

A. INTRODUCTION

In January 2020, Governor Andrew M. Cuomo announced the “Empire Station Complex” project among his State of the State initiatives, establishing the proposed blueprint for an integrated public transportation complex to revitalize New York’s Pennsylvania Station (Penn Station) area and give New York City the world-class intercity transportation hub it deserves. The first step in realizing this vision is Moynihan Train Hall, which opened on January 1, 2021, and breathed new life into the historic James A. Farley Post Office (Farley Building), transforming it into an iconic, state-of-the-art infrastructure gateway for the National Railroad Passenger Corporation d/b/a Amtrak (Amtrak) and the Long Island Rail Road (LIRR). The other components of the Governor’s vision include a reconstructed and expanded Penn Station, currently being planned by the Metropolitan Transportation Authority (MTA) in conjunction with Amtrak and New Jersey Transit (NJT), which would, among other things, modernize the facility and significantly increase its track and platform capacity.

The relocation of Amtrak’s operations to Moynihan Train Hall provides the opportunity to overhaul Penn Station, including opening up its confined concourses and creating bold new entrances, inviting in natural light, improving retail and other user amenities, increasing safety and security, consolidating support functions, rationalizing pedestrian flows, and making it easier for passengers to navigate within the station as well as connect to their destinations beyond. The railroads are also undertaking planning for an expansion of Penn Station potentially to the south into Block 780 and parts of Blocks 754 and 806 to accommodate up to nine additional tracks and five new platforms. Both the reconstruction and expansion of Penn Station are essential infrastructure projects for the future of New York, long talked about but finally achievable under the leadership of Governor Cuomo.

The New York State Urban Development Corporation d/b/a Empire State Development (ESD) is considering the adoption and affirmation of a General Project Plan for the Proposed Project, a comprehensive redevelopment initiative to create a revitalized, transit-oriented commercial district centered around Penn Station, which is critical to fulfilling the Empire Station Complex vision.¹ The Proposed Project would address substandard and insanitary conditions in the Project Area (as defined below) by facilitating redevelopment to create a cohesive, transit-oriented commercial district and would introduce much-needed public transportation and public realm improvements in the area. Specifically, the Proposed Project would result in the development of ten new buildings on eight development sites in the Project Area. The Proposed Project’s new developments would incorporate new onsite entrances and access ways to Penn Station and public transit. It would

¹ As discussed under “Alternatives” below, this DEIS also evaluates a Residential Alternative, in which three of the development sites would include residential uses, including affordable housing. ESD is also seeking comment on this alternative as part of the DEIS public review process.

Empire Station Complex Civic and Land Use Improvement Project

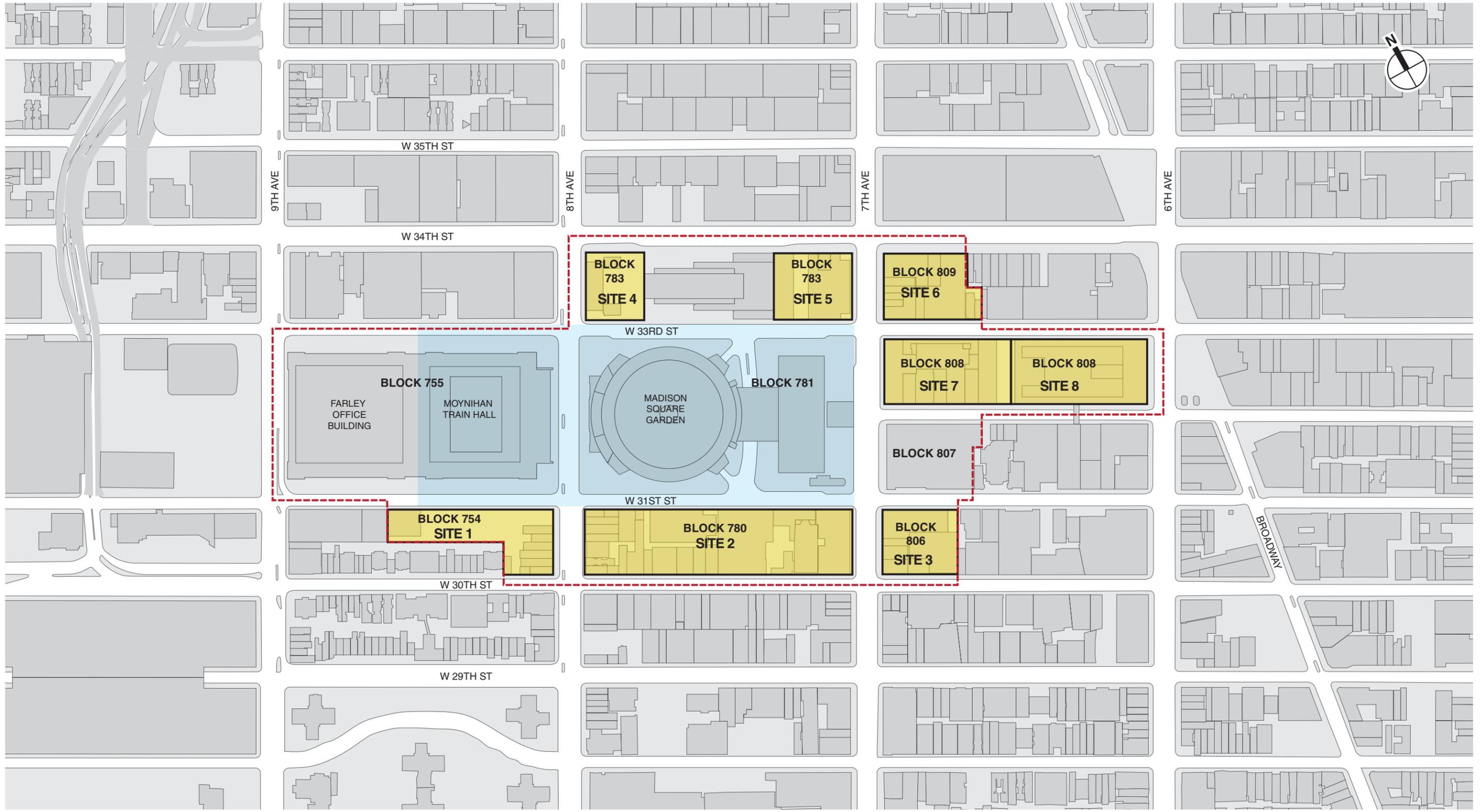
revitalize the Project Area by introducing public realm improvements to address pedestrian, bicycle, and vehicular circulation and enhance the surrounding streetscape.

The Proposed Project would also support the reconstruction and expansion of Penn Station, which would be accomplished through separate but related projects that would be undertaken by one or more of the involved railroads (MTA, Amtrak, and/or NJT). Commercial development facilitated by the Proposed Project would generate essential revenue for substantial improvements at Penn Station, subway stations, and other transit facilities in the Project Area—as well as the proposed expansion of Penn Station. The Proposed Project would accommodate the potential expansion of Penn Station into the blocks south of the existing station to allow for the creation of new, below-grade tracks and platforms, significantly increasing the station’s capacity. The additional rail infrastructure, if located on these blocks, would be built beneath three of the proposed development sites, and the Proposed Project’s General Project Plan (GPP) would require that the commercial development accommodate the station’s proposed expansion at these sites and beneath adjoining streets. The design, construction, and operation of an expanded Penn Station would be assumed by one or more of the involved public transportation entities: MTA, Amtrak, and/or NJT. The specific assignment of responsibilities for those tasks is the subject of ongoing collaboration and planning among MTA, Amtrak, and NJT.

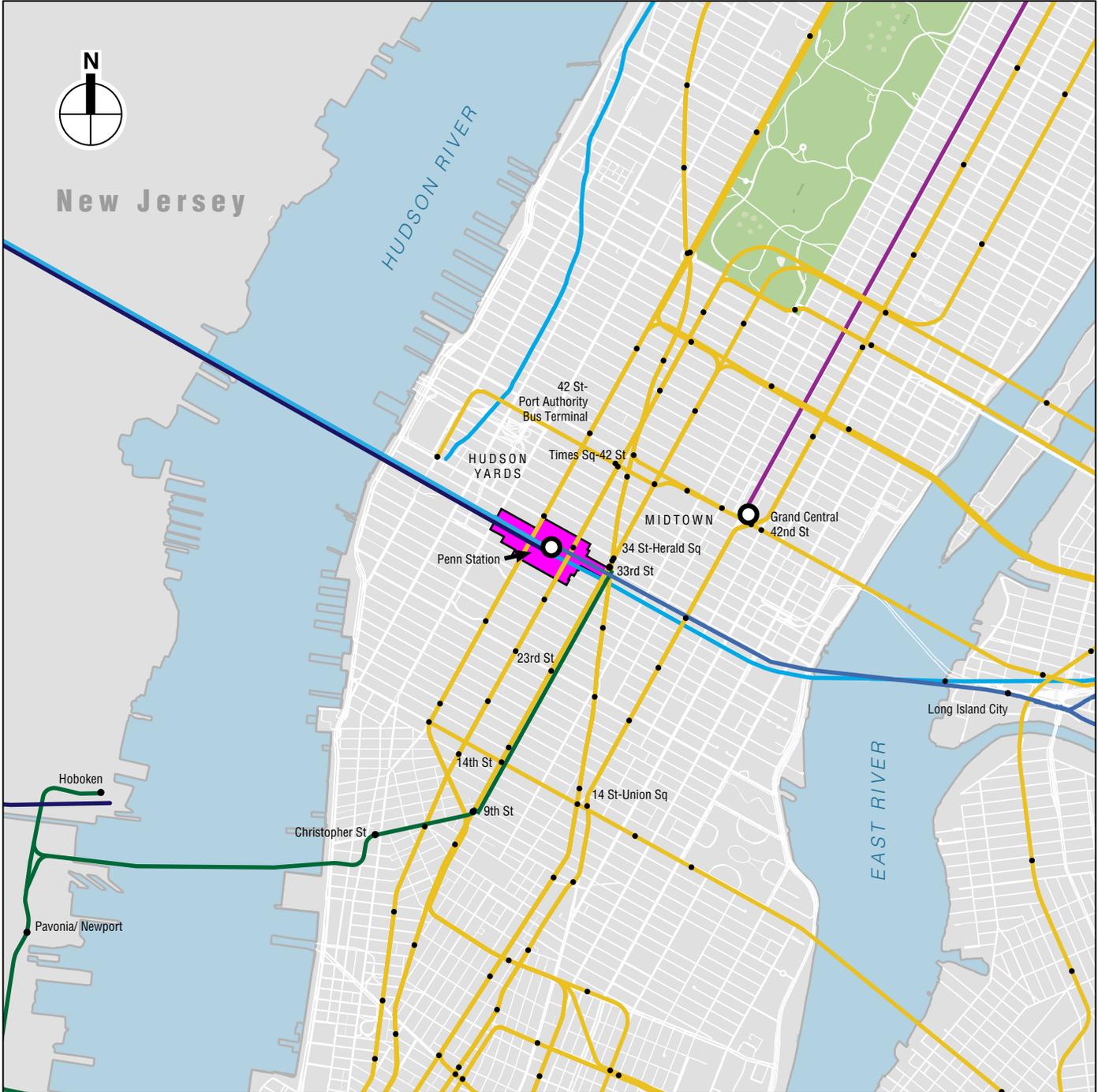
The area of the Proposed Project is generally bounded by Sixth and Ninth Avenues to the east and west, and by West 30th and West 34th Streets to the south and north in Midtown Manhattan, Community Districts 4 and 5 (the Project Area). The Project Area includes all or portions of nine Manhattan tax blocks—Blocks 754, 755, 780, 781, 783, 806, 807, 808, and 809—that encompass Penn Station, Madison Square Garden (MSG), Moynihan Train Hall (see **Figure S-1**), and surrounding blocks. However, the Proposed Project would not include any new commercial buildings at the existing Penn Station, MSG, or Moynihan Train Hall. As shown in **Figure S-2**, the Project Area is centrally located in Manhattan, near Hudson Yards and the Midtown Central Business District, proximate to passenger rail service at Penn Station and subway service at three major stations, with unmatched connections to other portions of New York City and the region.

Despite its outstanding transit access, the Penn Station area today is characterized by outmoded building stock, a disjointed and uncoordinated public realm, overburdened transit infrastructure, and stagnant development activity. The Proposed Project would address these conditions by establishing a cohesive development framework and an integrated approach to the public realm. Commercial redevelopment under the Proposed Project would capitalize on the Project Area’s transit-rich location, transform the area to a premier commercial office district, provide for public transportation and public realm improvements essential for a dynamic business district, and complement other transformative initiatives that have reshaped the Far West Side and Midtown over the past 20 years. Furthermore, the Proposed Project would reflect a public commitment to the area commensurate with the essential infrastructure investments already completed (Moynihan Train Hall, East End Gateway) and planned for the future (the reconstruction and expansion of Penn Station). The Proposed Project would also promote the economic recovery of New York City and the region in the aftermath of the COVID-19 pandemic by supporting economic activity associated with the growth of Midtown and investments in regional rail and transit infrastructure.

Overall, the Proposed Project is a critical component of the Governor’s vision for the Empire Station Complex, as it would create a vibrant commercial district that would benefit Penn Station, complement long-term development initiatives and reinforce the major infrastructure investments in the reconstruction and expansion of Penn Station, and support the City’s goal of encouraging high-density development around a world-class transportation hub.



- Project Area
- Development Sites
- Existing Penn Station



New Jersey

HUDSON RIVER

EAST RIVER

- Project Area
- Long Island Rail Road
- Metro North Railroad
- PATH
- New Jersey Transit
- Amtrak
- New York City Transit Subway
- Subway Station

0 5,000 FEET

SUMMARY OF THE PROPOSED PROJECT

In overview, the Proposed Project includes:

- **Creation of a revitalized, transit-oriented commercial district to benefit Penn Station and revitalize the surrounding area.** The Proposed Project would result in approximately 20 million gross square feet (gsf) of primarily Class A commercial office, retail, and hotel space on eight development sites within the Project Area (see **Figure S-1**).
- **Improvements to area subway stations and transit connections with Penn Station.** ESD, through the GPP, and in collaboration with MTA, would require the completion of transit improvements at each development site in connection with new building construction. It is anticipated that transit improvements would be implemented at the following subway stations: 34th Street–Penn Station (Eighth Avenue A/C/E Subway Lines), 34th Street–Penn Station (Seventh Avenue 1/2/3 Subway Lines), and 34th Street–Herald Square (Sixth Avenue B/D/F/M/N/Q/R/W Subway Lines and Port Authority Trans-Hudson [PATH] train service). Additional public transportation improvements under consideration include creating a below-grade east–west corridor between the 34th Street–Penn (1/2/3 Subway Lines) and 34th Street–Herald Square subway stations, new station entrances, new stairways, widening existing stairways and platforms, consideration of below-grade north–south circulation east of Seventh Avenue, and other improvement measures.
- **Implementation of public realm improvements.** ESD, through the GPP, would require the completion of public realm improvements in the Project Area in connection with the proposed developments. Improvements under consideration include widening sidewalks adjoining the Proposed Project buildings and creating new plaza spaces in the Project Area.

In addition, the Proposed Project would support separate but related projects to improve and expand Penn Station. These projects would be undertaken separately by one or more of the involved railroads (MTA, Amtrak, and/or NJT) and would be subject to their own environmental reviews and approvals, as appropriate. Specifically, the Proposed Project would:

- **Support reconstruction of the existing Penn Station.** Revenue from the Proposed Project’s new development would contribute towards funding for substantial improvements to the existing Penn Station as identified through a Penn Station Master Plan under development by MTA, Amtrak, and NJT.
- **Support the expansion of Penn Station.** The Proposed Project would support the planned expansion of Penn Station by (i) providing a potential source of funding for the proposed expansion and improvement of Penn Station and (ii) facilitating, through ESD’s proposed GPP for the Empire Station Complex, transit-oriented development above the below-grade expansion of tracks and platforms south of the existing Penn Station. Such an expansion of Penn Station would increase the overall station capacity for train operations and passenger flow. The expanded facility would incorporate eight or nine tracks (depending on final configuration) to substantially increase Penn Station’s existing track and platform capacity. Subject to ongoing collaboration and planning among the involved public transportation providers (MTA, Amtrak, and NJT) and any required federal approvals and federal environmental reviews, the expansion of Penn Station would occupy the below-grade levels of Block 780 and portions of Blocks 754 and 806 (and areas beneath adjoining streets), if this location is selected as the approved location for the station’s expansion. The Proposed Project would be designed and constructed to accommodate rail infrastructure for the proposed station expansion.

Empire Station Complex Civic and Land Use Improvement Project

Section C, “Project Description,” provides a more detailed description of the multiple elements of the Proposed Project.

To allow for the implementation of the Proposed Project, ESD is proposing to seek its Directors’ approval of a GPP that would, among other things, authorize ESD to override provisions of the New York City Zoning Resolution and other local laws, as applicable, in accordance with the New York State Urban Development Corporation Act (the UDC Act). At this time, a determination has not been made as to whether the property acquisitions needed for the Penn Station expansion (consisting of Block 780 and portions of Block 754 and Block 806) would be undertaken, in whole or in part, by ESD or by another entity, such as MTA or Amtrak. Decisions about property acquisition, including which public entity or entities would be responsible for those property acquisitions, would be made only in the event that the Penn Station expansion site is selected as the locally preferred alternative for that project and that alternative is selected as a result of the ongoing federal approval process, as the planning and design of the Proposed Project develops, and ESD’s collaboration with the involved railroads continues. The acquisition of property would be by negotiated purchase with the property owners and/or through the exercise of eminent domain. In addition, ESD and the City of New York would cooperate as contemplated by the UDC Act in connection with the construction of the public realm improvements located within City-owned mapped streets. Such improvements would be subject to the approval of the New York City Department of Transportation (DOT). Affirmation of the proposed GPP for the Empire Station Complex, the actions that may be taken to acquire the property interests as necessary to facilitate the Proposed Project, and other actions authorized by the UDC Act in furtherance of the Proposed Project are collectively referred to as the “Proposed Actions.”

ESD is working closely with the City of New York to accomplish the Proposed Project’s development goals and the implementation of public realm and public transportation improvements for the area. The planning, design, and implementation of public realm improvements are a collaborative effort of ESD with the New York City Department of City Planning (DCP) and DOT. ESD is collaborating with MTA, Amtrak, and NJT with respect to the proposed expansion of Penn Station and implementation of public transportation improvements. To facilitate implementation of the Proposed Project, ESD is also working with Vornado Realty Trust (Vornado), the owner of a significant number of properties in the Project Area that contain connections (or potential future connections) to Penn Station and the subway and transit infrastructure in the Penn Station area.

The Proposed Actions require discretionary approvals subject to environmental review under the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations. Pursuant to SEQRA, ESD is the SEQRA lead agency for the Proposed Project.

B. BACKGROUND

Penn Station is the main intercity railroad station and a major commuter railroad station in New York City. Connections are available within Penn Station to Newark International Airport (via Amtrak and NJT service), John F. Kennedy International Airport (via LIRR and MTA New York City Transit [NYCT] subway service), and to LaGuardia Airport via NYCT subway to bus transfers. Penn Station provides connections to NYCT’s Seventh Avenue Line station, serving the 1, 2, and 3 trains; and the Eighth Avenue Line station, serving the A, C, and E trains. These subway stations, and the Herald Square Subway Station and 33rd Street PATH Station located one block to the east of Penn Station at Sixth Avenue, are among the most heavily used subway stations in the City. With nearly 600,000 rail and subway trips per day, Penn Station is the busiest passenger transportation hub in North America, and offers unmatched connectivity between intercity rail

service, commuter rail service, and local subway service. The station is located entirely underground between Seventh and Eighth Avenues and West 31st and West 33rd Streets.

The original Penn Station was built by the Pennsylvania Railroad and opened in 1910. It was a classic Beaux-Arts style building designed by the famed architecture firm of McKim, Mead, & White and featured an ornate marble and granite station house above ground covering the entire double superblock from West 31st to West 33rd Streets and Seventh to Eighth Avenues. The station was considered a masterpiece of the Beaux-Arts style and one of the great architectural works of New York City. The station was part of the Pennsylvania Railroad's New York Improvement and Tunnel Extension, which also included the tunnels and track connections extending from Weehawken, New Jersey, beneath the Hudson River, Manhattan, and the East River to Long Island City, Queens. Once completed, this massive engineering project enabled direct rail access to New York City from points south for the first time.

Passenger volumes began to decline after World War II—a time when America was investing in automobiles, highways, and suburban infrastructure rather than rail and subways. In the 1950s, the declining Pennsylvania Railroad sold the air rights to the property and reduced the size of the railroad station. In 1963, the above-ground train station was demolished. Over the next nine years, the below-grade concourses and waiting areas were reconstructed, creating the Penn Station that commuters and visitors use today, while MSG and the high-rise office buildings at 1 Penn Plaza and 2 Penn Plaza, between West 31st and West 34th Streets and Seventh and Eighth Avenues, were constructed. The current station has three underground levels: concourses on the upper two levels and train platforms on the lowest. The two levels of concourses were original to the 1910 station but were extensively modified during the construction of MSG into the cramped, poorly organized, and substandard corridors that exist today.

At the time Penn Station was demolished and replaced in the 1960s, the facility was designed to serve approximately 200,000 rail trips per day. Today, Penn Station is owned by Amtrak, a federally chartered corporation created under federal law. Penn Station is located on Amtrak's Northeast Corridor, a vital passenger rail link over which Amtrak provides rail service from New York City to Boston, Philadelphia, Baltimore, Washington, D.C., and intermediate points, with connections to Amtrak's national intercity commuter rail network. Penn Station currently serves more than double the number of rail trips that it was designed for in the 1960s. MTA Metro-North Railroad (Metro-North) service to Penn Station is projected to begin after 2023 when MTA completes the East Side Access Project, which will free up track capacity at Penn Station by providing direct LIRR service to Grand Central Terminal.

LIRR's services are operated in the lower concourse level of the station, which LIRR leases from Amtrak and operates under a joint facilities agreement. Although it is now confined to the lower level of Penn Station, LIRR's portion of the station alone is the second-busiest rail station in the nation, second only to Grand Central Terminal. Based on 2019 data, LIRR provides over 237,000 daily trips on more than 450 daily trains within its platforms, concourses, and exits. Similarly, NJT's portion of Penn Station serves approximately 187,000 daily trips. LIRR and NJT customers also make heavy use of the adjacent NYCT subway stations to complete their journeys to and from workplaces or other destinations. Approximately one-half of commuting daily customers enter or leave the railroad station via the busy Seventh Avenue or Eighth Avenue subway stations, which accommodate 177,000 and 174,700 weekday trips, respectively.

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In the last decade, the number of average weekday Penn Station riders on Amtrak, LIRR, and NJT has grown by 26 percent and subway ridership on the Seventh and Eighth Avenue lines has increased by 34 percent. Although they operate at capacity today, Amtrak, MTA (LIRR and Metro-North), and NJT ridership is expected to increase.

Despite its status as the busiest rail and transit hub in the nation, commercial office development around Penn Station has been limited by an overburdened transit infrastructure, aging building stock, and poor pedestrian circulation. Even with these challenges, the Project Area presents a significant opportunity for sustainable growth in New York City, thanks to its unparalleled rail and transit access.

Over the past two decades, the public and private sectors have embarked on transformative transit and land development proposals at Penn Station, the Far West Side, and East Midtown to improve transit infrastructure and sustain Manhattan as the nation's center of commerce and business. The Empire Station Complex presents a unique opportunity to reconstruct and expand Penn Station and reinvigorate the area that surrounds it.

PENN STATION OPERATIONS

Penn Station has a total of 11 platforms and 21 platform tracks, shared by Amtrak, LIRR, and NJT. The platform tracks are connected to a network of tracks to the east and west. On the west, Amtrak and NJT trains enter and leave the station using the two tracks of the existing North River Tunnel; Amtrak trains from the Empire Line serving Albany and points north also connect into Penn Station on the west.

The blocks west of Penn Station are occupied by approach tracks that provide access to and from the station. These tracks are used for cross-Hudson rail service to the station for Amtrak's Northeast Corridor Line, NJT lines, and LIRR's rail connections to MTA's John D. Caemmerer West Side Yard, which is bounded by Tenth Avenue, Twelfth Avenue, West 30th Street, and West 33rd Street, and is used by LIRR for midday train storage and light maintenance. Tracks east of the station proceed eastward to the four-track East River Tunnels, which provide a continuing connection for Amtrak's Northeast Corridor Line to New England, and for LIRR's rail lines to Queens and Long Island. The East River Tunnels also provide access to Sunnyside Yard in Queens, a large Amtrak train storage and maintenance yard that is also used for midday train storage by NJT.

Over the past several years, the three railroads have performed extensive operations analyses and implemented infrastructure improvements that have allowed the railroads to increase service frequency. Today, the three railroads use the full capacity of the tracks and platforms in Penn Station during the peak hours of travel.

Penn Station has two levels of passenger space above the tracks and platforms. The main passenger hall, Amtrak ticketing and waiting area, and NJT concourse are located on the upper passenger level. The upper level also provides connections to street level. The lower passenger level consists of LIRR's concourse in the station, with connections to the Seventh and Eighth Avenue subway lines and NJT passenger access to its platforms. Several connecting concourses lead from LIRR's main passenger space to provide access to the track space below. The Penn Station Service Building is located at 236-248 West 31st Street, directly across from Penn Station. This building was constructed in 1908 and originally supplied electricity to the electric locomotives going in and out of Penn Station. The Penn Station Service Building houses mechanical, electrical, and plumbing systems that serve Penn Station, including steam piping and chiller units, as well as systems that

service tracks, including switches and compressors, which control train movements beyond Penn Station. The electricity that powers the tunnel ventilation system originates in the Service Building. This powers Amtrak infrastructure that extends from Long Island to New Jersey.

MOYNIHAN TRAIN HALL

The need for improvements to Penn Station has been recognized almost since the original station building was demolished in 1963. In the past two decades, a number of highly visible improvements have been made. Most notable among these is the new Moynihan Train Hall recently completed at the Farley Building, which has brought a monumental above-ground passenger space back to Penn Station.

On January 1, 2021, the new Moynihan Train Hall opened in the landmark Farley Building, across Eighth Avenue from Penn Station as part of ESD’s Moynihan Station Civic and Land Use Improvement Project. This building was constructed around the time of the original Penn Station, and its architecture is evocative of the now-demolished 1910 station building. Since many of Penn Station’s existing tracks and platforms are located directly below the Farley Building, the location of the Farley Building and its related below-grade improvements (including the expanded West End Concourse and ramps that connect the Farley Building to Penn Station and can be accessed at-grade from the west side of Eighth Avenue) offered a unique opportunity to create a new above-ground train hall serving Amtrak and LIRR passengers. Now complete, Moynihan Train Hall serves as the primary boarding and ticketing facility for Amtrak and an additional facility for LIRR. The train hall has a monumental, sky-lit passenger space with state-of-the-art wayfinding, information displays, and other visitor amenities. The Moynihan Train Hall expands Penn Station’s passenger concourse space by 50 percent, and the shift of Amtrak’s daytime passenger services to the new Moynihan Train Hall now opens space for other uses in the existing Penn Station.

Despite this improvement, the majority of train cars and passengers arriving at Penn Station will land beneath the unreconstructed part of the station east of Eighth Avenue and will continue to navigate the substandard corridors and egress through those areas to exit the station.

OTHER PENN STATION IMPROVEMENTS

In addition to the Moynihan Train Hall, MTA, Amtrak, and NJT are currently completing other improvements at Penn Station. These include LIRR’s newly completed East End Gateway, which creates a new entrance to LIRR’s Penn Station concourse at West 33rd Street west of Seventh Avenue, and the currently under construction LIRR Concourse project, which will create wider reconstructed passenger concourses to improve access, egress, and circulation, and relieve overcrowding. NJT is conducting preliminary design work for the Central Concourse Extension, a proposed corridor to provide additional access to Tracks 1 through 12. In addition, Amtrak is undertaking an ongoing series of repairs and upgrades to tracks and switches at Penn Station, collectively referred to as the Penn Station Infrastructure Renewal Project.

PENN STATION ACT

The New York Pennsylvania Station Public Safety Improvements Act (Penn Station Act), adopted in 2018 as Part MMM of Chapter 59 of the Laws of 2018 (enacted into law by the New York State Legislature), identified the rehabilitation of Penn Station and its connectivity to the surrounding areas as “a pressing public safety and transportation issue and is a major objective for the State to resolve and should be made a top priority.” In particular, the Penn Station Act stated that the

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rehabilitation of Penn Station would require “improvements to access and egress and to the surrounding areas to position such areas to accommodate and attract passengers and evolving technological and business and commercial needs and practices” and directed ESD and other governmental, community and business entities to collaborate on solutions. The Proposed Project would help to achieve the goals of the Penn Station Act.

PENN STATION MASTER PLAN

As discussed in more detail below, Penn Station suffers from a number of design and operational deficiencies. To create a framework for addressing these problems, MTA, Amtrak, and NJT are preparing a Master Plan for Penn Station, which includes a number of separate, but complementary projects, including the reconstruction of the existing station, the new Moynihan Train Hall, and the proposed Penn Station expansion. The planning process for the Penn Station Master Plan is expected to continue under the leadership of the involved railroads. The Penn Station Master Plan will provide for the integration of the different station components functionally, operationally, and architecturally to produce a cohesive station complex that will improve circulation and connections to the surrounding district. Key goals of the Penn Station Master Plan include:

- Increasing station capacity and accommodating increased train service;
- Integrating the components of the Empire Station Complex, including the new Moynihan Train Hall and the proposed expansion of Penn Station;
- Integrating the Empire Station Complex with the surrounding area;
- Rationalizing station functions and systems;
- Improving pedestrian circulation;
- Improving safety and security; and
- Increasing revenue generation to support the station.

The Proposed Project would support the implementation of the Penn Station Master Plan by facilitating the expansion of Penn Station, improving connectivity, and generating revenue from the new development to be applied towards the implementation of the plan.

REGIONAL RAIL INITIATIVES

Several rail improvement projects are currently planned that will change rail operations at Penn Station in the future. These include capital projects planned or proposed by LIRR, Metro-North, Amtrak, and NJT. These improvement projects are separate and independent from the Proposed Project.

LIRR EAST SIDE ACCESS

MTA is currently constructing the East Side Access Project, which will allow LIRR service to Grand Central Terminal in East Midtown. The project includes a new passenger terminal beneath Grand Central’s existing passenger spaces as well as new tunnels, track connections, and rail storage and support spaces. When this project is complete, LIRR will serve both Penn Station and Grand Central Terminal. In combination with other LIRR initiatives, including the Main Line expansion (a new third track on the LIRR Main Line and new double track on Ronkonkoma Branch), this will allow LIRR to provide substantially more service across Long Island for its customers. With the introduction of service to Grand Central Terminal, LIRR will reduce its train frequency at Penn Station, freeing capacity for other rail movements there.

METRO-NORTH PENN STATION ACCESS

MTA is in planning to bring Metro-North service to Penn Station, taking advantage of train capacity freed by the East Side Access Project. The Penn Station Access Project would create a new connection for Metro-North's New Haven Line service, making use of Amtrak's Hell Gate line (on its Northeast Corridor route) through the Bronx, Queens, and Penn Station. This project would create four new Metro-North stations in the East Bronx in areas not well-served by rail transit today.

GATEWAY PROGRAM

The Gateway Program proposes a comprehensive program of phased rail infrastructure improvements to increase track, tunnel, bridge, and station capacity, eventually creating four mainline tracks between Newark, New Jersey and Penn Station, that will allow the doubling of passenger trains (including Amtrak and NJT service) on the Northeast Corridor between Newark, New Jersey and Penn Station. While the specific details of most of the capacity-enhancing elements are still under development, these improvements include a new two-track Hudson River tunnel to supplement the existing North River Tunnel, an upgraded replacement bridge over the Hackensack River in New Jersey (Portal North Bridge), the addition of a new, two-track bridge over the Hackensack River (Portal South Bridge), and the proposed Penn Station expansion. In addition, for NJT to increase rail service to Penn Station, new rail infrastructure and a new rail storage yard in New Jersey are needed. A connection at Secaucus Station would provide direct rail service to New York for a number of rail lines that currently terminate at Hoboken Terminal. All of these capacity improvements are necessary to significantly increase Amtrak and NJT rail service to Penn Station.

In addition to capacity expansion, the Gateway Program also includes preservation projects to update and modernize existing infrastructure and make repairs to infrastructure elements that are damaged due to age or events, such as Superstorm Sandy.

HUDSON TUNNEL PROJECT

One key component of the Gateway Program, the Hudson Tunnel Project, has independent utility as a resiliency project. The Hudson Tunnel Project will create a new two-track tunnel under the Hudson River for Amtrak and NJT service on the Northeast Corridor and will rehabilitate the existing North River Tunnel, which was severely damaged during Superstorm Sandy. Having the new tunnel in place will allow Amtrak and NJT to divert train service from the existing tunnel so that it can be repaired. The new tracks will connect to Penn Station immediately south of the connections from the existing North River Tunnel and Amtrak's Empire Line service, and will require modifications to the approach track geometry and switches.

EAST RIVER TUNNELS REHABILITATION

Amtrak is planning the rehabilitation of the East River Tunnels that were damaged during Superstorm Sandy. The rehabilitation will occur one tube at a time to minimize disruption to rail service, but closure of one tube will nonetheless require service changes for Amtrak, LIRR, and NJT.

PLANNING CONTEXT

In New York City, planning initiatives often link high-density development with transit and public realm improvements. Notable examples of this approach include the Hudson Yards Rezoning and

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No. 7 Subway Line Extension and the Greater East Midtown Rezoning, which have facilitated high-density development coupled with investment in transit improvements and the public realm.

HUDSON YARDS REZONING AND NO. 7 SUBWAY LINE EXTENSION

Planning for Hudson Yards, an area of Manhattan bounded by West 42nd/West 43rd Streets, Seventh/Eighth Avenues, West 28th/West 30th Streets, and Hudson River Park, began in 2001. Since that time, the City of New York, MTA, and the State of New York have collaborated on planning initiatives to create a development program to transform Hudson Yards into a new mixed-use district accommodating job growth and new housing for New York City's growing population.

The heart of the Special Hudson Yards District is the John D. Caemmerer West Side Yard, spanning the superblocks between West 30th and West 33rd Streets and Tenth and Twelfth Avenues. The rezoning allowed the rail yard to be decked over with a new platform to allow for construction of new buildings. Bisected by Eleventh Avenue, the sites over the Caemmerer Rail Yard are known as the Eastern Rail Yard site and Western Rail Yard site.

As rezoned, the Special Hudson Yards District has the capacity for approximately 26 million square feet (sf) of new office development, 20,000 units of housing, 2 million sf of retail, and 3 million sf of hotel space. To support the new neighborhood, MTA extended the No. 7 subway line from 42nd Street-Times Square to a new terminal station in Hudson Yards at 34th Street and Eleventh Avenue. Since the adoption of the rezoning in 2005, several developments have been constructed and more are underway—most notably the development on the Eastern Rail Yard site, which opened in 2019 with almost 12 million sf of development in four office buildings, two residential buildings, a shopping mall, an arts center called the Shed, and an art installation known as the Vessel. It is anticipated that the Western Rail Yard site will be developed with up to 6.4 million sf of mixed-used development, providing residential and commercial uses (retail and office or hotel space), a new public school, and publicly accessible open space overlooking the High Line.

GREATER EAST MIDTOWN REZONING

In 2017, the City of New York approved the Greater East Midtown Rezoning. The rezoning will facilitate new, modern office buildings needed to spur jobs and keep New York a global capital of commerce. The plan ties that growth directly to improvements in the district's public transit and public space network, so as new buildings are developed, major investments in infrastructure like subway stations and public plazas will also be implemented. The rezoning affected 78 blocks between Third and Madison Avenues and East 39th and East 57th Streets.

The zoning changes will enable the development of new Class A commercial buildings, cementing East Midtown's position as a world-class business district that offers modern amenities and a range of office types. Buildings would be able to achieve higher densities provided the developments support enhancements to the area's public realm by providing transit improvements and/or purchasing unused floor area from the district's landmarks. The zoning framework is expected to generate 6.8 million sf of new commercial office space, along with an additional 6.6 million sf that will be upgraded into Class A office space. In "Transit Improvement Zones" near transit hubs, new buildings may include additional floor area when they undertake or pay for major subway station improvements.

C. PROJECT DESCRIPTION AND PURPOSE AND NEED

PURPOSE AND NEED FOR THE PROPOSED PROJECT

The primary purpose of the Proposed Project is to transform a substandard and insanitary area in and around Penn Station into a revitalized, modern transit-oriented commercial district. The Proposed Project would generate revenue to help fund improvements to Penn Station and support economic growth in New York City and the region by providing substantial new high-density commercial development proximate to Penn Station and public transportation and public realm improvements to the area. In addition, the Proposed Project would support the reconstruction and expansion of Penn Station.

The following section describes the challenges facing the Penn Station area and Penn Station itself and provides more detail on the goals and objectives of the Proposed Project.

THE PENN STATION AREA

Despite its adjacency to the busiest transit hub in North America, commercial office development in the vicinity of Penn Station has been limited by overburdened and degraded transit infrastructure, aging building stock, and poor pedestrian circulation. The last major building in the Project Area (1 Penn Plaza) was constructed almost 50 years ago (1970–1972). Aside from the recent ESD-led transformation of the underutilized Farley Building into the Moynihan Train Hall and new commercial development, the neighborhood immediately surrounding Penn Station is characterized by outmoded office buildings, low quality retail offerings, congested sidewalks, and limited publicly accessible open space. Yet the Project Area provides a significant opportunity for sustainable growth in New York City due to its unmatched access to the region’s rail and transit network with the potential for future development to incorporate sustainable, resilient, and energy-efficient infrastructure.

The Project Area is one of the most transit-rich areas in the City, but the public realm, both above- and below-grade, is substandard and deters redevelopment. The subway stations that serve Penn Station along Sixth, Seventh, and Eighth Avenues are among the busiest subway stations in the City (the 3rd, 6th and 7th busiest in 2019). Entrances are often difficult to locate, with small, inconspicuous entryways. Below-grade, subway infrastructure is overburdened with narrow stairs and corridors, crowded platforms, and poor accessibility. Above-grade, public realm spaces, including sidewalks and pedestrian circulation spaces, are overcrowded and poorly organized, and sidewalk widths are too narrow to accommodate the high volume of pedestrians in the area.

PENN STATION

Penn Station is located at the center of the Project Area. The combination of the low-cost construction redesign in the 1960s, inadequate investment in the station over time, and a steady rise in ridership has strained the station’s infrastructure and systems and degraded the user experience. Almost 60 years after the demolition and underground reconstruction of Penn Station, the facility is substandard, poorly configured, and in dire need of major investment to maintain operations, renew its infrastructure, improve its revenue stream, and re-establish itself as the premier rail transportation center in the region. A substantially improved Penn Station, along with the Moynihan Train Hall across Eighth Avenue, would catalyze the economic revival of the surrounding area.

Empire Station Complex Civic and Land Use Improvement Project

Nearly 600,000 trips are navigated through Penn Station's narrow underground corridors (more than three times the number of daily trips in the 1960s), which are devoid of natural light, consistent wayfinding, or sufficient waiting areas.

MTA, in collaboration with Amtrak and NJT, is conducting a comprehensive study of the existing conditions at Penn Station as part of the Penn Station Master Plan. The Penn Station Master Plan's preliminary findings indicate that commuters experience congested platforms and concourse levels, poor pedestrian accessibility (entrance and egress points are particularly difficult for persons with mobility issues to navigate), a lack of sufficient passenger waiting and overflow space, and a lack of sufficient public restroom facilities. The overall customer experience is universally perceived as very poor, particularly on the lower level, due to low ceiling heights, narrow corridors and concourses, poor lighting, and outdated and inadequate wayfinding and passenger information systems.

Furthermore, robust growth in ridership into Penn Station is projected in the future as rail service is expanded and the population in the LIRR, NJT, Amtrak, and Metro-North service areas continues to grow. Penn Station train operations are currently at or near capacity, constrained by the number of tracks and platforms in the station and by the condition and capacity of the North (Hudson) River and East River Tunnels that serve it. Ridership through Penn Station, though impacted in the short term by the COVID-19 pandemic, is projected to continue to increase as service is expanded and the population in the LIRR, NJT, Amtrak, and Metro-North service areas continues to grow. Responding to this growing need, Amtrak, NJT, MTA, and New York State are planning and implementing extensive investments to alleviate these constraints, expand service, and extend existing service to new locations.

Although recent initiatives like the new Moynihan Train Hall and West End Concourse beneath the Farley Building have improved the passenger experience in parts of Penn Station, the station still operates well beyond its capacity in terms of both trains and passengers and remains overcrowded and confusing for passengers. Frequent train delays, unclear wayfinding, and aesthetically uninviting concourse levels are synonymous with Penn Station, and frustrate thousands of commuters every day. In the future, without any expansion to the station itself, overcrowding will continue to worsen as the number of commuters grows.

To address these issues, on January 8, 2020, Governor Andrew M. Cuomo announced an initiative to create a new commercial transit district (the Proposed Project) and reconstruct and expand Penn Station. The Empire Station Complex would build upon the recent improvements to Penn Station, and facilitate the transformation of the Project Area to a revitalized commercial transit district.

GOALS AND OBJECTIVES

The goals and associated objectives for the Proposed Project are as follows:

- Goal 1: Revitalize the area surrounding Penn Station with new, sustainable, high-density commercial development
 - Provide a substantial amount of new commercial development to create a cohesive, transit-oriented district that will capitalize on the Project Area's central Manhattan location proximate to passenger rail service at Penn Station and three major subway stations;
 - Eliminate substandard and insanitary conditions in the Project Area;
 - Foster and support economic growth and tax revenue through the creation of jobs and economic activity during construction, and through the provision of new commercial

- office space to accommodate New York City’s long-term growth targeting the modern needs of commercial tenants (i.e., generous column spacing, large ceiling heights and upgraded mechanical systems); and
- Maximize incorporation of sustainable design practices to achieve environmentally superior performance in the new buildings.
- Goal 2: Improve passenger rail and transit facilities and pedestrian circulation, access, and safety
 - Implement transit improvements at the 34th Street–Penn Station–Eighth Avenue [A/C/E], 34th Street–Penn Station–Seventh Avenue [1/2/3], and 34th Street–Herald Square–Sixth Avenue [B/D/F/M/N/Q/R/W/PATH] subway stations to better accommodate passenger volumes in these stations, and offer coherent wayfinding and a safer passenger experience;
 - Create a below-grade east–west corridor connecting the 34th Street–Herald Square and the 34th Street–Penn Station–Seventh Avenue subway stations;
 - Facilitate public realm improvements in the Project Area, including widened sidewalks, creation of shared streets, and installation of protected bike lanes; and
 - Create publicly accessible passive open space to serve residents, workers, and visitors in the area.
- Goal 3: Support improvements to address substandard conditions in Penn Station
 - Maximize revenue generated by the new development to fund, in part, improvements to Penn Station by MTA, Amtrak, and NJT; and
 - Utilize the adjacency of certain development sites to expand Penn Station ingress and egress and increase identifiable entrances.
- Goal 4: Support and accommodate future capacity increases at Penn Station
 - Maximize revenue generated by the new development to fund, in part, the potential expansion of Penn Station into Block 780 (and portions of Blocks 754 and 806) to accommodate new, below-grade tracks and platforms, to be designed, constructed and operated per arrangements among MTA, Amtrak, and NJT. Such expansion is anticipated to significantly increase the station’s overall track and platform capacity.
 - Accommodate the potential southward expansion of Penn Station in the design and construction of the development sites on the blocks comprising the proposed expansion.

DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Project is a comprehensive redevelopment initiative to create a revitalized, modern transit-oriented commercial district centered around Penn Station. It would address substandard and insanitary conditions in the Project Area by introducing much-needed public transportation and public realm improvements to the area and facilitating high-density redevelopment of nearby parcels to create a cohesive, transit-oriented commercial district. The primary components of the Proposed Project are described in more detail below. The following section also describes the reconstruction and potential expansion of Penn Station, which would be supported and accommodated by the Proposed Project.

TRANSIT-ORIENTED COMMERCIAL DISTRICT

The Proposed Actions would facilitate redevelopment on the blocks surrounding Penn Station within the Project Area, setting the stage to transform a poorly planned and under-developed area

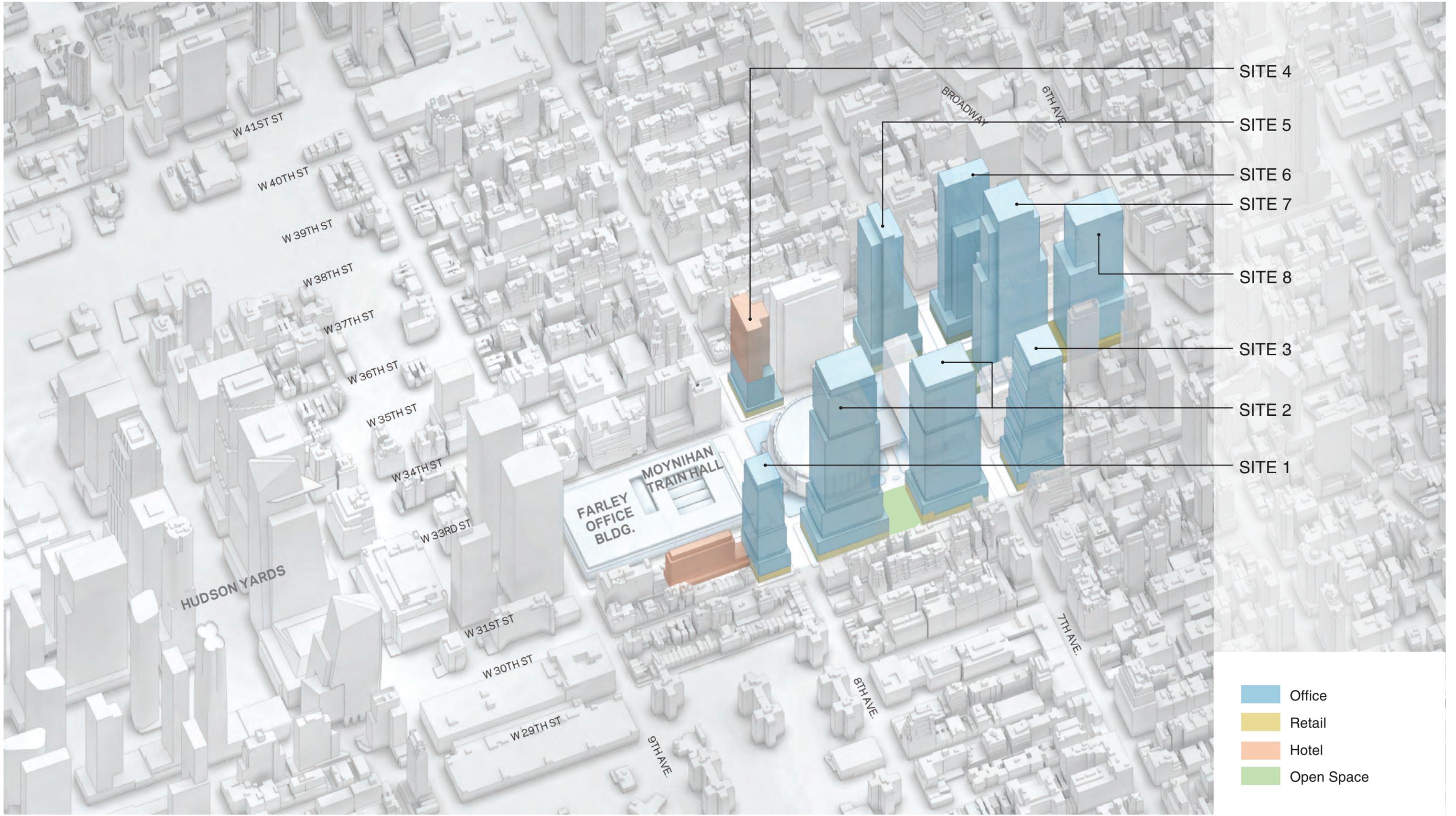
Empire Station Complex Civic and Land Use Improvement Project

with outmoded buildings and an inhospitable public realm into a cohesive commercial district incorporating sustainability measures. The GPP would facilitate the construction of approximately 20 million gsf of new Class A commercial office space, retail, and hotel space on eight development sites within the Project Area. The new developments would provide new entrances and connections for both Penn Station and the subway system, further increasing transit access for the area. The new development would generate funds to support improvements to and expansion of Penn Station and its interconnected pedestrian passageways and subway stations.

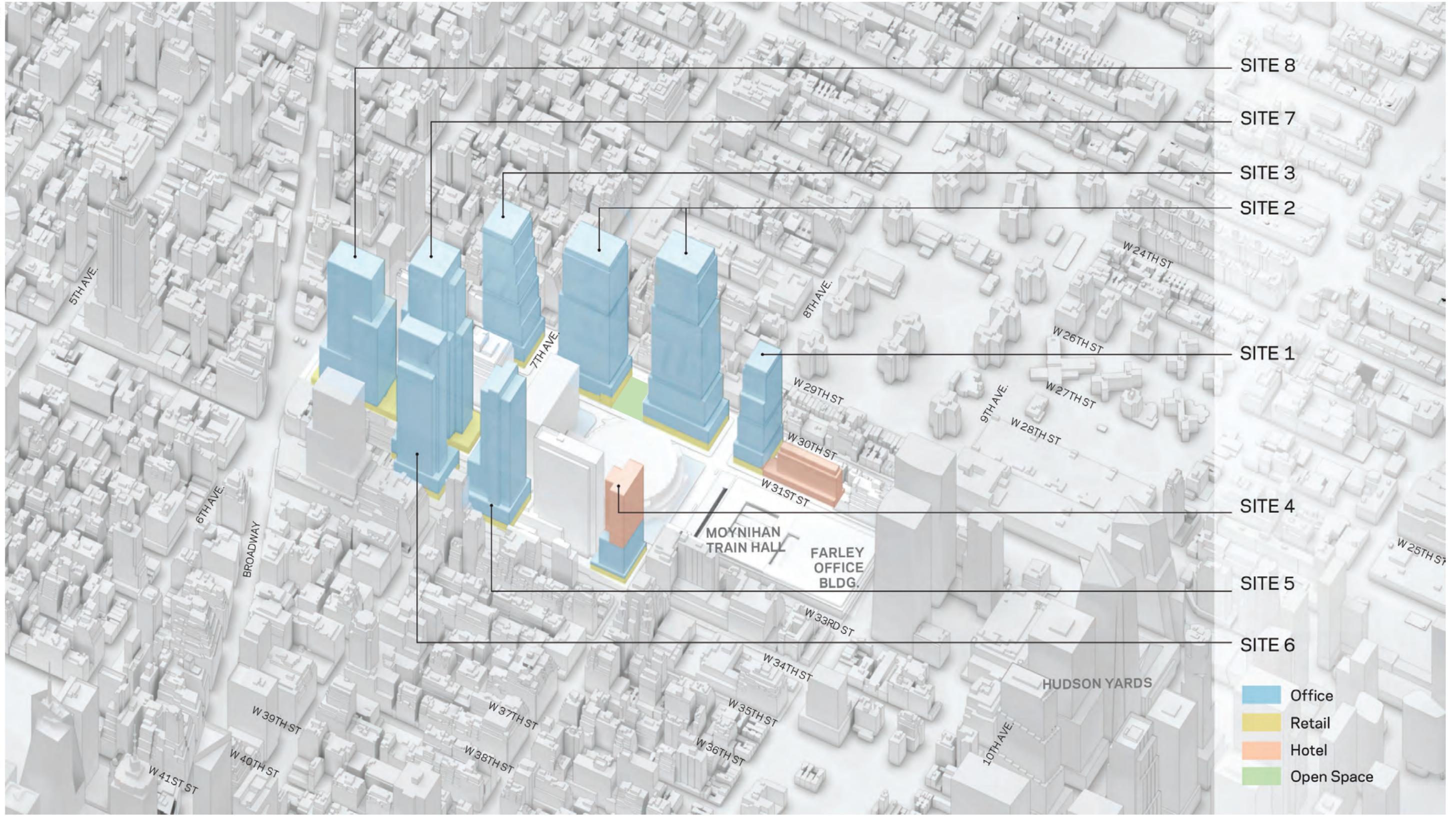
Sites 1 through 8 would be developed in accordance with design guidelines referenced in the GPP. The development sites are shown in **Figure S-1**. The GPP would override use, bulk, density, and other requirements of the New York City Zoning Resolution. ESD would prepare Design Guidelines for the Proposed Project, which would specify the parameters for permitted development in lieu of zoning. The proposed developments are described below.

- Site 1: a 64,189-sf site at 403-415 Eighth Avenue, between West 30th and West 31st Streets (Block 754, Lots 34-41, 44, 51, and 63). Site 1 would be redeveloped with two buildings containing approximately 1.3 million gsf of floor area, including approximately 750,000 gsf of office use, ground-floor retail, and an approximately 560-room hotel, replacing the existing lower-density mix of office, retail, hotel, residential, community facility, and parking uses.
- Site 2: a 158,000-sf site that occupies the full block bounded by West 30th and West 31st Streets and Seventh and Eighth Avenues (Block 780, all lots). Site 2 would be redeveloped with two buildings containing a total of approximately 6.3 million gsf of office space with ground-floor retail and a new public plaza in the center of the block.
- Site 3: a 44,436-sf site at 363-371 Seventh Avenue between West 30th and West 31st Streets (Block 806, Lots 1, 3, 6, 9, 69, and 76). Site 3 would be redeveloped with an approximately 1.8-million-gsf building with office and ground-floor retail uses, replacing the existing mix of predominantly hotel and commercial office uses.
- Site 4: a 34,807-sf site on the east side of Eighth Avenue between West 33rd and West 34th Streets (Block 783, Lot 1 and part of Lot 70). Site 4 would be developed with an approximately 1.1-million-gsf mixed-use building (office, hotel, and ground-floor retail).
- Site 5: 45,425-sf site on the west side of Seventh Avenue between West 33rd and West 34th Streets (Block 783, Lots 34, 48, and part of Lot 70). Site 5 is expected to be developed with a 1.9-million-gsf building with office and ground-floor retail uses. Adjacent to Site 5, the Plaza 33 open space is expected to be enhanced and improved with new public amenities.
- Site 6: a 54,313-sf site at 435 Seventh Avenue between West 33rd and West 34th Streets (Block 809, Lots 1, 3, 4, 5, 8, 16, 17, 69, 73, 80, and 82). Site 6 would be redeveloped with an approximately 2.1-million-gsf office and retail building with accessory parking, replacing existing lower-density retail, mixed-use commercial and residential buildings, and office uses.
- Site 7: a 79,000-sf site on the east side of Seventh Avenue between West 32nd and West 33rd Streets (Block 808, Lot 7501). The building on Site 7 would contain approximately 2.6 million gsf of office, retail, and accessory parking uses.
- Site 8: a 79,000-sf site on the west side of Sixth Avenue between West 32nd and West 33rd Streets (Block 808, Lot 40). Site 8 would be redeveloped with a 2.6-million-gsf building with office, retail, and accessory parking, replacing the existing office and Manhattan Mall retail uses.

Potential illustrative building heights for each site are provided in **Table S-1**. Illustrative building massings for each development site are shown in **Figures S-3** and **S-4**. The new buildings would



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

have maximum base heights specified in the Design Guidelines. The GPP would limit the overall floor area of each building. However, consistent with zoning in other high-density commercial areas of New York City, it would not impose height limits, except for on the midblock portion of Site 1, where a 400 foot height limit would be imposed. If constructed, the buildings could be taller and slimmer or shorter and bulkier than shown in **Figures S-3** and **S-4**. Several factors have been taken into consideration to determine the development program and inform the illustrative depictions of the buildings, including the size of the development sites, the floorplate size necessary to accommodate modern office developments, the amount of floor area necessary to achieve high-density commercial buildings that also provide space for on-site transit and public realm improvements, and the floor-to-ceiling heights sought by tenants of Class A office buildings.

As noted above, an objective of the Proposed Project is to incorporate sustainable design practices to achieve environmentally superior performance in the new buildings. The development on Sites 1, 2, and 3 would meet this objective as energy efficient measures and sustainable design elements would be required criteria in the request for proposals (RFP) for these sites. Sites 4 through 8 would be among the first new buildings to be designed and constructed after the passage of Local Law 97 of 2019, which places carbon intensity limits on most buildings larger than 25,000 sf and those limits become more stringent over time.

The proposed development program with the Proposed Project (the With Action condition) is summarized in **Table S-1**.

Table S-1
Proposed Project Development Program (With Action Condition)

Site	Lot Area	Illustrative Heights (in feet)	Total GSF	Total Commercial GSF	Office GSF	Retail GSF	Hotel (Rooms)	Garage GSF	Parking Spaces	Non-Program Area*
1**	64,189	748 (Eighth Ave) 235 (Midblock)	1,283,460	1,039,602	751,999	6,000	563	0	0	243,857
2	158,000	1,052 (Seventh Ave) 1,300 (Eighth Ave)	6,292,118	5,096,615	5,060,615	36,000	0	0	0	1,195,503
3	44,436	936	1,769,598	1,433,375	1,421,375	12,000	0	0	0	336,224
4	34,807	664	1,100,000	866,000	289,160	100,000	734	25,000	100	209,000
5	45,425	1,018	1,900,000	1,539,000	1,418,436	120,564	0	0	0	361,000
6	54,313	1,130	2,100,000	1,676,000	1,554,500	121,500	0	25,000	100	399,000
7	79,000	1,270	2,600,000	2,081,000	1,879,000	202,000	0	25,000	100	494,000
8	79,000	975	2,600,000	2,081,000	1,875,000	206,000	0	25,000	100	494,000
Total	559,170	--	19,645,176	15,812,592	14,250,085	804,064	1,297	100,000	400	3,732,583

Notes:

* Non-program area includes space for building mechanicals, circulation space associated with transit improvements on the ground and sublevels, back-of-house areas (e.g., hallways and corridors to the building core), certain building core space, and lobby and loading space on the ground and sublevels.

** Site 1 (Block 754) may be developed with an alternate no-hotel commercial development program comprised of approximately 1,013,000 gsf office and 16,000 gsf retail. For this site, the program identified in the table above represents the more conservative scenario for the EIS analyses.

PUBLIC TRANSPORTATION AND PUBLIC REALM IMPROVEMENTS

Public Transportation Improvements

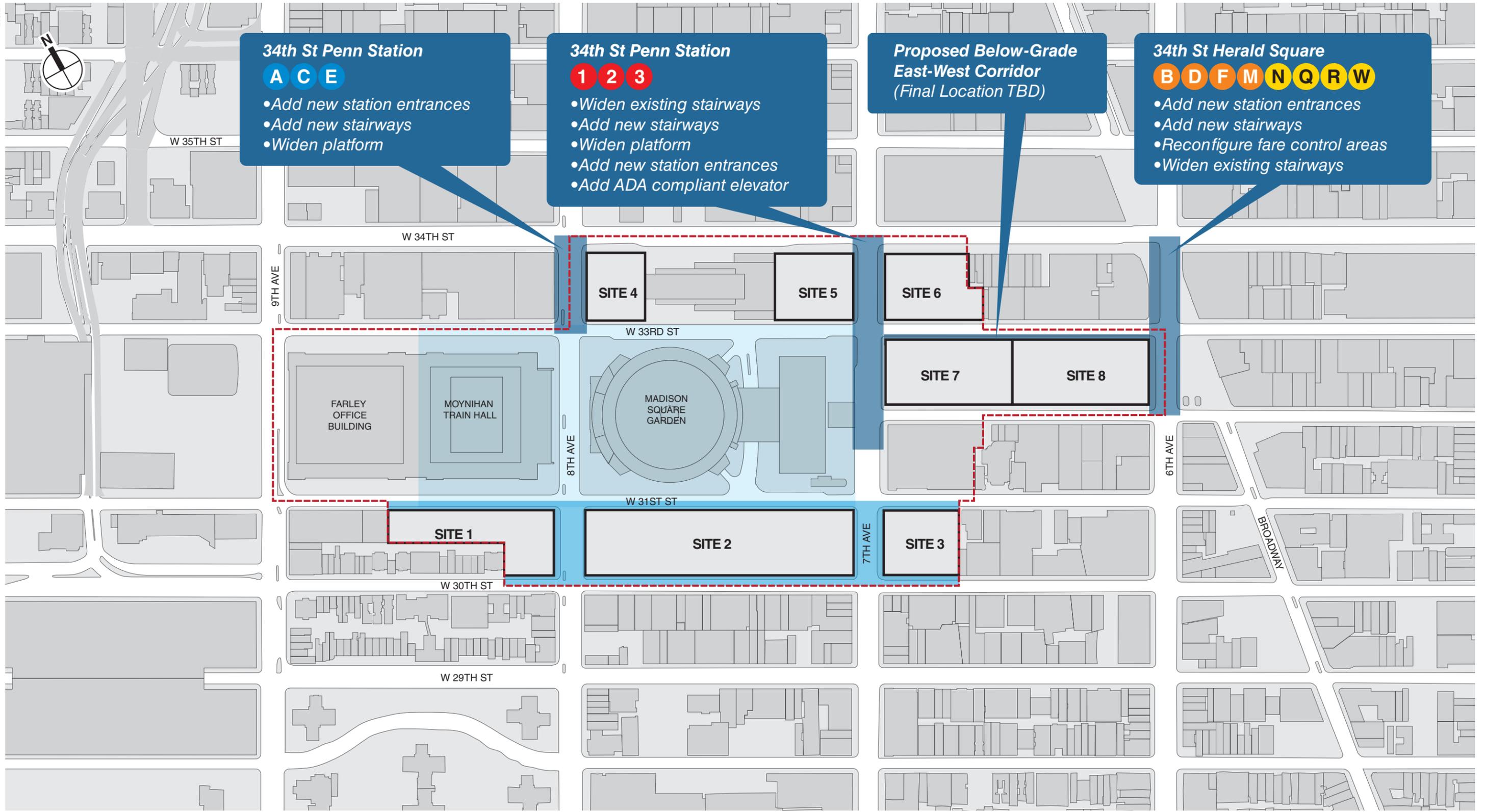
The Proposed Project would include public transportation improvements consisting of improvements to passenger rail facilities at Penn Station and transit facilities at area subway stations. ESD,

Empire Station Complex Civic and Land Use Improvement Project

through the GPP and in collaboration with MTA, would require the completion of certain public transportation improvements as part of certain new building construction in the Project Area. It is anticipated that transit improvements would be implemented at the 34th Street–Penn Station–Eighth Avenue [A/C/E], 34th Street–Penn Station–Seventh Avenue [1/2/3], and 34th Street–Herald Square–Sixth Avenue [B/D/F/M/N/Q/R/W/PATH] subway stations. The proposed public transportation improvements under consideration are shown in **Figures S-5** and **S-6** and summarized below:

- Sites 1, 2, and 3 (Block 780 and portions of Blocks 754 and 806) – New Penn Station connections with publicly accessible in-building connections on Seventh and Eighth Avenues.
- Site 4 – New Penn Station entrance at the corner of Eighth Avenue and West 33rd Street incorporating a new West 33rd Street subway entrance; new West 34th Street subway entrance; and widening of the uptown local C/E platform between West 33rd and West 34th Streets. These improvements would be made to the 34th Street–Penn Station (Eighth Avenue) Subway Station.
- Site 5 – New Penn Station entrance on West 34th Street; new West 34th Street subway entrance (possibly incorporated in the new Penn Station entrance); new West 33rd Street subway entrance; and widen the downtown local No. 1 platform between West 33rd and West 34th Streets. These improvements would be made to the 34th Street–Penn Station–Seventh Avenue Subway Station.
- Site 6 – Widen the uptown local No. 1 platform between West 33rd and West 34th Streets; new West 33rd Street subway entrance and new West 34th Street subway entrance. These improvements would be made to the 34th Street–Penn Station (Seventh Avenue) Subway Station.
- Site 7 – Widen the uptown local No. 1 platform between West 32nd and West 33rd Streets; new West 32nd Street subway entrance just east of Seventh Avenue; new West 33rd Street subway entrance just east of Seventh Avenue and add a new ADA-compliant elevator adjacent to this entrance, and add new express No. 2/3 platform stairs at the south end of the station. These improvements would be made to the 34th Street–Penn Station (Seventh Avenue) Subway Station.
- Site 8 – Construct new street level stairs at West 32nd and West 33rd Streets and Sixth Avenue, plus additional escalators and/or other vertical circulation elements as needed in consultation with the MTA and NYCT; reconstruct two mezzanine stairs connecting the N/Q/R/W and B/D/F/M; and reconfigure the fare control area at the B/D/F/M mezzanine level; and replace the PATH-related elevator in the new building on Site 8. These improvements would be made to the 34th Street–Herald Square Subway Station.
- Establish an east–west underground corridor connecting the 34th Street–Herald Square and the 34th Street–Penn Station–Seventh Avenue Subway Stations and providing access to Sites 7 and 8.

In addition, a potential north–south below-grade concourse east of Seventh Avenue (between approximately West 30th Street and West 34th Street), one or two new crossings below Seventh Avenue to connect Penn Station to the potential new north–south concourse, and an underground passage from the potential expansion of Penn Station to Moynihan Train Hall are under consideration subject to additional analysis for engineering and financial feasibility. The proposed public transportation improvements described above are under consideration, and new or different improvements may be identified as additional planning, design, and transportation analyses are undertaken during the EIS process.



34th St Penn Station
A C E
 •Add new station entrances
 •Add new stairways
 •Widen platform

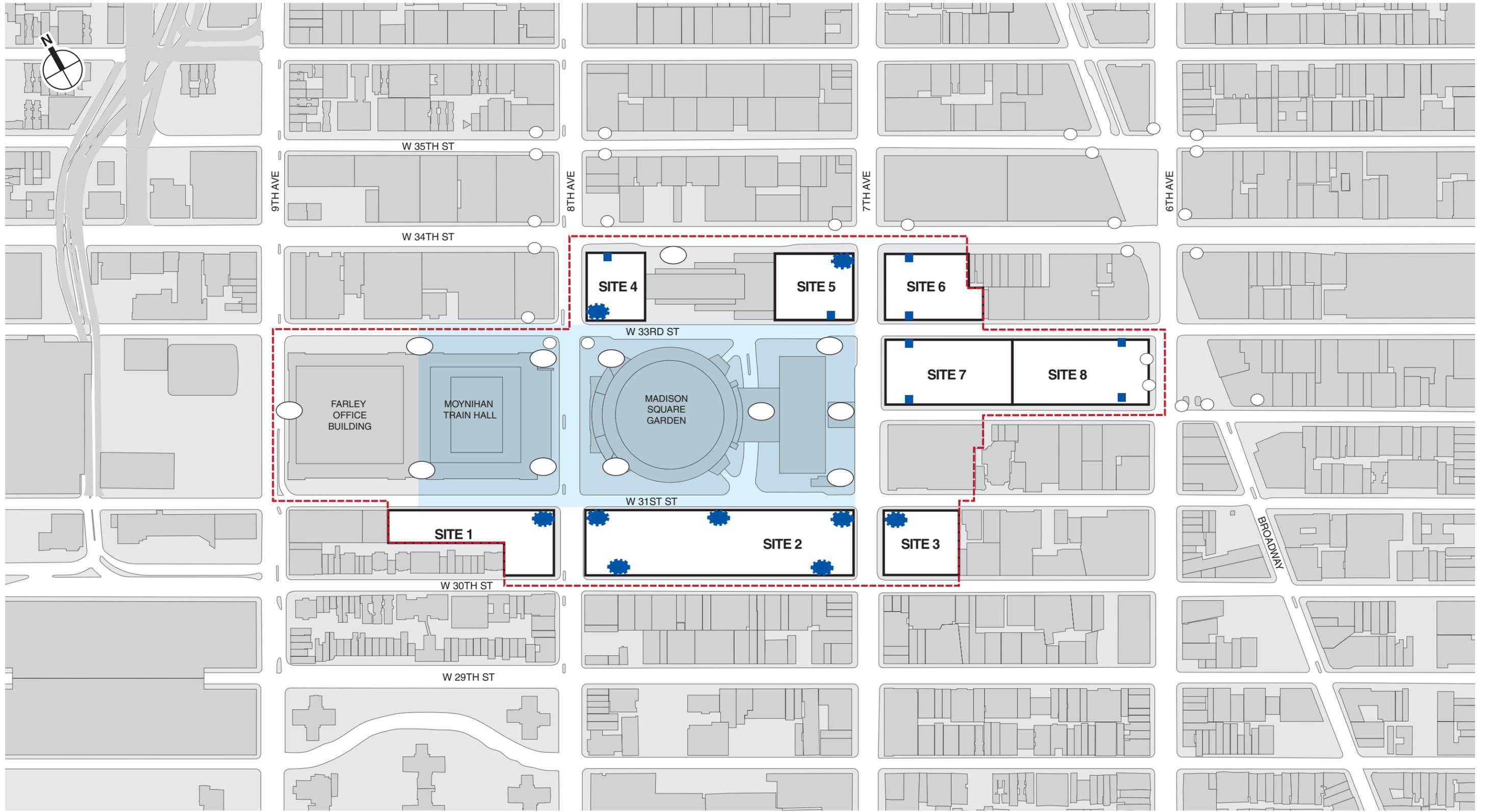
34th St Penn Station
1 2 3
 •Widen existing stairways
 •Add new stairways
 •Widen platform
 •Add new station entrances
 •Add ADA compliant elevator

Proposed Below-Grade East-West Corridor
 (Final Location TBD)

34th St Herald Square
B D F M N Q R W
 •Add new station entrances
 •Add new stairways
 •Reconfigure fare control areas
 •Widen existing stairways

- Project Area
- Development Sites
- Public Transit Improvements Areas
- Potential Expansion of Penn Station
- Existing Penn Station

Note: In addition to the improvements shown on this figure, a potential north-south below-grade concourse east of Seventh Avenue, between approximately West 30th Street and West 34th Street, two new crossings below Seventh Avenue to connect Penn Station to the potential north-south concourse, and an underground passage from the proposed expansion of Penn Station to Moynihan Train Hall are under consideration subject to additional analysis for engineering and financial feasibility.



- Project Area
- Development Sites
- Existing Penn Station

- Proposed Transportation Access Improvements**
- ⚙ New Penn Station Entry
 - Relocated Subway Stair

- Existing or Planned Penn Station Entry (Separate from the Proposed Project)
- Existing Subway Access

Public Realm Improvements

ESD, through the GPP, would require the implementation of above-grade public realm improvements in the Project Area in connection with the proposed developments. The above-grade public realm improvements include sidewalk widenings, new passive open space, enhancements to existing open space, the potential creation of shared streets, the potential installation of protected and standard bike lanes, and potentially a publicly accessible sky concourse above Plaza 33 with access through the lobbies of the 1 and 2 Penn Plaza office buildings. The public realm improvements are shown in **Figure S-7**.

Sidewalk Widenings

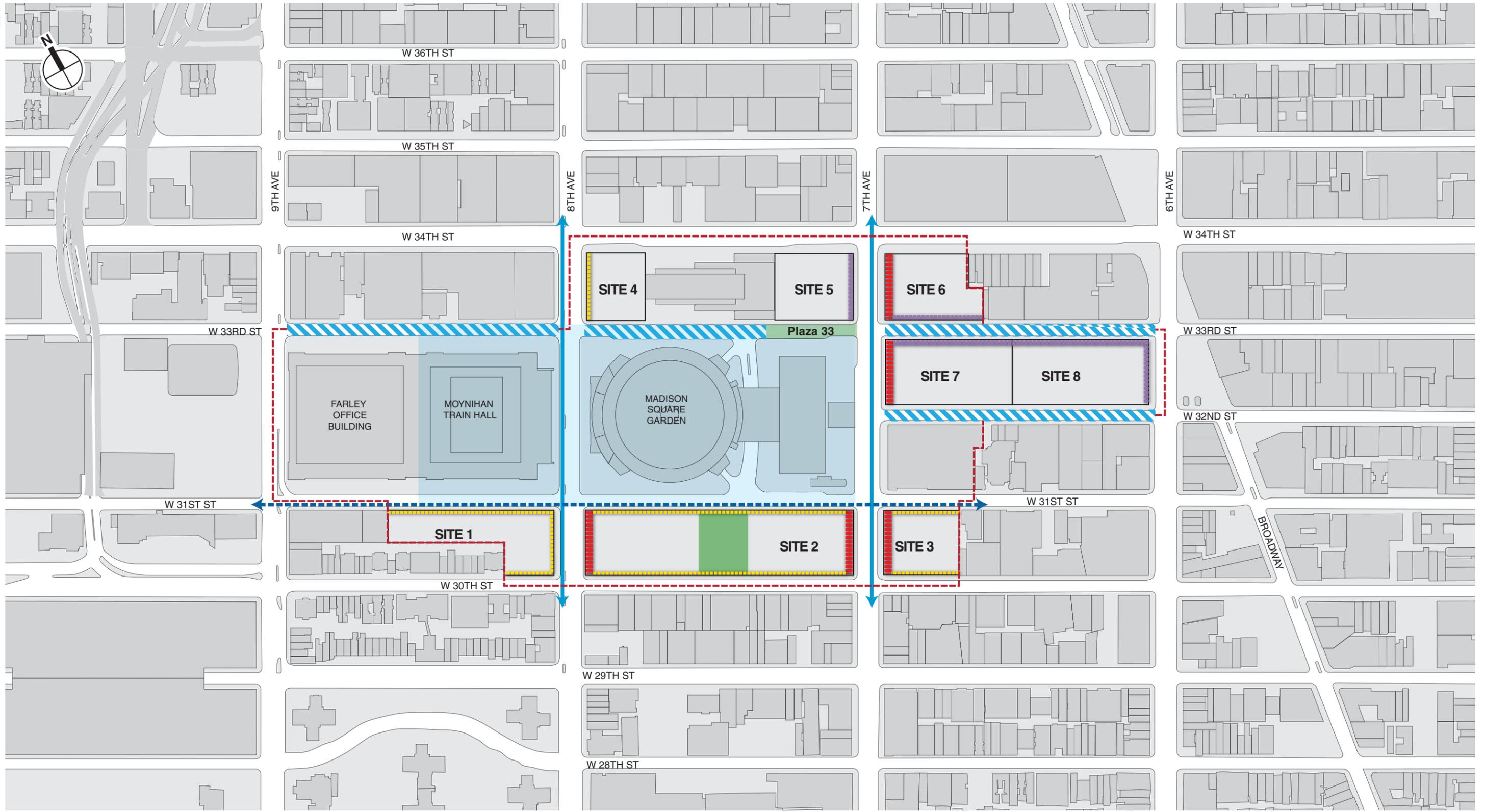
Sidewalks would be widened on the sites adjoining the City-owned mapped streets at the locations listed below and shown in **Figure S-7**. The widenings would be accomplished by setting the new buildings back from the property line.

- The entire north side of West 30th Street between Seventh and Eighth Avenues, and portions of the north side of West 30th Street, between Eighth and Ninth Avenues and Sixth and Seventh Avenues;
- The entire south side of West 31st Street between Seventh and Eighth Avenues, and portions of the south side of West 31st Street, between Eighth and Ninth Avenues and Sixth and Seventh Avenues;
- Both sides of West 33rd Street between Sixth and Seventh Avenues (all of the south side and western portion of the north side);
- Both sides of Eighth Avenue between West 30th and West 31st Streets, and the east side of Eighth Avenue between West 33rd and West 34th Streets;
- Both sides of Seventh Avenue between West 30th and West 31st Streets, both sides of Seventh Avenue between West 33rd and West 34th Streets, and the east side of Seventh Avenue between West 32nd and West 33rd Streets; and
- West side of Sixth Avenue between West 32nd and West 33rd Streets.

Open Space

The Proposed Project would introduce a new through-block open space on Site 2 between West 30th and West 31st Streets. The proposed open space would be a public plaza constructed in connection with the commercial buildings on Site 2. The plaza would be approximately 30,800 sf (0.71 acres) and would provide a variety of hard- and soft-scape features to support passive recreation and provide a midblock pedestrian connection between West 30th and West 31st Streets. Although a detailed design for the proposed plaza has not yet been developed, the plaza is expected to include a variety of seating typologies and a mix of paved and planted areas. The plaza would include planting beds (surface and/or raised) with ground cover, flower beds, shrubs or lawn. In addition, the plaza is expected to include access and egress points to the expanded Penn Station. The proposed public plaza on Site 2 would provide new open space amenities directly above a modernized and expanded Penn Station, and would serve the new commercial district surrounding Penn Station and the surrounding neighborhoods. The new public plaza would provide passive open space for residents, workers, and visitors to the area.

Plaza 33 is an existing public plaza on West 33rd Street west of Seventh Avenue that is currently closed for construction of the LIRR Concourse project. With the Proposed Project, Plaza 33 would be substantially improved with trees, planters, moveable seating, and new paving. These improvements to Plaza 33 would provide an enhanced environment for passive recreation,



- Project Area
- Development Sites
- Existing Penn Station

- Sidewalk Widening**
- 15'
 - 10'
 - 5'

- Shared Street
- Bike Lane
- Protected Bike Lane
(constructed with permanent materials)

- Proposed Open Space
- Other Planned Open Space

Empire Station Complex Civic and Land Use Improvement Project

programming, and pedestrian circulation. With the Proposed Project, the improvements to the plaza would be integrated with other public realm improvements in the vicinity of Plaza 33 such as the wider sidewalk along the west of Seventh Avenue and the potential shared street on West 33rd Street that would extend to Ninth Avenue. The improvements are intended to create an inviting open space amenity with a clear hierarchy and organization of space that carefully balances the pedestrian circulation and passive recreation functions of the plaza.

Shared Streets

The Proposed Project envisions the future provision of “shared streets” to relieve sidewalk crowding, and potentially provide space for functional elements such as bike racks, seating, plantings, and furniture. A “shared street” is a roadway designed for slow travel speeds where pedestrians and cyclists share the right-of-way with slow-moving vehicles. Shared Streets are designed to accommodate high pedestrian volumes and low traffic volumes and speeds.

Shared street corridors are contemplated along West 32nd Street between Sixth and Seventh Avenues, and West 33rd Street, between Sixth and Ninth Avenues. These street segments would potentially be converted to shared streets, which would enhance the pedestrian experience and provide an opportunity for passive recreation for residents, workers, and visitors to the area. Access to all buildings and businesses would be maintained, allowing for servicing, loading, and deliveries.

Shared streets could be developed through a variety of means, either temporary (e.g., roadway painting, moveable planters and street furniture) or permanent (e.g., a rebuilt street with the roadway flush from building line to building line, rather than with a typical curb line grade separation). Development of shared streets within City-owned mapped streets would require approval by DOT.

Shared streets feature design elements to distinguish areas intended solely for pedestrians and the shared road. They typically include the installation of a tactile warning surface between the pedestrian-only areas and the shared road to guide people with visual impairments. Gutters or drainage inlets to handle stormwater are commonly located between the pedestrian-only zone and the shared road to define the spaces and manage stormwater runoff. Pedestrian areas are programmed with furniture such as seating and planters, and bike infrastructures such as bike racks and bike-share stations. Considerations are typically made to create a safe environment for pedestrians and cyclists. For example, a common strategy is to place bike arrows on the pavement to remind drivers that they are sharing the road with cyclists.

Bicycle Lanes

The Proposed Project would allow for the installation of protected bicycle lanes along Seventh and Eighth Avenues and a standard bicycle lane along West 31st Street within the Project Area, subject to the approval of DOT. Along Seventh Avenue, the existing bicycle lane, which currently terminates at West 30th Street, is expected to be extended north by DOT. On Eighth Avenue, a bicycle lane already exists and will be maintained. The Proposed Project would allow for the enhancement of bicycle lane infrastructure within the Project Area along these two corridors. As part of the development of Sites 1, 2, and 3, the Proposed Project would accommodate bicycle lanes between Sixth and Ninth Avenues along West 31st Street. DOT may consider extending these bicycle lanes along West 31st Street beyond the Project Area.

PENN STATION RECONSTRUCTION AND EXPANSION

The Proposed Project would generate financial support for the potential expansion of Penn Station, and would be designed and constructed to accommodate an integrated below-grade expansion of tracks and platforms south of the existing Penn Station. The design, construction, and operation of an expanded Penn Station would be assumed by one or more of the involved public transportation entities: MTA, Amtrak, and/or NJT. The expansion would substantially increase the station's platform capacity—addressing critical infrastructure constraints at Penn Station. The proposed expansion of Penn Station would alleviate the limitations on train operations within Penn Station and would be integrated with Penn Station, including Moynihan Train Hall, to create the Empire Station Complex (see **Figures S-5** and **S-6**). Subject to federal approvals, the expansion of Penn Station would encompass Block 780 immediately to the south (bounded by Seventh and Eighth Avenues and West 30th and West 31st Streets), the western portion of Block 806 on the east side of Seventh Avenue, and the eastern portion of Block 754 on the west side of Eighth Avenue. Development of an expanded Penn Station could require the removal of all buildings currently existing on these blocks within the Project Area. The expanded station would add eight or nine new tracks and five new platforms—the exact number and configuration will be determined by service operations and engineering studies currently in progress. The new tracks and platforms are expected to primarily serve NJT, whose rail operations are currently the most constrained of the three railroads using Penn Station. NJT also anticipates the highest rate of service growth in mid- and long-term projections. The addition of these tracks would free up capacity on existing tracks in Penn Station.

The platforms and stairways in the proposed expansion of Penn Station would be considerably wider than the existing platforms and stairways in Penn Station, allowing for ample passenger circulation to avoid potential crowding. The track spacing would accommodate the structure and foundations required to support high-density development over an expanded Penn Station.

The potential expansion of Penn Station would likely include a mezzanine level to connect passengers to Level A (the lower level) of the existing Penn Station under West 31st Street and could house mechanical and electrical systems and back-of-house space. Entrances to an expanded Penn Station would be integrated into the proposed developments on Sites 1, 2, and 3. In addition, a new service building for the existing Penn Station and its expansion is assumed to be completed on Site 2.

The proposed expansion of Penn Station is assumed to be constructed by 2028. The full capacity of the expansion would not be realized until the new two-track Hudson River tunnel and Gateway Program are fully operational. The Hudson River tunnel project and all elements of the Gateway Program except the proposed expansion of Penn Station are separate and independent projects from the Proposed Project. The proposed expansion of Penn Station is the only element of the Gateway Program that could potentially receive funding generated by the Empire Station Complex—all other components of the Gateway Program would be funded by other sources.

In addition to accommodating an expanded Penn Station, the Proposed Project would support the reconstruction of the existing Penn Station. Specifically, development under the Proposed Project would generate revenue that would contribute towards funding for substantial improvements to Penn Station as identified through the Penn Station Master Plan. As noted above, improvements under the Penn Station Master Plan would address the functionality, operations, capacity, and safety of the current station and integrate the three primary locations that would comprise the Empire Station Complex into a single, well-functioning, multi-modal complex. As noted above, the implementation of the Penn Station Master Plan is a separate but related projected to the

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Proposed Project, and it would be undertaken separately by one or more of the involved railroads (MTA, Amtrak, and/or NJT).

Project Financing

Project financing is not part of the EIS scope; however, the discussion below is intended to provide context and background. The Proposed Project is complex, with multiple components and construction occurring over many years. In addition, the proposal involves various state and federal entities, such as ESD, MTA, NJT, and Amtrak, as well as private developers. The expanded station will require additional sources of financing, including federal and state funding, to cover the cost of construction. Financing of the station expansion would likely require various partnership structures and federal and state appropriations that are currently unknown. ESD and its partners are exploring multiple funding options, including Payments In Lieu of Taxes (PILOTs), sale of development rights, the sale of bonds, grants, and/or other mechanisms that could be utilized to finance and support the Proposed Project. In addition, the development of the commercial buildings, and the site-specific public realm and transportation improvements, would be privately funded with developer equity and private financing, but various value-capture structures to potentially offset some of the cost of the improvements are being explored.

D. REQUIRED ACTIONS AND ENVIRONMENTAL REVIEW

REQUIRED APPROVALS

The Proposed Project is expected to require the following discretionary actions and approvals, which collectively comprise the Proposed Actions:

EMPIRE STATE DEVELOPMENT

In order to implement the Proposed Project, ESD must adopt and affirm a GPP in accordance with the UDC Act, which would, among other things, provide for new commercial development to create a transit-oriented commercial district to revitalize the area surrounding Penn Station and to fund improvements to Penn Station, subway stations and other transit facilities in the Project Area, as well as the proposed expansion of Penn Station. The GPP would require that the commercial development be designed and constructed to accommodate the Penn Station expansion at three of these sites and beneath adjoining streets, if the blocks south of Penn Station are approved as the location for the station's expansion. The GPP would allow for the override of use, bulk, density, and other applicable provisions of New York City's Zoning Resolution and possibly other local laws, codes, and requirements.

As discussed below, any commercial development on the proposed Penn Station expansion sites (Sites 1, 2, and 3) would be contingent on those sites first being deemed the preferred alternative for a station expansion by or for Amtrak, MTA, and NJT pursuant to an independent approval process and federal environmental review that will be undertaken for the proposed Penn Station expansion. Although ESD has no authority to approve or dictate the location of a Penn Station expansion, it has included Sites 1, 2, and 3 within the proposed GPP boundaries in order to (i) preserve the opportunity to facilitate joint commercial development with the rail facilities on those sites, should the station expansion proceed at those locations; and (ii) include the station expansion, if constructed on those sites, and potentially other elements of the above- and below-grade pedestrian circulation network in the vicinity of Penn Station, as elements of Penn Station

that could receive proceeds from the Proposed Project's revenues. In the event a preferred alternative different from a Penn Station expansion on Sites 1, 2, and 3 emerges from any federal approval process, ESD would consider whether to modify the proposed GPP as appropriate to achieve the goals of revitalizing the area and improving Penn Station, and would undertake additional environmental review as necessary and appropriate.

At this time, a final determination has not been made as to which public entity or entities would acquire the property interests needed for the proposed expansion of Penn Station or which entity or entities would construct the expanded station. If authorized by the U.S. Department of Transportation pursuant to applicable federal laws and rules, acquisition of Sites 1, 2, and 3 may proceed in advance of final approval of the federal environmental impact statement for the Penn Station expansion for the purpose of right-of-way acquisition, but any relocation and demolition of properties on those parcels would not occur until the National Environmental Policy Act (NEPA) process is complete. If the Penn Station expansion proceeds on Sites 1, 2, and 3, it is anticipated that the portions of these properties (and the development rights above them) that are not needed for the proposed expansion of Penn Station or to service the rail network would subsequently be conveyed or leased for commercial redevelopment that is described in Chapter 1, "Project Description," and assessed in this DEIS. However, ESD would not exercise its override of zoning or other local laws or enter into binding development arrangements for Sites 1, 2, and 3 unless and until the involved public transportation entities become committed to constructing a Penn Station expansion at those locations and all necessary approvals to do so are in place.

METROPOLITAN TRANSPORTATION AUTHORITY

MTA would take such actions as are necessary to implement its responsibilities under the Penn Station Master Plan (see Chapter 1, "Project Description"), including requisite agreements with NJT and Amtrak and, potentially, MSG. There may also be an agreement between ESD and MTA relating the use of proceeds from the Proposed Project's revenues to fund eligible improvements at Penn Station and the adjoining subway stations, new or refurbished below-grade pedestrian passageways connecting to Penn Station, or the proposed expansion of Penn Station. It is anticipated that the expansion of Penn Station will be subject to an environmental impact statement prepared under NEPA. The expansion may involve a funding agreement with the U.S. Department of Transportation or one of its agencies, and it may require agreements among MTA (which also could involve MTA's operating entities New York City Transit [NYCT], the Long Island Rail Road [LIRR], the Metro-North Railroad [Metro-North]) and other as-yet-unknown developer(s) of Sites 1, 2, and 3 regarding project design, construction phasing, and leasing arrangements. MTA may consider the information and analyses in this EIS to determine whether to proceed with acquisition of the real property at Sites 1, 2, and 3.

CITY OF NEW YORK

ESD will consult with the City as required by the UDC Act in connection with the GPP, including, among other things, with respect to design and development parameters in lieu of zoning and construction of the public realm improvements.

NEW JERSEY TRANSIT

NJT will likely operate the largest number of trains and would carry the largest passenger volumes on the tracks and platforms comprising the proposed expansion of Penn Station. It is anticipated that NJT would need to enter into agreements with Amtrak (and potentially the as-yet-unknown

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developer[s] of the land above the proposed Penn Station expansion) regarding project design, construction phasing, and operations. NJT may also need to modify existing agreements governing NJT obligations and use of Penn Station facilities.

AMTRAK

As the owner of Penn Station, Amtrak would enter into development, construction, and leasing agreements with ESD, MTA, NJT, or others as necessary.

PORT AUTHORITY OF NEW YORK AND NEW JERSEY

The Port Authority of New York and New Jersey (PANYNJ) would be involved in the design and construction of transportation improvements affecting the 33rd Street Port Authority Trans-Hudson (PATH) line station.

APPROVALS REGARDING THE PROPOSED PENN STATION EXPANSION

Although the sites constituting a proposed expansion of Penn Station are included within ESD's GPP boundaries, the siting, planning, environmental review, property acquisition, and construction of a Penn Station expansion into the sites identified as Site 1 (part of Block 754), Site 2 (Block 780), and Site 3 (part of Block 806) would be subject to separate actions and approvals by or for the involved public transportation agencies—Amtrak, MTA, and NJT. In the likely event that a Penn Station expansion project would be contingent on some level of federal funding, such actions and approvals may include:

- Designation of a federal lead agency (most likely the Federal Railroad Administration and/or the Federal Transit Administration), participating public transportation entities, and any other involved agencies;
- Environmental review under NEPA, including—but not limited to—an identification of the preferred alternative and any other reasonable and feasible alternatives;
- Determination of the scope of the environmental review;
- Selection of the southward expansion of Penn Station as the preferred alternative;
- Potential authorization by the federal lead agency of acquisition of Sites 1, 2, and 3 in advance of the completion of the NEPA review of the Penn Station expansion for the purpose of right-of-way preservation;
- Acceptance by the lead federal agency of the NEPA EIS and publication of a federal Record of Decision upon completion of the NEPA review; and
- Review under federal historic preservation laws.

Property Acquisition

At this time, a determination has not been made as to which public entity or entities would procure the property interests needed for the proposed expansion of Penn Station or which entity or entities would construct the expanded station. Property acquisitions by Amtrak would be governed by applicable federal law, while property acquisitions by ESD, MTA, or NJT would be governed by applicable state laws, including (if undertaken by ESD or MTA) the New York Eminent Domain Procedure Law. If the proposed expansion of Penn Station becomes a project that receives federal funding or is dependent on federal approvals, the property acquisitions also would comply with

the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. § 4601 *et seq.*) and regulations promulgated under 49 C.F.R. Part 24 (collectively, the “Uniform Act”).

In accordance with applicable federal or state law, owners of properties that would be acquired would be compensated at fair market value and would be provided all other benefits and assistance required by law. Residents of affected properties, whether owners or rental tenants, also would be entitled to receive relocation aid that could include assistance in finding and moving to comparable replacement housing.

E. ANALYTICAL FRAMEWORK

DEFINITION OF STUDY AREAS

The Proposed Project involves eight development sites, adjoining public rights-of-way (like streets and sidewalks), and other portions of the Project Area that are associated with Penn Station and area subway stations that may be located below-grade (see **Figure S-1**).

For each technical area examined in the EIS, an appropriate study area or multiple study areas are defined for the specific analysis. A study area is the geographic area likely to be affected by the Proposed Project for a given technical area or the area in which impacts of that type could occur. Appropriate study areas differ depending on the type of impact being analyzed. The methods and study areas for addressing impacts are discussed in the individual technical environmental analysis chapters.

ANALYSIS YEARS

OPERATIONAL ANALYSIS

SEQRA requires analysis of a project’s effects on its environmental setting. Because the Proposed Project would be completed and become operational at a future date, the environmental setting is the environment as it would exist at project completion and operation. Consequently, future conditions must be projected for a particular year, referred to as the “analysis year” in the DEIS. The analysis year is the year when a project is assumed to be substantially operational, and when the effects of the project would occur. For analysis purposes, the Proposed Project is assumed to be constructed over approximately 16 years. The DEIS will assess an interim analysis year of 2028 and a final analysis year of 2038. The exact schedule of the Proposed Project cannot be predicted with certainty, but the use of 2028 and 2038 analysis years will allow the DEIS to disclose the environmental impacts of the Proposed Project and allow for the identification of any appropriate environmental mitigation of such impacts.

By 2028, it is assumed that the proposed expansion of Penn Station on Block 780 and portions of Blocks 754 and 806 would be constructed, and the tracks and train platforms would be in use. In addition, a new service building for the existing Penn Station and its expansion is assumed to be completed on Site 2 by 2028. Besides the new service building, the above-grade uses on Sites 1, 2, and 3 would be cleared in anticipation of future development. In addition, the reconstruction of the existing Penn Station is assumed to be completed, and commercial development on Site 7, including associated transit and public realm improvements, would be completed and operational. The components of the Proposed Project which are analyzed for the 2028 analysis year are referred to as “Phase 1.” By 2038, it is assumed that all components of the Proposed Project would be completed and fully operational, including the commercial developments on Sites 1 through 6 and 8, as well as the expansion of Penn Station and other Penn Station improvements, and all public

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transportation and public realm improvements. The components of the Proposed Project which are analyzed for the 2038 analysis year are referred to as “Phase 2.” For each analysis year, the With Action condition is evaluated and compared against the No Action condition. The DEIS also considers an extended schedule scenario, as discussed below.

CONSTRUCTION ANALYSIS

For the purposes of analysis, construction of the Proposed Project is assumed to span over approximately 16 years and is delineated into two phases with completion years of 2028 and 2038. Construction activity associated with the Proposed Project would be substantial, and extended construction effects on the environment and sensitive receptors from construction activities are anticipated through 2038.

The construction impact assessment will be based on the Proposed Project’s conceptual construction schedule, preliminary logistics, on-site construction activities, and other relevant activities. For each of the technical areas, appropriate construction analysis year(s) have been selected to represent reasonable worst-case conditions relevant to that technical area, which can occur at different times for different analyses. Because there is uncertainty as to the construction schedule for the Proposed Project, which will depend in part on the demand for the substantial commercial office space that comprises a significant component of the Proposed Project, the conceptual construction schedule has been prepared to allow an assessment of the potential for significant construction impacts under reasonable worst-case conditions, which would involve the concurrent construction of several project buildings.

MITIGATION

Mitigation measures for all significant adverse impacts identified in this EIS are summarized below and described in detail in Chapter 22, “Mitigation.” SEQRA requires that any significant adverse impacts identified in the EIS be minimized or avoided to the fullest extent practicable, balanced against social, economic, and other considerations. The DEIS will present a range of mitigation measures for selection by the lead agency in the FEIS. Where feasible mitigation is not available or practicable, the EIS must disclose the potential for unavoidable significant adverse impacts.

ALTERNATIVES

Alternatives analyzed in this DEIS include a No Action Alternative, a No Unmitigated Significant Adverse Impacts Alternative, a Lower Density Alternative, and a Residential Alternative (see Chapter 21, “Alternatives”).

EXTENDED SCHEDULE SCENARIO

Notwithstanding current disruptions associated with the COVID-19 pandemic, the proximity of the Proposed Project’s buildings to abundant transportation service is likely to make them attractive to prospective office tenants over the coming decades. It is not reasonable to assume that the COVID-19 pandemic will continue to suppress demand for commercial office space and passenger rail and transit ridership through 2038, and the assumption that the Proposed Project would be completed expeditiously represents a reasonable worst-case scenario for analysis. In the event conditions stemming from the pandemic or other market forces suppress demand for commercial space for an extended period of time, the schedule for implementation of the Proposed Project would adjust to those market conditions.

In general, if demand for office space within the Project Area is insufficiently robust to warrant the completion of each of the Proposed Project's office buildings by the 2038 analysis year, then construction and occupancy of the Proposed Project office buildings would be deferred. If the development of the Proposed Project extends beyond 2038, then many of the economic benefits would not accrue and environmental impacts of the construction and operation of the Proposed Project would not occur until a later date.

In the event that the Proposed Project's completion is extended beyond the analysis years of 2028 and 2038 (the extended schedule scenario), the impacts from the Proposed Project would not be different or of a greater magnitude than the impacts studied and disclosed in the analysis chapters of this EIS. The EIS analysis accounts for known development projects likely to be built by the analysis years, including developments currently under construction or that can be reasonably expected due to the current level of planning and applications for public approvals. Therefore, the EIS analyses represent a reasonable worst-case depiction of future conditions, because they account for a full array of other nearby projects that could materialize within the study timeframes. To the extent that economic conditions affect the completion of the Proposed Project, it is expected that other background development projects would be subject to the same market forces (e.g., reduced demand for commercial space). Therefore, an extended schedule for the Proposed Project resulting from prolonged adverse economic conditions would be expected to be accompanied by a delay in other background development projects, and future conditions in an extended analysis year be projected to be similar to those described in this EIS for 2038.

In an extended schedule scenario, the program, bulk, density, and location of the Proposed Project would not change, nor would the projected worker population. It is also assumed that each development site (other than Sites 1, 2, and 3, which would be cleared for the Penn Station expansion) would continue as in existing conditions and would only be demolished when construction is ready to commence. Therefore, an extended schedule scenario would result in the same or similar impacts as the Proposed Project, but at a later date, in the analysis areas of land use, zoning, and public policy; socioeconomics; community facilities and services; open space; shadows; historic and cultural resources; urban design and visual resources; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; air quality; greenhouse gas emissions and climate change; noise; public health; or neighborhood character. The extended schedule scenario would also result in the same or similar impacts with respect to transportation and construction, as discussed in more detail in Chapter 14, "Transportation," and Chapter 20, "Construction."

The completion of the Proposed Project at a later date would delay the delivery of some of the project benefits such as revitalization of the Project Area, economic growth and tax revenue through job creation and economic activity, implementation of transit and public realm improvements, and the Proposed Project's support for the reconstruction and expansion of Penn Station.

F. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE, ZONING, AND PUBLIC POLICY

The Proposed Project would not result in significant adverse impacts related to land use, zoning or public policy. The Proposed Actions would facilitate development of eight sites with high-density commercial developments containing a mix of Class A office space, retail space, and hotel space. The Proposed Project would increase commercial density compared to the No Action condition and this increase in density would be consistent with broader land use trends of high-density commercial development in adjacent areas of Manhattan (including the area adjacent to Grand

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Central Terminal) and capitalize on the Project Area's unparalleled transit access. The Proposed Project would enhance the public realm and generate revenue for much-needed public transportation improvements at Penn Station and area subway stations. The Proposed Project would also support the planned expansion of Penn Station, which would serve New York's future transportation needs. Overall, the Proposed Project would reinvigorate the Project Area by creating a modern, transit-oriented commercial district centered around Penn Station and would help create a corridor of high-density, predominantly commercial uses linking the Midtown Central Business District, Penn Station, and Hudson Yards. Therefore, the Proposed Project would not adversely affect the land use character of the primary or secondary study area and would not result in significant adverse land use impacts in either the Phase 1 or Phase 2 analysis years. The Proposed Project would not directly displace any land uses so as to adversely affect surrounding land uses, nor would it generate land uses that would be incompatible with surrounding land uses, zoning, or public policies.

The Proposed Actions would override the New York City Zoning Resolution and impose design guidelines, developed in consultation with the City, in lieu of zoning. The override of existing zoning regulations would be necessary to achieve the goals and objectives of the Proposed Project. The Proposed Actions would permit densities and bulk that would further public policies to support high-density development in areas well-served by public transit and the density permitted with the GPP and would be consistent with the densities allowed in surrounding areas such as Hudson Yards and Midtown. Overall, the GPP and zoning overrides would foster high-density development appropriate for the Project Area's central location in Midtown Manhattan and unmatched transit connectivity. Therefore, the Proposed Actions would not result in a significant adverse impact to zoning. With respect to public policy, the Proposed Project would result in development that is consistent with land use and zoning and furthers several stated public policies intended to promote sustainability, walkability, transit, employment, and economic development.

SOCIOECONOMIC CONDITIONS

The Proposed Project would not result in significant adverse impacts due changes in socioeconomic conditions, and would generate substantial economic benefits for New York City and New York State. Conclusions related to each of the five areas of potential socioeconomic impacts are summarized below, followed by a summary of economic benefits that would be generated by the Proposed Project.

DIRECT RESIDENTIAL DISPLACEMENT

The Proposed Project would directly displace an estimated 206 residents living in 128 residential units. This direct displacement estimate conservatively includes all housing units on the development sites regardless of their current occupancy status or the terms upon which they would be vacated. The potential displacement of these residents would occur during Phase 1 of the Proposed Project (by 2028). Based on guidelines in the *CEQR Technical Manual*, the direct displacement of these residents would not result in a significant adverse impact because they do not represent a significant portion of the study area population (the 206 residents represent less than five percent of the study area population), and they do not have socioeconomic characteristics that differ markedly from the study area population as a whole.

At this time, a determination has not been made as to which public entity or entities would acquire the property interests on Sites 1, 2, and 3 that would be needed for the proposed expansion of Penn Station. Property acquisitions by Amtrak would be governed by applicable federal law, including

the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. § 4601 *et seq.*) and regulations promulgated under 49 CFR Part 24 (collectively, the “Uniform Act”). Property acquisitions by the MTA or ESD would be governed by applicable state law, including the New York Eminent Domain Procedure Law. If the proposed expansion of Penn Station receives a significant amount of federal funding or support, relocation assistance to displaced residents and businesses would be provided in accordance with the Uniform Act. Otherwise, such relocation assistance would be provided in accordance with applicable state law.

DIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

By 2038, the Proposed Project would result in the direct displacement of an estimated 9,137 employees and 473 firms. In Phase 1 (2028), an estimated 3,747 employees at 353 firms would be displaced. In Phase 2, an estimated 5,390 employees at 120 firms would be displaced. The potentially displaced workers represent approximately three percent of total jobs in the study area. Businesses and institutions subject to direct displacement are involved in a variety of industries including Professional, Scientific, and Technical Services; Manufacturing; Information; Accommodation and Food Services; and Retail Trade. The proportion of displaced jobs by sector would not exceed five percent of the sector jobs within the study area, with the exception of the following: Retail Trade (nine percent); Manufacturing (seven percent); and Professional, Scientific, and Technical Services (six percent).

The Proposed Project would not cause a significant adverse direct business and institutional displacement impact because the potentially displaced businesses and institutions provide goods and services that would still be found within the study area and that would continue to be available to local residents and businesses. None of the businesses or institutions serve a customer base that is uniquely dependent upon their location within the study area, nor are they subject to regulations or publicly adopted plans aimed at preserving, enhancing, or otherwise protecting them in their current location.

While the potentially displaced establishments and jobs are valuable individually and collectively to the City, the Proposed Project would provide modern office, retail, and hotel space in an area of the City where the commercial building stock is aging and in need of revitalization. The Proposed Project is necessary to maintain the Project Area’s competitiveness and connectivity as a business district within the City and region. The Proposed Project would result in a net increase of 11.2 million gross square feet (gsf) of office space, 141,000 gsf of retail space, 336 hotel rooms over what would be developed in the No Action condition. This amount of new commercial space would create opportunities for new businesses to locate within the Project Area. Furthermore, potentially displaced businesses would be able to find comparable space within the study area or the City at large.

INDIRECT RESIDENTIAL DISPLACEMENT

The Proposed Project would not introduce new residential space, and the Project Area would experience a net reduction of residential units in the With Action condition compared to the No Action condition. Due to the absence of new residential development in the Proposed Project, the Proposed Project would not induce residential price trends that could result in substantial changes to socioeconomic conditions for study area residents. Therefore, an assessment of indirect residential displacement is not warranted for the Proposed Project.

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INDIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

The Proposed Project would not result in significant indirect business or institutional displacement impacts and, in general, existing businesses would benefit from the larger customer base that would be created by the worker and visitor populations introduced by the Proposed Project. While the introduction of new workers and visitors could alter existing economic patterns in certain portions of the study area, these changes would not lead to a substantial amount of indirect business or institutional displacement. Although the Proposed Project would directly displace 9,137 employees, the Proposed Project would support 59,300 new permanent jobs within the study area. Existing businesses could capitalize on new demand from the worker population such that an increase in sales and services rendered could offset potential increased rents. In addition, the analysis found that neighboring submarkets are either consistent in development trends with the Proposed Project or are well-established commercial districts that have remained relatively stable within the Midtown market. In certain retail and commercial districts, the effects of rezoning efforts in Chelsea and the Garment District have already led to displacement of certain businesses in specific sectors (e.g., Manufacturing, Wholesale Trade), even in the absence of the Proposed Project. These displacement trends are expected to continue to occur irrespective of the Proposed Project through the final analysis year of 2038.

The types of businesses and institutions that are most vulnerable to indirect displacement include Manufacturing and Wholesale Trade sector jobs that are housed in traditionally industrial-class real estate. Institutional uses are also vulnerable to displacement, since these uses may be less compatible with economic trends. Overall, these categories of businesses and institutions are not unique to the study area and do not have locational needs that would preclude them from relocating elsewhere in Manhattan or to Brooklyn, Queens, or the Bronx. In the case of the Garment District, garment manufacturing and wholesale establishments have already been dispersing and growing in smaller clusters outside of Manhattan due in part to the changing nature of retail supply chain distribution networks. Based on the assessment of displaced businesses, the potentially displaced products and services may be found elsewhere within the study area. As noted earlier, the study area is already experiencing a trend of displacement of Manufacturing and Wholesale Trade businesses and this trend is expected to continue, even in the absence of the Proposed Project. Thus, the potential displacement of businesses and institutions would not have a significant adverse impact on remaining businesses and residents in the study area.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

The Proposed Project would not result in a significant adverse impact on business conditions in any specific industry or any category of businesses. In addition, the Proposed Project would not indirectly substantially reduce employment or impair the economic viability in any specific industry or category of business.

ECONOMIC BENEFITS

Proposed Project

Transit-oriented developments have the potential to create economic benefits for the local and regional economies. The Proposed Project would increase the density and capacity for additional businesses and firms through new commercial spaces within the Project Area. It would provide substantial, new high-density and commercial development proximate to Penn Station. The generation of new, permanent direct and indirect jobs in New York City and New York State would

produce ongoing fiscal benefits for both New York City and New York State, including income and sales tax revenues. The new commercial spaces within the Proposed Project would enable greater business activity for current and new establishments located in and around Penn Station.

Based on estimated total development costs of \$11.7 billion (in 2020 dollars), the construction of the Proposed Project buildings (not including the new train station facilities) would generate approximately 75,300 direct and indirect person-years of construction-related employment in New York City, and approximately 89,800 direct and indirect person-years of employment in New York State. In turn, the construction-related employment would generate \$7.5 billion in wages in New York City and \$8.7 billion in wages in New York State. In terms of total economic output, construction of the Proposed Project would generate \$16.7 billion in economic activity in New York City and \$21.9 billion in New York State overall.

During annual operations, upon full build-out the Proposed Project would support an estimated 59,300 direct jobs. Job growth within the Project Area has been stagnant compared to the study area, and the new employment generated by the Proposed Project would serve to revitalize the Project Area into a modernized commercial district. In New York City, the Proposed Project would generate 61,200 indirect jobs, for a total of 120,500 jobs. In New York State, the Proposed Project would generate an additional 19,800 indirect jobs for a total of 140,300 jobs. This would generate \$14.3 billion in total annual earnings within New York City and \$16.1 billion in total annual earnings in New York State. In terms of total economic output at completion, \$64.0 billion would be generated annually in New York City and \$73.3 billion in New York State overall.

Penn Station Expansion

Enhanced transportation infrastructure, including access/egress to station, street connections, as well as potential for future cross-Hudson capacity improvements, would allow for greater rail and transit capacity, as well as improved accessibility for commuters, facilitating job growth in New York City. The Penn Station improvements and expansion would generate new direct and indirect construction-related employment in New York City and New York State. In turn, the construction-related employment would generate wages and annual economic activity in New York City and New York State. Increased rail and transit capacity could also lead to an increase in economic activity for businesses located in and around the station. The new construction and economic activity would also generate fiscal benefits for both New York City and New York State, including income and sales tax revenues and transit fare revenues.

COMMUNITY FACILITIES

The Proposed Project would not result in a significant adverse impact to community facilities. The Proposed Project would not introduce a new residential population and therefore detailed assessments of public schools (elementary, intermediate, and high schools), libraries, and child care facilities are not warranted. Based on the *CEQR Technical Manual* screening methodology, detailed analyses of outpatient health care facilities and police and fire protection services are also not warranted, although a description of such facilities serving the Project Area is provided for informational purposes.

With respect to the community facilities directly displaced by the Proposed Project, the analysis concludes that there are other facilities that provide similar services nearby, some of the facilities serve only a small local population, and that some of the facilities and services do not have unique locational needs and would likely be able to relocate. Overall, the analysis concludes that the displacement of these facilities with the Proposed Project would not result in significant adverse impacts to community facilities and services.

OPEN SPACE

The Proposed Project would result in significant adverse impacts to open space by directly and indirectly affecting open space resources. According to the CEQR Technical Manual, a proposed action may result in a significant adverse impact on open space resources if (a) there would be direct displacement/alteration of existing public open space within the study area that would have a significant adverse effect on existing users; or (b) it would reduce the open space ratio and consequently result in the overburdening of existing facilities or further exacerbation of a deficiency in open space. Typically, a reduction in the open space ratio exceeding five percent is considered to be significant. However, if an area has a very low open space ratio, a reduction as small as one percent may be considered significant. The open space study area analyzed in this chapter is located in an area that is considered neither underserved nor well-served by open space as defined by the 2020 *CEQR Technical Manual Appendix: Open Space Maps*. A five percent or greater decrease in the open space ratio is considered to be “substantial.”

The Proposed Project would result in the direct displacement of a through-block plaza between West 33rd and West 34th Streets that is part of the 1 Penn Plaza privately owned public space (POPS), eliminating a substantial portion of that open space resource. In addition, the Proposed Project would introduce a substantial non-residential population to the study area that would place a significant demand on passive open spaces. Currently, the passive open space ratio in the study area for non-residential users is well below the City’s guidelines as indicated in the *CEQR Technical Manual*, and would remain well below the guidelines in both the Future With the Proposed Project (the With Action condition) and the Future Without the Proposed Project (the No Action condition) for both the 2028 Phase 1 and 2038 Phase 2 analysis years.

DIRECT EFFECTS

With respect to direct effects, in the 2028 With Action condition, the Proposed Project would introduce improvements to Plaza 33, including trees, planters, moveable seating, and new paving. The improvements to Plaza 33 with the Proposed Project would provide an enhanced environment for passive recreation, programming, and pedestrian circulation. Based on the shadows, air quality, noise, and construction impacts analyses, study area open spaces would not experience direct effects related to any of these areas of analysis that would cause a significant adverse impact to open space.

In the 2038 With Action condition, the Proposed Project would directly affect open space by introducing a new through-block public plaza on Site 2 between West 30th and West 31st Streets, in addition to the improvements to Plaza 33 that would occur in the 2028 With Action condition. The proposed public plaza on Site 2 would be approximately 0.71 acres and would provide a variety of hard and soft scape features to support passive recreation use as well as midblock pedestrian access between West 30th and West 31st Streets. It is expected that the proposed plaza would include a variety of seating types to provide varied seating options and a mix of paved and planted areas. The proposed public plaza on Site 2 would provide new open space amenities directly above a modernized Penn Station, and would serve the new commercial district surrounding Penn Station and the adjacent neighborhoods.

In addition to the proposed plaza on Site 2, Phase 2 of the Proposed Project would introduce other improvements that would enhance the public realm, including wider sidewalks and shared streets, which would reduce sidewalk crowding and allow for an improved pedestrian experience around Penn Station. Shared streets would be located along West 32nd Street between Sixth and Seventh Avenues, and along West 33rd Street between Sixth and Ninth Avenues and may provide space for seating and planters.

In the 2038 With Action condition, the Proposed Project would also directly affect open space by eliminating the through-block east pedestrian plaza that is part of the 1 Penn Plaza POPS. The elimination of the plaza represents a reduction of approximately 0.16 acres of passive open space as compared to the No Action condition. Although the Proposed Project would introduce improvements that would enhance the public realm—including wider sidewalks, shared streets, a new public plaza on Site 2, and an enhanced open space with the reopening of Plaza 33—the elimination of the plaza on the 1 Penn Plaza POPS as a result of construction on Site 5 would constitute a significant adverse direct impact to open space. A range of potential measures to mitigate the significant adverse direct open space impact are discussed below.

Furthermore, as discussed in Chapter 7, “Shadows,” the Proposed Project would result in a significant adverse impact as a result of incremental shadows cast on six open space resources, including the MSG POPS, Plaza 33, Herald Square Park, Chelsea Park, the Penn South open spaces, and the Farley Building’s Eighth Avenue steps. Based on the analyses provided for air quality, noise, and construction, study area open spaces would not experience significant adverse impacts associated with direct effects related to any of these areas of analysis.

INDIRECT EFFECTS

In the 2028 With Action condition, the Proposed Project is projected to result in a net decrease in the worker population in the study area compared to the No Action condition. This projected decrease in the worker population reflects new development on Site 7 in Phase 1 as well as the clearing of the existing buildings on Sites 1, 2, and 3 to accommodate construction of the proposed expansion of Pennsylvania Station (Penn Station). Phase 1 of the Proposed Project would result in a moderate increase to the passive open space ratio for the worker population (a 0.58 percent change). Taking into account the combined residential and worker populations within the study area, the combined open space ratio represents a 0.60 percent change. Since there would be a moderate increase in the open space ratios, Phase 1 of the Proposed Project would not result in a significant adverse impact to open space.

In the 2038 With Action condition, the Proposed Project would introduce new and enhanced publicly accessible open spaces, as well as other public realm improvements that would benefit workers and residents of the surrounding neighborhoods. Nonetheless, given the introduction of a substantial new worker population, the Proposed Project would result in a decrease in the passive open space ratio of approximately 8.87 percent. Taking into account the combined residential and worker populations within the study area, there would be an 8.17 percent decrease in the combined open space ratio. These decreases would exceed the CEQR Technical Manual threshold of a five percent decrease for a potential open space impact. The Proposed Project would overburden existing and proposed passive open spaces, particularly during the midday hours when the open spaces would be most heavily utilized by numerous users in addition to study area workers. Therefore, the Proposed Project would result in a significant adverse indirect impact to open space in 2038. A range of potential measures to mitigate the significant adverse indirect impact to open space are discussed below in “Mitigation.”

SHADOWS

The Proposed Project would cause significant adverse shadow impacts to five open space resources and four historic architectural resources with sunlight-sensitive features in the 2038 analysis year (Phase 2).

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The Proposed Project would result in the development of ten new buildings within the Project Area. These buildings would be developed in accordance with Design Guidelines, which would specify the parameters for permitted development in lieu of zoning and, consistent with zoning in other high-density commercial areas of New York City, would not impose height limits, except for on the midblock portion of Site 1, where a 400-foot height limit would be imposed. Therefore, to provide for a conservative analysis, the assessment accounts for the maximum buildable envelope for each development site (i.e., assuming minimum required setbacks), up to the illustrative building height, plus an additional 150 feet to provide for future design flexibility, rooftop mechanical space, and other potential rooftop structures, such as spires (except for the midblock portion of Site 1, which was limited to 400 feet in height). The actual structures to be built on the development sites may have a different height and bulk than the conservative envelopes examined in this shadow assessment, resulting in somewhat different shadows.

The analysis concludes that, in the 2028 analysis year, Phase 1 of the Proposed Project would cast incremental shadows on 35 sunlight-sensitive resources. As described in detail in Chapter 7 “Shadows,” these new shadows would be of limited extent and duration and would not cause any significant adverse shadow impacts. Incremental shadow would fall on 18 of the 35 resources for 30 minutes or less on any given day, and would only occur in some but not all seasons. Other resources would receive longer durations of incremental shadow, but in no case would the incremental shadow be substantial enough in extent or duration to significantly affect the use or appreciation of the resource.

In the 2038 analysis year (Phase 2), the Proposed Project would be completed and the additional development would cast larger shadows for longer durations as compared to the future without the Proposed Project. Forty-eight sunlight-sensitive resources would experience incremental shadows as a result of the Proposed Project. Most of the affected resources in 2038 would receive a limited extent and duration of new shadows and would not be significantly impacted. However, nine sun-sensitive resources would experience substantial durations and occasionally large extents of new shadow, significantly reducing their attractiveness and usability, or, in the case of the historic resources, obscuring a sunlight-dependent feature. Phase 2 of the Proposed Project would result in significant adverse shadow impacts to the following sunlight-sensitive resources: MSG privately owned public space (POPS), Plaza 33, Herald Square Park, Chelsea Park, the Penn South open spaces, Moynihan Train Hall, St. Michael’s Catholic Church, St. Francis of Assisi Church, and the former Greenwich Savings Bank. A range of potential measures to mitigate the significant adverse shadows impacts is discussed below in “Mitigation.”

HISTORIC AND CULTURAL RESOURCES

The Proposed Project would result in significant adverse impacts to architectural resources, however, no impacts to archaeological resources would occur. In the 2028 analysis year, direct significant adverse impacts involve the removal of historic resources on Sites 2, 3, and 7 and potential construction-related impacts to several architectural resources located within 90 feet of proposed construction activity. In the 2038 analysis year, indirect significant adverse impacts related to shadows and visual resources would affect several historic resources. Additionally, the Proposed Project would result in construction-related impacts in the 2038 analysis year.

ARCHAEOLOGICAL RESOURCES

There are no areas of archaeological sensitivity within the Project Area. LPC reviewed the blocks and lots included within the development sites and advised ESD in a letter dated July 14, 2020

that Sites 1, 2, 3, 4, 5, 6, and 8 were not potentially archaeologically significant. After considering such advice, ESD as the lead agency has determined no further archaeological analysis is required for those sites. An Archaeological Documentary Study of Site 7 and the adjacent streetbed of West 32nd Street prepared in September 2020 determined that Site 7 and the adjacent streetbed are not archaeologically sensitive due to the extensive excavation that occurred during the construction of the existing railroad easements and the Hotel Pennsylvania. In comment letters dated December 10 and December 14, 2020, OPRHP and LPC (respectively) concurred with the conclusions and recommendations of the Archaeological Documentary Study (see **Appendix E**). Therefore, the Proposed Project would not result in significant adverse impacts on archaeological resources in either the 2028 (Phase 1) or 2038 (Phase 2) With Action condition.

ARCHITECTURAL RESOURCES

In the 2028 With Action condition, the Proposed Project would result in significant adverse direct impacts on five architectural resources located on Sites 2 and 3 that would be removed for the proposed below-grade expansion of Penn Station, and one architectural resource on Site 7 that would be demolished to allow for new commercial development on Site 7. Measures that could partially mitigate these significant adverse impacts are described below in “Mitigation;” consultation with OPRHP regarding these potential measures is ongoing.

In the 2028 With Action condition, development of the Proposed Project could have adverse physical impacts on six additional architectural resources that are located within 90 feet of proposed construction activities, close enough to potentially experience adverse construction-related impacts from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery. The same six architectural resources could also be adversely affected by adjacent construction in the 2038 With Action condition. Therefore, Construction Protection Plans to protect the six architectural resources within 90 feet of construction would be required to be developed and implemented in coordination with OPRHP. For New York City Landmark designated and eligible properties potentially affected by construction impacts, the construction protection plans would also be submitted to LPC for review and comment.

In the 2038 With Action condition, the Proposed Project would result in significant adverse shadows impacts on four architectural resources in the primary and secondary study areas and one architectural resource that is located north of the secondary study area. ESD, in ongoing consultation with OPRHP, has identified a range of potential measures that could partially mitigate certain of these significant adverse impacts. Those measures are described below. In the 2038 With Action condition, the Proposed Project would also result in significant adverse visual impacts with respect to the Empire State Building by obstructing views east and northeast towards the architectural resource. Potential measures to mitigate that significant adverse visual impact are discussed below, and consultation with OPRHP regarding those potential measures is ongoing.

As noted above, the siting, planning, property acquisition, and construction of the Penn Station expansion on Sites 1, 2, and 3 would be subject to separate actions and approvals by or for the involved public transportation agencies and would be subject to environmental review under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. Section 106 mandates that federal agencies consider the effects of their actions on any properties listed on or determined eligible for listing on the National Register of Historic Places and afford the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Section 106 requires consultation with the OPRHP acting in its capacity as the State Historic Preservation Office (SHPO), federally recognized Indian tribes that might attach

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religious and cultural significance to historic properties affected by the project, and additional consulting parties with a demonstrated interest in the project based on a legal or economic relation to affected properties or on an interest in the project's effects on historic properties. The lead federal agency, in consultation with the SHPO and consulting parties, must determine whether a proposed project would have any adverse effects on historic properties within the area of potential effect. Section 106 consultation typically results in a Memorandum of Agreement or Programmatic Agreement, outlining agreed-upon measures to avoid, minimize, or mitigate the project's effects on historic properties. Likewise, historic reviews on the state level typically result in the documentation of any agreements stemming from the consultation process in Letters of Resolution.

In addition, it is expected that the involved public transportation agencies would need to comply with Section 4(f) of the U.S. Department of Transportation Act of 1966, which prohibits actions by the U.S. Secretary of Transportation that require the "use" of a historic property that is listed in or eligible for inclusion in the State and National Registers of Historic Places (S/NR), unless a determination is made that there is no feasible and prudent alternative to such use, and all possible planning has been undertaken to minimize harm to the 4(f) property. However, because the Proposed Project would support the proposed expansion of Penn Station on sites containing architectural resources, the potential impacts of the expansion are addressed in this analysis.

This EIS identifies the potential impacts from development of all eight sites within the boundaries of the GPP and proposes potential mitigation measures to fully or partially address adverse impacts on historic and cultural resources. Potential measures to mitigate the adverse impacts resulting from construction on Sites 4 through 8 would likely be stipulated in a Letter of Resolution among ESD, MTA, the developer, and OPRHP in accordance with Section 14.09 of the State Historic Preservation Act. It is anticipated that potential measures to partially mitigate the adverse effects resulting from the expansion of Penn Station on Sites 1, 2, and 3 would be stipulated in a Memorandum of Agreement or Programmatic Agreement among the lead federal agency, OPRHP acting in its capacity as the SHPO, and other applicable parties in accordance with Section 106 regulations.

The impacts of the Proposed Project on architectural resources are summarized in **Table S-2**.

URBAN DESIGN AND VISUAL RESOURCES

URBAN DESIGN

In the 2028 With Action condition, the Proposed Project would not result in a significant adverse impact to urban design. As with the No Action condition, the proposed development on Site 7 would be constructed on an existing block, and would not result in any changes to topography, street pattern and hierarchy, block shapes, or natural features. The proposed improvements to the existing Plaza 33 including additional greenery and seating and the proposed widened sidewalks and potential street plantings on Seventh Avenue and West 33rd Street adjacent to Site 7 would provide amenities for pedestrians to utilize and enjoy. The inclusion of ground-floor retail and landscaping at the sidewalks, similar to the No Action condition, would be consistent with the streetscape of the secondary study area. The proposed With Action development on Site 7 would bring uses that are consistent with those currently developed or proposed within the secondary study area, including office and retail uses. The anticipated building massing, consisting of a base and tower configuration, would be in keeping with the urban design of the secondary study area, which includes new tall buildings with base and tower massings. In addition, the development of a tall building along the avenue would be consistent with the urban design of the secondary study area.

Table S-2

Summary of Adverse Impacts on Architectural Resources

Resource	Adverse Impact from Removal	Adverse Impact from Adjacent Construction*	Adverse Contextual/ Visual/ Shadows Impact	Notes
(#1) Penn Station Service Building, 236-248 West 31st Street, S/NR-eligible, NYCL-eligible	X			Significant Adverse Impact from Development on Site 2
(#2) Fairmont Building, 239-241 West 30th Street, S/NR-eligible	X			Significant Adverse Impact from Development on Site 2
(#3) St. John the Baptist Roman Catholic Church Complex, 207-215 West 30th Street, S/NR-eligible, NYCL-eligible	X			Significant Adverse Impact from Development on Site 2
(#4) Penn Terminal Building, 370 Seventh Avenue, S/NR-eligible	X			Significant Adverse Impact from Development on Site 2
(#5) Stewart Hotel, 371-377 Seventh Avenue, S/NR-eligible, NYCL-eligible	X			Significant Adverse Impact from Development on Site 3
(#6) Hotel Pennsylvania, 401 Seventh Avenue, S/NR-eligible	X			Significant Adverse Impact from Development on Site 7
(#7) U.S. General Post Office, Block bounded by Eighth and Ninth Avenues, West 31st and West 33rd Streets, S/NR, NYCL		X	X	Potential Adverse Construction-Related Impacts from Construction on Site 1; Shadows Impact from Development on Sites 1, 2, 5, and 6
(#8) Former Equitable Life Assurance Company, 393 Seventh Avenue, S/NR-eligible, NYCL-eligible		X		Potential Adverse Construction-Related Impacts from Construction on Sites 3 and 7
(#22) St. Francis Roman Catholic Church Complex, 129-143 West 31st Street, S/NR-eligible, NYCL-eligible		X	X	Potential Adverse Construction-Related Impacts from Construction on Sites 3, 7, and 8; Shadows Impact from Development on Sites 3 and 8
(#25) 23rd Police Precinct Station House, 134-138 West 30th Street, S/NR-eligible, NYCL		X		Potential Adverse Construction-Related Impacts from Construction on Site 3
(#27) Loft Building, 144-154 West 30th Street, S/NR-eligible		X		Potential Adverse Construction-Related Impacts from Construction on Site 3
(#30) Fur Craft Building, 242-246 West 30th Street, S/NR-eligible		X		Potential Adverse Construction-Related Impacts from Construction on Site 2
(#37) Penn South Apartment Complex, Complex bounded by West 29th and West 23rd Streets, Eighth and Ninth Avenues, S/NR-eligible			X	Shadows Impact from Development on Sites 2, 3, 6, 7, and 8
(#40) St. Michael's Roman Catholic Church, 414-424 West 34th Street S/NR-eligible, NYCL-eligible			X	Shadows Impact from Development on Sites 1 and 2
(#45) Empire State Building, S/NR, NYCL, NHL			X	Visual Impact from Development on Sites 2 and 6**
Former Greenwich Savings Bank, 1352-1362 Broadway, S/NR, NYCL (This property is outside the study area.)			X	Shadows Impact from Development on Sites 5, 6, and 7

Notes:

See **Figure 8-1** for the location of the architectural resources in this table.

* Resources that may experience an adverse impact from adjacent construction are located within 90 feet of proposed construction activities.

** The 2038 With Action development on Site 6 would almost fully obstruct views of the Empire State Building in eastward views along West 34th Street, and the 2038 With Action development on the east (Seventh Avenue) portion of Site 2 would block partial views northeast to the Empire State Building available from the east portion of Chelsea Park along Ninth Avenue, from the south side of the Ninth Avenue and West 28th Street intersection, and along the western portion of West 28th Street between Eighth and Ninth Avenues.

NYCL: New York City Landmark

S/NR: Listed on the State and National Registers of Historic Places.

S/NR-eligible: Officially determined eligible for listing on the State and National Registers of Historic Places.

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The proposed development on Site 7 would be built within a context of both older and newer buildings that vary in height, form, and materials, including shorter older buildings of masonry construction and taller newer buildings with steel, glass, and masonry curtain walls. The proposed development on Site 7 would be one of the tallest buildings in the area. However, its height would be comparable to other tall buildings in the secondary study area including the Empire State Building and 30 Hudson Yards. The secondary study area also contains other very tall buildings, although shorter than the proposed development on Site 7, such as the One and Two Manhattan West developments, and towers at Hudson Yards that have also been recently built or are projected to be complete by the 2028 analysis year. The height of the building on Site 7 would not be readily apparent to the pedestrian at street level in close proximity to the site, though it would be more discernable when viewed from farther away and in context with other tall towers located in the secondary study area.

It is assumed that Sites 1, 2, and 3 would be cleared and devoid of buildings (except for the new service building for Penn Station and entrances to the Penn Station expansion) in the 2028 Phase 1 With Action condition. The sites would not have any ground-floor amenities or elements of visual interest to the pedestrian, and are expected to be surrounded by construction fencing except for construction-related access points to the proposed Penn Station expansion. This condition would have a negative effect on the pedestrian experience until the completion of the new buildings on the site in the 2038 analysis year. The potential sky concourse above Plaza 33 to connect the buildings at 1 and 2 Penn Plaza would be consistent with the urban design character of the primary and secondary study area, where a number of structures and bridges span over streets.

The Proposed Project would also not result in significant adverse impacts related to urban design in the 2038 analysis year. The Proposed Project would not alter the location and arrangement of streets, street hierarchy, or block shapes in the secondary study area. The shared streets contemplated along West 32nd Street between Sixth and Seventh Avenues and West 33rd Street between Sixth and Ninth Avenues would be consistent with the urban design character of the Broadway Boulevard Plazas in the secondary study area, which also create pedestrian-friendly spaces and include seating, plantings, and street furniture; however, the intent is for a more civic character with higher-quality materials and favoring heavier pedestrian traffic. The proposed installation of protected bicycle lanes along a number of the avenues and on West 31st Street within the Project Area would be in keeping with the existing urban design character of the secondary study area, where protected bike lanes are separated from vehicular traffic by a lane of parking, traffic islands, and plantings.

The proposed widened sidewalks adjacent to the development sites and proposed landscaping at the sidewalks and on the proposed shared streets would provide plantings and publicly accessible spaces for pedestrians to utilize and enjoy, though in-ground trees would not be possible in many areas due to rail structures beneath. In addition, the proposed public plaza on Site 2 would provide a new open space that would serve the new commercial district surrounding Penn Station and the surrounding neighborhoods and provide a significant new pedestrian amenity similar to the existing parks in the secondary study area, including Chelsea Park and Herald and Greeley Squares. The proposed open space would be anticipated to provide greenery and passive recreation opportunities for the pedestrian, such as seating, in an area where there are limited publicly accessible open spaces, and would have a positive impact on the pedestrian's experience.

The proposed developments would provide office, retail, hotel, and open space uses that are consistent with the existing uses currently developed or proposed within the secondary study area,

including commercial and residential uses. The Proposed Actions would facilitate the development of new, tall buildings on the development sites, which would be taller than many of the older existing buildings in the secondary study area, but comparable in height to a number of the buildings built in the secondary study area within the past 20 years or planned or under construction by the 2028 analysis year. These new buildings would form a cluster of predominantly tall towers that are anticipated to be of steel, glass, and masonry curtain wall construction, consistent with the urban design characteristics of the developments at Manhattan West and at Hudson Yards

The anticipated building massings, consisting of base and tower configurations, would be consistent with the urban design of the larger and taller more recent buildings constructed in the second half of the 20th century and the buildings recently built or under construction within the past 20 years in the secondary study area, which typically have base and tower configurations, with the bases of the buildings typically containing active ground-floor uses, such as stores and restaurants. Street wall requirements would permit varied geometry to accommodate heavy pedestrian circulation areas, including at transit entrances and office lobbies. The buildings would have large footprints, which would be consistent with the urban design of the secondary study area, which includes a mix of buildings of smaller size and footprint and buildings that have very large footprints and occupy all or portions of city blocks.

The buildings are anticipated to have contemporary designs, with curtain wall façades of glass, metal, or masonry, which would be consistent with the urban design character of a number of the taller, more recently constructed buildings in the primary study area, such as 1 Penn Plaza and 2 Penn Plaza, and in the secondary study area; as well as complementing the urban design character of some shorter buildings. The location of new buildings ranging in illustrative height between 750 feet and 1,300 feet along the avenues would be consistent with the urban design of the study area, where recent new construction includes tall buildings of between 500 and 1,000 feet in height, as well as taller buildings of over 1,000 feet, as described in greater detail below. Overall, the development of new taller and larger buildings would be consistent with trends in the secondary study area that have included and continue to include the development of very tall, large buildings of contemporary designs and curtain wall cladding—in particular, groupings of such buildings at Manhattan West and Hudson Yards. Although most of the new buildings would be taller than existing buildings in the primary study area, the proposed office building on Site 1 with an illustrative height of 750 feet would be comparable in height to 1 Penn Plaza (also approximately 750 feet tall); the proposed development on Site 4 at an illustrative height of 664 feet would be shorter than 1 Penn Plaza, and the proposed hotel on Site 1, with an illustrative height of 235 feet (and a height limit of 400 feet), would be comparable or shorter in height than the approximately 412-foot-tall office building at 2 Penn Plaza and the approximately 390-foot-tall building at 11 Penn Plaza (at the maximum height limit). In addition, though most of the new buildings would be among the tallest in the secondary study area, it is not anticipated that the height of the new buildings, when viewed in context with other tall towers visible to pedestrians within and outside the primary and secondary study areas, would result in significant adverse impacts to the pedestrian experience.

VISUAL RESOURCES

The Proposed Project would result in significant adverse impacts to visual resources in the 2028 and 2038 analysis years. Demolition of the Church of St. John the Baptist on Site 2 is projected to occur as of the 2028 analysis year and demolition of the copper skybridge spanning from Site 8 across West 32nd Street is projected to occur in the 2038 analysis year. As these elements are identified, based on *CEQR Technical Manual* criteria, as visual resources, demolition of these visual resources would constitute a direct significant adverse impact on visual resources. In

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addition, the obstruction of views east and northeast from certain vantage points within the western portion of the secondary study area towards the Empire State Building in the 2038 With Action condition would also constitute a significant adverse impact to visual resources. More proximate and complete views of the Empire State Building would remain unaffected in views north and south on Fifth Avenue, in all views from east of the Empire State Building looking west, and in views looking east to the Empire State Building from areas east of Sixth Avenue. Although these views would continue to be available, the new project buildings would block pedestrian views of the Empire State Building from certain vantage points in the west portion of the study area, constituting a significant adverse impact with respect to a visual resource. Potential measures to mitigate the significant adverse impacts to visual resources have been evaluated and are discussed below in “Mitigation.” As discussed in “Unavoidable Adverse Impacts,” these impacts would be unavoidable.

The proposed developments on Sites 1 through 8 would not obstruct view corridors on public streets as the proposed developments would be constructed on existing blocks. The potential sky concourse above Plaza 33 west of Seventh Avenue would be visible in views from areas to the east and west of it on West 33rd Street. However, the potential sky concourse, which would be elevated above Plaza 33 by at least 14.5 feet, would not obstruct street level pedestrian views. As a largely transparent (glazed) structure, it would have less of a visual presence than other bridges that cross over streets in the secondary study area, which are larger and of solid steel or masonry construction. Moreover, there are no views of the Hudson River and extremely limited and distant views of New Jersey from locations east of the proposed sky concourse on West 33rd Street. In addition, the High Line already crosses over West 33rd Street near Twelfth Avenue, affecting views west closer to the river. Therefore, the potential sky concourse would also not obstruct view corridors on public streets and would not result in a significant adverse impact to urban design and visual resources.

The Proposed Project would also not affect views to parks that constitute visual resources in the secondary study area including Chelsea Park, Greeley Square, and Herald Square. Views on the High Line would also remain free of obstructions.

HAZARDOUS MATERIALS

The Proposed Project would not result in significant adverse impacts related to hazardous materials. As described in Chapter 10, “Hazardous Materials,” a hazardous materials assessment was performed to identify the potential for contamination in the buildings and the subsurface, based on past and current use. Potential contamination may be present in both the subsurface (related primarily to localized former gas stations, historic fill, current and abandoned heating oil underground storage tanks [USTs], and historical operations) and inside buildings (primarily related to asbestos, lead-based paint [LBP], and polychlorinated biphenyls [PCBs]). With the implementation of a variety of standard precautionary measures (e.g., identification of hazardous materials as part of Phase I and Phase II investigations, and handling/disposal of hazardous materials in accordance with applicable regulations and under the direction of material management plans and health and safety plans), no significant adverse impacts related to hazardous materials would be expected to occur as a result of construction of the Proposed Project. Following construction of the Proposed Project with the proposed measures, there would be no further potential for significant adverse impacts.

WATER AND SEWER INFRASTRUCTURE

The Proposed Project would not result in a significant adverse impact on the City’s water supply, wastewater treatment, or stormwater management infrastructure in either analysis year. With respect to stormwater and sanitary sewage, the Proposed Project would result in decreases in the peak stormwater runoff rate in both analysis years and would not contribute to increased combined sewer overflow (CSO) events, as described in Chapter 11 “Water and Sewer Infrastructure” and summarized below.

With the expansion of Penn Station beneath Sites 1, 2, and 3, it is assumed that some or all of the existing water and sewer infrastructure where underground expansion is to take place would require relocation or re-routing. Other utilities within the right-of-way may require relocation as well.

WATER SUPPLY—2028

Phase 1 of the Proposed Project would result in a decrease in water demand of 211,535 gallons per day (gpd) as compared to the Future without the Proposed Project (the No Action condition). This represents a 0.02 percent decrease in demand on the New York City water supply system. Phase 1 of the Proposed Project would not result in a significant adverse impact on the City’s water supply system.

SANITARY SEWAGE—2028

The Proposed Project would result in a decrease of 94,595 gpd of sewage compared to the No Action condition. The decrease in volume in sanitary flow to the combined sewer system would represent approximately 0.09 percent of the average daily flow to the North River Wastewater Treatment Plant (WWTP). With a decrease in sanitary flow, volume would not result in an increase of flow to the North River WWTP. Therefore, the 2028 With Action condition would not create a significant adverse impact on the City’s sanitary sewage treatment system.

STORMWATER—2028

The overall volume of stormwater runoff and the peak stormwater runoff rate from the development sites is anticipated to decrease due to the replacement of some building coverage with pavement and/or walkways, which is more pervious than roof coverage. The development sites are located in an area that is well-served by combined sewer infrastructure. Additionally, the incorporation of selected best management practices (BMPs) and use of low-flow plumbing on Site 7 would further contribute to a reduction in stormwater runoff rates compared to existing conditions. Phase 1 of the Proposed Project would result in a decrease of 44.69 cubic feet per second (cfs) in peak stormwater runoff rate compared to existing conditions, and 34.87 cfs in the peak stormwater runoff rate compared to the No Action condition. Therefore, Phase 1 of the Proposed Project would not have a significant adverse impact on the downstream City combined sewer system.

WATER SUPPLY—2038

In 2038, Phase 2 of the Proposed Project would result in an incremental water demand of 2,903,911 gpd as compared to the No Action condition. This represents a 0.26 percent increase in demand on the New York City water supply system. Given the immense capacity of the City’s water supply system, the relatively minor incremental increase in water consumption (as compared

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to citywide demand) and the development sites' location in an area well-served by water infrastructure, the Proposed Project's incremental demand would not result in a significant adverse impact on the City's water supply.

SANITARY SEWAGE—2038

The Proposed Project would result in an increment of 1,088,537 gpd of sewage. This incremental volume in sanitary flow to the combined sewer system would represent approximately 1 percent of the average daily flow to the North River WWTP. This volume would not result in an exceedance of the North River WWTP's capacity, and is not anticipated to create a significant adverse impact on the City's sanitary sewage treatment system.

STORMWATER—2038

The overall volume of stormwater runoff is anticipated to increase due to the replacement of some existing paved areas with roof coverage, which is more impervious than pavement and walkways; however, with the implementation of the New York City Department of Environmental Protection's (DEP) design standards, the peak stormwater runoff rate from the development sites is anticipated to decrease. As stated above, the development sites are located in an area that is well-served by combined sewer infrastructure. Additionally, with the incorporation of selected BMPs (specifically on-site detention), the use of low-flow plumbing, as well as any potential sewer improvements that would be required as part of the DEP site connection approval process, the peak stormwater runoff rates are expected to be reduced as compared to existing conditions. DEP's detention performance standard is intended to reduce peak discharges to the City's sewer system during rain events by requiring greater onsite storage of stormwater runoff and slower release to the sewer system. The implementation of DEP's stormwater performance standard over time is expected to provide additional capacity to the existing sewer system, thereby improving its performance. The Proposed Project would result in a decrease of 69.26 cfs in peak stormwater runoff rate compared to existing conditions, and 50.26 cfs in the peak stormwater runoff rate compared to the No Action condition. Given the small increment in flow volumes, and the incorporation of sanitary and stormwater source control BMPs, the Proposed Project is not expected to appreciably increase the frequency or volume of CSO events. Overall, the Proposed Project would not result in significant adverse impacts to water supply, wastewater treatment, or stormwater conveyance.

SOLID WASTE

This analysis finds that the Proposed Project would not result in a significant adverse impact on solid waste and sanitation services. In addition, the Proposed Project would not directly affect a solid waste management facility.

In the 2028 Phase 1 analysis year, the Proposed Project would result in a net reduction in solid waste between No Action and With Action conditions of approximately 19 tons. As such, there would be no significant adverse impact to solid waste by 2028.

In the 2038 Phase 2 analysis year, the Proposed Project would result in an incremental increase in solid waste compared to the No Action condition of approximately 291 tons per week of solid waste, comprised of a reduction of approximately 18 tons of waste handled by the New York City Department of Sanitation (DSNY), and an increase of approximately 309 tons of waste when compared to the no Action condition (0.4 percent of the City's anticipated future commercial waste generation) that would be handled by private carters. This correlates to approximately 210

additional truckloads per week handled by private carters. Although this would be an increase compared with the No Action condition, the additional solid waste resulting from the Proposed Project would be a negligible increase relative to the approximately 12,260 tons of solid waste handled by the DSNY or the 9,000 tons handled by private carters per day. As such, the Proposed Project would not result in an increase in solid waste that would overburden available waste management capacity and there would be no significant adverse impact to solid waste. The Proposed Project would not conflict with, or require any amendment to, the City's solid waste management objectives as stated in the SWMP.

ENERGY

This analysis finds that neither Phase 1 nor Phase 2 of the Proposed Project would result in a significant adverse impact related to energy. As presented in this analysis, the energy demand for each phase of the Proposed Project represents the total incremental increase in energy consumption between the Future without the Proposed Project (the No Action condition) and the Future with the Proposed Project (the With Action condition) in the applicable analysis year.

In the 2028 Phase 1 analysis year, the Proposed Project is expected to result in a decrease in energy demand of approximately 147,956 thousand British thermal units (MBTUs) of energy per year in the 2028 analysis year. Therefore, Phase 1 of the Proposed Project would not result in a significant adverse impact related to energy.

With the completion of the Proposed Project in the 2038 analysis year, the Proposed Project is projected to result in an incremental increase in demand of approximately 2,220,826 MBTUs of energy per year by the 2038 analysis year. This represents approximately 0.001 percent of the City's forecasted annual energy requirement of 189 trillion BTU.

In addition, the Proposed Project would be required to comply with the NYCECC, which governs performance requirements of heating, ventilation, and air conditioning (HVAC) systems, as well as the exterior building envelope of new buildings. In compliance with this code, new development must meet standards for energy conservation, which include requirements relating to energy efficiency and combined thermal transmittance. Therefore, Phase 2 of the Proposed Project would not result in a significant adverse impact related to energy.

TRANSPORTATION

TRAFFIC

Traffic conditions were evaluated at 108 intersections for the weekday AM, midday, and PM peak hours. In the 2028 With Action condition, significant adverse traffic impacts were identified at 43 intersections during the weekday AM peak hour, 53 intersections during the weekday midday peak hour, and 54 intersections during the weekday PM peak hour. In the 2038 With Action condition, significant adverse traffic impacts were identified at 96 intersections during the weekday AM peak hour, 84 intersections during the weekday midday peak hour, and 92 intersections during the weekday PM peak hour. **Table S-3** summarizes the projected significant adverse traffic impacts for both the 2028 and 2038 With Action conditions. Potential improvement measures that may be implemented to mitigate these impacts are summarized below under "Mitigation."

Table S-3

Summary of Significant Adverse Traffic Impacts

Analysis Peak Hour	Total No. of Impacted Intersections/Lane Groups	
	2028 Phase 1 With Action Condition	2038 Phase 2 With Action Condition
Weekday AM	43/52	96/175
Weekday Midday	53/64	84/151
Weekday PM	54/61	92/170
Totals During Any Peak Hour	71/94	102/224

Notes: In total, 108 intersections, comprising of nearly 400 lane groups, were included in the traffic study area for analysis.

TRANSIT

Based on a detailed assignment of project-generated bus trips and in consultation with NYCT, it was determined that none of the express or local bus routes serving the study area would incur 50 or more peak hour riders in a single direction. Therefore, a detailed bus line-haul analysis is not warranted and the Proposed Project is not expected to result in any significant adverse bus line-haul impacts. For subway operations, detailed analyses of station circulation elements and control areas were prepared for the 34th Street-Herald Square Station, 34th Street (Seventh Avenue)-Penn Station, and 34th Street (Eighth Avenue)-Penn Station for the weekday AM and PM peak hours. A subway line-haul analysis was also prepared for the subway lines serving the three stations for the weekday AM and PM peak hours. **Tables S-4** and **S-5** summarize the projected significant adverse subway station and line-haul impacts, respectively, for the 2028 and 2038 With Action conditions. Potential improvement measures that may be implemented to mitigate these impacts are discussed below in “Mitigation.”

Table S-4

Summary of Significant Adverse Subway Station Impacts

Analysis Peak Hour	Station Element	Total No. of Impacted Station Elements					
		2028 Phase 1 With Action Condition			2038 Phase 2 With Action Condition		
		34th-Herald Square	34th-Seventh Avenue	34th-Eighth Avenue	34th-Herald Square	34th-Seventh Avenue	34th-Eighth Avenue
Weekday AM	Stairways	0	2	0	12	8	4
	Escalators	2	0	0	4	0	0
	Passageways	0	0	0	0	0	0
	Control Areas	0	0	0	0	2	1
Weekday PM	Stairways	0	2	0	10	8	4
	Escalators	0	0	0	2	0	0
	Passageways	0	0	0	0	1	0
	Control Areas	0	0	0	0	2	0

Notes: In total, 103 station elements at the 34th Street-Herald Square, 34th Street-Seventh Avenue, and 34th Street-Eighth Avenue Stations were included in the subway station analysis.

**Table S-5
Summary of Significant Adverse Subway Line-Haul Impacts**

Analysis Peak Hour	Direction of Travel	Impacted Subway Lines					
		2028 Phase 1 With Action Condition			2038 Phase 2 With Action Condition		
		34th-Herald Square	34th-Seventh Avenue	34th-Eighth Avenue	34th-Herald Square	34th-Seventh Avenue	34th-Eighth Avenue
Weekday AM	Northbound				M		
	Southbound				D	2/3	A
Weekday PM	Northbound					1, 2/3	

Notes: The 34th Street-Herald Square Station serves the B, D, F, M, N, Q, R, and W subway lines; the 34th Street-Seventh Avenue Station serves the No. 1, 2, and 3 subway lines; and the 34th Street-Eighth Avenue Station serves the A, C, and E subway lines.

Between the DEIS and FEIS, NYCT may provide additional guidance on the anticipated distribution of future subway ridership along the various subway lines serving the study area. Accordingly, refinements to the future conditions subway line haul analyses would be made, where appropriate, and presented in the FEIS.

PEDESTRIANS

Weekday peak period pedestrian conditions were evaluated at key area sidewalk, corner reservoir, and crosswalk locations. Pedestrian conditions were evaluated at 88 sidewalks, 83 corners, and 74 crosswalks for the weekday AM, midday, and PM peak hours. In the 2028 With Action condition, significant adverse impacts were identified for one sidewalk and three crosswalks during the weekday AM peak hour; one sidewalk and six crosswalks during the weekday midday peak hour; and five crosswalks during the weekday PM peak hour. In the 2038 With Action condition, significant adverse impacts were identified for 21 sidewalks, 10 corners, and 53 crosswalks during the weekday AM peak hour; 5 sidewalks and 33 crosswalks during the weekday midday peak hour; and 20 sidewalks, 13 corners, and 55 crosswalks during the weekday PM peak hour. **Table S-6** summarizes the projected significant adverse pedestrian impacts for both the 2028 and 2038 With Action conditions. Potential improvement measures that may be implemented to mitigate these impacts are discussed below in “Mitigation.”

**Table S-6
Summary of Significant Adverse Pedestrian Impacts**

Analysis Peak Hour	Total No. of Impacted Pedestrian Elements					
	2028 Phase 1 With Action Condition			2038 Phase 2 With Action Condition		
	Sidewalks	Corners	Crosswalks	Sidewalks	Corners	Crosswalks
Weekday AM	1	0	3	21	10	53
Weekday Midday	1	0	6	5	0	33
Weekday PM	0	0	5	20	13	55
Totals During Any Peak Hour	2	0	10	28	16	60

Notes: In total, 245 pedestrian elements were included in the pedestrian study area for analysis.

VEHICULAR AND PEDESTRIAN SAFETY

Crash data for the study area intersections were obtained from DOT for the period between January 1, 2015 and December 31, 2017. During this period, a total of 1,663 reportable and non-reportable crashes, 8 fatalities, 1,250 injuries, and 542 pedestrian/bicyclist-related crashes occurred at the study area intersections. A rolling yearly total of crash data identifies 22 study area intersections as high crash locations. A summary of the identified high accident locations, prevailing trends, project-specific effects, and recommended safety measures is provided in **Table S-7**.

Table S-7

Summary of High Crash Locations and Recommended Safety Measures

High Crash Intersection	Prevailing Trends	Anticipated Background and Project Changes	Recommended Safety Measures
First Ave & E 30th St	North and east crosswalks affected by failing to yield	Incremental trips: 109 vehicles and less than 200 pedestrians	None
First Ave & E 34th St	Lighting	Incremental trips: 189 vehicles and less than 200 pedestrians	None
Second Ave & E 30th St	Northeast corner pedestrians not using crosswalk	Incremental trips: 119 vehicles and less than 200 pedestrians	Widening north crosswalk to median and improving median
Second Ave & E 36th St	Queues from QMT	Incremental trips: 280 vehicles and less than 200 pedestrians	Improve Signage
Third Ave & E 23rd St	Conflicting vehicles with pedestrians	Incremental trips: 129 vehicles and less than 200 pedestrians	Install countdown timers
Third Ave & E 30th St	North and east crosswalks affected by failing to yield	Incremental trips: 141 vehicles and less than 200 pedestrians	None
Fifth Ave/B'way & W 23rd St	Conflicting vehicles with pedestrians	Incremental trips: 89 vehicles and less than 200 pedestrians	Vision Zero improvements implemented
Fifth Ave & W 31st St	No prevailing trends	Incremental trips: 307 vehicles and 289 pedestrians	Vision Zero improvements to be implemented
Sixth Ave & W 23rd St	Conflicting vehicles with pedestrians	Incremental trips: 108 vehicles and less than 200 pedestrians	None
Sixth Ave & W 30th St	North and east crosswalks affected by failing to yield	Incremental trips: 303 vehicles and 421 pedestrians	None
Seventh Ave & W 23rd St	Conflicting vehicles with pedestrians	Incremental trips: 149 vehicles and less than 200 pedestrians	None
Seventh Ave & W 34th St	No prevailing trends	Incremental trips: 667 vehicles and 1,822 pedestrians	None
Seventh Ave & W 42nd St	Conflicting vehicles with pedestrians	Incremental trips: less than 50 vehicles and less than 200 pedestrians	Intersection recently reconfigured due to SBS
Eighth Ave & W 23rd St	Conflicting vehicles with pedestrians	Incremental trips: 159 vehicles and less than 200 pedestrians	None
Eighth Ave & W 26th St	Conflicting vehicles with pedestrians	Incremental trips: 194 vehicles and less than 200 pedestrians	None
Eighth Ave & W 29th St	Conflicting vehicles with pedestrians	Incremental trips: 197 vehicles and less than 200 pedestrians	None
Eighth Ave & W 34th St	Conflicting vehicles with pedestrians	Incremental trips: 321 vehicles and 1,080 pedestrians	Improve Signage
Eighth Ave & W 39th St	Conflicting vehicles with pedestrians	Incremental trips: 56 vehicles and 1,690 pedestrians	Vision Zero improvements implemented
Eighth Ave & W 42nd St	Conflicting vehicles with pedestrians	Incremental trips: 59 vehicles and less than 200 pedestrians	None
Ninth Ave & W 31st St	Conflicting vehicles with pedestrians	Incremental trips: 204 vehicles and less than 200 pedestrians	Adjacent properties under construction
Ninth Ave & W 42nd St	Conflicting vehicles with pedestrians	Incremental trips: 86 vehicles and less than 200 pedestrians	None
Eleventh Ave & W 34th St	Conflicting vehicles with pedestrians	Incremental trips: 149 vehicles and less than 200 pedestrians	Adjacent properties under construction

Notes: Anticipated background and project changes – only general traffic increases and those relevant to specified crash trends are identified; LPI = Leading Pedestrian Interval.
Sources: DOT January 1, 2015 to December 31, 2017 crash data.

Table S-7 above summarizes the study area analysis locations that are considered high crash locations based on CEQR Technical Manual criteria, some of which are also Vision Zero high priority intersections or part of high priority corridors. In consultation with DOT, other study area analysis locations that are not high crash locations per CEQR Technical Manual criteria were reviewed to determine whether they are Vision Zero high priority intersections or part of high priority corridors. This review identified 57 other study area analysis intersections that are Vision Zero high priority intersections or part of high priority corridors. Additional safety measures were recommended where applicable at these locations to improve pedestrian safety. These include

restriping faded crosswalks at the intersections of Second Avenue and East 34th Street and at Eighth Avenue and West 33rd Street.

PARKING

Under the 2028 With Action condition, public parking utilization is projected to be at 91, 111, 110, and 78 percent of the off-street parking capacity within ¼-mile of the Project Area during the weekday AM, midday, PM, and overnight time periods, respectively. The corresponding parking shortfall for the 2028 With Action weekday midday and PM time periods would be 757 and 720 parking spaces, respectively. These levels are expected to increase, under the 2038 With Action condition, to 111, 138, 125, and 88 percent during the weekday AM, midday, PM, and overnight time periods, respectively. The corresponding parking shortfall for the 2038 With Action weekday AM, midday, and PM time periods would be 685, 2,389, and 1,583 parking spaces, respectively. As stated in the *CEQR Technical Manual*, a parking shortfall resulting from a project located in Manhattan does not constitute a significant adverse impact, due to the magnitude of available alternative modes of transportation. If the projected level of parking demand materializes in the 2038 With Action condition, some motorists may alter their modes of transportation or would have to seek parking availability further beyond the Project Area.

AIR QUALITY

The mobile source analyses determined that concentrations of CO and particulate matter less than 10 microns in diameter (PM₁₀) due to the Proposed Project would not result in any violations of National Ambient Air Quality Standards (NAAQS) at the intersections analyzed for the 2028 and 2038 analysis years and that incremental concentrations of CO would not exceed the *de minimis* criteria referenced in the *CEQR Technical Manual*. Maximum 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM_{2.5}) are predicted to exceed the *de minimis* criterion at one of the intersections analyzed for the 2038 analysis year, and annual incremental PM_{2.5} concentrations are predicted to exceed the *de minimis* criterion at one intersection in the 2028 analysis year, and at all three intersection sites analyzed in the 2038 analysis year. The potential exceedances would be limited to the immediate areas around these intersections, primarily sidewalk locations, and no residential, hotel, or other buildings with sensitive uses would be affected. The affected areas are used only by transient users (pedestrians) and the overall exposure to the predicted PM_{2.5} exceedances from the Proposed Project at the affected locations near these intersections would be infrequent and brief. Furthermore, while the maximum incremental increase in PM_{2.5} concentrations was predicted to exceed the *CEQR Technical Manual de minimis* criterion on an annual basis, the maximum total 24-hour average concentration is 34.2 µg/m³, which is below the NAAQS of 35 µg/m³, and the maximum total annual concentration is 11.98 µg/m³, which is below the NAAQS of 12 µg/m³. Therefore, the PM_{2.5} concentrations exceeding the *CEQR Technical Manual de minimis* criteria would not constitute a significant adverse air quality impact.

Emissions of CO and PM from the proposed parking garages at Sites 4, 6, 7, and 8 were analyzed. The analysis found that pollutant concentrations from the proposed parking facilities would not result in any significant adverse air quality impacts. The mobile source intersection analysis determined that the intersection adjacent to Site 6 would exceed the *CEQR Technical Manual de minimis* criteria for the 2038 analysis year; therefore the cumulative incremental PM_{2.5} annual average concentration (including the contribution from the intersection) also results in a concentration that exceeds the *CEQR Technical Manual de minimis* criteria on an annual average basis. However, no violation of the NAAQS would result from cumulative impacts of the Proposed

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Project's mobile sources of emission and emissions from the proposed parking garages, and thus no significant adverse air quality impacts are predicted.

An analysis was performed of the emissions and dispersion of nitrogen dioxide (NO₂) and PM₁₀ from potential fossil fuel-fired heating and hot water systems, which determined that such emissions would not result in a violation of the NAAQS for the 2028 and 2038 With Action condition. With respect to stationary source emissions, PM_{2.5} was analyzed in accordance with the City's current PM_{2.5} *de minimis* criteria, which determined that the maximum predicted PM_{2.5} increments from the Proposed Project would be less than the applicable *CEQR Technical Manual de minimis* criteria and would not exceed the NAAQS. To ensure that there are no significant adverse impacts resulting from the Proposed Project due to heating and hot water emissions, additional air quality measures would be included in the project documents for specific development sites with respect to fuel type, emission limits, and stack height and setbacks.

Based on the analysis of the emissions from large and major sources of emissions in the study area on the Proposed Project, design requirements would be imposed in the project documents to avoid the potential for significant air quality impacts at Sites 5 and 7 regarding the placement of operable windows and air intakes on portions of these sites.

GREENHOUSE GAS EMISSIONS

As demonstrated in this chapter, the Proposed Project would be consistent with New York City's GHG reduction goals, and would be developed in compliance with recently adopted state and City requirements intended to reduce GHG emissions from buildings. In order to attain the City's *OneNYC* GHG reduction goal to achieve carbon neutrality by 2050, the City of New York enacted the Climate Mobilization Act (CMA). The CMA includes a number of laws geared towards moving New York City's buildings towards the City's goal of reducing GHG emissions by targeting increased energy efficiency, utilizing roof space for installation of solar energy sources and green roofing, and reducing GHG emissions associated with building energy use.

As part of the CMA, Local Law 97 (LL97) places carbon intensity limits on most buildings larger than 25,000 sf, and those limits become more stringent over time. The City, in consultation with stakeholders, is establishing a program to implement those limits with enforcement of the first carbon intensity limits beginning in 2024. ESD would require compliance with the requirements of the CMA, so the Proposed Project buildings would be required to meet applicable future carbon intensity limits as well as the green/solar rooftop requirements established under the law.

The building energy use and vehicle use associated with commercial development envisioned under the GPP is expected to result in up to approximately 231 thousand metric tons of carbon dioxide equivalent (CO₂e) emissions per year in the 2038 analysis year, and up to approximately 179 thousand metric tons per year pursuant to the future 2050 citywide average carbon intensity limit. Compliance with the CMA would ensure consistency with the efficient buildings goal defined in the *CEQR Technical Manual* as part of the City's GHG reduction goal.

New York State has enacted the Climate Leadership and Community Protection Act (CLCPA), which calls for stringent limits on the statewide emission of GHGs, requiring that those emissions on a statewide basis be reduced by 40 percent by 2030 and 85 percent by 2050, compared with statewide 1990 levels. Pursuant to the CLCPA, a newly created body called the Climate Action Council will issue a scoping plan outlining recommendations for attaining the GHG emission limits established under the statute. A final scoping plan is anticipated to be issued by 2022. Based upon recommendations made in the final scoping plan, the CLCPA charges the New York State

Department of Environmental Conservation (DEC) with promulgating regulations to reduce emissions, as necessary, to meet the statutory mandates. The CLCPA also increases the State's investment in renewable energy sources, and requires that significant portions of those investments be directed to disadvantaged communities. The DEC regulations would apply across various sectors, including the buildings and construction industry.

Since the scoping plan called for by the CLCPA has not yet been issued by the Climate Action Council and the DEC regulations needed to implement the plan have not been promulgated, there are no specific CLCPA regulations currently applicable to the Proposed Project. However, by requiring the developers of the Proposed Project to achieve the stringent emission reductions and comply with the green/solar rooftop requirements imposed by the CMA, ESD expects that development in accordance with the GPP will be consistent with any future statewide emissions limits established under the CLCPA. If the CLCPA regulations impose emission standards even more stringent than the City's CMA, the Proposed Project buildings would in any event be required to comply with such CLCPA regulations.

While emissions associated with the operation of the expanded Penn Station have not been quantified, current design goals seek to advance the railroad entities' goals of achieving a 50 percent reduction from current emissions of GHG by 2030 as well as achieving net-zero carbon emissions for Penn Station by 2050.

The total emissions associated with construction of the commercial developments along with construction associated with the expanded Penn Station throughout the construction period, including both direct energy and emissions embedded in materials (extraction, production, and transport), would be approximately 1.4 million metric tons CO₂e, equivalent to approximately 6 years of operational emissions.

The *CEQR Technical Manual* defines five goals by which a project's consistency with the City's emission reduction goals is evaluated: (1) efficient buildings; (2) clean power; (3) sustainable transportation; (4) construction-related emissions; and (5) building materials carbon intensity.

Specific energy efficiency measures and design elements needed for the proposed developments to comply with the requirements of the CMA are not known at this time; however, potential measures have been identified for consideration, such as high-efficiency HVAC systems, efficient lighting and heating controls, inclusion of rooftop solar arrays, as well as potentially requiring sustainability measures in connection with tenant build-out. In addition, consideration will be given to increased or fully electric building designs, utilization of a centralized geothermal heat plant, or use of utility steam. In order to be completed and operational by the 2028 Phase 1 analysis year, the design for Site 7 has been further developed and these measures are being actively evaluated for implementation.

The proposed developments would also be subject to the City's 2020 building energy code—the New York City Environmental Conservation Code (NYCECC), which imposes stringent energy efficiency requirements. In order to meet the requirements of the CMA, the building design efficiencies would likely exceed these recently enacted code requirements. Moreover, the commercial developments contemplated by the GPP may seek certification under one of a number of developed benchmarks for energy efficiency and green building design (green building design considerations include factors such as material selection, which affects GHG emissions associated with materials extraction, production, delivery, and disposal.)

The Proposed Project would also support the other GHG goals by virtue of its inclusion and proximity to public transportation, increased and/or full electrification (where practicable),

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avoidance of the use of fossil fuels other than natural gas for on-site combustion sources, commitment to construction air quality controls, and the fact that as a matter of course, construction in New York City generally uses recycled steel and includes cement replacements. All of these factors demonstrate that the proposed development supports the GHG reduction goal.

The Proposed Project would be a transit-oriented development located in close proximity to abundant mass transportation services, and would implement a wide variety of energy efficiency and sustainability measures to (i) comply with the stringent requirements of the CMA; (ii) meet any requirements of the CLCPA as applicable under future regulations; and (iii) meet or exceed the City's stringent building energy code. Accordingly, the Proposed Project would be consistent with the City's emissions reduction goals, as defined in the *CEQR Technical Manual*.

NOISE

The analysis concludes that, in the 2028 analysis year, Phase 1 of the Proposed Project would not have the potential to result in any significant impacts as the predicted increases in noise levels would fall below the applicable *CEQR Technical Manual* significant adverse impact threshold (3.0 dBA). In the 2038 analysis year, traffic generated by the Proposed Project would be expected to produce significant increases in noise levels at receptors along West 31st Street between Ninth and Tenth Avenues, along West 31st Street between Sixth and Seventh Avenues, and along West 30th Street between Sixth and Eighth Avenues. The increases would occur primarily due to project-generated trucks travelling along the DOT truck route on these streets. The increases would constitute a significant adverse impact at the receptors along these roadway segments. Potential measures to mitigate this impact are discussed below in "Mitigation."

In the 2038 With Action condition, the Proposed Project would result in noise levels at the newly introduced open space at Site 2 that would exceed the 55 dBA $L_{10(1)}$ noise level for outdoor areas requiring serenity and quiet recommended by the *CEQR Technical Manual* noise exposure guidelines. However, the existing noise levels at these locations are currently in the low-to-mid 70s dBA, exceeding the acceptable threshold, and the predicted levels at this open space are comparable to those at many open spaces in New York City. Consequently, the predicted noise exposure at the newly introduced open space would not constitute a significant adverse impact.

Based on the projected noise levels at newly introduced hotel guestroom and community facility receptors, up to 37 dBA window/wall attenuation would be required to achieve acceptable interior noise levels per the *CEQR Technical Manual* noise exposure guideline at these uses. To implement the attenuation requirements, ESD would include provisions specifying the appropriate window/wall attenuation applicable to each development site in project documents with the future developers of each site. By meeting the requirements specified in the project documents, buildings developed as a result of the Proposed Project would provide sufficient attenuation to achieve the *CEQR Technical Manual* interior noise level guidelines of 45 dBA L_{10} for hotel guestroom or community facility uses. With implementation of the attenuation levels outlined above, the Proposed Project would not result in any significant adverse impacts at the newly introduced noise receptors.

PUBLIC HEALTH

The Proposed Project would not result in a significant adverse public health impact. As described in the relevant analyses of this EIS, the Proposed Project would not result in unmitigated significant adverse impacts in the areas of hazardous materials, water quality, or air quality, and therefore would not have the potential for a public health impact related to these technical areas.

As described in Chapter 17, “Noise,” the Proposed Project would result in a potential unmitigated significant adverse noise impact at sensitive receptors along West 30th and West 31st Streets due to noise increases from project-generated trucks traveling on these streets. In addition, as noted in Chapter 20, “Construction,” construction activities for the Proposed Project could result in unmitigated significant adverse noise impacts at several sensitive receptors, as defined by *CEQR Technical Manual* thresholds. A public health assessment was conducted for these unmitigated noise impacts. The assessment determined that the predicted noise exposure that would be experienced by people inhabiting affected areas would be comparable to existing noise exposure at other nearby areas, and it would not exceed the threshold that would be expected to result in health effects. Therefore, the Proposed Project’s unmitigated noise impacts would not result in a significant adverse public health impact.

NEIGHBORHOOD CHARACTER

The Proposed Project would not result in a significant adverse impact on neighborhood character. As discussed in this chapter, the defining features of neighborhood character are a mixture of several high-density commercial buildings and lower-scale (and, in some cases, historic) commercial buildings and transportation infrastructure; high levels of pedestrian and vehicular activity and associated noise; and a varied neighborhood context with smaller buildings interspersed among taller buildings and iconic New York City landmarks. The assessment concludes that the Proposed Project is expected to enhance existing neighborhood character by reinforcing these defining features while improving pedestrian facilities and transit accessibility. As described in Chapter 1, “Project Description,” the Proposed Project would address substandard conditions in the Project Area by facilitating redevelopment to create a cohesive, transit-oriented commercial district, introducing much-needed public transportation and public realm improvements in the area, and supporting the reconstruction and expansion of Penn Station.

The Proposed Project would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; or urban design. Although there would be significant adverse impacts with respect to open space, historic resources, shadows, visual resources, transportation, and noise, these impacts would not result in a significant adverse impact to the defining elements of neighborhood character, nor would a combination of effects result in a significant adverse impact to such a defining feature. Overall, the Proposed Project is expected to result in positive effects to neighborhood character by addressing substandard and insanitary conditions and transforming the area around Penn Station into a revitalized, modern transit-oriented commercial district. The new development and the public realm and public transportation improvements introduced with the Proposed Project would unify the area around Penn Station, making it a more attractive and inviting neighborhood.

CONSTRUCTION

Construction activities associated with the Proposed Project would result in significant adverse impacts in the areas of transportation, noise, localized neighborhood character, and historic and cultural resources. For all other technical areas, the Proposed Project would not result in significant adverse construction impacts.

Construction associated with the Proposed Project would result in temporary disruptions in the surrounding area. The construction impact assessment is based on an illustrative construction schedule intended to reflect a reasonable worst-case scenario for the potential sequencing of construction events. However, if the construction schedule were to extend beyond the timetable

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assumed in this analysis, then construction activities for the Proposed Project as a whole would occur over a longer period of time. This scenario (“Extended Schedule Scenario”) was also assessed and presented in Chapter 20, “Construction,” under Section G, “Extended Schedule Scenario.”

The illustrative construction schedule for the Proposed Project assumes that construction activities would typically occur from 7:00 AM to 3:30 PM, five days a week on weekdays. However, for the below-grade work for the expansion of Penn Station during Phase 1 construction, construction activity in close proximity to existing train tracks would be conducted primarily during nights and weekends to avoid disruptions to daytime train service; night and weekend work may also be necessary in order to meet the project construction schedule or to make up time due to weather delays and/or other circumstances. This scenario (“Alternative Construction Schedule Scenario”) was also assessed and presented in Chapter 20, “Construction,” under Section H, “Alternative Construction Schedule Scenario.”

The Proposed Project’s construction activities would result in significant adverse impacts in the areas of transportation, noise, localized neighborhood character, and historic and cultural resources. For all other technical areas, construction activities associated with the Proposed Project would not result in significant adverse impacts. Analysis results specific to each of the technical areas are summarized below.

TRANSPORTATION

The Proposed Project’s construction transportation analysis is based on peak two-year running average construction conditions. As detailed in Chapter 20, “Construction,” the Proposed Project is not expected to result in any significant adverse parking, transit, and pedestrian impacts during construction.

Traffic

For traffic, conditions during construction were evaluated at 6 and 44 intersections for the Phase 1 and Phase 2 construction conditions, respectively, for the weekday AM and PM construction peak hours. During the Phase 1 construction condition, significant adverse traffic impacts were identified at four intersections during the weekday AM construction peak hour and four intersections during the weekday PM construction peak hour. During the Phase 2 construction condition, significant adverse traffic impacts were identified at 19 intersections during the weekday AM construction peak hour and 16 intersections during the weekday PM construction peak hour. **Table S-8** summarizes the projected significant adverse traffic impacts for both the Phase 1 and Phase 2 construction conditions. Potential improvement measures that may be implemented to mitigate these impacts are discussed below in “Mitigation.”

Table S-8
Summary of Significant Adverse Construction Traffic Impacts

Analysis Peak Hour	Total No. of Impacted Intersections/Lane Groups	
	Phase 1 Peak Construction Condition	Phase 2 Peak Construction Condition
Weekday AM	4/4	19/26
Weekday PM	4/4	16/22
Totals During Any Peak Hour	5/5	26/38
Notes:	In total, 6 and 44 intersections, comprised of approximately 20 and 140 lane groups, were included the traffic study area for analysis for Phase 1 and Phase 2 construction analyses, respectively.	

Pedestrians

Construction worker trips would be dispersed to pedestrian elements surrounding the Project Area. These peak construction pedestrian increments would also take place during hours when background pedestrian levels are lower than they would be in the 8:00 AM to 9:00 AM and 5:00 PM to 6:00 PM commuter peak hours. Therefore, construction of the Proposed Project is not expected to result in any significant adverse pedestrian impacts. With regard to pedestrian facilities surrounding the construction sites, Maintenance and Protection of Traffic (MPT) plans that are subject to approvals and stipulations from DOT's Office of Construction Mitigation and Coordination (OCMC) would be implemented to appropriately protect and facilitate pedestrian flow, as well as to avoid impacts to pedestrian circulation. As with standard practices for construction projects in New York City, the temporary effects from these measures would change over time and across different parts of construction sites.

Transit

Construction worker-related transit trips would be dispersed to the numerous subway stations/lines, local bus routes, and commuter rail/bus options described above. These trips would also be made outside of the commuter peak hours, which correspond with lower background transit levels and are typically not subject to concern or assessment of operating conditions. Therefore, construction of the Proposed Project is not expected to result in any significant adverse transit impacts.

Parking

Under the Phase 1 Peak Construction condition, public parking utilization would increase to 78 and 111 percent within ¼-mile of the Project Area during the weekday AM and PM construction time periods, respectively. A shortfall of 731 parking spaces would occur during the weekday PM construction time period. These levels are expected to increase, under the Phase 2 Peak Construction condition, to 87 and 127 percent within ¼-mile of the Project Area during the weekday AM and PM construction time periods, respectively. A shortfall of 1,665 parking spaces would occur during the weekday PM construction time period. As stated in the *CEQR Technical Manual*, a parking shortfall resulting from a project located in Manhattan does not constitute a significant adverse impact, due to the magnitude of available alternative modes of transportation. If the projected level of parking demand materializes in the Phase 1 and Phase 2 Peak Construction conditions, some motorists may alter their modes of transportation or would have to seek parking availability further beyond the Project Area.

AIR QUALITY

The construction of the Proposed Project would require the use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site, such as cranes, loaders, and excavators. On-road vehicles include worker vehicles and construction trucks arriving to and departing from the construction site as well as operating on-site. The dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that particulate matter (PM_{2.5} and PM₁₀), annual average nitrogen dioxide (NO₂), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. In addition, the requirement to use Tier 4 non-road diesel engines would reduce NO_x emissions and address the 1-hour NO₂ NAAQS. An emissions reduction program would be implemented for the Proposed Project to minimize the effects of construction activities on the surrounding community. Measures

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would include, to the extent practicable, dust suppression measures, use of ultra-low sulfur diesel (ULSD) fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment (i.e., equipment meeting the U.S. Environmental Protection Agency's [EPA] Tier 4 emission standard), and best available tailpipe reduction technologies. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts due to construction sources.

NOISE

Based on the construction predicted to occur at each development site, noise resulting from construction is expected to exceed the *City Environmental Quality Review (CEQR) Technical Manual* noise impact thresholds as well as result in "objectionable" and "very objectionable" noise level increases at some receptors. Twelve time periods were analyzed over the course of the Proposed Project's assumed construction schedule. Receptors where noise level increases were predicted to exceed the construction noise evaluation thresholds for extended durations were identified. The noise analysis results show that the predicted noise levels would exceed the *CEQR Technical Manual* construction noise impact criteria at numerous receptors near the Project Area.

For development sites at which noise-sensitive uses (e.g., residential, hotel, community facility spaces) would be completed and occupied while other project construction would occur immediately adjacent, construction is predicted to result in "clearly unacceptable" noise levels and interior noise levels exceeding the 45 dBA criterion considered acceptable by up to 5 dBA. These exceedances would be intermittent and temporary, and would not occur during the nighttime hour when residences and hotel guest rooms are most sensitive to noise. Consequently, noise resulting from construction of the proposed developments would not result in significant adverse noise impacts at completed project buildings. Potential measures to mitigate these impacts are discussed below in "Mitigation."

At locations predicted to experience an exceedance of the noise impact threshold criteria, the exceedances would be due primarily to noise generated by on-site construction activities (rather than construction-related traffic). However, the noise analysis examined the reasonable worst-case peak hourly noise levels that would result from construction in a specific month selected for analysis, and consequently is conservative in predicting significant increases in noise levels. Typically, the loudest hourly noise level during each month of construction would not persist throughout the entire month. Furthermore, this analysis is based on conceptual site plans and construction schedules. If construction on multiple development sites do not overlap, construction noise would be less intense than the analysis predicts. However, if the construction schedule were to extend beyond the timetable assumed in the analysis, then construction activities for the Proposed Project as a whole would occur over a longer period of time. This would increase the duration of elevated construction noise levels at some locations, particularly those with line of sight to two or more Proposed Project buildings that are assumed to be constructed simultaneously rather than consecutively in the quantified analysis presented in Chapter 20, "Construction."

VIBRATION

The buildings of most concern with regard to the potential for structural or architectural damage due to vibration would be historic buildings (see Chapter 8, "Historic and Cultural Resources," for a list of historic structures) immediately adjacent to the development sites. Since these historic buildings and structures would be within 90 feet of the development sites, New York City Department of Buildings' (DOB) Technical Policy and Procedure Notice (TPPN) #10/88

regulations would limit acceptable levels of vibration and require vibration monitoring at these structures. For non-historic buildings and other structures immediately adjacent to the development sites, vibration levels would be in the range generally considered acceptable for non-historic buildings or structures. In terms of potential vibration levels that would be perceptible and annoying, construction would have the potential to produce perceptible vibration levels at receptor locations within a distance of approximately 550 feet depending on soil conditions. However, the operation would only occur for limited periods of time at a particular location and therefore would not result in any significant adverse impacts. Consequently, significant adverse vibration impacts would not result from construction of the Proposed Project.

LAND USE AND NEIGHBORHOOD CHARACTER

Land Use

Construction activities would affect land use on the development sites, but would not affect land use conditions and patterns outside of these areas. As is typical with construction projects, during periods of peak activity, there would be some disruption to nearby areas. There would be construction trucks and construction workers coming to the Project Area as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would have limited effects on land uses in the larger study area, as most construction activities would take place within the Project Area. Overall, the temporary and localized nature of construction would not result in any significant adverse impacts on local land use patterns of the nearby area.

Neighborhood Character

Long-term construction activity associated with the proposed expansion of Penn Station and new buildings on Sites 1, 2, and 3 would result in significant adverse localized neighborhood character impacts in the immediate vicinity of these development sites during construction. Construction activities would be disruptive and concentrated on these sites for an extended period of time. Throughout the construction period, measures would be implemented to control air quality, noise, and vibration on the construction sites, including the erection of construction fencing and in some areas fencing incorporating sound reducing measures. This fencing would reduce potentially undesirable views of construction sites and buffer noise emitted from construction activities. Furthermore, in the event that there is an extended period between the completion of the expansion of Penn Station and the commencement of construction of the new buildings on Sites 1, 2, and/or 3, MTA, in consultation with the City, would seek to activate one or more of the sites with temporary uses or other programming. Nonetheless, long-term construction activities on Sites 1, 2, and 3 would constitute a substantial change to the character of these blocks, especially given their location in Midtown Manhattan adjacent to Penn Station. Therefore, construction activity associated with the Proposed Project would have significant adverse localized neighborhood character impacts in the immediate vicinity of Sites 1, 2, and 3 during construction. However, the impacts would be localized and would not alter the character of the larger neighborhoods surrounding these development sites.

SOCIOECONOMIC CONDITIONS

Construction activities could temporarily affect pedestrian and vehicular access to businesses near the development sites. However, MPT plans would be developed and implemented to ensure that access to existing businesses near the Project Area would be maintained throughout the construction period. Construction would create direct benefits resulting from expenditures on

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labor, materials, and services, and indirect benefits near the Project Area created by expenditures by material suppliers, construction workers, and other employees involved in the construction activity. Construction also would contribute to increased tax revenues for the City and state, including those from personal income taxes. Construction activities associated with the Proposed Project would not result in any significant adverse impacts on socioeconomic conditions.

OPEN SPACES

Construction of the Proposed Project would directly affect three publicly accessible open spaces—the through-block east plaza at 1 Penn Plaza, Plaza 33, and the proposed plaza on Site 2. At Site 5, the through-block east plaza of 1 Penn Plaza would be displaced by construction activities. As discussed in Chapter 6, “Open Space,” this would constitute a significant adverse impact on open space under operational conditions. Construction of Site 5 would also likely use a portion of the adjacent Plaza 33 for construction staging activities, which would temporarily reduce the amount of open space in Plaza 33. This would be a temporary adverse effect on Plaza 33 and would not constitute a significant adverse impact to open space. At Site 2, the proposed plaza could be opened on a temporary basis after the completion of the potential expansion of Penn Station, and then returned to use for construction staging activities during construction of one or both buildings on the site. After completion of the new buildings on Site 2, the proposed plaza would be opened on a permanent basis. Therefore, the displacement of a temporary Site 2 plaza would not constitute a significant adverse impact to open space.

Other open space resources would not be used for construction staging, and access to other resources would be maintained throughout the duration of the construction period. While construction of the Proposed Project may cause temporary disruptions to the other nearby open spaces, it is expected that such disruptions in any given area would be temporary and would not be ongoing for the full duration of the construction period. Throughout the construction period, measures would be implemented to control air quality, noise, and vibration within the construction areas. Therefore, construction associated with the Proposed Project would not result in significant adverse impacts on nearby open spaces.

HISTORIC AND CULTURAL RESOURCES

For Phase 1 construction, the Proposed Project would result in significant adverse direct impacts on five architectural resources located on Sites 2 and 3 that would be removed for the proposed below-grade expansion of Penn Station, and one architectural resource on Site 7 that would be demolished to allow for new commercial development on Site 7. Measures that could partially mitigate these significant adverse impacts are described below in “Mitigation,” consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) regarding these potential measures is ongoing.

HAZARDOUS AND CONTAMINATED MATERIALS

The Proposed Project would not result in significant adverse impacts related to hazardous materials. A hazardous materials assessment was performed to identify the potential for contamination in the buildings and the subsurface, based on past and current use. Potential contamination may be present in both the subsurface (related primarily to localized former gas stations, historic fill, current and abandoned heating oil USTs, and historical operations) and inside buildings (primarily related to asbestos, LBP, and PCBs). With the implementation of a variety of standard precautionary measures (e.g., identification of hazardous materials as part of Phase I and Phase II

investigations, and handling/disposal of hazardous materials in accordance with applicable regulations and under the direction of material management plans and health and safety plans), no significant adverse impacts related to hazardous materials would be expected to occur as a result of construction of the Proposed Project. Following construction of the Proposed Project with the proposed measures, there would be no further potential for significant adverse impacts.

WATER AND SEWER INFRASTRUCTURE

Infrastructure activities at the Project Area would include utility connections to existing water, sewer, electric, gas, and telecommunications. These activities would be coordinated with DEP, Con Edison, or the appropriate private utility company to ensure that service to customers in nearby areas is not disrupted. All utility lines would be located either in the streetbed or within the below-grade space. Residents and workers in nearby buildings are not expected to experience substantial disruptions to water supply or wastewater removal. Any disruption to service that may occur when new equipment (e.g., a transformer, or a sewer or water line) is put into operation is expected to be very short-term (i.e., hours). Therefore, the construction of the Proposed Project's infrastructure improvements would not cause any significant adverse impacts to nearby users of these services.

ALTERNATIVES

In accordance with SEQRA, the DEIS analyzes four alternatives to the Proposed Project: a No Action Alternative, a No Unmitigated Significant Impact Alternative, a Residential Alternative, and a Lower Density Alternative. The conclusions for alternative are provided below.

NO ACTION ALTERNATIVE

Consideration of the No Action Alternative is mandated by SEQRA and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of no action on their part. Under the No Action Alternative, Sites 1, 2, 3, 6, and 8 would remain unchanged from existing conditions, and as-of-right development would occur on Sites 4, 5, and 7. The No Action Alternative assumes that Penn Station would not be expanded and most of the public transportation and public realm improvements would not be implemented.

The potential for significant adverse impacts anticipated for the Proposed Project would not occur with the No Action Alternative, except in the areas of historic resources and construction noise. As with the Proposed Project, the No Action Alternative would result in the direct impact on Site 7 (the S/NR-eligible Hotel Pennsylvania) that would be demolished to allow for new commercial development on that site. Additionally, construction on Site 7 under the No Action Alternative would result in the same potential for impacts related to adjacent construction identified with respect to that site under the Proposed Project, specifically with respect to the S/NR-eligible and NYCL-eligible Former Equitable Life Assurance Company and the S/NR-eligible and NYCL-eligible St. Francis Roman Catholic Church Complex. These resources are located within 90 feet of proposed construction activities on Site 7. Unlike the Proposed Project, under the No Action Alternative, a CPP to protect these resources would not be required and implemented in coordination with OPRHP and LPC. However, these resources would be offered some protection through DOB controls governing the protection of adjacent properties from construction activities. Furthermore, although the No Action Alternative would not result in the Proposed Project's significant adverse transportation impacts, transportation conditions under this alternative would

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be characterized by increased roadway congestion, increasingly congested subway station elements, subway lines, and pedestrian elements.

Overall, the No Action Alternative would not meet the goals and objectives of the Proposed Project. Specifically, the No Action Alternative would not:

- revitalize the area surrounding Penn Station with a substantial amount of new, sustainable, high-density commercial development that would eliminate substandard and insanitary conditions in the Project Area and foster and support economic growth and tax revenue through the creation of jobs and economic activity;
- improve passenger rail and transit facilities and pedestrian circulation, access, and safety with the implementation of transportation and public realm improvements and the creation of new open space;
- support improvements to address substandard conditions in Penn Station; or
- support and accommodate future capacity increases at Penn Station.

NO UNMITIGATED SIGNIFICANT IMPACT ALTERNATIVE

The No Unmitigated Impact Alternative considers development that would eliminate the Proposed Project's unmitigated significant adverse impacts. The DEIS analyses identified significant adverse impacts for which no practicable mitigation has been identified to fully mitigate the impacts in the areas of: open space, shadows, historic and cultural resources, visual resources, transportation, noise, and construction-period traffic, noise, and neighborhood character.

There is no practicable alternative that could be developed to avoid the unmitigated significant adverse impacts of the Proposed Project. In order to eliminate the Proposed Project's unmitigated significant adverse impacts in the areas of open space, shadows, historic and cultural resources, visual resources, and noise, the Proposed Project would have to be reduced in size or modified to a point where it would not realize the goals and objectives of the Proposed Project, which include revitalizing the area surrounding Penn Station and eliminating substandard and insanitary conditions in the Project Area; and fostering and supporting economic growth and tax revenue through the creation of jobs and economic activity; improving passenger rail and transit facilities; creating new open space; supporting improvements to address substandard conditions in Penn Station; and supporting and accommodating future capacity increases at Penn Station. Additionally, any level of development could result in the unmitigated significant adverse impacts in the areas of shadows, transportation, and construction. Therefore, there is no feasible alternative that could be developed to avoid the unmitigated significant adverse impacts of the Proposed Project.

RESIDENTIAL ALTERNATIVE

The Residential Alternative considers a development in which all sites would remain the same as in the Proposed Project, except for Sites 1, 4, and 8, which would include a residential program.

Like the Proposed Project, the Residential Alternative would not result in significant adverse impacts with respect to: land use, zoning, and public policy; socioeconomic conditions; urban design; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; air quality; greenhouse gas emissions; public health; and neighborhood character.

Under the Residential Alternative, significant adverse impacts in the areas of open space, shadows, historic resources, noise, and construction would be the same as or similar to those of the Proposed Project. The Residential Alternative would result in significant adverse transportation impacts, but

to a lesser extent compared with the Proposed Project. With respect to visual resources, the Residential Alternative would result in the same significant adverse impacts as the Proposed Project, except with respect to the demolition of the copper skybridge spanning from Site 8 across West 32nd Street. If the owner of Site 8 retains the skybridge, the significant adverse impact that would occur with the Proposed Project would not occur.

With respect to community facilities, because the Residential Alternative would introduce a substantial residential population that would meet the financial and social eligibility criteria for publicly funded child care, the Residential Alternative would result in a significant adverse impact on early childhood programs that would not occur with the Proposed Project.

With respect to pedestrians, the Residential Alternative is expected to result in overall fewer impacted locations as compared to Phase 2 of the Proposed Project. However, because the existing Site 8 building and uses would remain under the Residential Alternative, it would not be accompanied by the building setbacks along the south side of West 33rd Street portion fronting Site 8 and the west side of Sixth Avenue that would otherwise accompany the Proposed Project's Site 8 development. Therefore, these two sidewalk segments, which are not impacted under the Proposed Project, could potentially be impacted under the Residential Alternative. Without the additional sidewalk circulation space afforded by the building setbacks, these impacts could potentially be unmitigated. Overall, accounting for these two additional potentially unmitigated sidewalk impacts and the potential reduction of unmitigated impacts at other pedestrian analysis elements due to the overall lower trip increments, the Residential Alternative could result in unmitigated pedestrian impacts at a similar number, or a slightly fewer number, of elements as compared to Phase 2 of the Proposed Project.

While the Residential Alternative would develop less overall commercial use than the Proposed Project, like the Proposed Project, it would address substandard conditions in the Project Area by facilitating redevelopment to create a cohesive, transit-oriented commercial district, foster and support economic growth and tax revenue through the creation of jobs and economic activity, and improve passenger rail and transit facilities and pedestrian circulation, access, and safety with the implementation of transportation and public realm improvements and the creation of new open space. Furthermore, the Residential Alternative would provide additional benefits by facilitating the development of new housing, including new affordable units, in the Project Area, which would not occur with the Proposed Project. The Residential Alternative would also contribute to enlivening the streetscape within the Project Area by extending the hours of street activity and creating a more vibrant mixed-use neighborhood. However, the Residential Alternative would do slightly less than the Proposed Project to improve the public realm, by not providing the sidewalk widenings along West 33rd Street and Sixth Avenue fronting Site 8. While this alternative would generate less revenue than the Proposed Project, it would still provide substantial support for the reconstruction and expansion of Penn Station. Overall, the Residential Alternative would not substantially avoid or reduce the significant adverse impacts that would occur with the Proposed Project and could result in unmitigated significant adverse impacts in the areas of early childhood programs and pedestrians that would not occur with the Proposed Project. However, the Residential Alternative would substantially meet the goals and objectives of the Proposed Project.

LOWER DENSITY ALTERNATIVE

The Lower Density Alternative considers a project program that would include less total square footage of development, including less commercial office, retail, hotel rooms, parking square

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footage and spaces, and open space than the Proposed Project. Under this alternative, Site 8 would not be redeveloped.

Like the Proposed Project, the Lower Density Alternative would not result in significant adverse impacts with respect to: land use, zoning, and public policy; socioeconomic conditions; community facilities and services; urban design; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; air quality; greenhouse gas emissions; public health; and neighborhood character.

Under the Lower Density Alternative, significant adverse impacts in the areas of open space, historic resources, noise, construction noise would be the same as or similar to those of the Proposed Project. The Lower Density Alternative would result in significant adverse transportation impacts (operational and during construction), but to a lesser extent than with the Proposed Project. With respect to shadows, the Lower Density Alternative would result in the same significant adverse impacts as the Proposed Project, with the exception of the impact to Herald Square Park. With no new development on Site 8, the Lower Density Alternative would cast less incremental shadow on Herald Square Park, and, unlike the Proposed Project, would not cause a significant adverse shadow impact to that park. With respect to visual resources, the Lower Density Alternative would result in the same significant adverse impacts as the Proposed Project, except with respect to the demolition of the copper skybridge spanning from Site 8 across West 32nd Street. If the owner of Site 8 retains the skybridge, the significant adverse impact that would occur with the Proposed Project would not occur.

With respect to pedestrians, the Lower Density Alternative is expected to result in fewer overall impacted locations as compared to Phase 2 of the Proposed Project. However, because the existing Site 8 building and uses would remain under the Lower Density Alternative, it would not provide the building setbacks along the south side of West 33rd Street portion fronting Site 8 and the west side of Sixth Avenue that would otherwise accompany the Proposed Project's Site 8 development. Therefore, these two sidewalk segments, which are not impacted under the Proposed Project, could potentially be impacted under the Lower Density Alternative. Without the additional sidewalk circulation space afforded by the building setbacks, these impacts could potentially be unmitigated. Accounting for these potential two additional unmitigated sidewalk impacts and the potential reduction of unmitigated impacts at other pedestrian analysis elements due to the overall lower trip increments, the Lower Density Alternative could result in unmitigated pedestrian impacts at a similar or a slightly fewer number of elements as compared to Phase 2 of the Proposed Project.

Overall, the Lower Density Alternative would not substantially avoid or reduce the significant adverse impacts that would occur with the Proposed Project and could result in new unmitigated significant adverse impacts with respect to pedestrians that would not occur with the Proposed Project.

In general, although the Lower Density Alternative would meet a number of the Proposed Project's goals and objectives, it would do so to a lesser degree than the Proposed Project because it would introduce less new commercial office use and would not implement all of the public transportation and public realm improvements that would occur with the Proposed Project. As with the Proposed Project, the Lower Density Alternative would address substandard conditions in the Project Area by facilitating redevelopment to create a cohesive, transit-oriented commercial district, although the amount of commercial development under this alternative would be less than the Proposed Project and would not capitalize on the Project Area's unmatched transit access and would not be consistent with the maximum permitted densities of other transit-oriented districts in the City.

By providing for less overall development, the Lower Density Alternative would require land acquisition and other fixed costs to be amortized over less office space, which would offer less incentive for construction of the new office buildings, potentially delaying or forestalling their construction. Similarly, the Lower Density Alternative would foster and support economic growth to a lesser extent than the Proposed Project by creating fewer jobs and less economic activity. The Lower Density Alternative would be less supportive of the public policy goal of accommodating jobs and future economic growth in areas near transit hubs, and therefore a greater proportion of the City and state's future growth could be located in areas that are less transit-accessible than the Project Area under this alternative than with the Proposed Project.

The Lower Density Alternative would also implement fewer public transportation and public realm improvements than the Proposed Project, as it would not provide the sidewalk widenings or public transportation improvements associated with Site 8, and it would generate substantially less revenue than the Proposed Project and would therefore be less successful at providing support for the reconstruction and expansion of Penn Station.

MITIGATION

OPEN SPACE

Chapter 6, "Open Space," identifies direct and indirect impacts on open space resources. Specifically, the Proposed Project would result in the following significant adverse impacts to open space:

- Direct impact due to the elimination of portion of the through-block east plaza on Site 5 that is part of the 1 Penn Plaza privately owned public space (POPS). The elimination of the plaza represents a reduction of approximately 0.16 acres of passive open space as compared to the No Action condition.
- Indirect impact due to the introduction of a substantial new worker population, causing a decrease in the passive open space ratio of approximately 8.87 percent. Taking into account the combined residential and worker populations within the study area, there would be an 8.17 percent decrease in the combined open space ratio for workers and residents.

The direct impact would occur with the elimination of the through-block east plaza at the commencement of construction at Site 5. The indirect impact would occur with the completion and occupancy of approximately 7.8 million gsf of office floor area, which would introduce approximately 31,200 office workers to the study area.

Potential mitigation measures include, but are not limited to, the creation of new passive open space within the study area or funding for improvements, renovation, or maintenance at existing open spaces to increase their utility to meet identified open space needs in the area, such as the provision of additional passive recreation facilities. The significant adverse indirect impact on open space could be fully mitigated with the addition of approximately 0.44 acres (or 19,160 square feet [sf]) of new passive open space. This amount of open space would be in addition to the open space introduced with the Proposed Project.

Potential open space mitigation measures under consideration include the creation of additional passive open space in or near the Project Area (in addition to Site 2), or the provision of funding for open space improvements. Funding improvements could serve to partially mitigate the significant adverse open space impact. Funding could be provided to NYC Parks to address repairs

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and upgrades at open spaces in the study area. The need for improved facilities and repairs have been identified at Madison Square Park, Chelsea Park, and the Penn South open spaces.

Another measure, which would partially address the demand for open space introduced by the Proposed Project, is a separate proposal announced by Governor Andrew M. Cuomo to construct a pedestrian connector that would link the High Line spur, at its present eastern terminus at West 30th Street and Tenth Avenue, to the Moynihan Train Hall. The High Line is an elevated 1.45-mile linear park formed by a repurposed railroad viaduct that runs between Tenth and Eleventh Avenues, terminating at Gansevoort Street in the Meatpacking District. In 2019, a spur of the elevated viaduct that extends east along West 30th Street, terminating at Tenth Avenue, was converted to open space and incorporated into the park.

The first component of the Governor's proposal, which would be implemented independent of the second component, would provide a new elevated pedestrian connection starting at the present terminus of the High Line spur at West 30th Street and Tenth Avenue, extending eastward parallel to West 30th Street across property owned by the Port Authority of New York and New Jersey (PANYNJ) along Dyer Avenue (a service road for the Lincoln Tunnel that is under PANYNJ's jurisdiction), then turn north at the midblock point, continuing on Dyer Avenue and over West 31st Street and connecting to the existing public space in the Manhattan West development (a privately owned, mixed-use development) that continues north and then east, terminating at Ninth Avenue directly across from the Farley Building and the Moynihan Train Hall. A second, independent component of the proposed plan would extend the northwestern end of the High Line, which currently terminates at West 34th Street and Twelfth Avenue, north toward the Javits Center, then west across the West Side Highway to Pier 76 in Hudson River Park. While the High Line and the spur along West 30th Street currently fall just beyond the boundaries of the study area (the study area terminates at Tenth Avenue in the west), the first component of the Governor's proposal would extend the High Line into the study area and provide it with an elevated pedestrian walkway with some passive recreation functions and connections to other open space resources in proximity to the entire High Line, including a future direct connection to Hudson River Park that would be built in the second independent component of the Governor's proposed plan. The proposed extension of the High Line would be undertaken as a separate project and would undergo its own environmental review and other approvals, as appropriate. If implemented, the proposed extension of the High Line would partially mitigate the Proposed Project's open space impacts.

ESD will explore the feasibility of these measures in further detail between the DEIS and FEIS. These measures may warrant evaluation in consultation with NYC Parks and potentially other entities. If it is determined that there are no practicable mitigation measures that would reduce or eliminate the impacts, the significant adverse impact would remain unmitigated.

The Proposed Project would also result in significant adverse direct impacts to open space due to shadows. Potential mitigation measures for shadow impacts to open space are discussed below.

SHADOWS

As described in Chapter 7, "Shadows," shadows cast by the Proposed Project in the 2038 analysis year would result in significant adverse shadow impacts to nine sunlight-sensitive historic and open space resources: MSG POPS, Plaza 33, Herald Square Park, Chelsea Park, the Penn South open spaces, the Farley Building, St. Michael's Roman Catholic Church, St. Francis of Assisi Church, and the former Greenwich Savings Bank. These nine sunlight-sensitive resources would experience substantial durations and occasionally large extents of new shadow, which would significantly reduce the attractiveness and usability of the open spaces, or, in the case of the

historic resources, obscure sunlight-dependent features. Potential mitigation measures are described below.

Shadows On Open Spaces

The *City Environmental Quality Review (CEQR) Technical Manual* identifies several measures that could mitigate significant adverse shadow impacts on open spaces. These measures include modifying the height, shape, size, or orientation of the proposed developments in order to eliminate or reduce the extent and duration of incremental shadow on the resource; relocating sunlight-sensitive features within an open space to avoid sunlight loss; and undertaking additional maintenance to relocate or upgrade facilities or equipment or replace plantings.

Mitigation measures for shadow impacts that involve changes to the bulk or configuration of the proposed developments would be impracticable for the Proposed Project. Other potential mitigation measures for the shadows impacts to Chelsea Park, the Penn South open space areas north of West 26th Street, Herald Square Park, the MSG POPS, and Plaza 33 are being explored by ESD, and will be refined between the DEIS and FEIS. Such other potential mitigation measures include the provision of dedicated funding for improvements such as relocating seating, providing more seating in sunlit areas, upgrading walkways, and, with respect to Chelsea Park, upgrading the comfort station. Additional measures could include the hiring of additional maintenance staff, providing for improved maintenance in these resources.

If practicable mitigation measures are identified, the impacts would be considered partially mitigated. Furthermore, as the significant adverse shadows impacts would not be fully mitigated, the Proposed Project would result in unmitigated significant adverse shadows impacts to these resources.

In addition, the proposed extension of the High Line as described above in Section B, “Open Space” would create an elevated pedestrian walkway with some passive recreation functions and connections to other open space resources in proximity to the entire High Line. To the extent that this extension creates or provides access to sunlit open space, it would also provide partial mitigation for the significant adverse shadow impacts to open space resources. As noted above, proposed extension of the High Line, if pursued, would be undertaken as a separate project, subject to its own environmental review and other approvals, as appropriate

Shadows on Historic Resources

The *CEQR Technical Manual* identifies potential mitigation measures to reduce or eliminate, to the greatest extent practicable, significant adverse shadow impacts to sunlight-sensitive historic features, including changes to the bulk or configuration of the proposed developments that cause or contribute to the significant adverse impact. As noted above, mitigation measures for shadow impacts that involve changes to the bulk or configuration of the proposed developments would be impracticable for the Proposed Project. For significant adverse impacts to stained-glass windows and skylights, potential mitigation measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. These mitigation measures will be explored in consultation with OPRHP between publication of the DEIS and FEIS. If practicable mitigation is found, the impacts would be partially mitigated. In the absence of practicable mitigation, the significant adverse shadow impacts would remain unmitigated.

HISTORIC AND CULTURAL RESOURCES

The Proposed Project would result in a significant adverse impact associated with direct and indirect effects on architectural resources. The Proposed Project would result in the demolition of five architectural resources located on Sites 2 and 3 that would be removed for the proposed below-grade expansion of Penn Station, and one architectural resource on Site 7 that would be demolished to allow for new commercial development on Site 7. These resources are: Penn Station Service Building (#1, S/NR-eligible, NYCL-eligible), Fairmont Building at 239-241 West 30th Street (#2, S/NR-eligible), St. John the Baptist Roman Catholic Church Complex (#3, S/NR-eligible, NYC-eligible), Penn Terminal Building at 370 Seventh Avenue (#4, S/NR-eligible) Stewart Hotel (#5, S/NR-eligible, NYCL-eligible), and Hotel Pennsylvania (#6, S/NR-eligible).

Because the Hotel Pennsylvania on Site 7 has been determined S/NR-eligible, a feasibility study was undertaken to evaluate the potential for retaining and renovating the building for continued hotel use or reusing the building for office or residential uses. As detailed in Chapter 21, “Alternatives,” and **Appendix H**, “Alternatives Analysis for the Hotel Pennsylvania,” the analysis determined that it would not be feasible to retain this building.

With respect to the architectural resources located on Sites 2 and 3, retaining these buildings would substantially compromise the goals and objectives of the Proposed Project. As discussed in more detail in Chapter 21, “Alternatives,” retaining these buildings would preclude the redevelopment of Sites 2 and 3, which would prevent achievement of the project goal of revitalizing the area around Penn Station with new, sustainable, high-density commercial development, eliminating substandard and insanitary conditions in the Project Area, fostering and supporting economic growth and tax revenue through the creation of jobs and economic activity, and accommodating New York City’s long-term growth targeting the modern needs of commercial tenants at a transit-accessible location. Retaining these buildings would also be less supportive of the project objective of maximizing revenue generated by the new development to fund, in part, improvement and expansion of Penn Station, and would preclude the development of new open space on Site 2, which would not fulfill the project objective of creating new publicly accessible passive open space.

The retention of the architectural resources located on Sites 2 and 3 would also greatly complicate—or perhaps preclude altogether—the proposed expansion of Penn Station beneath Sites 2 and 3. Further analysis of this issue is expected to be developed during the federal environmental review process under the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. Alternatives that would avoid or minimize adverse impacts to historic resources from development on Sites 2 and 3 would be further explored pursuant to the NEPA review and Section 106 process.

Potential mitigation measures that could partially mitigate the impact of the demolition of the six architectural resources may include (to the extent practicable and feasible):

- Historic American Buildings Survey (HABS) documentation. HABS Level II documentation of all six buildings could be conducted by a recognized professional credentialed for preparing such reports, to be submitted to LPC, OPRHP, the New York Historical Society, the Museum of the City of New York, and/or other repositories.
- Architectural salvage. Surveys of the historic resources could be conducted to determine if any significant exterior or interior architectural elements could be removed and incorporated into the proposed project. This could include paying for the relocation and installation of church artifacts from St. John the Baptist Roman Catholic Church to other church locations.

Development of the Proposed Project could have adverse physical impacts on six architectural resources that are located within 90 feet of proposed construction activities, close enough to potentially experience adverse construction-related impacts from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery. These resources are: U.S. General Post Office (#7, S/NR, NYCL); former Equitable Life Assurance Company (#8, S/NR-eligible, NYCL-eligible); St. Francis Roman Catholic Church Complex (#22, S/NR-eligible, NYCL-eligible); 23rd Police Precinct Station House (#25, S/NR-eligible, NYCL); loft building (#27, S/NR-eligible) at 144-154 West 30th Street; and Fur Craft Building (#30, S/NR-eligible). Therefore, Construction Protection Plans to protect the six architectural resources within 90 feet of construction would be developed and implemented in coordination with OPRHP. The Construction Protection Plans would be required for Sites 1, 2, 3, 7, and 8. For the NYCL and NYCL-eligible properties potentially affected by construction impacts, the Construction Protection Plans would also be submitted to LPC for review and comment.

In 2038, the Proposed Project would result in significant adverse shadows impacts on four architectural resources in the primary and secondary study areas—the Farley Building (#7, S/NR, NYCL), St. Francis Roman Catholic Church Complex (#22, S/NR-eligible, NYCL-eligible), the open spaces of the Penn South Apartment Complex (#37, S/NR-eligible), and St. Michael’s Roman Catholic Church Complex (#40, S/NR-eligible, NYCL-eligible), and one architectural resource that is located north of the secondary study area: Greenwich Savings Bank (S/NR, NYCL). The sites that contribute to the shadows impact at each of these resources are discussed above in Section C, “Shadows.”

The *CEQR Technical Manual* identifies potential mitigation strategies to reduce or eliminate, to the greatest extent practicable, adverse shadow impacts to sunlight-sensitive historic features, including changes to the bulk or configuration of the development sites that cause or contribute to the adverse impact. For adverse impacts to stained-glass windows and skylights, potential mitigation measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. These mitigation measures will be further explored in ongoing consultation with OPRHP between publication of the DEIS and FEIS. If practicable mitigation is found, the impacts would be partially or fully mitigated. In the absence of practicable mitigation, the significant adverse shadow impacts would be unavoidable.

In addition, completion of Site 6 of the Proposed Project would obstruct views east of the iconic Empire State Building along West 34th Street, and completion of Site 2 would block northeast views of the Empire State Building from the east portion of Chelsea Park along Ninth Avenue, from the south side of the Ninth Avenue and West 28th Street intersection, and along the western portion of West 28th Street between Eighth and Ninth Avenues within the larger urban design study area. As described below, the potential mitigation measures for these significant adverse impacts to this visual resource would not be practicable, as they would not meet the goals and objectives of the Proposed Project.

ESD is undertaking continuing consultation with OPRHP regarding the development of mitigation for these significant adverse direct impacts and the evaluation of alternatives that may avoid or fully or partially mitigate these significant adverse impacts. Any mitigation measures for adverse impacts resulting from the development of Sites 5, 6, 7, and 8 (as summarized in Table 8-1 of Chapter 8, “Historic and Cultural Resources”) would be stipulated in a Letter of Resolution between ESD, the Metropolitan Transportation Authority (MTA), the developer, and OPRHP. Any mitigation measures for adverse impacts resulting from the expansion of Penn Station on

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Sites 1, 2, and 3 would likely be stipulated in a Memorandum of Agreement or Programmatic Agreement among the lead federal agency, OPRHP acting in its capacity as the State Historic Preservation Office, and other applicable parties pursuant to the separate Section 106 process.

VISUAL RESOURCES

The Proposed Project would result in a significant adverse impact to visual resources in the 2028 and 2038 analysis years; however, it would not result in a significant adverse impact related to urban design. Demolition of the Church of St. John the Baptist on Site 2 is projected to occur with the start of construction on Site 2 and demolition of the copper skybridge spanning from Site 8 across West 32nd Street is projected to occur during construction of Site 8. Demolition of these visual resources would constitute a direct significant adverse impact on visual resources. In addition, the obstruction of views east and northeast from certain vantage points within the western portion of the secondary study area towards the Empire State Building in the 2038 With Action condition would constitute a significant adverse impact to visual resources. In particular, the Proposed Project would obstruct views of the Empire State Building in views east on West 34th Street, in views northeast from West 28th Street and Ninth Avenue, and in views northeast from the east portion of Chelsea Park. Potential measures to mitigate the significant adverse impact to visual resources are discussed below.

As discussed above, the visual resource on Site 2—the Church of St. John the Baptist—would be demolished by the 2028 analysis year. As the Church of St. John the Baptist is an architectural resource, partial mitigation measures would be developed as discussed in Section D, “Historic and Cultural Resources.”

Demolition of the copper skybridge spanning from Site 8 across West 32nd Street would be required in order to redevelop Site 8, also requiring demolition of the existing building on the site to which the sky bridge is connected. As noted in Chapter 9, “Urban Design and Visual Resources,” the property owner could demolish the unused copper skybridge at any time independent of the Proposed Project. Retaining the existing building on Site 8 with the skybridge would preclude the inclusion of building setbacks that would allow for widened sidewalks along West 33rd Street and Sixth Avenue fronting Site 8 and it is expected that the transit improvements associated with Site 8 would not be undertaken if Site 8 is not redeveloped or expanded. Therefore, retaining the existing building would hinder the achievement of the State’s goal of improving passenger rail and transit facilities and pedestrian circulation and access. In addition, the removal of Site 8 as a development site would result in an alternative that would be less successful than the Proposed Project at revitalizing the area around Penn Station, eliminating substandard and insanitary conditions in the Project Area, fostering and supporting economic growth and tax revenue through the creation of jobs and economic activity, and accommodating New York City’s long-term growth at a transit-accessible location. Accordingly, demolition of the copper skybridge would remain unmitigated.

The proposed development on Site 6 would block views of the Empire State Building along the West 34th Street corridor. In views northeast from the east portion of Chelsea Park along Ninth Avenue, from the south side of the intersection of Ninth Avenue and West 28th Street, and along the western portion of West 28th Street between Eighth and Ninth Avenues, the eastern building of Site 2 along Seventh Avenue would block views of the Empire State Building. As noted in Chapter 9, “Urban Design and Visual Resources,” views to the Empire State Building in views north and south on Fifth Avenue and in all views looking towards the west would remain unaffected by the Proposed Project, as would views east from Sixth Avenue.

Mitigation options considered for the significant adverse impact to the Empire State Building as a visual resource included limiting the height of the proposed buildings on Sites 2 and 6 and requiring a greater setback from West 34th Street on Site 6. The DEIS analyses conclude that these potential mitigation measures would not be practicable. Accordingly, the significant adverse impact to the Empire State Building as a visual resource would remain unmitigated.

TRANSPORTATION

The Proposed Project could result in significant adverse impacts to traffic, transit, and pedestrians. Potential measures to mitigate these impacts to the extent practicable are summarized below. Subject to continuing review by DOT, MTA, and NYCT, some of the analyses and mitigation conclusions presented in this Draft EIS could change and may be revised, as needed, for the FEIS. Because of the Proposed Project’s long build-out and the extent and severity of the transportation-related impacts identified, ESD in coordination with DOT, would require developers for the Proposed Project to undertake a future transportation monitoring plan (TMP). The TMP studies, which would be undertaken at several development milestones, are expected to evaluate actual project-generated demand and background conditions during various stages of project development and occupancy and would consider adjusting the identified mitigation strategies as appropriate to address traffic and pedestrian issues at those points in time. This plan would be developed in consultation between ESD, and DOT for the identified mitigation strategies to address significant adverse traffic and pedestrian impacts. Regarding mitigation for the identified significant adverse subway station impacts, an assessment of when these impacts would materialize was prepared to inform decisions regarding the timing of mitigation implementation that ESD would make in coordination with MTA and NYCT.

Traffic

As discussed in Chapter 14, “Transportation,” traffic conditions were evaluated at 108 intersections for the weekday AM, midday, and PM peak hours. In the 2028 With Action condition, significant adverse traffic impacts were identified at 43 intersections during the weekday AM peak hour, 53 intersections during the weekday midday peak hour, and 54 intersections during the weekday PM peak hour. Under the 2038 With Action condition, significant adverse traffic impacts were identified at 96 intersections during the weekday AM peak hour, 84 intersections during the weekday midday peak hour, and 92 intersections during the weekday PM peak hour. Potential measures considered to mitigate these impacts include signal timing changes, restriping, and changes to parking regulations. Due to the high level of congestion predicted for both the future No Action and With Action conditions, many of the identified impacts were determined to be potentially unmitigatable. **Table S-9** summarizes the traffic mitigation analysis results for both the 2028 Phase 1 and 2038 Phase 2 analysis years.

Table S-9
Summary of Traffic Mitigation Analysis Results

Analysis Peak Hour	2028 Phase 1 With Action Condition			2038 Phase 2 With Action Condition		
	No. of Impacted Intersections	No. Fully Mitigated	No. Partially Mitigated or Unmitigated	No. of Impacted Intersections	No. Fully Mitigated	No. Partially Mitigated or Unmitigated
Weekday AM	43	28	15	96	27	69
Weekday Midday	53	42	11	84	41	43
Weekday PM	54	40	14	92	27	65

Notes: In total, 108 intersections, comprising of nearly 400 lane groups, were included in the traffic study area for analysis. During the 2038 With Action weekday midday peak hour, significant adverse traffic impacts were identified at 84 intersections; however, mitigation measures recommended at one intersection resulted in a new impact at an adjacent impact, so a total of 85 intersections would be impacted.

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Transit

As discussed in Chapter 14, “Transportation,” detailed analyses of station circulation elements and control areas were prepared for the 34th Street-Herald Square Station, 34th Street (Seventh Avenue)-Penn Station, and 34th Street (Eighth Avenue)-Penn Station, as well as line-haul conditions along the subway lines serving these three stations for the weekday AM and PM peak hours. In the 2028 With Action condition, significant adverse impacts were identified for four station elements during the AM peak hour and two station elements during the PM peak hour. Under the 2038 With Action condition, significant adverse impacts were identified for 31 station elements during the AM peak hour and 27 station elements during the PM peak hour. In addition, five subway lines during the AM peak hour and three subway lines during the PM peak hour would incur significant adverse line-haul impacts. Potential measures considered to mitigate these impacts include increasing operating speeds for escalators, streamlining the structure or widening of stairways, adding turnstiles, and increasing operating frequency of subway trains on subway lines. Based on a preliminary analysis of spatial and operating limitations, many of the identified impacts may be unmitigated. Between the DEIS and FEIS, additional measures will be explored, where practicable, to further mitigate the identified impacts, and ESD, in coordination with the MTA and NYCT, will assess in further detail the feasibility and practicability of the potential transit mitigation measures. In the event that certain mitigation measures are deemed impracticable and no other practicable mitigation measures can be identified, those impacts would be unmitigated. **Table S-10** summarizes the subway station mitigation analysis results for both the 2028 Phase 1 and 2038 Phase 2 analysis years.

Table S-10

Summary of Subway Station Mitigation Analysis Results

Analysis Peak Hour	Station Element	34th Street-Herald Square Station			34th-Seventh Ave Station			34th-Eighth Ave Station		
		No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated	No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated	No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated
2028 Phase 1 With Action Condition										
Weekday AM	Stairways	0	-	-	2	1	1	0	-	-
	Escalators	2	1	1	0	-	-	0	-	-
	Passageways	0	-	-	0	-	-	0	-	-
	Control Areas	0	-	-	0	-	-	0	-	-
Weekday PM	Stairways	0	-	-	2	1	1	0	-	-
	Escalators	0	-	-	0	-	-	0	-	-
	Passageways	0	-	-	0	-	-	0	-	-
	Control Areas	0	-	-	0	-	-	0	-	-
2038 Phase 2 With Action Condition										
Weekday AM	Stairways	12	6	6	8	5	3	4	2	2
	Escalators	4	3	1	0	-	-	0	-	-
	Passageways	0	-	-	0	-	-	0	-	-
	Control Areas	0	-	-	2	2	0	1	1	0
Weekday PM	Stairways	10	5	5	8	3	5	4	2	2
	Escalators	2	2	0	0	-	-	0	-	-
	Passageways	0	-	-	1	0	1	0	-	-
	Control Areas	0	-	-	2	2	0	0	-	-
Notes: In total, 103 station elements at the 34th Street-Herald Square, 34th Street-Seventh Avenue, and 34th Street-Eighth Avenue Stations were included in the subway station analysis.										

The Penn Station Master Plan has identified various potential improvements that are not part of the Proposed Project studied in this EIS. These improvements, if implemented, could have substantial benefits in addressing the identified impacts and/or enhancing commuter rail and subway rider experience at Penn Station and the adjacent 34th Street subway stations.

Since details and options associated with these potential improvements are still under development, their anticipated effects on alleviating projected congestion and/or mitigating the identified subway station impacts are described qualitatively in this Draft EIS. Additional analyses may be presented in the Final EIS, where appropriate.

Regarding the subway line-haul conditions identified for 2038 Phase 2 of the Proposed Project, the necessary changes in service frequency to fully mitigate the projected impacts are summarized in **Table S-11**. Since these changes are subject to the operational and fiscal feasibility of the MTA and NYCT, the identified impacts could be unmitigated. It should be noted that, as stated in Chapter 14, “Transportation,” NYCT may provide additional guidance on the anticipated distribution of future subway ridership along the various subway lines serving the study area. Accordingly, some of the subway line haul analysis results and potential mitigation measures identified may change for the FEIS.

**Table S-11
Summary of 2038 Phase 2 Subway Line Haul Mitigation Analysis Results**

Peak Hour	Line	Direction	Maximum Load Point	Average No. of Scheduled Trains Per Hour	No. of Additional Trains Needed to Mitigate Impact
Weekday AM	2/3	SB	72nd St	21.5	3
	A/D	SB	125th St	9.3	1
	M	NB	Marcy Av	16.1	1
Weekday PM	1	NB	Columbus Cir	21.3	1
	2/3	NB	Times Sq	19.2	3
Notes: The 34th Street-Herald Square Station serves the B, D, F, M, N, Q, R, and W subway lines; the 34th Street-Seventh Avenue Station serves the No. 1, 2, and 3 subway lines; and the 34th Street-Eighth Avenue Station serves the A, C, and E subway lines. NB = Northbound; SB = Southbound					

Pedestrians

As discussed in Chapter 14, “Transportation,” detailed analyses of pedestrian conditions were prepared for a study consisting of 245 pedestrian elements, including 88 sidewalks, 83 corners, and 74 crosswalks) for the weekday AM, midday, and PM peak hours. In the 2028 With Action condition, significant adverse impacts were identified for one sidewalk and three crosswalks during the weekday AM peak hour; one sidewalk and six crosswalks during the weekday midday peak hour; and five crosswalks during the weekday PM peak hour. Under the 2038 With Action condition, significant adverse impacts were identified for 21 sidewalks, 10 corners, and 53 crosswalks during the weekday AM peak hour; 5 sidewalks and 33 crosswalks during the weekday midday peak hour; and 20 sidewalks, 13 corners, and 55 crosswalks during the weekday PM peak hour. Potential measures explored to mitigate these impacts include street furniture removal/relocation, sidewalk/corner obstruction removal/relocation, curb extension, modification of pedestrian signal timing within each phase, and crosswalk widening. Although there is projected to be a high level of congestion predicted for both the future No Action and With Action conditions, many of the identified impacts were determined to be potentially mitigated. **Table S-12** summarizes the pedestrian mitigation analysis results for both the 2028 Phase 1 and 2038 Phase 2 analysis years.

Table S-12
Summary of Pedestrian Mitigation Analysis Results

Analysis Peak Hour	Sidewalks			Corners			Crosswalks		
	No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated	No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated	No. of Impacted Elements	No. Fully Mitigated	No. Partially Mitigated or Unmitigated
2028 Phase 1 With Action Condition									
Weekday AM	1	1	0	0	-	-	3	2	1
Weekday Midday	1	0	1	0	-	-	6	6	0
Weekday PM	0	-	-	0	-	-	5	5	0
2038 Phase 2 With Action Condition									
Weekday AM	21	8	13	10	8	2	53	30	23
Weekday Midday	5	0	5	0	-	-	33	23	10
Weekday PM	20	11	9	13	9	4	55	27	28
Notes: In total, 245 pedestrian elements were included in the pedestrian study area for analysis. Under the 2028 With Action condition, significant adverse impacts were identified at three, six, and five crosswalks during the weekday AM, midday, and PM peak hours, respectively. However, the recommended traffic mitigation measures would result in new crosswalk impacts including two, three, and three during the weekday AM, midday, and PM peak hours, respectively, for a total of five, nine, and eight total crosswalk impacts, respectively. During the 2038 With Action weekday midday peak hour, significant adverse impacts were identified at 33 crosswalks. However, the recommended traffic mitigation measures and corner mitigation measures resulted in five new crosswalk impacts for a total of 38 crosswalk impacts.									

As with the area’s subway system and further detailed in Chapter 22, “Mitigation,” the Penn Station Master Plan has identified various improvements that are not part of the Proposed Project studied in this EIS. However, if implemented, these improvements could have substantial benefits to pedestrian circulation within the Project Area. Their anticipated benefits on alleviating existing and future pedestrian congestion and potentially mitigating the study area’s impacted pedestrian elements are described qualitatively. Additional analyses may be presented in the Final EIS to more specifically depict the anticipated level of congestion relief these improvements could achieve for study area pedestrian facilities.

Implementation of Mitigation Measures

Implementation of proposed traffic and pedestrian mitigation measures would be subject to modifications in light of the results of the TMP and the approval of DOT prior to installation. These include signal timing changes, restriping, changes to parking regulations, street/sidewalk obstruction removal/relocation, curb extension, and crosswalk widening—standard measures routinely implemented throughout the City and generally considered to be feasible. ESD has committed to requiring designated developers of Project Area development sites to undertake post-approval TMP studies. Consultation with DOT for its review and approval of the TMP scope and timing would be undertaken approximately six months prior to critical project milestones, which could tentatively be the completion and occupancy of Phase 1 and Phase 2 of the Proposed Project, as well as the midpoint of the Phase 2 build-out. In accordance with SEQRA findings, to be imposed through project documents, project developers would be obligated to provide the traffic and pedestrian mitigation measures, subject to DOT approval. Regarding the significant adverse subway station and line-haul impacts, the MTA, as one of the project stakeholders, would coordinate with ESD on any future studies that may be necessary to confirm the need for the potential mitigation measures identified in this EIS and implement those and/or other improvement measures, subject to available funding.

NOISE

By the 2038 analysis year, traffic generated by the Proposed Project would produce significant increases in noise levels at receptors along West 31st Street between Ninth and Tenth Avenues, along West 31st Street between Sixth and Seventh Avenues, and along West 30th Street between Sixth and Eighth Avenues. The increases would occur primarily due to project-generated trucks travelling along the New York City Department of Transportation (DOT)-designated truck route on these streets. The increases would constitute a significant adverse impact at the receptors along these roadway segments. These locations are shown in **Table S-13**. These operational noise impacts are projected to occur upon the completion and occupancy of approximately 4.75 million gsf of office space on the proposed development sites.

Table S-13
Operational Noise Impact Locations

Address	Block	Lot
371 Ninth Avenue	729	7502
432 West 31st Street	728	55
252 West 30th Street	779	7501
234 West 30th Street	779	62
360 Seventh Avenue	779	45
355 Seventh Avenue	805	97
130 West 30th Street	805	7501
143 West 31st Street	807	17
137 West 31st Street	807	18
133 West 31st Street	807	22
132 West 32nd Street	807	7501
110 West 32nd Street	807	50
109 West 31st Street	807	7502
855 Sixth Avenue	806	7502

Many of the buildings at these locations feature modern façade construction including insulated glass windows and an alternate means of ventilation that would allow for the maintenance of a closed-window condition. At impacted residential buildings' façades that do not already have one or both of these features, ESD would require project developers to make mitigation measures (i.e., storm windows and/or alternative means of ventilation in the form of window air conditioners) available at no cost for purchase and installation on the buildings' West 31st Street or West 30th Street façades. Building façades with insulated glass windows or storm windows and alternative ventilation would provide sound attenuation such that even during warm weather conditions, interior noise levels would be approximately 25 dBA less than exterior noise levels. However, traffic generated by the Proposed Project by the 2038 analysis year would still result in interior noise levels up to approximately 9 dBA higher than 45 dBA during the peak hour of truck activity. Therefore, the significant adverse noise impacts predicted to occur at the above-mentioned residences would be only partially mitigated.

*CONSTRUCTION**Traffic*

Construction of the Proposed Project would result in temporary significant adverse traffic and noise impacts during the peak construction period for both Phase 1 and Phase 2 construction. The same or similar traffic mitigation measures identified to mitigate the operational impacts could be

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implemented early at the discretion of DOT to mitigate the temporary traffic impacts during construction.

Noise

Significant adverse noise impacts are predicted to occur at multiple sensitive locations as a result of construction of the proposed developments associated with the Proposed Project under either the illustrative construction schedule scenario or the alternative construction schedule scenario, as shown below in **Table S-14**.

Table S-14
Locations with Significant Construction Noise Impacts

Address	Block / Lot	Impact from Illustrative or Alternative Construction Schedule	Associated Development Site(s)
105 West 28th Street	Block 804 / Lot 32	Both	Sites 3 and 8
140 West 28th Street	Block 803 / Lot 62	Both	Sites 3 and 4
261 West 28th Street	Block 778 / Lot 7501	Both	Site 2 (Trainshed)
124 West 29th Street	Block 804 / Lot 54	Both	Site 3
211 West 29th Street	Block 779 / Lot 31	Both	Site 2
215 West 29th Street	Block 779 / Lot 7502	Both	Site 2
221 West 29th Street	Block 779 / Lot 27	Both	Site 2
247 West 29th Street	Block 779 / Lot 12	Both	Sites 2 and 7
249 West 29th Street	Block 779 / Lot 10	Both	Sites 2 and 7
252 West 29th Street	Block 778 / Lot 70	Both	Site 2
253 West 29th Street	Block 779 / Lot 8	Both	Sites 2 and 7
257 West 29th Street	Block 779 / Lot 7	Both	Sites 2 and 7
301 West 29th Street	Block 753 / Lot 35	Alternative	Sites 2 (Trainshed) and 7
130 West 30th Street	Block 805 / Lot 7501	Both	Sites 2 and 3
135 West 30th Street	Block 806 / Lot 13	Both	Sites 3 and 7
143 West 30th Street	Block 806 / Lot 7501	Both	Sites 3 and 7
208 West 30th Street	Block 779 / Lot 49	Both	Site 2
214 West 30th Street	Block 779 / Lot 52	Both	Site 2
234 West 30th Street	Block 779 / Lot 62	Both	Site 2
252 West 30th Street	Block 779 / Lot 7501	Both	Sites 2 and 7
308 West 30th Street	Block 753 / Lot 7502	Both	Sites 1, 2, and 7
313 West 30th Street	Block 754 / Lot 31	Both	Sites 1 and 7
314 West 30th Street	Block 753 / Lot 51	Alternative	Sites 1, 2, and 7
315 West 30th Street	Block 754 / Lot 30	Both	Sites 1 and 7
317 West 30th Street	Block 754 / Lot 29	Both	Sites 1 and 7
319 West 30th Street	Block 754 / Lot 28	Both	Sites 1 and 7
321 West 30th Street	Block 754 / Lot 27	Both	Sites 1 and 7
324 West 30th Street	Block 753 / Lot 56	Both	Sites 1, 2, and 7
337 West 30th Street	Block 754 / Lot 19	Both	Sites 1 and 7
341 West 30th Street	Block 754 / Lot 18	Both	Sites 1 and 7
342 West 30th Street	Block 753 / Lot 65	Both	Sites 1, 2, and 7
345 West 30th Street	Block 754 / Lot 16	Both	Sites 1 and 7
361 West 30th Street	Block 754 / Lot 8	Both	Sites 1 and 2
363 West 30th Street	Block 754 / Lot 1	Both	Sites 1 and 2
109 West 31st Street	Block 807 / Lot 7502	Both	Sites 3, 7, and 8
116 West 31st Street	Block 806 / Lot 52	Both	Site 3
133 West 31st Street	Block 807 / Lot 22	Both	Sites 3, 7, and 8

Table S-14 (cont'd)
Locations with Significant Construction Noise Impacts

Address	Block / Lot	Impact from Illustrative or Alternative Construction Schedule	Associated Development Site(s)
137 West 31st Street	Block 807 / Lot 18	Both	Sites 3, 7, and 8
143 West 31st Street	Block 807 / Lot 17	Both	Sites 3, 7, and 8
110 West 32nd Street	Block 807 / Lot 50	Both	Sites 3, 7, and 8
132 West 32nd Street	Block 807 / Lot 7501	Both	Sites 3, 7, and 8
142 West 32nd Street	Block 807 / Lot 64	Both	Sites 3, 7, and 8
144 West 32nd Street	Block 807 / Lot 65	Both	Sites 3, 7, and 8
36 West 33rd Street	Block 834 / Lot 66	Both	Sites 3 and 8
42 West 33rd Street	Block 834 / Lot 69	Both	Sites 3 and 8
49 West 33rd Street	Block 835 / Lot 9	Both	Sites 7 and 8
315 West 33rd Street	Block 757 / Lot 22	Both	Site 2 (Trainshed)
321 West 33rd Street	Block 757 / Lot 20	Both	Site 2 (Trainshed)
40 West 34th Street	Block 835 / Lot 65	Both	Sites 7 and 8
44 West 34th Street	Block 835 / Lot 67	Both	Sites 7 and 8
124 West 34th Street	Block 809 / Lot 59	Both	Sites 2, 3, 6, 7, and 8
126 West 34th Street	Block 809 / Lot 60	Both	Sites 2, 3, 6, 7, and 8
128 West 34th Street	Block 809 / Lot 61	Both	Sites 2, 3, 6, 7, and 8
130 West 34th Street	Block 809 / Lot 62	Both	Sites 2, 3, 6, 7, and 8
134 West 34th Street	Block 809 / Lot 64	Both	Sites 2, 3, 6, 7, and 8
136 West 34th Street	Block 809 / Lot 65	Both	Sites 2, 3, 6, 7, and 8
138 West 34th Street	Block 809 / Lot 66	Both	Sites 2, 3, 6, 7, and 8
140 West 34th Street	Block 809 / Lot 67	Both	Sites 2, 3, 6, 7, and 8
142 West 34th Street	Block 809 / Lot 68	Both	Sites 2, 3, 6, 7, and 8
223 West 34th Street	Block 784 / Lot 28	Both	Sites 4 and 7
243 West 34th Street	Block 784 / Lot 18	Both	Sites 4 and 7
245 West 34th Street	Block 784 / Lot 17	Both	Sites 4 and 7
249 West 34th Street	Block 784 / Lot 15	Both	Sites 4 and 7
255 West 34th Street	Block 784 / Lot 12	Both	Sites 4 and 7
315 West 34th Street	Block 758 / Lot 28	Both	Sites 2 and 4
218 West 35th Street	Block 784 / Lot 54	Both	Sites 4 and 7
835 Avenue of the Americas	Block 805 / Lot 7502	Both	Sites 2 and 3
846 Avenue of the Americas	Block 831 / Lot 7502	Both	Sites 2 and 8
855 Avenue of the Americas	Block 806 / Lot 7502	Both	Site 3
874 Avenue of the Americas	Block 832 / Lot 78	Alternative	Site 8
960 Avenue of the Americas	Block 837 / Lot 1	Both	Sites 3 and 8
315 Seventh Avenue	Block 803 / Lot 7501	Alternative	Sites 3 and 5
341 Seventh Avenue	Block 805 / Lot 1	Both	Sites 2 and 3
355 Seventh Avenue	Block 805 / Lot 97	Both	Sites 2 and 3
360 Seventh Avenue	Block 779 / Lot 45	Both	Site 2
474 Seventh Avenue	Block 785 / Lot 43	Both	Sites 3 and 4
370 Eighth Avenue	Block 778 / Lot 75	Both	Site 2 (Trainshed)
372 Eighth Avenue	Block 778 / Lot 74	Alternative	Site 2 (Trainshed)
374 Eighth Avenue	Block 778 / Lot 73	Alternative	Site 2 (Trainshed)
376 Eighth Avenue	Block 778 / Lot 72	Alternative	Site 2 (Trainshed)
378 Eighth Avenue	Block 778 / Lot 71	Alternative	Site 2 (Trainshed)

Table S-14 (cont'd)

Locations with Significant Construction Noise Impacts

Address	Block / Lot	Impact from Illustrative or Alternative Construction Schedule	Associated Development Site(s)
382 Eighth Avenue	Block 779 / Lot 1	Both	Sites 2 and 7
383 Eighth Avenue	Block 753 / Lot 36	Alternative	Sites 2 (Trainshed) and 7
387 Eighth Avenue	Block 753 / Lot 37	Alternative	Sites 2 (Trainshed) and 7
389 Eighth Avenue	Block 753 / Lot 38	Alternative	Sites 2 (Trainshed) and 7
391 Eighth Avenue	Block 753 / Lot 39	Alternative	Sites 2 (Trainshed) and 7
393 Eighth Avenue	Block 753 / Lot 40	Alternative	Sites 2 (Trainshed) and 7
481 Eighth Avenue	Block 758 / Lot 37	Both	Sites 2 and 4
270 Ninth Avenue	Block 751 / Lot 1	Alternative	Site 2
305 Ninth Avenue	Block 752 / Lot 1	Alternative	Sites 2 (Trainshed) and 7
342 Ninth Avenue	Block 753 / Lot 78	Both	Sites 1 and 2
360 Ninth Avenue	Block 754 / Lot 5	Both	Sites 1 and 2
1227 Broadway	Block 831 / Lot 68	Both	Site 8
1260 Broadway	Block 834 / Lot 11	Both	Sites 2 and 8
1282 Broadway	Block 835 / Lot 1	Both	Sites 7 and 8
1313 Broadway	Block 810 / Lot 40	Alternative	Peak construction truck traffic from all sites

Where feasible and practicable, construction would use drilled piles or caissons instead of impact-driven piles. This pile installation method is approximately 10 dBA quieter than impact-driven piles. Since impact-driven piles were the dominant noise source for most construction sites, this would reduce maximum noise levels at most impacted receptors. However, it is not possible at this time to confirm that drilled piles would be feasible and practicable for all pile installation work.

Construction of the proposed buildings at the development sites would be required to follow the requirements of the New York City Noise Control Code for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the New York City Noise Code, including a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the New York City Noise Code:

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code would be utilized from the start of construction. Table 20-22 in Chapter 20, “Construction,” shows the noise levels for typical construction equipment and the mandated noise levels for the equipment that would be used for construction under the Proposed Actions.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.

- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment—such as cranes, concrete pumps, concrete trucks, and delivery trucks—would be located away from and shielded from sensitive receptor locations.
- Noise barriers at least eight feet tall constructed from plywood or other materials consistent with the noise barrier performance requirements set forth in DEP’s “Rules for Citywide Construction Noise Mitigation,” would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations. The requirements for construction of portable noise barriers, enclosures, tents, etc. are set forth in DEP’s “Rules for Citywide Construction Noise Mitigation.”

Many of the buildings where impacts have been identified feature modern façade construction, including insulated glass windows and an alternative means of ventilation that would allow for the maintenance of a closed-window condition. At façades of impacted buildings that do not already have one or both of these features, ESD would require project developers to make mitigation measures (i.e., storm windows and/or alternative means of ventilation in the form of window air conditioners) available on façades that face construction at no cost for purchase and installation. The mitigation measures would be implemented at each receptor prior to the start of construction on any development site whose construction contributes to the predicted impact at that receptor (see **Table S-14**). Building façades with insulated glass windows or storm windows and alternative ventilation would provide sound attenuation such that even during warm weather conditions, interior noise levels would be approximately 25 dBA less than exterior noise levels. However, construction of the Proposed Project during the most noise-intensive construction activity nearest a receptor would result in interior noise levels up to 62 dBA L_{10} , which is 17 dBA greater than the level considered acceptable according to *CEQR Technical Manual* noise exposure guidelines. Consequently, significant adverse noise impacts predicted to occur at the above-mentioned residences would be only partially mitigated.

Neighborhood Character

As discussed in Chapter 20, “Construction” long-term construction activity associated with the proposed expansion of Penn Station and new buildings on Sites 1, 2, and 3 would result in significant adverse localized neighborhood character impact in the immediate vicinity of these development sites during construction. Construction activities would be disruptive and concentrated on these sites for an extended period of time. Throughout the construction period, measures would be implemented to control air quality, noise, and vibration on the construction sites, including the erection of construction fencing and in some areas fencing incorporating sound reducing measures. This fencing would reduce potentially undesirable views of construction sites

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and buffer noise emitted from construction activities. Furthermore, in the event that there is an extended period between the completion of the expansion of Penn Station and the commencement of construction of the new buildings on Sites 1, 2, and/or 3, MTA, in consultation with the City, would seek to activate one or more of the sites with temporary uses or other programming. There are no other practicable measures to mitigate the significant adverse localized neighborhood character impact in the vicinity of Sites 1, 2, and 3. Therefore, this impact would remain unmitigated.

UNAVOIDABLE ADVERSE IMPACTS

OPEN SPACE

The Proposed Project would result in direct and indirect significant adverse impacts on open space resources. Specifically, the Proposed Project would result in a direct impact due to the elimination of portion of the through-block east plaza on Site 5 that is part of the 1 Penn Plaza POPS, and an indirect impact would occur as the result of the introduction of a substantial new worker population, causing a substantial decrease in the passive open space ratio for workers and the combined open space ratio for workers and residents. As discussed in Chapter 21, “Alternatives,” alternatives that would avoid these open space impacts would be impracticable.

Several measures have been identified to potentially mitigate the significant adverse open space impacts, as discussed above in “Mitigation.” ESD will explore the feasibility of these mitigation measures in further detail between the DEIS and FEIS. These measures may warrant evaluation with NYC Parks and potentially other entities. If it is determined that there are no practicable mitigation measures that would reduce or eliminate the impacts, the significant adverse open space impacts would remain unmitigated and constitute an unavoidable adverse impact of the Proposed Project.

SHADOWS

Shadows cast by the Proposed Project in the 2038 analysis year would result in significant adverse shadow impacts to nine sunlight-sensitive historic and open space resources: MSG POPS, Plaza 33, Herald Square Park, Chelsea Park, the Penn South open spaces, the Farley Building, St. Michael’s Roman Catholic Church, St. Francis of Assisi Church, and the former Greenwich Savings Bank. These nine sunlight-sensitive resources would experience substantial durations and occasionally large extents of new shadow, which would significantly reduce the attractiveness and usability of the open spaces, or, in the case of the historic resources, obscure sunlight-dependent features.

Mitigation measures to eliminate or minimize the significant adverse shadow impacts are described above in “Mitigation.” As discussed above, mitigation measures for shadow impacts to open spaces and historic resources that involve changes to the bulk or configuration of the proposed developments would be impracticable for the Proposed Project. For significant adverse impacts to stained-glass windows and skylights, potential mitigation measures could also include the provision of artificial lighting to simulate the effect of direct sunlight. In the absence of mitigation, these impacts would remain unmitigated and constitute an unavoidable significant adverse impact of the Proposed Project.

HISTORIC AND CULTURAL RESOURCES

The Proposed Project would result in significant adverse impacts to architectural resources in the 2028 and 2038 analysis years.

In the 2028 With Action condition, the Proposed Project would result in significant adverse direct impacts on five architectural resources located on Sites 2 and 3 that would be removed for the proposed below-grade expansion of Penn Station, and one architectural resource on Site 7 that would be demolished to allow for new commercial development on Site 7. These architectural resources are: (#1, S/NR-eligible, NYCL-eligible) Penn Station Service Building at 236-248 West 31st Street; (#2, S/NR-eligible) Fairmont Building at 239-241 West 30th Street; (#3, S/NR-eligible, NYCL-eligible) St. John the Baptist Roman Catholic Church Complex at 207-215 West 30th Street; (#4, S/NR-eligible) Penn Terminal Building at 370 Seventh Avenue; (#5, S/NR-eligible, NYCL-eligible) Stewart Hotel at 371-377 Seventh Avenue; and (#6, S/NR-eligible) Hotel Pennsylvania at 401 Seventh Avenue. Measures that could partially mitigate these significant adverse impacts are described in “Mitigation;” consultation with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) regarding these potential measures is ongoing.

In the 2038 With Action condition, the Proposed Project would result in significant adverse shadow impacts on four architectural resources in the primary and secondary study areas and one architectural resource that is located north of the secondary study area. These architectural resources are: (#7, S/NR, NYCL) U.S. General Post Office, on the block bounded by Eighth and Ninth Avenues, West 31st and West 33rd Streets; (#22, S/NR-eligible, NYCL-eligible) St. Francis Roman Catholic Church at 129-143 West 31st Street; (#37, S/NR-eligible) Penn South Apartment Complex, bounded by West 29th and West 23rd Streets, Eighth and Ninth Avenues; (#40, S/NR-eligible, NYCL-eligible) St. Michael’s Roman Catholic Church at 414-424 West 34th Street; and the former Greenwich Savings Bank (S/NR, NYCL) at 1352-1362 Broadway, which is outside the study area. Measures that could partially mitigate the significant adverse impacts on the U.S. General Post Office, St. Francis Roman Catholic Church Complex, and St. Michael’s Roman Catholic Church Complex are described in “Mitigation;” consultation with OPRHP regarding these potential measures is ongoing. Potential measures to mitigate the significant adverse shadow impacts on the other architectural resources would not be practicable and the significant adverse impacts would remain unmitigated.

In the 2038 With Action condition, the Proposed Project would also result in significant adverse visual impacts with respect to the Empire State Building by obstructing views towards the architectural resource east on West 34th Street and northeast from the east portion of Chelsea Park along Ninth Avenue, from the south side of the Ninth Avenue and West 28th Street intersection, and along the western portion of West 28th Street between Eighth and Ninth Avenues. Potential measures to mitigate these significant adverse visual impacts were determined not practicable; therefore, the obstruction of views to the Empire State Building would be an unavoidable significant adverse impact of the Proposed Project.

VISUAL RESOURCES

The Proposed Project would result in a significant adverse impact to visual resources in the 2028 and 2038 analysis years. Demolition of visual resources on two development sites, the Church of St. John the Baptist on Site 2 by the 2028 analysis year and the copper skybridge spanning from Site 8 across West 32nd Street by the 2038 analysis year, would constitute a direct significant adverse impact on visual resources. In addition, the Proposed Project would obstruct views of the Empire State Building in eastward views along West 34th Street and in views northeast from the

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east portion of Chelsea Park along Ninth Avenue, from the south side of the Ninth Avenue and West 28th Street intersection, and along the western portion of West 28th Street between Eighth and Ninth Avenues. The obstruction of these views east and northeast from certain vantage points within the western portion of the secondary study area towards the Empire State Building in the 2038 With Action condition would constitute a significant adverse impact to visual resources. As discussed above, potential measures to mitigate the significant adverse impact to visual resources were assessed. As the St. John the Baptist Roman Catholic Church Complex is an architectural resource, partial mitigation measures would be developed as discussed above. Potential mitigation measures considered with respect to the demolition of the copper skybridge on Site 8 and the obstruction of views to the Empire State Building from certain vantage points within the western portion of the study area would not be practicable; therefore, the significant adverse impacts constitute an unavoidable significant adverse impact of the Proposed Project.

TRANSPORTATION

Under the 2028 and 2038 With Action conditions, a number of significant adverse transportation impacts could not be fully mitigated during one or more analysis peak hours; therefore, these unmitigated impacts would constitute unavoidable significant adverse impacts of the Proposed Project. Subject to continuing review by the DOT, MTA, and NYCT, some of the analyses and mitigation conclusions presented in this DEIS could change and may be revised, as needed, for the FEIS. In the event that certain mitigation measures are deemed impracticable and/or transportation analysis conditions change such that no other practicable mitigation measures can be identified, then there could be additional impacts that would be unmitigated.

In the 2028 With Action condition, the Proposed Project would result in significant adverse traffic impacts that could not be fully mitigated at 15, 11, and 14 intersections during the weekday AM, midday, and PM peak hours, respectively. For transit, the Proposed Project would result in significant adverse subway station element impacts that could not be fully mitigated at two and one analysis elements during the weekday AM and PM peak hours, respectively. For pedestrians, the Proposed Project would result in significant adverse pedestrian impacts that could not be fully mitigated at one, one, and zero analysis elements during the weekday AM, midday, and PM peak hours, respectively.

In the 2038 With Action condition, the Proposed Project would result in significant adverse traffic impacts that could not be fully mitigated at 69, 43, and 65 intersections during the weekday AM, midday, and PM peak hours, respectively. For transit, the Proposed Project would result in significant adverse subway station element impacts that could not be fully mitigated at 12 and 13 analysis elements during the weekday AM and PM peak hours, respectively. For pedestrians, the Proposed Project would result in significant adverse pedestrian impacts that could not be fully mitigated at 38, 15, and 41 analysis elements during the weekday AM, midday, and PM peak hours, respectively.

Regarding mitigation for traffic and pedestrian impacts, ESD in coordination with DOT, would require developers for the Proposed Project to undertake a future transportation monitoring plan (TMP) to evaluate actual project-generated demand and background conditions during various stages of project development and occupancy and would consider adjusting the identified mitigation strategies as appropriate to address traffic and pedestrian issues at those points in time.

For transit mitigation, ESD in coordination with the MTA and NYCT will assess in further detail the feasibility, practicability, and the implementation timing of the potential transit mitigation measures. In the event that certain mitigation measures are deemed impracticable and no other

practicable mitigation measures can be identified, those impacts would be unmitigated. Furthermore, mitigation measures identified for station elements within the footprint of a development site may be implemented together with the construction of that development site; therefore, if the development of a building at a development site is delayed or does not occur, the mitigation measures at that development site may be delayed or may not be implemented.

Should there be delays in implementing certain traffic, transit, or pedestrian mitigation measures because a development site has not been constructed, then the projected impacts would be unmitigated until the development site is constructed and the corresponding mitigation measures implemented. In the event that certain development sites are not developed, then some of the projected impacts may not occur and others would be unmitigated.

NOISE

Traffic noise generated by the Proposed Project would increase noise levels resulting in significant adverse noise impacts at receptors along West 31st Street between Ninth and Tenth Avenues, along West 31st Street between Sixth and Seventh Avenues, and along West 30th Street between Sixth and Seventh Avenues, primarily due to project-generated trucks travelling along the New York City Department of Transportation (DOT)-designated truck route on these streets. As discussed above in “Mitigation,” many of the buildings at these locations feature modern façade construction, including insulated glass windows and an alternate means of ventilation that would allow for the maintenance of a closed-window condition. At impacted residential buildings’ façades that do not already have one or both of these features, ESD would require project developers to make mitigation measures (i.e., storm windows and/or alternative means of ventilation in the form of window air conditioners) available at no cost for purchase and installation on the buildings’ West 31st Street or West 30th Street façades. Building façades with insulated glass windows or storm windows and alternative ventilation would provide sound attenuation such that even during warm weather conditions, interior noise levels would be approximately 25 dBA less than exterior noise levels. However, traffic generated by the Proposed Project by the 2038 analysis year would still result in interior noise levels up to approximately 9 dBA higher than 45 dBA during the peak hour of truck activity. Therefore, the significant adverse noise impacts predicted to occur at the above-mentioned residences would be only partially mitigated. In addition, some building owners may not accept the offer of storm windows and/or alternative means of ventilation; at these locations, the significant adverse noise impacts would be unmitigated. Because these impacts cannot be fully mitigated, the impacts would constitute an unavoidable significant adverse impact of the Proposed Project.

CONSTRUCTION

Transportation

As discussed above, there would be temporary significant adverse traffic impacts during the Phase 1 and Phase 2 peak construction conditions that cannot not be fully mitigated during one or more construction analysis peak hours. In the Phase 1 peak construction condition, there would be significant adverse traffic impacts that could not be fully mitigated at one intersection during the weekday PM construction peak hour. In the Phase 2 peak construction condition, there would be significant adverse traffic impacts that could not be fully mitigated at two and nine intersections during the weekday AM and PM construction peak hours, respectively. Subject to continuing review by DOT, some of the analyses and mitigation conclusions presented in this Draft EIS could change and may be revised, as needed, for the Final EIS. In the event that certain mitigation

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measures are deemed impracticable and/or construction traffic analysis conditions change such that no other practicable mitigation measures can be identified, then there could be additional impacts that would be unmitigated.

Noise

As discussed above, the detailed analysis of construction-period noise determined that construction of the Proposed Project has the potential to result in construction-period noise levels that would constitute significant adverse construction-period impacts at multiple sensitive locations (see **Table S-14**).

As discussed above in “Mitigation,” additional control measures beyond those already identified in Chapter 20, “Construction,” were explored to determine if there are feasible and practicable measures that could mitigate the potential construction noise impacts listed above. Where feasible and practicable, construction would use drilled piles or caissons instead of impact-driven piles. Construction of the proposed buildings at the development sites would be required to follow the requirements of the New York City Noise Control Code for construction noise control measures. At façades of impacted buildings that do not already have one or both of these features, ESD would require project developers to make mitigation measures (i.e., storm windows and/or alternative means of ventilation in the form of window air conditioners) available on façades that face construction at no cost for purchase and installation. With the provision of such measures, the façades of these buildings would be expected to provide approximately 25 dBA window/wall attenuation. Even with these measures, interior $L_{10(1)}$ noise levels at these buildings would at times during the construction period exceed the 45 dBA guideline recommended for residential and community spaces according to CEQR noise exposure guidelines by up to approximately 17 dBA. Because it is not possible at this time to confirm that drilled piles would be feasible and practicable for all pile installation and interior noise levels could still exceed the acceptable threshold even with the provision of receptor noise mitigation, the significant adverse construction noise impacts would be only partially mitigated. In addition, some building owners may not accept the offer of storm windows and/or alternative means of ventilation; at these locations, the significant adverse construction-period noise impacts would be unmitigated. Because these impacts cannot be fully mitigated, the impacts would constitute an unavoidable impact.

Neighborhood Character

Long-term construction activity associated with the proposed expansion of Penn Station and new buildings on Sites 1, 2, and 3 would result in significant adverse localized neighborhood character impacts in the immediate vicinity of these development sites during construction. Construction activities would be disruptive and concentrated on these sites for an extended period of time. Throughout the construction period, measures would be implemented to control air quality, noise, and vibration on the construction sites, including the erection of construction fencing and in some areas fencing incorporating sound reducing measures. This fencing would reduce potentially undesirable views of construction sites and buffer noise emitted from construction activities. Furthermore, in the event that there is an extended period between the completion of the expansion of Penn Station and the commencement of construction of the new buildings on Sites 1, 2, and/or 3, MTA, in consultation with the City, would seek to activate one or more of the sites with temporary uses or other programming. There are no other practicable measures to mitigate the significant adverse localized neighborhood character impacts in the vicinity of Sites 1, 2, and 3. Therefore, this impact would constitute an unavoidable adverse impact of the Proposed Project.

GROWTH-INDUCING ASPECTS OF THE PROPOSED PROJECT

The Proposed Project is not expected to induce additional growth beyond the Project Area. While the Proposed Project would improve existing infrastructure, including passenger rail and subway facilities, the infrastructure in the study area—i.e., the ¼-mile area surrounding the Project Area—is already well-developed such that improvements associated with the Proposed Project would not induce additional growth in that surrounding area. The study area’s residential market demand is already heavily influenced by its location proximate to a major commercial district and transit hub. Similarly, the retail uses introduced by the Proposed Project are already present in the study area and available to residents, workers, and visitors. For these reasons, the Proposed Project is not expected to induce residential growth in the ¼-mile study area.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

There are a number of resources, both natural and man-made, that would be expended in the construction and operation of the Proposed Project. These resources include the building materials used in construction; energy in the form of gas and electricity consumed during construction and operation of project-generated development by various mechanical and processing systems; and the human effort (time and labor) required to develop, construct, and operate various components of the Proposed Project.

The resources are considered irretrievably committed because their reuse for some purpose other than for the Proposed Project would be unlikely. The development associated with the Proposed Project also constitutes a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future. However, the land use changes, transit and rail improvements, and public realm improvements generated under the Proposed Project would be compatible in terms of use and scale with existing conditions and trends in the area as a whole. None of the development sites possess any natural resource of significant value, and the sites are in large part developed or have been previously developed.

These commitments of land resources and materials are weighed against the benefits of the Proposed Project, which would result in approximately 20 million gross square feet (gsf) of primarily Class A commercial office, retail, and hotel space on eight development sites within the Project Area. The Proposed Project would support the reconstruction and proposed expansion of Penn Station. In addition, the Proposed Project would provide several significant public benefits (including the provision of transit improvements at area subway stations) and public realm improvements (including new and enhanced publicly accessible open spaces, improvements to pedestrian circulation, and shared streets). *