Exhibit 4

SEQRA Findings Statement

New York State Urban Development Corporation
Doing Business as Empire State Development

State Environmental Quality Review Act Findings

Pennsylvania Station Area Civic and Land Use Improvement Project in the Borough of Manhattan New York, New York

Empire State Development
633 Third Avenue
New York, New York 10017

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I. Summary and Introduction

A. Introduction

This Statement of Findings is issued by the New York State Urban Development Corporation doing business as Empire State Development ("ESD") pursuant to the State Environmental Quality Review Act ("SEQRA"), N.Y. Envtl. Conserv. Law Article 8, and its implementing regulations adopted by the New York State Department of Environmental Conservation ("NYSDEC") and codified at Title 6 of the New York Code of Rules and Regulations Part 617 (the "SEQRA Regulations"). This statement sets forth ESD's findings with respect to the Pennsylvania Station Area Civic and Land Use Improvement Project (the "Project") as set forth in the modified General Project Plan dated July 2022 (the "GPP") after careful consideration of the Final Environmental Impact Statement dated June 2022 (the "FEIS"). ESD is the lead agency for the Project under SEQRA.

B. Project Location and Summary

The Project Area (described below) is centered around Penn Station, which is owned by the National Railroad Passenger Corporation doing business as Amtrak ("Amtrak"). Penn Station is Amtrak's major train station for intercity rail service on the Northeast Corridor and also serves as a major commuter rail station for Long Island Rail Road ("LIRR") and New Jersey Transit ("NJT"). Penn Station operates as part of a multi-modal transportation complex that includes the interconnected Moynihan Train Hall in the Farley Building (utilized principally by Amtrak), three interconnecting subway stations on Sixth Avenue, Seventh Avenue, and Eighth Avenue, the Port Authority Trans-Hudson ("PATH") train, and a web of transit entrances and interconnecting pedestrian corridors. (The "Gimbels passageway" between Penn Station and the Sixth Avenue subway station, however, is in disrepair and has been closed for decades.) This multi-modal transportation complex is a critical civic facility serving New York City (the "City") and the region, but, as discussed below, aside from the recently completed Moynihan Train Hall, nearly every element of this civic facility is substandard and impedes the growth and vitality of the area and the region.

Penn Station is located on Manhattan Block 781, which is located between Seventh and Eighth Avenues and West 31st and West 33rd Streets. The Project Area also includes all or portions of the blocks immediately surrounding Penn Station. Within the Project Area, the Project includes eight designated development sites (Sites 1, 2, 3, 4, 5, 6, 7 and 8). Proceeding counterclockwise around Penn Station, the Project Area includes:

- to the west of Penn Station, Block 755 (containing the Farley Building and its Moynihan Train Hall);
- to the southwest of Penn Station, a portion of Block 754 (tax lots 34, 35, 36, 37, 38, 39, 40, 41, 44, 51 and 63, comprising **Site 1** of the GPP, which is subdivided as **Site 1A** and **Site 1B**);
- to the south of Penn Station, Block 780 (**Site 2** of the GPP, which is subdivided as **Site 2A** and **Site 2B**);

- to the southeast of Penn Station, a portion of Block 806 (tax lots 1, 3, 6, 9, 69 and 76, comprising **Site 3** of the GPP);

- to the east of Penn Station between West 31st and West 32nd Streets, a portion of Block 807 (tax lot 1);

- to the east of Penn Station between West 32nd and West 33rd Streets, Block 808 (containing **Site 7** of the GPP on tax lot 7501 and **Site 8** of the GPP on tax lot 40);

- to the northeast of Penn Station, a portion of Block 809 (tax lots 1, 3, 4, 5, 8, 16, 17, 69, 73, 80 and 82, comprising **Site 6** of the GPP); and

- to the north of Penn Station, Block 783 (containing **Site 5** of the GPP on tax lots 34 and 48 and a portion of tax lot 70 and **Site 4** of the GPP on tax lot 1 and a portion of tax lot 70).

The Project Area also includes adjoining public rights-of-way (streets and sidewalks) and at-grade and below-grade transit infrastructure (existing and proposed).

C. Project Summary

The Project includes:

The creation of a revitalized, transit-oriented mixed-use district to benefit Penn Station, expansion of critical connecting transit infrastructure, and revitalization of the surrounding area. The Project would result in up to approximately 18 million gross square feet (gsf) of primarily Class A commercial office, retail, and hotel space and up to 1,798 dwelling units (DUs) on eight development sites within the Project Area. The Project includes the construction of ten new buildings (two buildings on Site 1, two buildings on Site 2, and one building on each of the other six designated development sites). To allow for the implementation of the Project, ESD would override the New York City Zoning Resolution and other local laws and requirements, as applicable.

Significant improvements to area subway stations and transit connections with Penn Station to support current and projected future ridership growth. The Project includes transit improvements and connecting entrances to Penn Station at each development site in connection with new building construction. Intermodal 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 PATH train service). Additional public transportation improvements 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, and creating a below-grade north–south circulation corridor east of Seventh Avenue, and other improvement measures.

Implementation of other 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 include widening sidewalks adjoining the Project buildings and creating new open space and public spaces in the Project Area.

Funding for Penn Station. The Project improvements would generate funding for the proposed reconstruction of Penn Station and the potential expansion of Penn Station to Sites 1, 2 and 3 by the Metropolitan Transportation Authority ("MTA"), Amtrak and NJT (collectively, the "Railroads"). The Railroads' expansion of Penn Station to Sites 1, 2 and 3 (and the associated above-grade redevelopment of Sites 1, 2 and 3 under the GPP) would occur only if the expansion of the train station to these blocks is selected as the preferred alternative after a federal environmental and historic resource review under the National Environmental Policy Act, the National Historic Preservation Act, and Section 4(f) of the U.S. Department of Transportation Act. Because the Project would provide support for the Railroads' Penn Station reconstruction and potential future expansion projects, ESD's environmental review of the Project has conservatively included an analysis of the potential effects of those Railroad projects, based on currently available information.

II. Procedural History

The review of the Project under SEQRA has been performed in coordination with the review of the adopted General Project Plan under the Urban Development Corporation Act (Chapter 174, Section 1, Laws of 1968; codified at N.Y. Unconsol. Laws § 6251 *et seq.*). In its role as lead agency, ESD prepared an Environmental Assessment Form (the "EAF"). Based on the information contained in the EAF, ESD determined that the Project would have the potential to result in significant adverse environmental impacts and issued a Positive Declaration on May 19, 2020. ESD issued a draft Scope of Work for the environmental impact statement ("EIS") on July 1, 2020. The draft Scope of Work was posted on ESD's web site and widely distributed to public officials and agencies and other interested parties. A Combined Notice of Lead Agency, Public Scoping and Intent to Prepare Draft Environmental Impact Statement was published in the *Environmental Notice Bulletin* on July 1, 2020.

The period for interested and involved agencies and the public to review and comment on the draft Scope of Work was held open through August 20, 2020. A public scoping meeting to hear comments on the draft Scope of Work was held on July 20, 2020. Due to the COVID-19 pandemic and restrictions on public gatherings, this public scoping meeting was conducted as a virtual meeting utilizing the Zoom video communications and teleconferencing platform. The final Scope of Work, reflecting comments made during the scoping process, was issued on December 29, 2020.

The draft EIS ("DEIS") was then prepared in accordance with the final Scope of Work. On February 18, 2021, the ESD Directors (the "Directors") accepted the DEIS, and a Notice of Completion was issued. At the same meeting, the Directors adopted a General Project Plan, which included draft Design Guidelines that were developed for the Project. ESD made the DEIS, adopted General Project Plan and draft Design Guidelines available to the public on the ESD website and distributed notice of the documents to the involved agencies. The notice of the availability of the DEIS for review was published in the *Environmental Notice Bulletin* on March 31, 2021. The notice of the availability of the DEIS and adopted General Project Plan for review was published in the *New York Daily News* on February 24, 2021 and March 5, 2021.

Following the adoption of the General Project Plan and ESD's issuance of the DEIS, ESD worked closely with and consulted the Project's Community Advisory Committee and its larger Working Group, including local elected officials and community stakeholders. After considering their comments and recommendations, ESD staff presented proposed revisions to the Project at meetings with the CACWG on November 4 and November 9, 2021. These presentation materials with further revisions by ESD staff were posted on the ESD project website on November 10, 2021 (the "Proposed Revisions").

Oral and written comments on the DEIS, the adopted General Project Plan, and Proposed Revisions were received during virtual public hearings held by ESD on December 8, 2021 and January 20, 2022. Written comments were accepted from issuance of the DEIS on February 18, 2021 through February 22, 2022, a period of about one year. Notices as to the public hearings and the close of the written comment period were published in the *Environmental Notice Bulletin* on November 17, 2021 and December 29, 2021 and in the *New York Daily News* on November 8, 2021, December 13, 2021, and December 16, 2021.

A total of 208 people spoke at the two public hearings. ESD received written comments from nearly 500 people and organizations.

On June 30, 2022, the Directors accepted the final EIS (the "FEIS"). On the same day, ESD posted a Notice of Completion and the FEIS itself on its web site. The Notice of Completion stated that written comments on the FEIS would be accepted through July 11, 2022.

After publication of the FEIS, ESD staff has proposed two modifications of the Project to further reflect input from elected officials and the community. These proposed modifications are discussed below.

Having reviewed the DEIS and FEIS, each of which is incorporated by reference into this statement of findings, and other Project documents, ESD makes the following findings and conclusions based on those documents and the administrative record:

III. Framework for the Environmental Impact Analysis

A. Methodology

The DEIS and FEIS were prepared in accordance with SEQRA and followed the guidelines set forth in the *New York City Environmental Quality Review (CEQR) Technical Manual* (the "*CEQR Technical Manual*"), where appropriate. The *CEQR Technical Manual* is generally considered to provide the most appropriate methodologies and criteria for environmental impact assessment in New York City.

B. Analysis Years

Since the Project would involve the development of many elements over an extended period of time, two analysis years, 2033 and 2044, were considered in the FEIS. ESD understands that it is impossible to predict the precise time period over which the Project, or any multi-faceted major project, will actually achieve completion because their schedule will be affected by many factors over the decades including among other things market conditions, the

overall health of the economy and labor availability. Accordingly, ESD has selected these analysis years not as a prediction of when the Project will be completed, but because they provide a reasonable basis for a conservative assessment of the potential short- and long-term environmental impacts of the Project. The FEIS also considers an extended buildout scenario in which the Project is completed after 2044, in order to assess how a longer construction schedule would affect the conclusions derived from examination of conditions as of the 2033 and 2044 analysis years.

By 2033, it is assumed that any potential southward 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 any southward expansion is assumed to be completed on Site 2A by 2033. Besides the new service building, the existing above-grade uses on Sites 1, 2, and 3 would be cleared, and developments Sites 1A and 1B would be completed. In addition, it is assumed that reconstruction of the existing Penn Station would be completed, and commercial development on Site 7, including associated transit and public realm improvements, is assumed to be completed and operational. Development on Site 4 would also be completed, as either a commercial building, or a building with a mix of commercial and residential uses. The completed and operational components of the Project which are analyzed for the 2033 analysis year are referred to as "Phase 1."[1] The operational analysis for Phase 1 considers the potential environmental effects of the completed buildings in 2033.

By 2044, it is assumed that all components of the Project would be completed and fully operational, including the developments on Sites 2 (2A and 2B), 3, 5, 6, and 8, as well as the southward expansion of Penn Station and the Penn Station reconstruction, and all public transportation and public realm improvements. The components of the Project which are analyzed for the 2044 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.

While construction sequencing of project buildings within each of the phases described above is partially guided by current expectations of the developer or assumptions regarding the construction process for the potential southern expansion of Penn Station, it is not intended to serve as a prediction of the exact sequence of the Project's construction. Rather, it has been developed to provide for a reasonably conservative analysis of the range of environmental effects associated with the buildout of the Project, and to ensure that impacts are identified at the earliest points in which they would occur in the course of development and that mitigations are implemented at that time. The sequencing of the development sites is hypothetical, and there is the potential for buildings to be constructed in a different order than that which is studied in this FEIS. If the buildings were to be constructed in a different order, it would not materially change the overall conclusions at the full buildout of the Project. Furthermore, the discussion of mitigation below identifies triggers for when the Project's identified significant adverse impacts would occur and when mitigation implementation would be necessary that are not tied to the particular sequence of activities assumed for purposes of analysis.

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[1] The use of the terms "Phase 1" and "Phase 2" in this FEIS is meant to encompass the portions of the Project assumed for analysis purposes to be completed by a particular analysis year, rather than a related collection of activities.

In addition to the "operational" analysis keyed to the impacts of the Project at the conclusion of Phase 1 and Phase 2, the FEIS includes an assessment of the construction-related impacts of the Project.

The FEIS provides a description of existing conditions, as well as an assessment of conditions in the "Future Without the Proposed Project" (the "No Action" condition) and the "Future With the Proposed Project" (the "With Action" condition). The No Action condition provides a baseline condition that was evaluated and compared with incremental changes due to the Project. The With Action condition assumed that none of the discretionary approvals proposed as part of the Project would be adopted and, using existing conditions as a baseline, added to the baseline changes that are known or expected to be in place at various times in the future. For many analysis areas, the No Action condition incorporated known development projects that are reasonably likely to be built in the absence of the Project by the analysis years. This includes development currently under construction or that can be reasonably anticipated due to the current level of planning and public approvals. The analyses of the No Action condition for some technical areas, such as traffic, also added a background growth factor, as a further conservative measure, to account for a general increase in activity unrelated to known projects in addition to anticipated future projects.

C. Reasonable Worst-Case Development Scenarios

To provide flexibility for the Project to meet the potential demand for office space and dwelling units in the Project Area, the GPP allows for a range of commercial and residential uses in buildings on Sites 1, 4 and 8. To account for this flexibility, the FEIS presents and assesses two variations of the Project: the maximum commercial scenario and maximum residential scenario.

For some technical areas, the Project has different potential environmental impacts under the two program scenarios. Accordingly, each section of the FEIS presents a full analysis of the Reasonable Worst Case Development Scenario ("RWCDS") – the program scenario with the greater potential to cause significant adverse environmental impacts for that particular technical area – and, where relevant, a less-detailed analysis for the other scenario. The mitigation described in the FEIS is keyed to the RWCDS for each technical area.

D. Extended Schedule Scenario

Notwithstanding current disruptions associated with the COVID-19 pandemic, the proximity of the Project's Class A office buildings to abundant transportation service is likely to make them attractive to prospective office tenants over the coming decades. Moreover, 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 2044, and the assumption that the Project would be completed by that year represents a reasonable worst-case scenario for the environmental 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 actually followed for implementation of the 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 Project's office buildings by the 2044 analysis year, then construction and occupancy of the Project office buildings would be deferred. If the development of the Project extends beyond 2044, many of the economic benefits would not accrue and environmental impacts of the construction and operation of the Project would not occur until a later date.

In the event that the Project's completion is extended beyond the analysis years of 2033 and 2044 (the "Extended Schedule Scenario"), the environmental impacts from the Project would not be different or of a greater magnitude than the impacts studied and disclosed in the analysis chapters of the FEIS or this SEQRA Findings Statement. The FEIS 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 FEIS 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 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 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 would be projected to be similar to those described in the FEIS for 2044.

In an extended schedule scenario, the program, bulk, density, and location of the 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 only for a southward Penn Station expansion if that alternative is selected for the potential 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 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; or public health. 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 FEIS Chapter 14, "Transportation," and FEIS Chapter 20, "Construction." The FEIS finds that neighborhood character in the area near three of the potential development sites would experience continued localized impacts in the extended schedule scenario, as explained in the discussion of construction impacts below.

The completion of the 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 Project's support for the reconstruction and potential expansion of Penn Station.

IV. Project Overview

A. Purpose and Need

As stated above, nearly every element of the critically important civic facility comprising the multi-modal Penn Station transportation complex – with the exception of the recently completed Moynihan Train Hall – is substandard and impedes the growth and vitality of the area and the region. Moreover, the Project Area, although including the busiest public transportation hub in North America, is economically stagnant. The last major building in the Project Area (1 Penn Plaza) was constructed 50 years ago (1970–1972). Aside from the recent ESD-led transformation of the Farley Building, the neighborhood immediately surrounding Penn Station is characterized by outmoded office buildings, low quality retail offerings, congested sidewalks, and limited publicly accessible open space. The Project Area fails to take advantage of its proximity to Penn Station and much of the area is underutilized due to poor planning, inappropriate land use, divided ownership and economic stagnation. As documented in the FEIS and the Neighborhood Conditions Study dated February 2021 and its addendum dated July 2022, the Project Area is substandard and insanitary as that term is used in the Urban Development Corporation Act.

The State Legislature has urged ESD to address these issues. 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, 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 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 prompted ESD and other governmental, community and business entities to collaborate on solutions.

More recently, in the State's 2022-2023 budget approved earlier this year, the State Legislature appropriated $1.3 billion for the Project, including the acquisition of all necessary land, real property, easements, and leasehold interests, including any appurtenances thereto and improvements thereon, preparation of plans, design, demolition, construction, renovation, administration, and other costs incidental thereto, including the payment of liabilities incurred prior to April 1, 2021; such funds are only to be used in furtherance of the Project-related transportation improvement projects and not for the new buildings.

The Project goals and associated objectives are as follows:

- Goal 1: Revitalize the area surrounding Penn Station with new, sustainable, high-density mixed-use development
  - Provide a substantial amount of new mixed-use 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;

- Provide opportunities for the creation of new housing, including permanently affordable housing and permanently affordable supportive housing units, to contribute to New York City's effort to meet the demand for housing;
- Eliminate substandard and insanitary conditions in the Project Area;
- Foster and support economic growth and tax revenue through (a) the creation of jobs and economic activity during construction, (b) 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, upgraded mechanical systems, and environmentally sustainable operations), and (c) the introduction of new households that will participate in the local economy; 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 concourse system 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, including critical safety improvements; and
  - Utilize the adjacency of certain development sites to expand Penn Station ingress and egress and increase identifiable entrances and overall station prominence distributed at key locations in the Project Area.
- 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 pursuant to 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 potential expansion; and
- Provide and expand intermodal connections to support the projected increased ridership.

B. Project Description

The Project will be a major mixed-use, transit-oriented development in the Project Area. The key elements of the Project include new mixed-use buildings, critical improvements to the multi-modal Penn Station transportation complex, other public realm improvements, and funding for the planned reconstruction and potential expansion of Penn Station. Each element is discussed below.

New Mixed-Use Buildings

The Project will include office space, retail uses, a potential hotel, community facility uses and up to 1,798 new dwelling units. Thirty percent of the new dwelling units would be set aside for affordable housing. An additional 108 dwelling units, on Site 1A, would be permanently affordable supportive housing units. The addition of the 108 permanently affordable supportive housing units on Site 1A was proposed by ESD staff after publication of the FEIS to respond to requests from elected officials and the community for this use.

The following table (which is based on FEIS Tables 1-1 and 2-3, with modifications to reflect post-FEIS reductions in the permissible commercial GSF at Site 4 and the post-FEIS addition of affordable supportive housing units on Site 1A) summarizes the Project development permitted on the eight designated development sites:

Site and Development Scenario	Total GSF[1]	Total Commercial GSF (Office, Retail & Hotel)[1]	Office GSF	Retail GSF[2]	Hotel (Rooms)	Dwelling Units (# Permanently Affordable)	Parking Spaces[3]	Community Facility GSF	Non-Program Area GSF[4]
Site 1A[5]	487,955	6,000	0	6,000	0	542 (271)[6]	0	18,398[6]	48,796
Site 1B (Commercial Scenario)[5]	731,911	592,848	584,348	8,500	0	0	0	0	139,063
Site 1B (Residential/Commercial Scenario)[5]	708,676	254,078	245,578	8,500	0	439 (132)[7]	0	0	99,098
Site 2A	2,495,471	2,021,331	2,004,579	16,752	0	0	0	0	474,139
Site 2B	2,867,235	2,322,461	2,303,213	19,248	0	0	0	0	544,775
Site 3	1,612,820	1,306,384	1,294,384	12,000	0	0	0	0	306,436
Site 4 (Residential/Office Scenario)[8]	1,100,000	389,160	289,160	100,000	0	630 (189)[8]	100	0	209,000
Site 4 (Residential/Hotel Scenario)[8]	1,100,000	406,660	0	100,000	472[8]	630 (189)[8]	100	0	209,000
Site 5	1,739,510	1,409,003	1,289,003	120,000	0	0	0	0	330,507
Site 6	2,079,849	1,659,678	1,539,344	120,334	0	0	100	0	395,171
Site 7	2,600,000	2,081,000	1,879,000	202,000	0	0	100	0	494,000
Site 8 (Commercial Scenario)	2,600,000	2,081,000	1,875,000	206,000	0	0	100	0	494,000
Site 8 (Residential/Commercial Scenario)[9]	1,650,411	885,004	667,004	218,000	0	626 (188)	100	0	284,053
Total (Max Commercial Scenario)	**18,314,751**	**13,886,365**	**13,058,031**	**810,834**	**472[8]**	**1,172 (460)**	**400**	**18,398**	**3,435,887**
Total (Max Residential Scenario)	**17,365,162**	**12,672,869**	**11,560,875**	**822,834**	**472[8]**	**1,798 (648)**	**400**	**18,398**	**3,225,939**

Table Notes:

1) Total GSF includes residential, retail, office, hotel, parking and non-program areas, but does not include the potential expanded train station and its new service building on Project Development Sites 1, 2 and 3. The maximum GSF or total commercial GSF of new development cannot be calculated by summing the maximum GSF for the individual program uses because maximizing the area of certain uses would require reducing the area of other uses.

2) The indicated square footage for retail uses may include physical culture or health establishments (gyms), and community facilities without sleeping accommodations.

3) Parking is permitted but not required.

4) Non-program area includes floor space within a building for mechanical equipment, circulation space associated with transit improvements on the ground floor and the sublevels including train station entrances, back-of-house areas (e.g., hallways and corridors to the building core), building core space, below-grade storage space, and lobby and loading space on the ground floor and below-grade levels. Non-program area shall not be considered in the GSF of program uses. The non-program area for an individual building may be increased by not more than fifteen percent or such other increase as ESD determines is needed to meet the sustainability requirements of the Design Guidelines; an increase in non-program area for an individual building beyond that assumed in the "Non-Program Area GSF" column for that building shall not be considered towards the "Total GSF" limit for the building. However, the Total GSF for the Project as a whole shall not exceed 18,314,751 GSF.

5) Sites 1A and 1B shall be considered a single lot for purposes of Chapter 6, Section 3 of the New York State Multiple Dwelling Law.

6) On Site 1A, thirty percent of the total number of residential units shall be permanently affordable and twenty percent of the total number of residential units shall be permanently affordable supportive housing units. Site 1A shall include approximately 18,398 GSF of community facility space.

7) The development on Site 1B may include more than 439 dwelling units with an off-setting reduction in commercial space on a square footage basis. Thirty percent of all dwelling units on Site 1B shall be permanently affordable. The Project (all buildings) may not exceed 1,798 dwelling units.

8) For Site 4, the development may include more than 472 hotel rooms and more than 630 dwelling units, but the commercial uses shall not exceed 406,660 GSF and the sum of residential and commercial uses shall not exceed 891,000 GSF. Thirty percent of all dwelling units on Site 4 shall be permanently affordable. The Project (all buildings) may not exceed 1,798 dwelling units.

9) Under the Residential/Commercial Scenario for Site 8, the existing Manhattan Mall building would remain on Site 8 and a new building expansion containing residential uses would be constructed above it. Therefore, the program shown in the table for Site 8 includes approximately 885,000 GSF of commercial use (office and retail) associated with the existing Manhattan Mall building, and 481,354 GSF of residential use and parking to be constructed as part of the Residential/Commercial Scenario.

As set forth in the table above, after publication of the FEIS, ESD staff has proposed to modify the permissible development program on Site 4 by reducing the square footage of permissible commercial development on Site 4 below the maximum floor area of commercial development assumed in the maximum commercial scenario and maximum residential scenario analyzed in the FEIS. The lower limit on the floor area of the maximum commercial development at Site 4 is proposed to incentivize the early construction of residential

development at Site 4, including affordable housing, in the build-out of the Project, in response to community input stressing the need for such uses in the area.

The Design Guidelines impose stringent sustainability requirements on all of the Project's residential, commercial or mixed-use buildings to achieve environmentally superior performance in the development and operation of the new buildings. All buildings are required to comply with New York City's Climate Mobilization Act ("CMA"), including Local Law 97, thereby requiring the development to meet applicable carbon intensity limits as well as the green/solar rooftop requirements established under the law. All buildings are required to operate with fully electric heating, ventilation, and air conditioning ("HVAC") and hot water systems with the only on-site emission sources being emergency back-up generators. Thus, the carbon emissions indirectly resulting from the operation of the buildings will be reduced over time as the New York State energy grid becomes less carbon intensive, as required by the State's Climate Leadership and Community Protection Act. The Project buildings are required to achieve a LEED score exceeding the LEED Gold standard and to achieve several specific LEED categories (or equivalent standards) including required embodied carbon analysis and optimization, enhanced mechanical, electrical and plumbing systems and envelope commissioning, advanced energy metering, enhanced refrigerant management, and heat island effect mitigation, as specified in the Design Guidelines. The developers of the buildings on Sites 1, 2 and 3 are required to coordinate with the Railroads on potential synergies between the mechanical systems for the potential Penn Station expansion and the buildings above.

Improvements to the Penn Station Multi-Modal Transportation Complex

A critical element of the Project is the construction of improvements to the Penn Station multi-modal transportation complex described above, including new entrances to Penn Station on each of the eight development sites. 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 public transportation improvements are summarized below:

Sites 1, 2, and 3: New Penn Station entrances and new below-grade connections to existing Penn Station with publicly accessible in-building connections.

Site 4: New entrance to Penn Station and improvements to the 34th Street–Penn Station (Eighth Avenue) subway station. These improvements include a new Penn Station and subway entrance at the corner of Eighth Avenue and West 33rd Street with new ADA-compliant elevator at this entrance; a new West 34th Street subway entrance with ADA-compliant elevator; widening of the uptown local C/E platform between West 33rd and West 34th Streets; one new and two widened express platform stairs; new underground passageway to connect 33rd Street Penn Station Level A concourse with A/C/E subway mezzanine between 33rd Street and 34th Street; two new uptown local C/E platform stairs; and one reconfigured fare control area.

Site 5: New entrance to Penn Station and improvements to the 34th Street–Penn Station–Seventh Avenue subway station. These improvements include a new Penn Station and subway entrance at the corner of Seventh Avenue and West 34th Street with escalators and an elevator, as well as new connections between Penn Station and the subway underpass and the fare control

area at West 34th Street; a new West 33rd Street subway entrance; and relocation and widening of the downtown local No. 1 platform stairs, accompanied by an elevator, between West 33rd and West 34th Streets into the property line.

Site 6: New entrance to Penn Station (via the new pedestrian concourse system) and improvements to the 34th Street–Penn Station (Seventh Avenue) subway station. These improvements include widening the uptown local No. 1 platform between West 33rd and West 34th Streets; a new West 33rd Street subway entrance; a new West 34th Street subway entrance; widening the stairs from the West 33rd Street–Seventh Avenue underpass to Penn Station; and widening the West 33rd Street paid-zone stairs together with relocating an elevator. This site would also include portions of the new north-south underground corridor, as discussed in more detail below.

Site 7: New entrance to Penn Station (via the new pedestrian concourse system) and improvements to the 34th Street–Penn Station (Seventh Avenue) subway station. These improvements include widening the uptown local No. 1 platform between West 32nd and West 33rd Streets; a new West 32nd Street subway entrance just east of Seventh Avenue; a new West 33rd Street subway entrance just east of Seventh Avenue with ADA-compliant elevator; widening the paid zone stair at the west end of the 32nd Street underpass; a new fare control area at the West 33rd Street underpass; reconfiguring the West 33rd Street free zone underpass and widening the stair and adding an ADA-compliant elevator; and adding a new express No. 2/3 platform stairs at the north and south portions of the station. This site would also include the east-west underground corridor and a portion of the new north-south underground corridor, as discussed in more detail below.

Site 8: New entrance to Penn Station (via the new pedestrian concourse system) and improvements to the 34th Street–Herald Square subway station. These improvements include new subway entrances at West 32nd and West 33rd Streets and Sixth Avenue, plus additional escalators and/or other vertical circulation elements as needed in consultation with MTA and New York City Transit ("NYCT"); reconstruction of two mezzanine stairs connecting the N/Q/R/W and B/D/F/M; reconfiguration of the fare control area at the B/D/F/M mezzanine level; and replacement of the PATH-related elevator in the new building on Site 8.[2] This site would also include portions of the new east-west underground corridor, as discussed in more detail below.

Underground Concourse Network: As an estimated 70 percent of Penn Station users are expected to have destinations east and north of the station, an important component of the Project's program of public transportation improvements is the creation of a new underground concourse network east of Seventh Avenue providing below-grade connections linking Penn Station, the 34th Street–Penn Station–Seventh Avenue subway station, and the 34th Street–Herald Square subway station. The purpose of this concourse system is two-fold: to alleviate

[2] The PATH-related elevator would be replaced only if the existing building on Site 8 is demolished and a new building constructed. If Site 8 is developed with a residential overbuild above the existing building, the existing PATH elevator would be maintained. Aside from the PATH-related elevator, the same transit improvements (or functionally equivalent improvements) would be implemented at Site 8 under the residential scenario for Site 8.

pedestrian sidewalk crowding on the Seventh Avenue side of Penn Station as well as to divert some Penn Station-subway intermodal trips to the generally less congested 34th Street–Herald Square Subway Station. The primary components of this concourse network are: one or two crossings beneath Seventh Avenue; 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 with midblock emergency egress (the "East-West Connector"); and a north-south underground corridor east of Seventh Avenue from approximately West 32nd Street to West 34th Street, with connections to Penn Station and the East-West Connector. This north-south underground corridor would be within the footprints of, and provide access to, Sites 6 and 7 (the "North-South Corridor").

There are two options under consideration for the East-West Connector, subject to additional analysis for engineering and financial feasibility. One of the options would be located along West 33rd Street (the "33rd Street Option") and the other would be located along West 32nd Street (the "32nd Street Option"). The overall underground concourse network would have a different configuration depending on which East-West Connector option is implemented.

- Under the Underground Concourse Network with 33rd Street Option, the network would include a North-South Corridor between approximately West 32nd Street and West 34th Street, an East-West Connector in the approximate location of the former Gimbels passageway on the south side of West 33rd Street (wider than the former Gimbels passageway), and a reconfigured fare control area under West 33rd Street to function as a Seventh Avenue undercrossing to connect Penn Station to the concourse network. In addition, one of the mezzanine stairs connecting the N/Q/R/W and B/D/F/M trains would be constructed together with this option.

- Under the Underground Concourse Network with 32nd Street Option, the network would include a North-South Corridor from West 34th Street to a location south of West 32nd Street, an East-West Connector along West 32nd Street, and two Seventh Avenue undercrossings: (1) the same reconfigured fare control area under West 33rd Street and (2) a new undercrossing of Seventh Avenue between West 31st Street and West 32nd Street.

The FEIS (in a transportation analysis that assumed the potential expansion of Penn Station on Sites 1, 2 and 3) concludes that the 32nd Street Option would be more heavily utilized by pedestrians than the 33rd Street Option and better serve commuters seeking to travel between Penn Station (or the 34th Street–Penn Station–Seventh Avenue subway station) and the 34th Street–Herald Square Herald Square subway station, but as noted above the decision as to whether to construct the East-West Connector with the 33rd Street Option or 32nd Street Option requires further engineering feasibility and cost estimation by MTA, in consultation with Vornado (the owner and anticipated future developer of Site 7 and Site 8). The decision as to which option should be built would be made before a development agreement is reached for the development of Site 7, because it anticipated with the East-West Connector would be located, in part, beneath the new building on Site 7 (and the existing building on Site 8). The decision would be made by ESD in close consultation with MTA.

Further conceptual design information about the Project's required transportation improvements is presented in FEIS Table 1-2 and FEIS Figures 1-7, 1-8a, 1-8b and 1-8c.

The construction of the Underground Concourse Network would occur over time with the development of Sites 6, 7, and 8. The East-West Connector (either option) would be constructed and operational as part of the development of Site 7, with an interim connection through or adjacent to Site 8 to the 34th Street–Herald Square subway station until Site 8 is redeveloped. When Site 8 is redeveloped, the development would widen and enhance the eastern portion of the East-West Connector and add new or reconstructed station connections on both the West 32nd Street and West 33rd Street sides of the building. The portions of North-South Corridor within Sites 6 and 7 would be constructed at the time those sites are redeveloped.

Other Public Realm Improvements

To address overcrowded pedestrian conditions in the Project Area, the Project also includes requirements that the ten new Project buildings be built with wider sidewalks on West 30th, West 31st and West 33rd Streets and Sixth, Seventh and Eighth Avenues. (*See* FEIS Figure 1-9.) Subject to the approval of the New York City Department of Transportation ("DOT"), the Project also includes pedestrianized shared streets on segments on West 32nd and West 33rd Streets. (*See* FEIS Figure 1-9.) ESD will also request that DOT consider and study the potential conversion of a segment of West 31st Street into a shared street. (*See* FEIS Figure 1-9.)

The Project includes a substantial new 30,800 square feet open space on Site 2. This area would function as passive open space and would have programming, seating, and plantings.

The Design Guidelines require each development site to include a certain specified amount of public space. A Public Realm Task Force would be created to advise ESD on the design of these improvements.

Funding for Penn Station

The development of approximately 18 million GSF of new buildings on the eight development sites would generate substantial revenues that would be used to pay for the improvements to the Penn Station Multi-Modal Transportation Complex described above and provide partial funding for the reconstruction of Penn Station and potential expansion of Penn Station.

Potential Sky Concourse

The Project may include a publicly accessible sky concourse above Plaza 33 on West 33rd Street with access through a portion of the 1 Penn Plaza and 2 Penn Plaza office buildings. The sky concourse would be approximately 15 feet wide, and would be an enclosed, one-level transparent structure to be constructed of steel and glass. It would have minimum and maximum clearances above Plaza 33 of 14.5 feet and 20 feet, respectively, with a maximum height of 18 feet from floor to ceiling. The sky concourse would be approximately 75 feet long, connecting across 60-foot-wide West 33rd Street from the second-floor levels of 1 Penn Plaza and 2 Penn Plaza. Construction of the sky concourse would require the consent of the City.

V. Benefits of the Project

Implementation of the Project will achieve the goals and objectives summarized above. The environmentally sustainable development will address the substandard and insanitary conditions in the Project Area. The Project will directly effectuate significant improvements to the Penn Station multi-modal transportation complex and each of the development sites, provide funding for the potential expansion of Penn Station and other improvements, and otherwise improve the public realm through the creation of new open space, public space and widened sidewalks. The new housing will help to meet the pressing housing needs in the City, including the need for permanently affordable housing and permanently affordable supportive housing units.

The Project will also result in substantial tax revenues to the State and City. As documented in the FEIS, the Project Based on estimated total development costs (not including the reconstruction or potential expansion of Penn Station) of $10.4 to $10.9 billion (in 2020 dollars), the construction of the Project buildings would generate approximately 66,700 to 70,200 direct and indirect person-years of construction-related employment in New York City, and approximately 79,700 to 83,800 direct and indirect person-years of employment in New York State. In turn, the construction-related employment would generate $6.7 to $7.0 billion in wages in New York City and $7.7 to $8.1 billion in wages in New York State. In terms of total economic output, construction of the Project would generate $14.8 to $15.6 billion in economic activity in New York City and $19.4 to $20.4 billion in New York State overall.[3]

During annual operations, upon full build-out the Project would support an estimated 48,400 to 54,400 direct full-time equivalent (FTE) jobs. Job growth within the Project Area has been stagnant compared to the study area, and the new employment generated by the Project would serve to revitalize the Project Area into a modernized commercial district. In New York City, the Project would generate 49,700 to 56,100 indirect FTE jobs, for a total of 98,100 to 110,500 FTE jobs. In New York State, the Project would generate an additional 65,800 to 74,200 indirect FTE jobs for a total of 114,200 to 128,600 FTE jobs. This would generate $8.6 to $9.7 billion in total annual earnings within New York City and $9.7 to $10.9 billion in total annual earnings in New York State. In terms of total economic output at completion, $38.5 to

[3] The estimates of 66,700 person-years of construction-related employment in New York City and 79,700 person-years of construction related employment in New York State, estimates of $6.7 billion in construction wages in New York City and $7.7 billion in construction wages in New York State, and estimates of $14.8 billion in economic activity in New York City and $19.4 billion in economic activity in New York State assume Project build-out under the FEIS Maximum Residential Scenario. *See* FEIS Table 4-43. The estimates of 70,200 person-years of construction-related employment in New York City and 83,800 person-years of construction related employment in New York State, estimates of $7.0 billion in construction wages in New York City and $8.1 billion in construction wages in New York State, and estimates of $15.6 billion in economic activity in New York City and $20.4 billion in economic activity in New York State assume Project build-out under the FEIS Maximum Commercial Scenario. *See* FEIS Table 4-39. With the post-FEIS reduction in the maximum commercial development permitted on Site 4, a maximum commercial scenario would include somewhat more residential use and somewhat less commercial use than assumed in the FEIS Maximum Commercial Scenario, resulting in an intermediate scenario falling between the FEIS Maximum Residential Scenario and FEIS Maximum Commercial Scenario.

$43.4 billion would be generated annually in New York City and $44.1 to $49.7 billion in New York State overall.[4]

In addition, the operation of the Project would generate income tax revenues from employee wages, sales tax revenues from employee expenditures, and hotel occupancy tax revenues from the potential hotel on Site 4. The total annual tax revenues (excluding property taxes) for New York City, New York State, and MTA are estimated to be $618.8 to $716.8 million. New York City would receive approximately $235.3 to $283.6 million. New York State would receive approximately $366.1 to $413.6 million, while MTA would receive approximately $17.3 to $19.6 million in tax revenues.[5] The analysis did not examine whether the benefits or impacts are net new to New York City and New York State.

This analysis does not include estimates of property tax revenue or other potential real estate revenues, as the terms of potential payment agreements or other financing options are yet to be determined.

VI. Consideration of Relevant Environmental Impacts, Facts, and Conclusions Disclosed in the FEIS

A. Land Use, Zoning, and Public Policy

The Project would not result in significant adverse impacts related to land use, zoning, or public policy. The Project would develop eight sites with high-density commercial and residential developments containing a mix of Class A office space, housing (including needed permanently affordable housing and permanently affordable supportive housing units), retail

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[4] The estimates of 48,400 direct FTE jobs and 49,700 indirect FTE jobs in New York City for a total of 98,100 FTE jobs in New York City, estimates of 65,800 indirect FTE jobs in New York State for a total of 114,200 FTE jobs in New York State, estimates that the Project would generate $8.6 billion in total annual earnings within New York City and $9.7 billion in total annual earnings in New York State, and estimates of $38.5 billion of economic output in New York City and $44.1 billion in New York State assume Project build-out under the FEIS Maximum Residential Scenario. *See* FEIS Table 4-45. The estimates of 54,400 direct FTE jobs and 56,100 indirect FTE jobs in New York City for a total of 110,500 FTE jobs in New York City, estimates of 74,200 indirect FTE jobs in New York State for a total of 128,600 FTE jobs in New York State, estimates that the Project would generate $9.7 billion in total annual earnings within New York City and $10.9 billion in total annual earnings in New York State, and estimates of $43.4 billion of economic output in New York City and $49.7 billion in New York State assume Project build-out under the FEIS Maximum Commercial Scenario. *See* FEIS Table 4-41. With the post-FEIS reduction in the maximum commercial development permitted on Site 4, a maximum commercial scenario would include somewhat more residential use and somewhat less commercial use than assumed in the FEIS Maximum Commercial Scenario, resulting in an intermediate scenario falling between the FEIS Maximum Residential Scenario and FEIS Maximum Commercial Scenario.

[5] The estimate of total annual tax revenues of $618.8 million and the corresponding breakdown among the taxing jurisdictions assumes the FEIS Maximum Residential Scenario. *See* FEIS Table 4-46. The estimate of total annual tax revenues of $716.8 million and the corresponding breakdown among the taxing jurisdictions assumes the FEIS Maximum Commercial Scenario. *See* FEIS Table 4-42. With the post-FEIS reduction in the maximum commercial development permitted on Site 4, a maximum commercial scenario would include somewhat more residential use and somewhat less commercial use than assumed in the FEIS Maximum Commercial Scenario, resulting in an intermediate scenario falling between the FEIS Maximum Residential Scenario and FEIS Maximum Commercial Scenario.

space, hotel space, and community facility space. The Project will also introduce new public open space and public realm improvements to address pedestrian, bicycle, and vehicular circulation and enhance the surrounding streetscape. The increase in density within the Project Area would be consistent with broader land use trends of high-density mixed-use development around other rail and transit hubs in Manhattan (including the area adjacent to Grand Central Terminal) and capitalize on the Project Area's unparalleled transit access. The Project would enhance the above-grade and below-grade pedestrian circulation network connecting to the Penn Station complex and generate revenue for much-needed public transportation improvements at Penn Station and area subway stations. The Project would also support the potential expansion of Penn Station, which would serve New York's future transportation and economic needs. Overall, the Project would reinvigorate the Project Area by creating a modern, transit-oriented mixed-use 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. The Project would not adversely affect the land use character of the area. The 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 GPP 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 would be necessary to achieve the goals and objectives of the Project. The GPP would permit densities and bulk that would further public policies to support high-density development in areas well-served by public transit. The permitted density would be consistent with the densities allowed in nearby 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 rail and transit connectivity. The Project would not affect zoning outside the Project Area and would not result in a significant adverse impact to zoning. With respect to public policy, the Project would result in development that is consistent with land use and zoning and furthers public policies promoting sustainability, walkability, transit, employment, and economic development.

B. Socioeconomic Conditions

The Project would not result in significant adverse impacts due changes in socioeconomic conditions.

1. Direct Residential Displacement

In the event Sites 1, 2, and 3 are selected as the preferred alternative for a southern expansion of Penn Station in the federal review process, the Project would directly displace an estimated 214 residents living in 128 residential units in this portion of the Project Area. These residents do not represent a significant portion of the study area population and do not have socioeconomic characteristics that differ markedly from the study area population as a whole. Because the potential train station expansion would require federal approvals and substantial federal funding, relocation assistance would be provided pursuant to the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and its implementing

regulations regardless of which entity or entities – federal or state – undertake the required property acquisitions and relocations.

2. Direct Business or Institutional Displacement

Prior to the demolition of buildings in Phase 1, an estimated 3,747 employees at 353 firms would be displaced. Upon completion, the Project under the Maximum Commercial Scenario would result in the direct displacement of an estimated 8,937 employees and 472 firms. The potentially displaced workers represent approximately three percent of total jobs in the ¼-mile study area. The Project would not cause a significant adverse direct business and institutional displacement impact because the displaced businesses and institutions provide goods and services that would still be found within the ¼-mile 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 ¼-mile study area, nor are they subject to regulations or publicly adopted plans aimed at preserving, enhancing, or otherwise protecting them in their current location. Displaced businesses would be able to find comparable space within the ¼-mile study area or the City at large.

3. Indirect Residential Displacement

The Project under the Maximum Residential Scenario is anticipated to result in a new population with higher incomes than the existing population in the ¼-mile study area, but the study area is already experiencing a trend of increasing rents. The Project would not create or accelerate this trend. The Project's affordability requirement would result in more affordable units and permanently affordable supportive housing units in the Project Area than in the No Action condition. The Project would support the socio-economic diversity of the study area and ensure that households with a range of incomes could remain in the neighborhood. It would not result in significant adverse impacts due to indirect residential displacement.

4. Indirect Business and Institutional Displacement

Existing businesses would benefit from the larger customer base that would be created by the Project's worker and visitor populations. 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 Project would directly displace 8,937 employees, the Project under the Maximum Commercial Scenario would support approximately 54,400 new permanent jobs within the Project Area. Existing businesses could capitalize on new demand from both the worker population and services required from the new businesses in the area such that an increase in sales and services rendered could offset potential increased rents. 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. Any potentially displaced products and services may be found elsewhere within the ¼-mile study area. The ¼-mile 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 Project. Thus, the potential indirect displacement of businesses and institutions would not have a significant adverse impact on remaining businesses an institutional uses in the ¼-mile study area.

5. Adverse Effects on a Specific Industry

The Project would displace an estimated 17 music-related businesses on Sits 1, 2 and 3. These businesses serve a broader trade area beyond the local economy and the ¼-mile study area. Thus, the direct displacement of some of these music-related businesses would not cause a significant adverse impact as there are alternative venues that provide comparable services and employment opportunities within the ¼-mile study area, borough, and City at large. The displaced businesses would also be able to find comparable space within the ¼-mile study area or the City at large. The Project would not significantly affect business conditions in the music industry, substantially reduce employment, or impair the economic viability of the music industry.

C. Community Facilities

1. Direct Effects

If Penn Station's expansion proceeds on Sites 1, 2, and 3, four community facilities would be displaced: a homeless drop-in center; a house of worship that provides a food pantry, health and wellness programs, and meeting space for substance abuse recovery programs; an English language school; and a non-profit organization for Lithuanian Americans. With respect to the homeless drop-in center, house of worship, and English language school, comparable services are provided by other organizations and institutions in the vicinity of the Project Area. ESD would also work with the operator of the drop-in center to facilitate its return to the Project Area in a larger space to increase the facility's capacity, if desired. With respect to the non-profit organization for Lithuanian Americans, the facility serves a regional population and does not have unique locational requirements, and it is anticipated that it could relocate in Manhattan or New York City. While these community facilities would be directly displaced by the Project, the displacement would not result in a significant adverse impact.

2. Indirect Effects

The Project's new residential population would be too small to result in significant adverse impacts to the New York City public schools or libraries in the area. The new affordable housing units and affordable supportive housing units, however, could result in a shortfall with respect to publicly financed early childhood programs in the study area. In both the 2033 With Action condition and 2044 With Action condition, the Project would result in significant increases in demand that could not be met within the capacity of the existing service providers in the study area. Accordingly, the Project would result in a significant adverse impact to publicly financed early childhood programs. Potential measures to mitigate the significant adverse impact to early childhood programs are discussed below in "Mitigation."

The Project Area is surrounded by multiple NYPD, FDNY and hospital facilities. Access would therefore be provided from multiple directions in the event of an emergency. The Project would contribute to traffic congestion in the area, and traffic congestion can delay vehicles responding to emergencies. However, when responding to emergencies, NYPD, FDNY and EMS vehicles are not bound by standard traffic controls or rules and are capable of adjusting to congestion encountered on route to their destinations and are therefore less affected than other vehicles by traffic congestion. Vehicles are also equipped with enhanced sirens and emergency lights that assist them in safely navigating through congested areas. These vehicles would be able to access the Project Area as they do other congested neighborhoods throughout New York City. All hospital-based ambulances are dispatched by FDNY under the same computer-based system, regardless of hospital affiliation. The dispatch system divides the City into geographic areas, based loosely on NYPD precinct sectors, with a number of areas located within each precinct, and assigns the nearest unit to an emergency call based on its current location. All units are assigned a permanent cross-street location where they await a service call; units return to this location once service is complete. These locations are determined by FDNY based on historical call volumes by location and time of day. Further, outside of peak hours, traffic congestion would be lower than in the peak hours assessed in the EIS. The Project is not expected to result in significant adverse impacts with respect to emergency services.

D. Open Space

The Project would result in significant adverse impacts to open space by directly and indirectly affecting open space resources.

1. Direct Effects

The Project's redevelopment of Site 5 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. The elimination of this resource would result in a significant adverse impact to open space. Potential measures to mitigate this significant adverse impact are discussed below in "Mitigation."

The Project would also result in shadows on a number of open spaces. The shadows would have significant adverse impacts on the following open space resources: the Madison Square Garden POPS, Plaza 33, Herald Square Park, Chelsea Park, the Penn South open space and the Farley Building's Eighth Avenue steps. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

2. Indirect Effects

The Project's new residential population would not result in a significant strain on the capacity of open space resources in the ½-mile residential study area. In the 2033 With Action condition, the combined effect of the Project's new worker population and residential population would not result in a significant indirect adverse impact to open space resources in the ¼-mile commercial study area.

By contrast, in the 2044 With Action condition, the Project would significantly overburden existing and proposed passive open spaces in the ¼-mile commercial study area, particularly during the midday hours when open space is used by study area workers and visitors to the area. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

E. Shadows

The 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 Site 1A, where a 350-foot height limit would be imposed. To provide for a conservative analysis, the shadows assessment in the FEIS 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 Site 1A, which was conservatively analyzed as 400 feet in height).

In the 2033 analysis year (Phase 1), the Project would cause significant adverse shadow impacts to two open space resources (the Madison Square Garden POPS and the Farley Building's Eighth Avenue steps) and one historic architectural resource with sunlight-sensitive features (the skylights and Eighth Avenue steps of the Farley Building). In the 2044 analysis year (Phase 2), the Project would cause significant adverse shadow impacts to the same resources as in Phase 1 plus an additional four open space resources (Plaza 33, Herald Square Park, Chelsea Park, and the Penn South open space) and five historic architectural resources with sunlight-sensitive features (the Farley Building colonnade, the Penn South Apartment Complex, St. Michael's Catholic Church, St. Francis of Assisi Church, and the former Greenwich Savings Bank). Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

F. Historic and Cultural Resources

Archaeological resources. The Project would not result in significant adverse impacts on archaeological resources.

Removal of Historic Resources. In the 2033 With Action condition, in the event Sites 1, 2, and 3 are selected as the preferred alternative for a southern expansion of Penn Station in the federal review process, significant adverse direct impacts would result due to the likely removal of six architectural resources on those sites (the Lithuanian Alliance of America, 307 West 30th Street; the Penn Station Service Building, 236-248 West 31st Street; the Fairmont Building, 239-241 West 30th Street; the St. John the Baptist Roman Catholic Church Complex, 207-215 West 30th Street; the Penn Terminal Building, 370 Seventh Avenue; and the Stewart Hotel, 371-377 Seventh Avenue). One architectural resource on Site 7 (Hotel Pennsylvania, 401 Seventh Avenue) would be demolished to allow for new commercial development on Site 7. (It should be noted, however, that the Hotel Pennsylvania would be removed in the No Action condition, and in fact is currently undergoing demolition.) In the 2044 With Action condition, the

redevelopment of Site 8 may result in the removal of an additional architectural resource (the Gimbel Brothers Skybridge over West 32nd Street).

Shadow Impacts on Sun-Sensitive Historic Resources. As noted in more detail above, the Project would result in significant shadow impacts on the Farley Building, the Penn South Apartment Complex, St. Michael's Catholic Church, St. Francis of Assisi Church, and the former Greenwich Savings Bank.

Visual Impacts on Historic Resources. In the 2044 With Action condition (but not the 2033 With Action Condition), the development of Site 6 would partially obstruct views of the Empire State Building in eastward views along West 34th Street, the developments on Sites 5 and 6 would partially obstruct views of the Empire State Building in eastward views along West 33rd Street, and the development on Site 2B would block partial views of the Empire State Building from the eastern portion of Chelsea Park along Ninth Avenue, and from Ninth Avenue and West 28th Street.

Construction-Related Damage to Historic Resources. The following historic resources are within 90 feet of Project-related construction work that could result in physical damage to the resource if the construction work were to proceed without adequate precautions: the Farley Building on the block bounded by Eighth and Ninth Avenues, West 31st and West 33rd Streets; the former Equitable Life Assurance Company, 393 Seventh Avenue; St. Francis Roman Catholic Church Complex, 129-143 West 31st Street; 23rd Police Precinct Station House, 134-138 West 30th Street; Loft Building, 144-154 West 30th Street; the Fur Craft Building, 242-246 West 30th Street; the Madison Square Garden on the block bounded by Seventh and Eighth Avenues, West 31st and West 33rd Streets; Penn Station, on the same block; 2 Penn Plaza, 397 Seventh Avenue, Gimbel Brothers Administration Building, 116 West 32nd Street; the Gimbel Brothers Skybridge over West 32nd Street; the FDNY Hook and Ladder 24, Engine 1, 142 West 31st Street; the Fralber Building, 224 West 30th Street; a loft building at 236 West 30th Street; Fire Patrol No. 3, 240 West 30th Street; and Irwin House, 308 West 30th Street.

Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

G. Urban Design and Visual Resources

1. Urban Design

The Project would not result in significant adverse urban design impacts. The Project would provide office, retail, residential, potential 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. Many of the new Project buildings would be among the tallest and largest buildings in the area, but tall and bulky office buildings are consistent with other development in midtown Manhattan and Hudson Yards. A number of the Project buildings would be considerably 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 2033 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 Manhattan West development. In addition, the proposed developments would share some similar characteristics with Hudson Yards in terms of building scale and materials, though the developments would be set within an existing street grid and in context with older existing, lower-scale buildings. The Project buildings on Sites 1A and 1B would be shorter than 1 Penn Plaza (approximately 750 feet tall).

The buildings would have large footprints, which would be consistent with the urban design of the primary study area including 1 Penn Plaza, 2 Penn Plaza, MSG, and the Farley Building, and with the secondary study area, which includes a mix of buildings of smaller size and footprint and buildings that have large footprints and occupy all or portions of city blocks.

The Project would not alter the location and arrangement of streets, street hierarchy, or block shapes in the primary and secondary study areas. The shared streets along West 32nd Street between Sixth and Seventh Avenues and along West 33rd Street between Sixth and Ninth Avenues (and potentially along West 31st Street between Seventh and Eighth 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. The installation of 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 and the City's urban design goals, where protected bike lanes are separated from vehicular traffic by a lane of parking, traffic islands, and plantings.

Widened sidewalks adjacent to the development sites, potential landscaping and other potential pedestrian amenities that could be included in the public space required at each development site, as well as potential landscaping and trees on the proposed shared streets could provide plantings and publicly accessible spaces for pedestrians to utilize and enjoy, although in-ground trees would not be possible in many areas due to rail structures beneath. In addition, the proposed public plaza space on Site 2 would provide a new open space that would serve the new mixed-use district surrounding Penn Station and the surrounding neighborhoods and provide a significant new pedestrian amenity.

2. Visual Resources

The Project's new buildings, in views throughout the secondary study area including from publicly accessible open spaces, would contribute to the continuously evolving Manhattan skyline, providing a grouping of new visual elements in much the same way as the tall, glazed towers of Manhattan West and Hudson Yards. These new buildings would also be visible from outside the secondary study area, adding to the diversity of the Manhattan skyline, which includes a variety of shorter and taller buildings of different massings, designs and materials.

The Project would result in significant adverse impacts to visual resources in the 2033 and 2044 analysis years. Demolition of the Church of St. John the Baptist on Site 2 is assumed to occur as of the 2033 analysis year and the possible demolition of the copper Gimbel Brothers Skybridge spanning from the existing building on Site 8 across West 32nd Street would occur by the 2044 analysis year. The removal of these visual resources would constitute a direct

significant adverse impact on visual resources. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

In addition, as discussed in further detail above, 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 2044 With Action condition would also constitute a significant adverse impact to visual resources. As discussed in "Unavoidable Adverse Impacts," these impacts would be unavoidable.

3. Potential Sky Concourse

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. As noted above, however, the Project may also include a publicly accessible sky concourse above Plaza 33 on West 33rd Street with access through a portion of the 1 Penn Plaza and 2 Penn Plaza office buildings. Construction of the sky concourse would require the consent of the City. The potential sky concourse would be visible in views from areas to the east and west of it on West 33rd Street. The sky concourse would be elevated above Plaza 33 by at least 14.5 feet and 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. The High Line already crosses over West 33rd Street near Twelfth Avenue, affecting views west closer to the river. The potential sky concourse would not obstruct view corridors on public streets and would not result in a significant adverse impact to urban design and visual resources.

H. Hazardous Materials

The 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 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 Project.

The Project would include appropriate health and safety and investigative/remedial measures (conducted in compliance with all applicable laws and regulations and conforming to appropriate engineering practice) that would precede or govern both demolition and soil disturbance activities. ESD, and with respect to potential Penn Station work, the Railroads,

would require the developers and/or contractors to comply with all applicable laws and regulations through project documents. These measures would include the following:

- Prior to demolition of existing buildings, investigations would be performed to determine whether ACM is present. If so, it would be removed, handled and disposed of in accordance with applicable federal, New York State, and New York City requirements. Appropriate engineering controls (e.g., wetting and other dust control measures) to minimize asbestos exposure would be implemented prior to and throughout demolition/reconstruction.
- Any activities with the potential to disturb lead-based paint would be performed in accordance with applicable requirements (including federal OSHA regulation 29 CFR 1926.62 - Lead Exposure in Construction).
- Suspected PCB-containing equipment (e.g., transformers, electrical feeder cables, hydraulic equipment, and fluorescent light ballasts) would be surveyed and evaluated prior to building demolition or utility relocation. PCB-containing equipment that would be disturbed by the work would be removed and disposed of in accordance with applicable federal and local regulations. Under those regulations, unless suspected PCB-containing equipment is labeled to be "non-PCB," it must be tested or assumed to be PCB-containing and disposed of at properly licensed facilities.

In addition, ESD will include in the project documents with developers provisions requiring implementation of the following measures:

- Performance of a pre-development Phase I Environmental Site Assessment and Phase II Environmental Site Investigation ("ESI") at each development site to characterize subsurface conditions prior to project excavation pursuant to a scope approved by the federal, state, or City agency exercising jurisdiction over environmental conditions at the site pursuant to applicable law or – if no such agency is exercising such jurisdiction – pursuant to a scope approved by ESD. The results of such investigations would be submitted to such agency or ESD, which may require additional investigation, as appropriate.
- Performance of Phase II ESIs that include soil gas sampling to determine vapor mitigation measures needed (e.g., vapor barrier installation beneath new foundations) during construction and as part of redevelopment plans.
- Development of Remedial Action Plans (RAPs) and Construction Health and Safety Plans (CHASPs) for site remediation and excavation, including detailed procedures for managing both known contamination (e.g., tank removal and soil and groundwater remediation) and any unexpectedly encountered contamination. The site-specific RAPs would address procedures for soil stockpiling, testing, loading, transporting (including truck routes), and properly disposing of all excavated material. The CHASPs would include procedures for community air monitoring for dust and vapors, dust suppression protocols, and environmental monitoring to ensure that construction is conducted in a manner protective of workers, the public, and the environment. Such monitoring would be in conformance with the Community Air Monitoring Plan (CAMP) guidance for PM_{10} and VOCs published by the New York State Department of Health (DOH) and would be implemented during the excavation of site soils (or other activities that involve moving existing site soils around or off

the site) in connection with the construction of the Project or any related excavation or remediation. The RAPs and CHASPs would be submitted for review and approval to the agency exercising jurisdiction over environmental conditions at the site pursuant to applicable law, or if no such agency is exercising jurisdiction, to ESD. Remediation, if required, and the demolition, excavation and construction at a development site would be performed in accordance with the approved RAP and CHASP for the site.

- Proper closure, closure in place or removal of all known petroleum storage tanks, and any unexpectedly encountered above-ground or below-ground storage tanks that would be disturbed by the Project, in accordance with applicable regulations, including NYSDEC tank management, registration, and spill reporting requirements. Any contaminated soil surrounding the tanks, separate-phase petroleum on the water table, or contaminants dissolved in the groundwater are also subject to NYSDEC regulations (6 N.Y.C.R.R. § 611.6).
- Design and construction of the Project so as to prevent VOCs from infiltrating the interior of the Project's buildings through (i) the construction of the building above the platform of a ventilated rail facility and/or (ii) the incorporation of equivalently effective engineering controls, such as a vapor barrier and/or sub-slab depressurization system. The engineering plans demonstrating compliance with such measures would be submitted to the agency exercising jurisdiction over environmental conditions at the site pursuant to applicable law, or if no such submission is to be made to an agency exercising jurisdiction, to ESD.
- In preparation for anticipated dewatering, collection of groundwater samples and analysis of such samples for the DEP sewer discharge parameters to determine if treatment is required prior to discharge to the City sewer. Any dewatering to the sewer system would be conducted in accordance with a DEP sewer discharge permit, if required.

After construction of the Project with the proposed measures, there would be no further potential for significant adverse impacts.

I. Water and Sewer Infrastructure

In the event of a southward 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. The 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. The Project's minor increase in sanitary flow would not result in an exceedance of the North River WWTP's capacity. The Project would result in decreases in the peak stormwater runoff rate in both analysis years and would not appreciably contribute to the frequency or volume of combined sewer overflow events.

J. Solid Waste

The Project would neither result in a significant adverse impact on solid waste and sanitation services or directly affect a solid waste management facility.

K. Energy

The Project's annual energy consumption would not result in a significant adverse impact related to energy. The requirement that Project buildings use fully-electrified heating, ventilation, and air conditioning (HVAC) and hot water systems would result in estimated energy consumption being reduced substantially when compared to the City's energy consumption factors for buildings that utilize fossil fuel-fired systems. In addition, the Project would be required to comply with the New York City Energy Conservation Code, which imposes performance requirements for 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.

L. Transportation

The transportation-related impact assessments prepared for the EIS accounted for the anticipated changes in trip-making attributed to the Project and the projected ridership increases that would be accommodated through the potential expansion of Penn Station.

1. Traffic

Traffic conditions were evaluated at 108 intersections for the weekday AM, midday, and PM peak hours. The analyses indicated the Project would result in numerous significant impacts throughout the study areas, and that many significantly impacted intersections would be very congested during peak hours. In the 2033 With Action condition, significant adverse traffic impacts were identified at 80 intersections during the weekday AM peak hour, 79 intersections during the weekday midday peak hour, and 76 intersections during the weekday PM peak hour. In the 2044 With Action condition, significant adverse traffic impacts were identified at 102 intersections during the weekday AM peak hour, 89 intersections during the weekday midday peak hour, and 94 intersections during the weekday PM peak hour. The table below summarizes the projected significant adverse traffic impacts for the 2033 and 2044 With Action conditions. The FEIS identifies the specific intersections and lane groups that would be experience significant impacts in the Phase 1 and Phase 2 With Action Conditions.

Summary of Significant Adverse Traffic Impacts

	Total No. of Impacted Intersections/Lane Groups	
Analysis Peak Hour	**2033 Phase 1 With Action Condition**	**2044 Phase 2 With Action Condition**
Weekday AM	80/123	102/188
Weekday Midday	79/121	89/147
Weekday PM	76/120	94/175
Totals During Any Peak Hour	92/170	104/231
Notes: In total, 108 intersections, comprising nearly 400 lane groups, were included in the traffic study area for analysis.		

The quantitative analysis of traffic conditions in the FEIS (summarized above) assumes an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would

utilize the East-West Connector, altering pedestrian flows and indirectly affecting traffic conditions. A qualitative assessment of this issue is presented on pages 14-150 through 14-151 of the FEIS.

Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

2. Transit

The Project would not result in significant adverse impacts on bus service.

For subway operations, detailed analyses of station circulation elements and control areas were prepared for the 34th Street–Herald Square, 34th Street (Seventh Avenue)–Penn Station, and 34th Street (Eighth Avenue)–Penn Station Subway Stations for the weekday AM and PM peak hours. Due to the Project's many proposed underground transit improvements, some of which are expected to also change commuter rail and subway passenger circulation patterns and direct commuters to prevalent desire lines, certain highly congested subway station elements in the 2033 No Action condition would realize notable improvements in levels of service. These benefits would be the most noticeable at the 34th Street-(Seventh Avenue) Penn Station and 34th Street-(Eighth Avenue) Penn Station Subway Stations, where various stairway widenings and reconfigurations have been proposed, and where a large number of commuters are expected to be diverted to the 34th Street-Herald Square Subway Station.

The tables below summarize the projected significant adverse subway station impacts, respectively, for the 2033 and 2044 With Action conditions.

Summary of Significant Adverse Subway Station Impacts

Analysis Peak Hour	Station Element	Total No. of Impacted Station Elements					
		2033 Phase 1 With Action Condition			2044 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	3	2	0	8	3	0
	Escalators	1	0	0	2	0	0
	Passageways	0	0	0	0	0	0
	Control Areas	0	0	0	0	1	0
Weekday PM	Stairways	4	3	0	7	4	3
	Escalators	2	0	0	3	0	0
	Passageways	0	0	0	0	0	0
	Control Areas	0	0	0	0	0	0

Notes: In total, 101 existing or reconstructed station elements and 10 new station elements at the 34th Street–Herald Square, 34th Street–Seventh Avenue, and 34th Street–Eighth Avenue Subway Stations were included in the subway station analysis.

The table above assumes an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would utilize the East-West Connector, resulting in changes to

the impact of the Project on transit elements. This issue is discussed on pages 14-151 through 14-156 of the FEIS.

The FEIS identifies the specific transit elements that would experience significant impacts in the Phase 1 and Phase 2 With Action Conditions. In the 2044 With Action Condition, most of the impacts identified for the Herald Square Subway Station would be attributed to the additional density in Project development, though Penn Station riders would contribute to some of the impacts at this station as well. Some of the impacts at the Seventh Avenue Subway Station would also be attributed to Project development, but Penn Station riders would contribute to most of the impacts at this station. For the Eighth Avenue Subway Station, the Project development alone would not yield any impacts; Penn Station riders alone would be capable of causing all three impacts identified at this station. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

A subway line-haul analysis was also prepared for the subway lines serving the three stations for the weekday AM and PM peak hours.

Summary of Significant Adverse Subway Line-Haul Impacts

Analysis Peak Hour	Direction of Travel	Impacted Subway Lines					
		2033 Phase 1 With Action Condition			2044 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	Southbound					2/3	E
Weekday PM	Northbound				D	1, 2/3	A, E

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.

These subway line-haul impacts are mostly attributable to the programmed uses of the Phase 2 development. Projected commuter rail ridership increases would generate trips that primarily contribute to subway transfers in the directions opposite to CBD travel during the commuter peak hours, and therefore would contribute comparatively lower increments than the programmed uses of the Phase 2 development toward the line haul impacts described above. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

3. Pedestrians

Weekday peak-period pedestrian conditions were evaluated at key area sidewalk, corner reservoir, and crosswalk locations. Pedestrian conditions were evaluated at 102 sidewalks, 88 corners, and 82 crosswalks for the weekday AM, midday, and PM peak hours. In the 2033 With Action condition, significant adverse impacts were identified for three sidewalks and six crosswalks during the weekday AM peak hour; two sidewalks and 15 crosswalks during the weekday midday peak hour; and nine sidewalks, four corners, and 18 crosswalks during the weekday PM peak hour. In the 2044 With Action condition, significant adverse impacts were identified for 18 sidewalks, 10 corners, and 40 crosswalks during the weekday AM peak hour; six sidewalks and 36 crosswalks during the weekday midday peak hour; and 19 sidewalks, 15 corners, and 43 crosswalks during the weekday PM peak hour. The table below summarizes the projected significant adverse pedestrian impacts for both the 2033 and 2044 With Action

conditions. The FEIS identifies the specific pedestrian elements that would be experience significant impacts in the Phase 1 and Phase 2 With Action Conditions.

Summary of Significant Adverse Pedestrian Impacts

Analysis Peak Hour	Total No. of Impacted Pedestrian Elements					
	2033 Phase 1 With Action Condition			2044 Phase 2 With Action Condition		
	Sidewalks	Corners	Crosswalks	Sidewalks	Corners	Crosswalks
Weekday AM	3	0	6	18	10	40
Weekday Midday	2	0	15	6	0	36
Weekday PM	9	4	18	19	15	43
Totals During Any Peak Hour	11	4	26	23	17	53

Notes: In total, 272 pedestrian elements were included in the pedestrian study area for analysis.

The table above assumes an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would utilize the East-West Connector, resulting in changes to the impact of the Project on certain pedestrian elements. This issue is discussed on pages 14-156 through 14-159 of the FEIS.

The opening of the East-West Connector and incorporation of the North-South Corridor would likewise divert a substantial number of pedestrians from at-grade sidewalks, corners, and crosswalks along Seventh Avenue between West 31st Street and West 34th Street, and those between Sixth and Seventh Avenues to the new underground pathways. These benefits would be the most noticeable during the AM and PM peak hours, as With Action service levels for pedestrian elements at the aforementioned locations are expected to be mostly similar to or better than those under the No Action condition.

Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

4. Vehicular and Pedestrian Safety Assessment

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, eight 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 crash locations, prevailing trends, project-specific effects, and recommended safety measures is provided in FEIS Table S-8 and FEIS Chapter 14, "Transportation."

In consultation with DOT, other study area analysis locations that are not considered high crash locations 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, and additional safety measures were recommended, where applicable, at these locations to improve pedestrian safety, as specified in FEIS Chapter 14, "Transportation." These include restriping faded crosswalks at the intersections of Second Avenue and East 34th Street and at Eighth Avenue and West 33rd Street.

5. Parking

Under the 2033 With Action condition, public parking utilization is projected to be at 97, 118, 117, and 84 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 2033 With Action weekday midday and PM time periods would be 1,219 and 1,125 parking spaces, respectively. These levels are expected to increase under the 2044 With Action condition to 105, 131, 120, and 84 percent during the weekday AM, midday, PM, and overnight time periods, respectively. The corresponding parking shortfall for the 2044 With Action weekday AM, midday, and PM time periods would be 355, 2,047, and 1,306 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 2044 With Action condition, some motorists may alter their modes of transportation, seek parking availability further beyond the Project Area or eliminate a trip to the area.

M. Air Quality

The Project would not result in any significant adverse air quality impacts. The mobile source analyses determined that concentrations of carbon monoxide (CO) and particulate matter less than 10 microns in diameter (PM_{10}) due to the Project would not result in any violations of National Ambient Air Quality Standards ("NAAQS") at the intersections analyzed for the 2033 and 2044 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 ($PM_{2.5}$) would not exceed the *de minimis* criteria referenced in the *CEQR Technical Manual* for the 2033 and 2044 analysis years, and annual average concentrations would not exceed the *de minimis* criteria for the 2033 analysis year. Maximum annual average $PM_{2.5}$ concentrations are predicted to exceed the *de minimis* criterion at all three intersection sites analyzed in the 2044 analysis year. The potential exceedances would be limited to the immediate areas around these intersections. The ambient air in each of the three affected areas would be in areas used only by transient users (pedestrians) and the overall exposure to the predicted $PM_{2.5}$ concentrations at the affected locations near these intersections would be infrequent and brief. Furthermore, while the maximum incremental increase in annual average $PM_{2.5}$ concentrations was predicted to exceed the *CEQR Technical Manual de minimis* criteria, the maximum total annual concentration is 11.1 $\mu g/m^3$, which is below the NAAQS of 12 $\mu g/m^3$. Therefore, the $PM_{2.5}$ concentrations exceeding the *CEQR Technical Manual* $PM_{2.5}$ *de minimis* criteria do 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 concentrations from the proposed parking facilities would not result in any significant adverse air quality impacts with respect to CO. For $PM_{2.5}$, maximum predicted increments from the proposed garages individually were found to not exceed the *CEQR Technical Manual de minimis* criteria; however, the mobile source intersection analysis determined that the intersection adjacent to Site 6 would exceed the *CEQR Technical Manual de minimis* criteria for annual average $PM_{2.5}$ for the 2044 analysis year; therefore, the cumulative

incremental $PM_{2.5}$ annual average concentration (including the contribution from the intersection) also would result 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 Project's mobile sources of emission and emissions from the Project's parking garages, and thus no significant adverse air quality impacts are predicted.

Based on the analysis of the emissions from large and major sources of emissions in the study area on the Project, design requirements regarding the placement of operable windows and air intakes on portions of Sites 4, 5, and 7 would be imposed in the Project documents to avoid the potential for significant adverse air quality impacts at these sites from an existing non-project source, as explained in FEIS Chapter 15, "Air Quality."

N. Greenhouse Gas Emissions

The Project would be consistent with New York City's GHG reduction goals, and would be developed in compliance with recently adopted City requirements aimed at reducing 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. 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. ESD would require compliance with the requirements of the CMA.

The commercial and residential building energy use (in conformance with the carbon intensity limits specified in LL97) and vehicle use associated with the proposed developments envisioned under the GPP in the 2044 Phase 2 analysis year is expected to result in up to approximately 239 thousand metric tons of carbon dioxide equivalent (CO2e) emissions per year for the Maximum Commercial Scenario, and up to approximately 218 thousand metric tons per year for the Maximum Residential Scenario. The total emissions associated with construction of the mixed-use 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 1.5 million metric tons CO2e.

The GPP would require the use of fully electric HVAC and hot water systems as well compliance with the CMA in future years. Accordingly, GHG emissions associated with the Project are likely to decrease as both New York City and New York State make progress towards achieving 100 percent renewable electric grids. Fully electric buildings would also ensure consistency with the efficient buildings goal defined in the *CEQR Technical Manual* as part of the City's GHG reduction goal. Moreover, additional energy efficiency measures would be identified and incorporated into the Project buildings as their design evolves. Among other things, the Design Guidelines require such buildings to exceed the LEED Gold standard, perform an embodied carbon analysis and optimize the selection of building materials based on the

results, perform enhanced MEP and envelope commissioning, and implement advanced energy metering and enhanced refrigerant management.

The Project would also support the potential expansion of Penn Station. While the Design Guidelines would apply to the mixed-use development on and above Sites 1, 2, and 3 (if Penn Station is expanded onto those sites) but not to the expanded station itself, it is anticipated that the expanded Penn Station would seek to achieve a reduction in GHG emissions by 50 percent below current levels and to certify Penn Station as a zero carbon facility by 2050. Design elements for the station are currently being developed to meet these goals. As part of the design process, a sustainability framework for the expanded Penn Station is under development that will identify potential measures to achieve the emission reduction goals. These measures will be assessed for implementation throughout the design process.

New York State has enacted the Climate Leadership and Community Protection Act ("CLCPA"), which calls for stringent limits on the statewide emission of GHGs. Pursuant to the CLCPA, a newly created body called the Climate Action Council has issued a Draft Scoping Plan that identifies the need for widespread adoption of electric HVAC systems in order to achieve the GHG emission reduction goals. The Draft Scoping Plan also prioritizes the promotion of "mobility-oriented development" within the state and makes the specific recommendation that ESD should "designate priority development areas to concentrate development and make it easier to build in areas that facilitate low-carbon transportation modes." Since the Project Area is exactly such an area, the Project would be consistent with this recommendation. The Project would result in high-density development in close proximity to Penn Station and would provide new entrances and connections for both Penn Station and the subway system, further increasing transit access for the area, consistent with this recommendation of the CLCPA. Furthermore, the Project would also support the potential expansion of Penn Station that would alleviate the limitations on train operations within Penn Station and would be integrated with Penn Station, including Moynihan Train Hall, and enable the Gateway Program to make full use of the Hudson River Tunnels with additional track and platform capacity.

Project development would also be subject to the City's 2020 building energy code (New York City Energy Conservation Code [NYCECC]), as such code is updated at the time of construction of a Project building. The NYCECC currently imposes stringent energy efficiency requirements.

O. Noise

In the 2033 analysis year, Phase 1 of the Project would not have the potential to result in any significant adverse noise impacts. In the 2044 analysis year, traffic generated by the 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.

In the 2044 With Action condition, the Project would result in noise levels at the newly introduced open space at Site 2 that would exceed the 55 dBA L10(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 residential, commercial office, 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 Project would provide sufficient attenuation to achieve the CEQR Technical Manual interior noise level guidelines of 45 dBA L10 for residential, hotel guestroom, or community facility uses and 50 dBA L10 for commercial office uses. With implementation of the attenuation levels outlined above, the Project would not result in any significant adverse impacts at the newly introduced noise receptors. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

ESD will recommend that DOT study the implementation of a shared street on West 31st Street between Seventh and Eighth Avenues. If DOT chooses to implement a shared street on West 31st Street between Seventh and Eighth Avenues, this street would remain open to vehicular traffic (including delivery vehicles), but some of its traffic could divert to other westbound cross-streets such as West 29th Street, West 34th Street, and West 35th Street. Some westbound truck traffic along West 31st Street may divert to West 29th Street for access to the Lincoln Tunnel via Tenth Avenue at West 30th Street/Dyer Avenue. Therefore, if the West 31st Street shared street is implemented by DOT, the impacts identified along West 31st Street may lessen in intensity or be eliminated altogether but new impacts could occur along West 29th Street instead as a result of the stated truck diversions, requiring the same mitigation measures specified for residences along West 31st Street.

P. Public Health

The Project would not result in a significant adverse public health impact. The 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 "Noise," the Project would result in a 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, which would be unmitigated or only partially mitigated. In addition, as noted in "Construction," construction activities for the Project would result in unmitigated significant adverse noise impacts at several sensitive receptor locations during certain phases of construction. 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 Project's unmitigated noise impacts would not result in a significant adverse public health impact.

Q. Neighborhood Character

The Project would not result in a significant adverse impact on neighborhood character. 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 Project is expected to enhance existing neighborhood character by reinforcing these defining features while improving pedestrian facilities and transit accessibility. The Project would address substandard conditions in the Project Area by facilitating redevelopment to create a cohesive, transit-oriented mixed-use district, introducing much-needed public transportation and public realm improvements in the area, and supporting the Penn Station reconstruction and potential Penn Station expansion.

The 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 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 mixed-use district. In addition to supporting a potential southward expansion of Penn Station and the reconstruction of the station, the Project would support an integrated intermodal transit network by providing transit improvements, including new entrances, stairs, elevators, wider subway platforms, and a new east–west underground corridor connecting the 34th Street–Herald Square Station with the 34th Street–Seventh Avenue Station (the East-West Connector) and a north-south corridor on the east side of Seventh Avenue (the North-South Corridor) to provide alternative pathways for pedestrians. It would provide public realm improvements, including new open space, wider sidewalks, and potentially shared streets—amenities for residents, as well as workers and visitors.

The Project would reinvigorate the neighborhood by replacing aging and outmoded commercial buildings with new primarily Class A office and mixed-use buildings befitting the neighborhood's prime New York City and Midtown Manhattan location and unparalleled transit access. While the Project would result in a change to neighborhood character, the change represents an improvement over current conditions and future conditions absent the Project. The new development and the public realm and public transportation improvements introduced with the Project would unify the area around Penn Station, making it a more attractive and inviting neighborhood. As discussed in more detail below, although the Project would not cause significant impacts to neighborhood character upon completion, construction activities on Sites

1, 2 and 3 would result in significant localized neighborhood character impacts in the areas immediately adjacent to the construction sites.

R. Construction

1. Construction Activities

Construction activities associated with the Project would result in temporary disruptions in the surrounding area. Those 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, the Project would not result in significant adverse construction impacts.

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

The illustrative construction schedule for the 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 potential 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 construction schedules for the Penn Station reconstruction and expansion projects as well as Project buildings, 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 FEIS Chapter 20, "Construction," under Section H, "Alternative Construction Schedule Scenario."

Analysis results specific to each of the technical areas are summarized below.

2. Transportation

As detailed in FEIS Chapter 20, "Construction," the Project is not expected to result in any significant adverse parking, transit, and pedestrian impacts during construction. For traffic, conditions during construction were evaluated at 16 and 67 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 10 intersections during the weekday AM construction peak hour and 10 intersections during the weekday PM construction peak hour. During the Phase 2 construction condition, significant adverse traffic impacts were identified at 39 intersections during the weekday AM construction peak hour and 45 intersections during the weekday PM construction peak hour. The table below summarizes the projected significant adverse traffic impacts for both the Phase 1 and Phase 2 construction conditions.

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	10/13	39/60
Weekday PM	10/13	45/87
Totals During Any Peak Hour	13/19	52/104
Notes: In total, 16 and 67 intersections, comprised of approximately 50 and 250 lane groups, were included the traffic study area for analysis for Phase 1 and Phase 2 construction analyses, respectively.		

The FEIS identifies the specific intersections and lane groups that would experience significant impacts in the Phase 1 Peak Construction Condition and Phase 2 Peak Construction Condition. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

3. Air Quality

The construction of the 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 PM_{10}), annual average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their respective NAAQS. In addition, the requirement to use Tier 4 non-road diesel engines would reduce NO_x emissions and address the 1-hour NO_2 NAAQS. An emissions reduction program would be implemented for the Project to minimize the effects of construction activities on the surrounding community. Measures 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. Construction of the Project would not result in significant adverse air quality impacts.

4. Noise

Noise resulting from construction is expected to exceed the *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 assumed construction schedule. 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 to those sites, 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 hours 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.

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, the analysis was 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 predicted. However, if the construction schedule were to extend beyond the timetable assumed in the analysis, then construction activities for the 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 Project buildings that are assumed to be constructed simultaneously rather than consecutively in the quantified analysis presented in FEIS Chapter 20, "Construction," although avoiding the overlap in construction activities for those specific receptors would reduce the maximum level of construction noise.

The FEIS (at Table S-15 and pages 20-53 through 20-67 and pages 20-81 through 20-94 for the Alternative Construction Schedule) identifies the specific locations that would be experience significant adverse construction noise impacts. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

5. Vibration

The Project construction would not result in significant adverse vibration impacts. The Project documents would require that construction within 90 feet of the historic buildings identified in the FEIS comply with DOB TPPN #10/88, requiring acceptable levels of vibration and vibration monitoring at these historic buildings. For non-historic buildings and other structures immediately adjacent to the development sites, vibration levels would be in the range generally considered acceptable for a 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 of construction work causing the vibration depending on soil conditions. However, such operations would only occur for limited periods of time at a particular location and therefore would not result in any significant adverse impacts.

6. Land Use and Neighborhood Character

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.

Long-term construction activity associated with the potential 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 to the north and residential uses to the south and west. Therefore, construction activity associated with the 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.

7. Socioeconomic Conditions

Construction activities associated with the Project would not result in any significant adverse impacts on socioeconomic conditions. Construction activities could temporarily affect pedestrian and vehicular access to businesses near the development sites. However, Maintenance and Protection of Traffic 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 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.

8. Open Spaces

Construction would directly affect three publicly accessible open spaces: the through-block east plaza at 1 Penn Plaza, Plaza 33, and the proposed plaza space on Site 2. At Site 5, the through-block east plaza of 1 Penn Plaza would be displaced by construction activities. This would constitute a significant adverse impact on open space both during construction and after the Site 5 building is completed. 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, 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 above-ground, the proposed plaza space 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 space would be opened on a permanent basis. Therefore, the displacement of temporary Site 2 plaza space 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 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 Project would not result in significant adverse impacts on nearby open spaces.

9. Historic and Cultural Resources

For Phase 1 construction, in the event Sites 1, 2, and 3 are selected as the preferred alternative for a southern expansion of Penn Station and alternatives are not identified to preserve existing buildings in the federal review process, the Project would result in significant adverse direct impacts from the removal of six architectural resources currently located on those sites. In addition, one architectural resource on Site 7 is currently being demolished to allow for new commercial development on Site 7 with or without the Project. This is conservatively identified as a significant adverse impact for the construction of the Project. In addition, during Phase 2 construction, one architectural resource could be removed for the redevelopment of Site 8. The seven architectural resources that would experience significant adverse direct impacts in Phase 1, and the one architectural resource that could experience a significant adverse direct impact in Phase 2, are described and summarized above. Potential measures to mitigate these significant adverse impacts are discussed below in "Mitigation."

10. Hazardous and Contaminated Materials

The Project would not result in significant adverse impacts related to hazardous materials. Potential contamination may be present in both the subsurface and inside buildings. The Project documents will require the implementation of precautionary measures summarized above (under the heading "Hazardous Materials"). Consequently, no significant adverse impacts related to hazardous materials would be expected to occur as a result of construction of the Project.

11. Water and Sewer Infrastructure

Infrastructure activities at the Project Area would include utility connections, possible relocations, and potential upgrades 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 significantly. 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 (hours). Therefore, the construction of the Project's infrastructure improvements would not cause any significant adverse impacts to nearby users of these services.

Utility work for the upgrade of a sewer line, if an upgrade is needed, would require trenching in the streets, which would either be filled and patched, or covered with steel plates during non-working times. This work would involve the use of backhoes to excavate the trenches and place the backfill, and cranes to lift the utility lines into place. Utility relocation activities would typically proceed along the corridor alignment such that no one location is expected to experience significant construction activities associated with the utility work for an extended duration.

12. Extended Build-Out

The construction impact assessment presented in the FEIS was based on an illustrative construction schedule intended to reflect a reasonable worst-case scenario for the potential sequencing of construction events. However, the FEIS also includes a discussion of construction-related impacts in the event the schedule were to extend beyond the timetable assumed in the analysis. The FEIS notes that under such circumstances construction activities as a whole would occur over a longer period of time, but the schedule for construction of each individual building would not change. As a result, there would be less overlapping of construction activities among the different Project sites and the intensity of construction activity at any period would be similar or reduced. Overall, the FEIS finds that the same or similar impacts would be expected to occur if the construction schedule were to be extended in the areas of vibration, land use, socioeconomic conditions, historic and cultural resources, hazardous materials, and water and sewer infrastructure.

With respect to Neighborhood Character, the FEIS indicates that there would be continued localized adverse impacts on adjacent streets over the extended schedule; however, effects associated with construction activity would be less intense because there would be less simultaneous activity in the Project Area. Moreover, as each building is completed, it would be occupied by its permanent intended uses, so there would be an incremental realization of the Proposed Project as buildings are constructed. The FEIS finds that a further extension to the already lengthy construction schedule assumed for Sites 1, 2 and 3 could leave those parcels in a cleared, but unbuilt condition for an extended period of time. Although MTA, in consultation with the City, would seek to activate one or more of the sites with temporary uses or other programming, the FEIS finds that this unbuilt condition would constitute a substantial change to the character of these blocks. However, it further found that the impacts would be localized in the immediate vicinity of Sites 1, 2 and 3 and would not alter the character of the larger neighborhoods surrounding these development sites.

VII. Alternatives

The FEIS analyzes a range of reasonable alternatives to the Project, and assesses the extent to which such alternatives could avoid or minimize adverse environmental impacts while still achieving the purposes and needs of the Project. In particular, the FEIS examines the No Action Alternative; a No Unmitigated Significant Impact Alternative; and a Lower Density Alternative.

A. 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. As-of-right development would occur on Sites 5 and 7. Development pursuant to a prior ESD approval would occur on Site 4. 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. Accordingly, this alternative would not support the creation of a modern intermodal hub supporting the New York economy.

The potential for significant adverse impacts anticipated for the Project would not occur with the No Action Alternative, except in the areas of historic resources and construction noise. As with the Project, the No Action Alternative would result in the direct impact on Site 7 due to the demolition of Hotel Pennsylvania to allow for new commercial development on that site. Additionally, construction on Site 7 under the No Action Alternative could result in the same potential for impacts identified with the Project to the S/NR-eligible and NYCL-eligible former Equitable Life Assurance Company. Similarly, construction on Site 4 under the No Action Alternative could result in accidental construction damage to Madison Square Garden and Penn Station, which are located within 90 feet and are contributing components of the Penn Plaza architectural resource (B, S/NR-eligible). As with the Project, ESD would likely require a CPP for Madison Square Garden and Penn Station in connection with the No Action development of Site 4. Absent a CPP, 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 Project's significant adverse transportation impacts, transportation conditions under this alternative would 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 Project. Specifically, the No Action Alternative would not:

- revitalize the area surrounding Penn Station with a substantial amount of new, sustainable, high-density mixed-use development that would eliminate substandard and insanitary conditions in the Project Area, foster and support economic growth and tax revenue; and maximize the incorporation of sustainable design practices;

- 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.

B. No Unmitigated Significant Impact Alternative

The No Unmitigated Impact Alternative considers development that would eliminate the Project's unmitigated significant adverse impacts. The FEIS 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.

To eliminate the Project's unmitigated significant adverse impacts in the areas of open space, shadows, historic and cultural resources, visual resources, and noise, the Project would have to be reduced in size or modified to a point where it would not realize its goals and objectives, which include revitalizing the area surrounding Penn Station and 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; 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, virtually any level of development could result in the unmitigated significant adverse impacts in the areas of shadows, transportation, and construction. Additionally, with a reduction in size of this magnitude, the No Unmitigated Impact Alternative would require land acquisition and other fixed costs to be amortized over significantly less office and residential space, which would offer less incentive for construction of the new office and residential buildings. In addition, this alternative would generate minimal funding for the reconstruction and potential expansion of Penn Station. Therefore, there is no practicable alternative that would avoid the unmitigated significant adverse impacts of the Project.

C. Lower Density Alternative

The Lower Density Alternative considers a project program that would include less total square footage of development, including less commercial office, residential, retail, hotel rooms, and parking square footage and spaces than the Project. Under this alternative, the commercial density would be reduced on certain sites and Site 8 would not be redeveloped. Compared to the Project, the Lower Density Alternative represents a reduction in program density of approximately 28 percent under the Maximum Commercial Scenario, and approximately 23 percent under the Maximum Residential Scenario. The purpose of this alternative is to evaluate whether there would be a meaningful reduction in the significant adverse impacts of the Project with a smaller program.

Like the Project, the Lower Density 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 Lower Density Alternative, significant adverse impacts in the areas of community facilities (early childhood programs), open space, historic resources, noise, construction noise would be the same as or similar to those of the Project. The Lower Density Alternative would result in significant adverse transportation impacts (operational and during construction), but to a lesser extent than with the Project. With respect to shadows, the Lower Density Alternative would result in the same significant adverse impacts as the 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 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 Project, except with respect to the demolition of the copper Gimbel Brothers 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 Project would not occur.

With respect to traffic, it can be expected that the number of intersections with significant adverse impacts resulting from full build-out of the Lower Density Alternative would fall within the range of impacted intersections of the Project in Phases 1 and 2, during any analysis peak hour. Some of these impacts could be mitigated with the same types of mitigation measures as with the Project. The number of unmitigated intersections under full build-out of the Lower Density Alternative would be expected to be fewer than the number of unmitigated intersections for Phase 2 of the Project. The Lower Density Alternative could result in unmitigated transit impacts at the same or slightly fewer subway station analysis elements as compared to Phase 2 of the Project. As with Phase 2 of the Project, the Lower Density Alternative would not result in any bus line-haul impacts.

With respect to pedestrians, the Lower Density Alternative is expected to result in moderately fewer overall impacted locations as compared to Phase 2 of the 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 Project's Site 8 development in the Maximum Commercial Scenario. Therefore, these two sidewalk segments 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 the same or a slightly fewer elements as compared to Phase 2 of the Project.

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

In general, although the Lower Density Alternative would meet a number of the Project's goals and objectives, it would do so to a lesser degree than the Project because it would introduce less new commercial office and residential use and would not implement all of the public transportation and public realm improvements that would occur with the Project. As with the Project, the Lower Density Alternative would address substandard conditions in the Project Area by facilitating redevelopment to create a cohesive, transit-oriented mixed-use district, although the amount of commercial and residential development under this alternative would be less than the Project and would not capitalize on the Project Area's unmatched rail and 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 and residential space, which would offer less incentive for construction of the new office and residential buildings, potentially delaying or forestalling their construction. Similarly, the Lower Density Alternative would foster and support economic growth to a lesser extent than the 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 Project.

Furthermore, the Lower Density Alternative would implement fewer public transportation and public realm improvements than the 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 Project and would therefore be less successful at providing support for the Penn Station reconstruction and potential expansion of Penn Station. Therefore, the Lower Density Alternative would not meet the project goal of maximizing revenue to support those projects.

VIII. Mitigation of the Project's Significant Adverse Impacts

A. Early Childhood Programs

The Project may result in a significant adverse impact to early childhood programs. Based on the current inventory of early childcare facilities and the availability of seats within those facilities, a significant adverse impact to early childhood programs is predicted to occur with the completion and occupancy of approximately 192 affordable dwelling units or supportive housing units. Ultimately, however, the demand for publicly funded early childhood programs depends not only on the amount of residential development in an area, but on the proportion of new low-income households with children that qualify (not all children meet the social and income eligibility criteria). Additionally, the analysis is based on the existing inventory of early childhood programs in the area and does not reflect shifts in demand or creation of new capacity. It is reasonable to expect that the market (*i.e.*, childcare facility operators) may respond to demand by opening new early childhood programs in the study area and thereby avoiding the significant impact. Several other actors may reduce the number of children in need of slots in publicly funded early childhood programs. Families in the study area could make use of alternatives to publicly funded early childhood programs. There are slots at homes licensed to

provide family-based child care that families of eligible children could elect to use instead of public center child care. These facilities could provide additional slots in the study area but are not included in the quantitative analysis appearing in FEIS Chapter 5. Parents of eligible children are also not restricted to enrolling their children in early childhood programs in a specific geographical area closer to their place of employment and beyond the study area assumed in the FEIS analysis.

Measures to mitigate the significant adverse impact have been identified by ESD and would be further developed in consultation with the New York City Department of Education (DOE) Division of Early Childhood Education, as explained below. Mitigation measures for the significant adverse impact could include a number of options: suitable space for an early childhood program center could be provided on one of the development sites, such as in the community facility space planned for Site 1A; additional early childhood program space could be provided at suitable locations off-site and within a reasonable distance (at a rate affordable to DOE providers); or additional capacity could be provided at existing facilities on- or off-site.

At this time, it is premature to determine whether such mitigation would be needed, and if so, which of the options described above should be implemented. Accordingly, at such time as ESD enters into a development agreement for a building that would include affordable housing, it would consult with DOE's Division of Early Childhood Education (or other appropriate agency at the time of mitigation consultation) to determine whether such building would trigger the need for additional early childhood program space. In the event such mitigation is determined to be necessary, ESD would include in such development agreement (or other binding agreement) provisions requiring the developer to arrange for such space through one or more of the options described above. The additional capacity to be provided under the development agreement would be at a level sufficient to avoid a significant impact to Early Childhood Education resulting from construction of the building containing the affordable housing units (considered together with any prior project buildings containing affordable housing). If an on-site facility or facilities are identified to be needed, the developer's design team would be required to coordinate with DOT regarding pick-up/drop-off locations, curbside parking regulations, school bus accommodations (if any), and pedestrian safety.

Based on the results of the analysis presented in Chapter 5, "Community Facilities," the FEIS estimates that approximately 16 slots in early childhood programs would be necessary to reduce or mitigate the impact, because 16 slots would reduce the utilization rate to less than five percent as compared to the No Action condition. However, the proposed post-FEIS change in the Project program on Site 1A would require 108 permanently affordable supportive housing units on Site 1A (in addition to the other affordable dwelling units on Site 1A), increasing the Project's maximum number of affordable dwelling units from the 540 affordable units assumed in the FEIS to 608 affordable units and potentially increasing the Project-induced shortfall in the availability of childcare slots upon full build-out. With the increased number of affordable units, approximately 20 slots in early childhood programs (rather than 16 slots) would be necessary to reduce or mitigate the impact, because 20 slots would reduce the utilization rate to less than five

percent as compared to the No Action condition.[6] This change is not material to these findings because, as discussed above, at the time it is to enter into a development agreement for each building ESD will be consulting DOE's Division of Early Childhood Education (or other appropriate agency) to determine whether such building would trigger the need for additional early childhood program space, and if needed will require the developer to arrange for such space. As a result of changes in the demand for and availability of childcare slots at the time of construction of a new project building containing affordable housing units, the number of childcare slots that would be required to mitigate the impact could be more than or less than 20 slots. Absent the implementation of such mitigation measures, the Project could have an unmitigated significant adverse impact on publicly funded early childhood programs.

B. Open Space

The Project's significant direct impact to an open space resource would occur with the elimination of the through-block 1 Penn Plaza's east plaza at the commencement of construction at Site 5. To partially mitigate this significant adverse direct impact on open space, the developer of Site 5 will be required to implement one or more of the following mitigation measures: arrange for the removal of the bonused floor area from 1 Penn Plaza; provide new on-site open space; or make an appropriate payment for use on public realm improvements in the Project Area. The design and features of any additional passive open space on Site 5 would be developed as part of the design of the new building on Site 5, in consultation with the Public Realm Task Force, and subject to review by ESD. Any funding for public realm improvements would be used for programs or improvements that would improve or increase open space within the ¼-mile (non-residential) open space study area (shown in FEIS Figure 6-1) including, but not limited to: (a) creation of new open space; (b) renovation, repairs, or improvements to existing open space; and/or (c) expansion of hours of operation of existing facilities. The funding would be allocated in consultation with New York City Department of Parks and Recreation (DPR) and the Public Realm Task Force. The final menu of mitigation to be implemented by the developer of Site 5 will be based on the open space needs of the area and opportunities to address those needs at the time that the development agreement for Site 5 is negotiated between the developer and ESD.

The Project's indirect impact on open space resources would occur with the completion and occupancy of approximately 8.0 million gsf of office floor area, which would introduce approximately 32,000 office workers to the study area. The significant adverse indirect impact on open space could be fully mitigated with the addition of approximately 0.37 acres (or approximately 16,000 square feet [sf], or the amount of open space necessary to result in a decrease in the open space ratio of less than 4 percent) of new passive open space. This amount of open space would be in addition to the open space introduced with the Project. To address the significant adverse indirect impact on open space, ESD would require the future developer of each Project building to implement one or both of the following measures:

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[6] This estimate conservatively assumes the supportive housing units are for formerly homeless families or single mothers; if the supportive housing units house formerly homeless single adults, they would not be expected to introduce children who would use early childhood programs.

- Create additional passive open space in or near the Project Area (in addition to the proposed plaza on Site 2). Additional passive open space could be created on the development sites under the "public space" requirements of the Design Guidelines. Under the Design Guidelines, a certain percentage of each site must be set aside for public space. Public space can include transit entrances and sidewalk widenings that would not be considered "open space." However, the public space requirements could also be satisfied by the provision of passive open spaces such as plazas with seating or other amenities. At this time, it is not known which sites (other than Site 2) may include passive open spaces or the specific details and features of these spaces. The design and features of any additional passive open spaces would be developed as part of the design of the new buildings on each site, in consultation with the Public Realm Task Force, and subject to review by ESD.

- Provide funding for open space improvements and/or maintenance of open space resources in the study area. Funding for open space improvements or maintenance could serve to partially mitigate the significant adverse open space impact. ESD would require the future developer of each building to make a financial contribution towards open space improvements and/or maintenance of open space resources in the study area. The funding would be used for programs or improvements that would improve or increase open space within the ¼-mile (non-residential) open space study area (shown in FEIS Figure 6-1) including, but not limited to: (a) creation of new open space; (b) renovation, repairs, or improvements to existing open space; and/or (c) expansion of hours of operation of existing facilities. The funding would be allocated in consultation with DPR and the Public Realm Task Force, and subject to review by ESD.

The amount of any financial contributions that may be required as mitigation for the significant adverse direct and indirect open space impacts would be established at the time that a development is proposed for each site. In establishing the amount of the financial contribution, ESD would account for the availability of other funds, the contribution of that development to the significant adverse open space impact, and the provision of any additional open space on the development site to satisfy the public space requirements of the Design Guidelines.

At this time, it is not possible to know exactly which mitigation measures would be most appropriate, because the condition of open spaces in the area may change and other spaces may be identified as needing repairs and upgrades in the future at the time that the open space impact occurs, and detailed development plans are not yet available for any of the development sites. ESD would require an appropriate contribution to the open space mitigation in the form of one or more of the mitigation measures listed above at the time that a development agreement is signed between ESD and the future developer(s) for each site. The requirement to implement the open space mitigation would be contained in the development agreement(s) or other binding documents between ESD and the future developer(s). Absent the implementation of such mitigation measures, the significant adverse impact would remain unmitigated.

The 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.

C. Shadows

1. Mitigation of Shadow Impacts on Open Space Resources

In the 2033 analysis year (Phase 1), the Project would cause significant adverse shadow impacts to two open space resources (the Madison Square Garden POPS and the Farley Building's Eighth Avenue steps). In the 2044 analysis year (Phase 2), the Project would cause significant adverse shadow impacts to the same resources as in Phase 1 plus an additional four open space resources (Plaza 33, Herald Square Park, Chelsea Park, and the Penn South open space).

The FEIS evaluates 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. For the reasons set forth in the FEIS, ESD has determined that mitigation measures for shadow impacts that involve changes to the bulk or configuration of the proposed developments would be impracticable for the Project because they would severely compromise the achievement of the Project's goal and objectives and therefore not fulfill the purpose and need of the Project.

To address the significant adverse shadow impacts on open spaces, ESD will require the future developer of each building causing or materially contributing to a significant adverse shadow impact to fund open space improvements and/or maintenance at the impacted open space resource(s). The funds would be used for renovation, repairs, or improvements to the impacted open space resources (such as relocating seating, providing more seating in sunlit areas, upgrading walkways, upgrading the Chelsea Park comfort station, replacing existing plantings with shade-tolerant species, or hiring additional maintenance staff to provide improved maintenance of these resources). The amount of the required funding for the significant adverse shadow impact would be established at the time that a development is proposed for each site that causes or materially contributes to a shadow impact on an open space resource. In establishing the amount of the financial contribution, ESD would account for the availability of other funds and the contribution of that development (with its specific as-designed envelope) to the significant adverse shadow impact.

At this point, it is not possible to know exactly which improvements or maintenance would be most appropriate, because the condition of open spaces may change or other repairs or upgrades may be identified in the future at the time that the shadow impacts to open spaces occurs. ESD will consult with DPR (and if applicable the Penn South Cooperative, the owner of the Penn South open spaces) to allocate funding for the open space improvements and/or maintenance of open space resources at the time a development agreement is signed between ESD and the future developer of a site that is predicted to result in or materially contribute to a significant adverse shadow impact to an open space resource.

The provision of funding for open space improvements and/or maintenance would partially mitigate the significant adverse shadow impacts to open space resources. As the

significant adverse shadows impacts would not be fully mitigated, the Project would result in unmitigated significant adverse shadows impacts to these resources.

2. Mitigation of Shadow Impacts on Historic Resources

In the 2033 analysis year (Phase 1), the Project would cause significant adverse shadow impacts to one historic resource with sunlight-sensitive features (the skylights and Eighth Avenue steps of the Farley Building). In the 2044 analysis year (Phase 2), the Project would cause significant adverse shadow impacts to five historic resources with sunlight-sensitive features (St. Michael's Roman Catholic Church, St. Francis of Assisi Church, the former Greenwich Savings Bank, and the skylights, Eighth Avenue steps and colonnade of the Farley Building).

For the reasons set forth in the FEIS, ESD has determined that mitigation measures for shadow impacts that involve changes to the bulk or configuration of the proposed developments would be impracticable for the Project because they would severely compromise the achievement of the Project's goal and objectives and therefore not fulfill the purpose and need of the Project.

For significant adverse impacts to skylights and stained-glass windows, potential mitigation measures can also include the provision of artificial lighting to simulate the effect of direct sunlight. With respect to the Farley Building skylights, the FEIS concludes that artificial lighting for the significant adverse impact to the skylights would be impracticable.

The requirements of the Letter of Resolution with the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") dated June 2022 (the "LOR," which is included in FEIS Appendix G) are hereby incorporated into these findings as mitigation measures. Pursuant to the LOR, ESD will continue to consult with OPRHP regarding the significant adverse shadows impacts on the stained glass windows of the St. Francis Roman Catholic Church Complex and the stained glass windows of the St. Michael's Roman Catholic Church Complex. ESD has committed to require the developers of Sites 1, 2, 3, and 8 to offer artificial lighting, which would simulate the effect of direct sunlight on the stained glass windows of the historic resources, to the Churches in the future when development on Sites 1, 2, 3, and 8 proceeds. If a church owner does not accept the offer of artificial lighting, then the significant adverse effects to the St. Francis Roman Catholic Church Complex or St. Michael's Roman Catholic Church Complex, as the case may be, would be unmitigated.

As documented in the LOR, ESD has advised OPRHP that ESD would consider the feasibility and efficacy of installing mirrors on nearby structures to mitigate significant adverse shadow impacts on historic resources. If the installation of mirrors is determined infeasible or ineffective, these significant adverse impacts would remain unmitigated.

D. Historic and Cultural Resources

As noted above, certain historic resource mitigation measures are stipulated in the LOR, has been incorporated herein by reference.

1. Hotel Pennsylvania (Site 7)

The Project would require the removal of the historic Hotel Pennsylvania on Site 7 that is currently undergoing demolition to allow for new commercial development on Site 7 with or without the Project. A feasibility study was undertaken to evaluate the potential for retaining and renovating the Pennsylvania Hotel building for continued hotel use or reusing the building for office or residential uses. As detailed in FEIS Appendix K, the analysis determined that it would not be feasible to retain this building.

Mitigation measures for the demolition of the Hotel Pennsylvania are stipulated in the LOR (FEIS Appendix G). These measures include:

- HABS Level II recordation.

- Architectural salvage. Vornado has salvaged the following items from the Hotel Pennsylvania: two original guest room Servidors; a Hotel Pennsylvania letterbox originally located in the hotel lobby; the Ellsworth M. Statler commemorative plaque originally located in the hotel lobby; decorative elements from the former Dining Room/Café Rouge, including two remaining column capitals, or portions thereof, and ceiling beams that retain ornament; and will salvage some original electrical switchgear and electrical panels found in the sub-basement of the hotel. Each salvaged item has been wrapped and crated individually, labeled with its contents, and placed in Vornado's storage area in the second basement of 11 Penn Plaza. In addition, Vornado will make reasonable efforts to salvage a mosaic originally installed in the Gimbel's Passage. The mosaic consists of brown and white tiles that read above a directional arrow, "Pennsylvania Station, Seventh Avenue Subway, Statler Hilton." In the event this mosaic can reasonably be salvaged, Vornado will cause it to be cleaned by a restoration contractor and stored by Vornado with the other salvaged artifacts or by its contractor in a suitable location until its reinstallation. Vornado will consult with ESD and OPRHP regarding the installation of the recovered artifacts. Such reinstallation will be incorporated into an interpretive exhibit at a location that is accessible to the public.

2. Gimbel Brothers Skybridge (Site 8)

The Project could result in the removal of the historic Gimbel Brothers Skybridge over West 32nd Street for the redevelopment of Site 8. Although the proposed redevelopment of Site 8 would occur within the envelope permitted by the GPP, a design of the redevelopment of this site has not been determined. Two alternative programs for Site 8 have been identified: a new office tower that would require removal of the existing building on Site 8 (and with it the removal of the Gimbel Brothers Skybridge) or the construction of a residential enlargement above the existing building on Site 8 (which may also require demolition of the Gimbel brothers Skybridge). Accordingly, it is not known based on current information whether the proposed redevelopment of Site 8 would involve the removal of the Gimbel Brothers Skybridge. As stipulated in the LOR, at such time as the necessary information concerning the conceptual design and proposed program for the Site 8 redevelopment is available, a thorough study as to whether feasible and practical alternatives would be available to avoid or minimize any adverse effects to the Gimbel Brothers Skybridge will be prepared in consultation with OPRHP. Further, if that future study determines that the redevelopment of Site 8 pursuant to the GPP would result

in a significant adverse impact on the Gimbel Brothers Skybridge, measures that could partially mitigate that significant adverse impact would be developed and implemented in consultation with OPRHP as stipulated in the LOR.

3. Historic Resources on Sites 1, 2 and 3

The Railroads' expansion of Penn Station to Sites 1, 2 and 3 (and the associated above-grade redevelopment of Sites 1, 2 and 3 under the GPP) would occur only if the expansion of the train station to these blocks is selected as the preferred alternative after a federal environmental and historic resource review under the National Environmental Policy Act, the National Historic Preservation Act, and Section 4(f) of the U.S. Department of Transportation Act. The FEIS assumes that a station expansion on Sites 1, 2, and 3 would result in the demolition of six historic resources on those sites: the Lithuanian Alliance of America, Penn Station Service Building, Fairmont Building at 239-241 West 30th Street, St. John the Baptist Roman Catholic Church Complex, Penn Terminal Building at 370 Seventh Avenue, and Stewart Hotel.

The removal of the resources on Sites 1, 2, and 3 would only occur if a southern expansion alternative is selected for a potential expansion of Penn Station and at the conclusions of the NEPA process, Section 106 consultation, and 4(f) evaluation, the involved public transportation agencies make a determination 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) properties. The federal agency taking the lead in performing the environmental and historic resources review will be considering alternatives or other measures that might preserve the historic resources on Sites 1, 2, and 3. ESD intends to seek to participate in the Section 106 process as a consulting party, with the intention of exploring further whether there are alternatives or other measures that might avoid or mitigate historic impacts on these sites. However, based upon the information currently available, ESD believes that retaining the architectural resources on Sites 1, 2, and 3 would substantially compromise the goals and objectives of the Project by preventing or severely hindering the redevelopment of Sites 1, 2, and 3, which would frustrate achievement of the project goal of revitalizing the area immediately to the south of 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 1, 2, and 3 would also greatly complicate – or perhaps preclude altogether – the potential southern expansion of Penn Station beneath Sites 1, 2, and 3. Further analysis of this issue is expected to be developed during the federal environmental review process.

Potential mitigation measures that could partially mitigate the impact of the demolition of the six architectural resources located on Sites 1, 2, and 3 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 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.

Potential measures to partially mitigate the adverse effects resulting from the expansion of Penn Station on Sites 1, 2, and 3 could 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 in accordance with Section 106 regulations.

4. Vibration and other construction impacts on historic resources

Development of the Project could have adverse physical impacts on 15 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; former Equitable Life Assurance Company; St. Francis Roman Catholic Church Complex; 23rd Police Precinct Station House; loft building at 144-154 West 30th Street; Fur Craft Building; Madison Square Garden; Penn Station; plaza portion of 2 Penn Plaza; Gimbel Brothers Administration Building; Gimbel Brothers Skybridge; FDNY Hook and Ladder 24, Engine 1; Fralber Building; loft building at 236 West 30th Street; Fire Patrol No. 3, and Irwin House. Therefore, Construction Protection Plans to protect the 15 architectural resources within 90 feet of construction will be required and would be developed and implemented in coordination with OPRHP. The Construction Protection Plans would be required for Sites 1, 2, 3, 4, 5, 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.

5. Shadow Impacts on historic resources

The Project would result in significant adverse shadows impacts on five architectural resources: the Farley Building, St. Francis Roman Catholic Church Complex, the open spaces of the Penn South Apartment Complex, St. Michael's Roman Catholic Church Complex, and Greenwich Savings Bank. As stipulated in the LOR, ESD will consider the feasibility and efficacy of installing mirrors on nearby structures to mitigate the significant adverse shadow impacts on the Farley Building, the open spaces of the Penn South Apartment Complex, and the former Greenwich Savings Bank. If the installation of mirrors is determined infeasible or ineffective, these significant adverse impacts would remain unmitigated.

Regarding the significant adverse shadow impacts on the stained glass windows of the St. Francis Roman Catholic Church Complex and the stained glass windows of the St. Michael's Roman Catholic Church Complex, ESD will continue to consult with OPRHP and has committed in the LOR to require the developers of Sites 1, 2, 3, and 8 to offer artificial lighting, which would simulate the effect of direct sunlight on the stained glass windows of the historic resources, to the churches in the future when development on Sites 1, 2, 3, and 8 proceeds, as stipulated in the LOR. If one or more of the church owners do not accept the offer of artificial lighting, then the significant adverse effects to the St. Francis Roman Catholic Church Complex or St. Michael's Roman Catholic Church Complex, as the case may be, would be unmitigated.

6. Obstructed views of Empire State Building

Completion of Site 6 of the Project would partially obstruct views east of the iconic Empire State Building along West 34th Street west of Sixth Avenue. Completion of Sites 5 and 6 would partially obstruct views east of the Empire State Building along West 33rd Street at Ninth Avenue. Completion of Site 2 would block northeast views of the Empire State Building from the east portion of Chelsea Park along Ninth Avenue and from Ninth Avenue and West 28th Street within the larger urban design study area. 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, 5, and 6 and requiring a greater setback from West 33rd Street and/or West 34th Street on Site 6 and on West 33rd Street on Site 5. As noted in Chapter 9, "Urban Design and Visual Resources," to reduce obstruction of views of the Empire State Building in views east on West 33rd Street, the Design Guidelines require the tower at Site 6 to have an additional, intermediate 30-foot setback on West 33rd Street (inclusive of the 10-foot sidewalk widening) above 500 feet. This measure was explored between the DEIS and FEIS and incorporated into the Project design as assessed in the FEIS. This setback would allow for greater visibility of the spire of the Empire Building in views east along West 33rd Street from locations west of Eighth Avenue. For the reasons discussed in the FEIS, ESD has determined that additional mitigation measures in the form of height reductions or setbacks would not be practicable, as they would not meet the goals and objectives of the Project. Accordingly, the significant adverse impact to the Empire State Building as a visual resource would remain unmitigated.

E. Visual Resources

1. Gimbel Brothers Skybridge (Site 8)

Demolition of the copper Gimbel Brothers skybridge, a visual resource spanning from Site 8 across West 32nd Street, could occur during construction of Site 8. The mitigation for the potential demolition of this resource is identified in the above discussion of historic resource mitigation.

2. Church of St. John the Baptist (Site 2)

The Church of St. John the Baptist, a visual resource, could be demolished with the development of Site 2. The mitigation for the potential demolition of this resource is discussed above in the section on historic resource mitigation.

3. Obstructed views of Empire State Building

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 2044 With Action condition would constitute a significant adverse impact to visual resources. In particular, the Project would partially obstruct views of the Empire State Building in views east on West 33rd and West 34th Streets, and would fully obstruct views northeast from West 28th Street and Ninth Avenue, and in views northeast from the east portion of Chelsea Park. As summarized in the above discussion of historic resource mitigation, ESD has determined that these significant adverse impacts cannot be practicably mitigated.

F. Transportation

1. Transportation Monitoring Plan

Because of the Project's long build-out and the extent and severity of the transportation-related impacts identified, ESD would require the future developers of the Project to undertake studies in coordination with DOT under a future transportation monitoring plan ("TMP"). The TMP studies will 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 and practicable 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.

Four development milestones have been identified for undertaking the TMP studies. The first would be the completion of the first two buildings (Sites 4 and 7, or an equivalent amount of floor area) of the Project. Two interim points and the full build-out of Phase 2 have been identified as the other three milestones. The first Phase 2 interim point would be the completion of half of the development sites and the completion of the Penn Station expansion and related regional infrastructure improvements. The second Phase 2 interim point would be the completion of all the development sites except for Sites 2 and 3, or an equivalent amount of floor area. The Penn Station expansion and related regional infrastructure improvements are expected to be completed prior to the completion of the Phase 2 build-out. Should the Phase 2 development site build-out period or the completion of the Penn Station expansion and related regional infrastructure improvements extend substantially, additional interim TMP studies may be added at the discretion of ESD. The exact scope and timing of these studies for the identified mitigation strategies to address significant adverse traffic and pedestrian impacts would be determined in consultation with DOT and subject to its approval prior to implementation. ESD would also require that these efforts be adequately funded through an escrow account or direct payments by designated developers of the various development sites. Prior to undertaking any TMP, the designated developer would prepare a scope of work and submit it for ESD and DOT review and approval. The designated developer would submit a report summarizing the finding of each TMP as well as all necessary materials (drawings, LOS analyses, etc.) for ESD and DOT's review and approval. The designated developer would be responsible for all costs of preparing the TMP and the design and implementation of any subsequent measures recommended by the TMP not determined to be the responsibility of another party.

2. Traffic Mitigation

Phase 1 Traffic Mitigation

FEIS Tables 22-5A through 22-5C itemize the recommended mitigation measures to address the identified impacts under the 2033 With Action condition. With the implementation of these mitigation measures, which are subject to modification in light of the results of the TMP and the approval of DOT prior to implementation, some of the significant adverse traffic impacts could be fully mitigated. At certain intersections, measures were recommended to partially mitigate the identified impacts, but the impacts at these intersections and those where no mitigation measures can be identified would all be unmitigated. As shown in FEIS Figures 22-1a, 22-1b, and 22-1c, impacts at 37 of the 80 impacted intersections during the weekday AM peak hour, 34 of the 79 impacted intersections during the weekday midday peak hour, and 34 of the 76 impacted intersections during the weekday PM peak hour could not be fully mitigated. The quantitative analysis of traffic conditions in the FEIS and quantified analysis as to the efficacy of the recommended traffic mitigation measures in the FEIS (summarized above) assume an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would utilize the East-West Connector, altering pedestrian flows and indirectly affecting traffic conditions. An assessment of the need for and efficacy of certain traffic mitigation measures with the 32nd Street Option for the East-West Connector is presented on page 22-63 of the FEIS.

Several of the traffic mitigation measures would result in the loss of on-street parking spaces (as summarized in FEIS Table 22-6), further exacerbating the shortage of parking spaces in the study area.

Phase 2 Traffic Mitigation

FEIS Tables 22-8A through 22-8C itemize the recommended mitigation measures to address the identified impacts under the 2044 With Action condition. With the implementation of these mitigation measures, which are subject to modification in light of the results of the TMP and the approval of DOT prior to implementation, some of the significant adverse traffic impacts could be fully mitigated. At some other intersections, measures were recommended to partially mitigate the identified impacts. Finally, those intersections where no mitigation measures were identified have been deemed unmitigated. As shown in FEIS Figures 22-2a, 22-2b, and 22-2c, impacts at 75 of the 102 impacted intersections during the weekday AM peak hour, 48 of the 89 impacted intersections during the weekday midday peak hour, and 69 of the 94 impacted intersections during the weekday PM peak hour could not be fully mitigated. The quantitative analysis of traffic conditions in the FEIS and quantified analysis as to the efficacy of the recommended traffic mitigation measures in the FEIS (summarized above) assume an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would utilize the East-West Connector, altering pedestrian flows and indirectly affecting traffic conditions. An assessment of the need for and efficacy of certain traffic mitigation measures with the 32nd Street Option for the East-West Connector is presented on page 22-63 of the FEIS.

Several of the traffic mitigation measures would result in the loss of on-street parking spaces (as summarized in FEIS Table 22-9), further exacerbating the shortage of parking spaces in the study area.

3. Transit Mitigation

Subway Station Mitigation Measures – 33rd Street Option for the East-West Connector

FEIS Table 22-12 identifies the recommended transit mitigation measures in the 2033 With Action condition and their efficacy in mitigating the identified significant adverse impacts in the 2033 With Action condition.

FEIS Tables 22-13 and 22-14 identify the recommended transit mitigation measures in the 2044 With Action condition and their efficacy in mitigating the identified significant adverse impacts in the 2044 With Action condition.

FEIS Table 22-10 summarizes the subway station mitigation analysis results for both the 2033 Phase 1 and 2044 Phase 2 analysis years.

Subway Station Mitigation Measures – 32nd Street Option for the East-West Connector

The 32nd Street Option for the East-West Connector, which would have an additional connection under Seventh Avenue, is expected to draw more Penn Station riders underground and shift more subway riders to the 34th Street–Herald Square Subway Station. In comparison to the 33rd Street Option for the East-West Connector, the 32nd Street Option is expected to result in overall fewer subway station impacts at the 34th Street-(Seventh Avenue) Penn Station Subway Station and the 34th Street-(Eighth Avenue) Penn Station Subway Station, roughly the same number of station impacts at the 34th Street-Herald Square Subway Station, and fewer subway line haul impacts, as described below.

Due to changes in peak hour passenger volumes caused by diverted flows, the following significant adverse transit impacts in the 2033 With Action condition with the 33rd Street Option for the East-West Connector would no longer occur with the 32nd Street Option. Therefore, the mitigation measures related to them would no longer be required, as described below:

- At the 34th Street-Herald Square Subway Station: (i) at the M1/S2 street-level stair at the northwest corner of Sixth Avenue and West 32nd Street in the weekday PM peak hour, the mitigation measure of widening the stair to 25 feet and eliminating the HM300 and M2/S1 stairs would no longer be required, but would be required for the 2044 With Action condition; (ii) at the E230 platform escalator connecting the N506 paid zone with the B/D/F/M platform in the weekday AM and PM peak hours, the mitigation measures of increasing the tread width to 32 inches and the escalator to speed to 100 feet per minute for the E229, E230, E231, and E232 escalators in the 2033 With Action condition would no longer be required, but would be required for the 2044 With Action condition.

- At the 34th Street (Seventh Avenue)-Penn Station Subway Station: (i) the ML2/ML4 mezzanine stair connecting the West 33rd Street underpass with the R139 free zone in the weekday AM peak hour would no longer be an unmitigatable impact; and (ii) the new "V2A" platform stair connecting the West 32nd Street underpass and the 2/3 platform in the weekday PM peak hour would no longer be an unmitigatable impact.

Due to changes in peak hour passenger volumes caused by diverted flows, the following new significant adverse transit impacts in the 2033 With Action condition would occur with the 32nd Street Option for the East-West Connector. Potential measures to mitigate these impacts for the 2033 Phase 1 With Action condition are detailed below.

- At the 34th Street-Herald Square Subway Station: (i) at the P4 (IND) platform stair connecting the N507 paid zone with the B/D/F/M platform in the weekday AM peak hour, the impact would be unmitigatable; (ii) at the P1 (BMT) platform stair connecting the A25 paid zone with the N/Q/R/W platform in the weekday AM peak hour, the impact would be mitigated with the reconstruction of the A25 mezzanine with two additional 7-foot-wide platform stairs; (iii) at the E222 street-level escalator connecting the PATH concourse with the northwest corner of Sixth Avenue and West 32nd Street in the weekday AM peak hour, this impact could be mitigated by increasing the tread width to 40 inches, but is not recommended with impacts temporarily unmitigated as the escalator would be reconfigured and widened as part of the Site 8 improvements in the 2044 With Action condition; (iv) at the E223 mezzanine escalator connecting the PATH concourse with the IND mezzanine in the weekday AM peak hour, the impact could be mitigated by increasing the tread width to 40 inches, but is not recommended with impacts temporarily unmitigated as the escalator would be eliminated as part of the Site 8 improvements in the 2044 With Action condition.

- At the E224 mezzanine escalator connecting the PATH concourse with the IND mezzanine in the weekday PM peak hour: this impact could be mitigated by increasing the tread width to 32 inches, but is not recommended with impacts temporarily unmitigated as the escalator would be eliminated as part of the Site 8 improvements in the 2044 With Action condition.

- At the E232 platform escalator connecting the N506 paid zone with the B/D/F/M platform in the weekday AM peak hour: this impact would be mitigated by increasing the tread width to 32 inches and the escalator to speed to 100 feet per minute for the E229, E230, E231, and E232 escalators.

Due to changes in peak hour passenger volumes caused by diverted flows, the following significant adverse transit impacts in the 2044 With Action condition with the 33rd Street Option would no longer occur with the 32nd Street Option:

- At the 34th Street-Herald Square Subway Station's E230 platform escalator connecting the N506 paid zone with the B/D/F/M platform in the weekday PM peak hour: since there would still be an impact in the AM peak hour, the mitigation measures of increasing the tread width to 32 inches and the escalator to speed to 100

feet per minute for the E229, E230, E231, and E232 escalators in the 2033 With Action condition would still be required.

- At 34th Street (Seventh Avenue)-Penn Station Subway Station, (i) the ML2/ML4 mezzanine stair connecting the West 33rd Street underpass with the R139 free zone in the weekday AM and PM peak hours would no longer be unmitigatable impacts; and (ii) the R135 fare control area at the West 32nd Street underpass in the weekday AM peak hour: the mitigation measure of adding one turnstile would no longer be required.

- At the 34th Street (Eighth Avenue)-Penn Station Subway Station's M9 platform stair to the southbound C and E platform in the weekday PM peak hour: the mitigation measure of widening and reconstructing as a 10-foot-wide stair would no longer be required.

Due to changes in peak hour passenger volumes caused by diverted flows, the following new significant adverse transit impacts in the 2044 With Action condition would occur with the 32nd Street Option, with the following additional mitigation measures recommended, as described below:

- At the 34th Street-Herald Square Subway Station, (i) the P4 (IND) platform stair connecting the N507 paid zone with the B/D/F/M platform in the weekday AM peak hour – this impact would be unmitigatable; (ii) the reconstructed E221 street escalator connecting the IND mezzanine with the northwest corner of Sixth Avenue and West 32nd Street in the weekday PM peak hour – this impact would be unmitigatable; (ii) the new 32nd Street East-West Connector connecting the 34th Street (Seventh Avenue)-Penn Station Subway Station and the 34th Street-Herald Square Subway Station in the weekday AM and PM peak hours – this impact would be unmitigatable; and (iv) the A25 control area's high entry-exit turnstiles in the weekday AM peak hour – this impact would be mitigated by adding one high entry-exit turnstile.

- At the 34th Street (Seventh Avenue)-Penn Station Subway Station's reconstructed P6 street-level stair at the southeast corner of Seventh Avenue and West 34th Street in the weekday PM peak hour: this impact would be mitigated by widening and reconstructing as a 17.5-foot-stair.

Timing of Subway Station Mitigations

The projected significant adverse impacts at the three 34th Street subway stations would be incurred over time, as various development sites in the Project Area are built out and commuter rail ridership increases materialize as a result of the completion of the Penn Station expansion and related regional rail improvements. Since the planning, design, and implementation of subway mitigation measures, depending on complexity, could take two or more years for each station location, it is important to begin the planning process well ahead of the time the anticipated increases in station passengers are expected to occur.

To implement the required mitigation measures when they are needed under a variety of different construction sequences for the 10-building Project, the FEIS identifies the following milestones:

- Milestone 1 – When temporary certificates of occupancy ("TCOs") have been issued for approximately two million square feet of total program floor area, prior to the time that projected commuter rail ridership associated with the full functionality of the Penn Station expansion materializes;
- Milestone 2 – When TCOs for approximately five million square feet of total program floor area have been issued, prior to the time that projected commuter rail ridership associated with the full functionality of the Penn Station expansion materializes.
- Milestone 3 – When TCOs for approximately eight million square feet of total program floor area have been issued, prior to the time that projected commuter rail ridership associated with the full functionality of the Penn Station expansion materializes.
- Milestone 4 – When TCOs for at least five million square feet of total program floor area have been issued and projected commuter rail ridership associated with the full functionality of the Penn Station expansion has materialized.
- Milestone 5 – When TCOs for approximately nine million square feet of total program floor area have been issued and projected commuter rail ridership associated with the full functionality of the Penn Station expansion has materialized.

The table below summarizes the station elements that are subject to mitigation implementation, with either the 33rd Street or 32nd Street East-West Connector Option, under each of the above milestone scenarios. ESD, in coordination with 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 upon subsequent review and engineering studies 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. Should there be delays in implementing certain mitigation measures because a development site has not been constructed, then the projected subway station 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 subway station impacts may not occur and others would be unmitigated.

Subway Station Mitigation Milestones

Station Element/ Development Milestone	33rd Street Option East-West Connector					32nd Street Option East-West Connector				
	1	2	3	4	5	1	2	3	4	5
34th Street – Herald Square (B/D/F/M/N/Q/R/W)										
E229/E230/E231/E232 escalators	X	X	X	X	X	X	X	X	X	X
HM302 stair	X	X	X	X	X	X	X	X	X	X
M1/S2 stair	X	X		X	X					
S5/M5 stair			X	X	X			X	X	X
ML11/P11 stair	X	X	X	X	X	X	X	X	X	X
ML12/P12 stair	X	X	X	X	X	X	X	X	X	X
P1 (BMT) and P2 (BMT) stairs	X	X	X	X	X	X	X	X	X	X
A25 fare control area										
34th Street – Penn Station (1/2/3)										
P6 stair									X	X
R135 fare control area										
34th Street – Penn Station (A/C/E)										
M4 stair				X	X				X	X
M9 stair				X	X					
Total # of Station Elements	**6**	**6**	**6**	**9**	**9**	**5**	**5**	**6**	**8**	**8**

Notes:
X = Mitigation implementation recommended to correspond with development milestone.
Mitigation measures identified for station elements within the footprint of a development site may be implemented together with the construction of that development site. ESD will continue to coordinate with MTA and NYCT regarding the practicability and the implementation timing of these mitigation measures.

Subway Line Haul Impacts Mitigation

Under the 2044 With Action condition, as summarized above, two subway lines during the weekday AM peak hour and five subway lines during the weekday PM peak hour would incur significant adverse line-haul impacts. FEIS Table 22-15 identifies the recommended mitigation for these impacts. (However, with the implementation of the 32nd Street Option rather than the 33rd Street Option for the East-West Connector, the mitigation measure of adding one train on the northbound E line during the weekday PM peak hour would no longer be required.) Because these changes are subject to the operational and fiscal feasibility of the MTA and NYCT, the identified impacts could be unmitigated.

4. Pedestrian Mitigation

As discussed in FEIS Chapter 14, "Transportation," detailed analyses of pedestrian conditions were prepared for a study consisting of 272 pedestrian elements including 102 sidewalks, 88 corners, and 82 crosswalks for the weekday AM, midday, and PM peak hours. In the 2033 With Action condition, significant adverse impacts were identified for three sidewalks and six crosswalks during the weekday AM peak hour; two sidewalks and 15 crosswalks during the weekday midday peak hour; and nine sidewalks, four corners, and 18 crosswalks during the weekday PM peak hour. Under the 2044 With Action condition, significant adverse impacts were identified for 18 sidewalks, 10 corners, and 40 crosswalks during the weekday AM peak hour; six sidewalks and 36 crosswalks during the weekday midday peak hour; and 19 sidewalks, 15 corners, and 43 crosswalks during the weekday PM peak hour.

FEIS Tables 22-20A through 22-22 itemize the mitigation measures recommended to address the identified impacts under the 2033 With Action condition. With the implementation of these mitigation measures, which are subject to modification in light of the results of the TMP

and the approval of DOT prior to implementation, only some of the significant adverse pedestrian impacts identified could be fully mitigated. As shown in FEIS Figures 22-3a, 22-3b, and 22-3c, impacts at seven of the nine impacted elements during the weekday AM peak hour, 10 of the 17 impacted elements during the weekday midday peak hour, and 27 of the 31 impacted elements during the weekday PM peak hour could not be fully mitigated.

FEIS Tables 22-23A through 22-25B itemize the mitigation measures recommended to address the identified impacts under the 2044 With Action condition. With the implementation of these mitigation measures, which are subject to modification in light of the results of the TMP and the approval of DOT prior to implementation, only some of the significant adverse pedestrian impacts identified could be fully mitigated. As shown in FEIS Figures 22-4a, 22-4b, and 22-4c, impacts at 57 of the 68 impacted elements during the weekday AM peak hour, 31 of the 42 impacted elements during the weekday midday peak hour, and 64 of the 77 impacted elements during the weekday PM peak hour could not be fully mitigated.

The quantitative analysis of pedestrian conditions in the FEIS and quantified analysis as to the efficacy of the recommended traffic mitigation measures in the FEIS (summarized above) assume an East-West Connector between Seventh Avenue and Sixth Avenue along the 33rd Street. If the East-West Connector is instead built along 32nd Street, it is expected that more pedestrians would utilize the East-West Connector, altering pedestrian flows and indirectly affecting traffic conditions. An assessment of the need for and efficacy of certain pedestrian mitigation measures with the 32nd Street Option for the East-West Connector assessment is presented on pages 22-88 through 22-89 of the FEIS.

The building setbacks along the West 33rd Street and Sixth Avenue sides of Site 8 that would otherwise accompany the reconstruction of Site 8 would not materialize under the Site 8 Residential Development Scenario. Accordingly, the adjacent sidewalk segments on the south side of West 33rd Street and the west side of Sixth Avenue, which were not determined to be impacted under the Project's Maximum Commercial Scenario, could potentially be impacted with the residential scenario on Site 8. Without the additional sidewalk circulation space afforded by the Site 8 building setbacks, these impacts could potentially be unmitigated.

5. 34th Street Undercrossings

The FEIS assesses an additional mitigation measure not discussed above: the construction of a west and/or east undercrossing along Seventh Avenue beneath W. 34th Street (a major two-way East-West street). The 34th Street undercrossings would enable Penn Station riders to connect to the north side of West 34th Street without having to cross West 34th Street at-grade and potentially draw more pedestrian traffic northward before continuing east.

To assess the efficacy of this potential mitigation measure, an assumption was made that the stairways on the north side of W. 34th Street would be in the sidewalk, rather than on private property that would be outside the Project Area and not under the control of either ESD or Vornado. This assumption provided a constraint limiting the potential effectiveness of the mitigation measure. The efficacy of the W. 34th Street undercrossings in mitigating the Project's adverse impacts on transit stairways is presented in FEIS Tables 22-17 and 22-18. As presented therein, the new stairways on the north side of W. 34th Street are projected to be overcrowded,

resulting in unmitigated impacts. The efficacy of the W. 34th Street undercrossings in mitigating the Project's adverse impacts on pedestrian elements is presented in FEIS Tables 22-26 and 22-27. As presented therein, the new undercrossings would be effective in mitigating significant adverse impacts at two crosswalks and one or two sidewalk segments (depending on whether the East-West Connector is built with the 33rd Street Option or the 32nd Street Option), but could create new potentially unmitigable significant adverse impacts on the North Sidewalk of West 34th Street between Seventh Avenue and Broadway and the East Sidewalk of Seventh Avenue between West 34th and West 35th Streets.

For these reasons, and due to the expected cost of the 34th Street Undercrossings and competing priorities for the use of funds to effectuate the Project-related transportation improvements and transportation mitigation as well as generating funds for the reconstruction and potential expansion of Penn Station, ESD declines to impose this mitigation measure at this time. However, as noted in the FEIS, if the Macy's project (which would be located in the Macy's building at the northeast corner of W. 34th Street and the Seventh Avenue) were to move forward with the provision of an access easement at the northeast corner of Seventh Avenue and West 34th Street, such an easement may allow the undercrossing stairs and elevator on the east side of Seventh Avenue to be larger and to be located outside the public right of way. In such a circumstance, ESD recommends that the feasibility, potential configuration, efficacy, and adverse impacts of this potential mitigation measure be reevaluated in connection with any discretionary City approval of the Macy's project.

G. Operational Noise Mitigation

By the 2044 analysis year, traffic generated by the 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 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 the table below.

Operational Noise Impact Locations		
Address	**Block**	**Lot**
371 Ninth Avenue	729	7502
432 West 31st Street	728	55
252 West 30th Street[1, 3]	779	7501
234 West 30th Street[1]	779	62
360 Seventh Avenue[1]	779	45
355 Seventh Avenue[1, 2]	805	97
130 West 30th Street[1, 2]	805	7501
143 West 31st Street[2, 3, 4]	807	17
137 West 31st Street[2, 3, 4]	807	18
133 West 31st Street[2, 3, 4]	807	22
132 West 32nd Street[2, 3, 4]	807	7501
110 West 32nd Street[2, 3, 4]	807	50
109 West 31st Street[2, 3, 4]	807	7502
855 Sixth Avenue[2]	806	7502

Notes:

[1] Construction at Site 2 predicted to contribute to significant adverse noise impact at this location requiring mitigation.

[2] Construction at Site 3 predicted to contribute to significant adverse noise impact at this location requiring mitigation.

[3] Construction at Site 7 predicted to contribute to significant adverse noise impact at this location requiring mitigation.

[4] Construction at Site 8 predicted to contribute to significant adverse noise impact at this location requiring 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 will 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 Project by the 2044 analysis year would still result in interior noise levels up to approximately 9 dBA higher than 45 dBA (the guideline for acceptable noise levels at residential uses under the *CEQR Technical Manual*) 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.

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; accordingly, the foregoing mitigation is required before this milestone. However, as noted in the table above, the construction of certain buildings may trigger the need for a more accelerated mitigation timetable at certain locations to mitigate significant adverse construction noise impacts at those locations.

As noted above, ESD will recommend that DOT study the implementation of a shared street on West 31st Street between Seventh and Eighth Avenues. If DOT chooses to implement a shared street on West 31st Street between Seventh and Eighth Avenues, this street would remain open to vehicular traffic (including delivery vehicles), but some of its traffic could divert

to other westbound cross-streets such as West 29th Street, West 34th Street, and West 35th Street. Some westbound truck traffic along West 31st Street may divert to West 29th Street for access to the Lincoln Tunnel via Tenth Avenue at West 30th Street/Dyer Avenue. Therefore, if the West 31st Street shared street is implemented by DOT, the impacts identified along West 31st Street may lessen in intensity or be eliminated altogether but new impacts could occur along West 29th Street instead as a result of the stated truck diversions, requiring the same mitigation measures specified above for residences along West 31st Street.

H. Construction

1. Construction Traffic

Construction of the 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 address the operational impacts could be implemented early at the discretion of DOT to mitigate the temporary traffic impacts during construction.

2. Construction Noise

The FEIS (at Table S-15, pages 20-53 through 20-67 and pages 20-81 through 20-94 for the Alternative Construction Schedule) identifies the specific locations that would be experience significant adverse construction noise impacts. To partially, mitigate these impacts, the following mitigation measures are required:

- 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.

- 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. FEIS Table 20-22 shows the noise levels for typical construction equipment and the mandated noise levels for the equipment that would be used for construction of the Project buildings.

- 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, trucks would be prohibited from idling in violation of 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.

- 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.

- 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. The requirements for construction of portable noise barriers, enclosures, tents and the like 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* FEIS Table S-15).

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 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. Activities of this sort would be episodic and would not occur in the same location for extended periods of time. However, in light of such occurrences significant adverse noise impacts predicted to occur at the above-mentioned residences would be only partially mitigated.

3. Neighborhood Character

Long-term construction activity associated with the potential 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 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.

4. Historic and Visual Resources

The mitigation measures for construction-related impacts to historic and visual resources are discussed above under the headings "Historic and Cultural Resources" and "Visual Resources."

IX. Summary of Unavoidable Adverse Impacts

A. Community Facilities

As discussed above, the Project may result in a significant adverse impact to early childhood programs. Under the analysis appearing in Chapter 5, "Community Facilities," a significant adverse impact to early childhood programs is predicted to occur with the completion and occupancy of approximately 192 affordable dwelling units (DUs) targeted to households earning up to 80 percent of the Area Median Income (AMI) (or approximately 22 children eligible for publicly funded early childhood programs). As discussed above in "Mitigation," measures to mitigate the significant adverse impact to early childhood programs have been identified by ESD and would be further developed in consultation with the DOE Division of Early Childhood Education. Absent the implementation of such mitigation measures, the significant adverse impact on publicly funded early childhood programs would remain unmitigated and constitute an unavoidable adverse impact of the Project.

B. Open Space

The Project would result in direct and indirect significant adverse impacts on open space resources. Specifically, the 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 above, alternatives that would avoid these open space impacts would be impracticable.

As discussed above in "Mitigation," open space mitigation measures have been explored by ESD and will be further developed in consultation with DPR. To address the significant adverse impact on open space, ESD would require future developers to create additional passive open space in or near the Project Area (in addition to the proposed plaza on Site 2) and/or provide funding for open space improvements and/or maintenance of open space resources in the study area. In addition, measures would be required of the developer of Site 5 to compensate for the displacement of the existing POPS on Site 5. These measures would partially mitigate the open space impact. Absent the implementation of such mitigation measures, the significant adverse open space impacts would remain unmitigated and constitute an unavoidable adverse impact of the Project.

C. Shadows

Shadows cast by the Project would result in significant adverse shadow impacts to the open space resources and sunlight-sensitive historic resources identified above. 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 have been deemed to be impracticable. In addition, artificial lighting for the significant adverse impact to the Farley Building skylights would be impracticable. For significant adverse impacts to stained-glass windows, measures to partially mitigate these impacts are described above. Because these impacts cannot be fully mitigated, the significant adverse shadow impacts would constitute unavoidable significant adverse impacts of the Project.

ESD has advised OPRHP that ESD would consider the feasibility and efficacy of installing mirrors on nearby structures to mitigate significant adverse shadow impacts on historic resources. If the installation of mirrors is determined infeasible or ineffective, these significant adverse impacts would remain unmitigated and would constitute unavoidable significant adverse impacts of the Project.

D. Historic and Cultural Resources

As discussed above, significant adverse impacts to certain architectural resources identified above would result from the planned or potential demolition of the resource, shadow impacts on the resource, or potential construction-related impacts on the resources. Development on Project Sites would also block views of the Empire State Building from certain vantage points, resulting in another significant adverse impact. Measures that could partially mitigate these significant adverse impacts are described above in "Mitigation." In the absence of practicable full mitigation, the significant adverse impacts would be unavoidable adverse impacts of the Project. Potential mitigation measures considered with respect to 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, these significant adverse impacts constitute an unavoidable significant adverse impact of the Project.

E. Visual Resources

Significant adverse impacts to visual resources would or may occur as a result of development on Project Sites. Demolition of visual resources on two development sites, the Church of St. John the Baptist on Site 2 by the 2033 analysis year and possibly the copper Gimbel Brothers skybridge spanning from Site 8 across West 32nd Street by the 2044 analysis year, would constitute a direct significant adverse impact on visual resources. In addition, the Project would obstruct views of the Empire State Building from certain vantage points within the western portion of the study area, resulting in another significant adverse impact. 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. As it is possible that the proposed redevelopment of Site 8 could involve the removal of the Gimbel Brothers Skybridge, the Project could have a direct significant adverse impact on this visual resource, which is also a historic resource as discussed above. In the absence of practicable mitigation for the resources discussed above, the significant adverse direct impacts would be unavoidable adverse impacts of the Project. Potential mitigation measures considered with respect to the obstruction of views to the Empire State Building from certain western vantage points would not be practicable; therefore, these significant adverse impacts constitute an unavoidable significant adverse impact of the Project.

F. Transportation

As discussed above, under the 2033 and 2044 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 Project.

Regarding mitigation for traffic and pedestrian impacts, ESD in coordination with DOT, would require developers for the Project to undertake a future 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 elements for which potential mitigation has been identified, 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 upon subsequent review and engineering studies 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. For certain transit elements, no practicable mitigation has been identified.

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.

G. Noise

Traffic noise generated by operation of the 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 NYCDOT-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 Project by the 2044 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 Project.

H. Construction

As discussed above, there would be temporary significant adverse traffic impacts during the Phase 1 and Phase 2 peak construction conditions that cannot 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 two intersections during both the weekday AM and PM construction peak hours. In the Phase 2 peak construction condition, there would be significant adverse traffic impacts that could not be fully mitigated at 14 and 27 intersections during the weekday AM and PM construction peak hours, respectively.

As discussed above, the detailed analysis of construction-period noise determined that construction of the Project has the potential to result in construction-period noise levels that would constitute significant adverse construction-period impacts at multiple sensitive locations. Even with the required construction noise mitigation, it is not possible at this time to confirm that drilled piles would be feasible and practicable for all pile installation. Accordingly, interior noise levels could still exceed the acceptable threshold even with the provision of receptor noise mitigation. 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.

Long-term construction activity associated with the potential 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. 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 Project.

X. Growth-Inducing Aspects of the Project

The Project would create a revitalized, transit-oriented mixed-use district centered around Penn Station. The Project would support and accommodate New York City's long-term growth, and would maintain Manhattan's competitive market condition; it is not expected to induce additional notable growth outside of the Project Area.

The Project would not create new access to undeveloped areas, but rather would support and improve existing mobility and projected growth within the Project Area. The Project's commercial development would serve to accommodate expected growth in the City's demand for sustainable Class A commercial space and need for modern office facilities. Similarly, the Project's residential development would contribute to meeting New York City's demand for housing. As discussed in FEIS Chapter 2, "Analytical Framework," dozens of commercial and residential developments are under construction or projected to be developed in the ¼-mile study area surrounding the Project Area by the 2033 and 2044 analysis years. Much of this development was contemplated by the City in connection with land use and zoning changes enacted in the last 20 years. Growth in these neighborhoods has been occurring for years and is a result of changes to zoning and land use policy. While the Project would generally make the ¼-mile study area more attractive to business and investment, major developments are already accounted for and underway, and growth is limited by existing zoning, which is not anticipated to change in the foreseeable future. Therefore, induced development in the ¼-mile study area is not expected as a result of the Project.

The Project would increase commercial and residential density in the Project Area compared to the No Action condition. The increase in density would be consistent with broader land use trends of high-density mixed-use commercial and residential development in adjacent areas of Manhattan, including adjacent to Grand Central Terminal, and would capitalize on the Project Area's unparalleled transit access. The Project is not expected to alter land use patterns in the ¼-mile study area, which contains long-established residential neighborhoods like Chelsea and commercial areas such as Midtown and Hudson Yards. The Project does not include area-wide zoning or land use changes affecting other sites in the ¼-mile study area.

While the Project would add a substantial amount of commercial development to the Project Area, this would not be a new use. While the Project would generate increased economic activity in the form of new businesses and employment on the development sites and contribute to growth in the city and state economies, it would not be expected to induce substantial growth

beyond the development sites. New York City already has a highly mobile worker population; with nearly 60 percent of workers commuting via public transit. The far reach and flat-fare nature of the City's mass transit system allows workers – including those without access to personal automobiles – to commute from all corners of the metropolitan area and substantially reduces the need to live in close proximity to employment opportunities.

This FEIS assumes that the potential expansion of Penn Station would be located on Sites 1, 2, and 3, although that is only one of a number of alternatives currently under consideration for expanding Penn Station. The potential expansion of Penn Station would substantially increase the current station's platform capacity, which would alleviate the limitations on train operations within existing Penn Station and facilitate substantial increases in service for NJT and Amtrak, which project substantial demand for increased service in the future. Thus, the Project would accommodate expected growth in rail service demand from New Jersey rather than inducing new growth. Furthermore, the potential for induced growth in New Jersey is outside New York State and therefore outside the scope of review under SEQRA.

Although the Project will benefit the LIRR by freeing up platform space and improving conditions within Penn Station, it is not expected to result in substantial increases in ridership from Long Island compared to conditions in the future without the Project. Ridership projections show a modest increase in ridership into Manhattan on the LIRR with the Project. The Project would not attract increased ridership to LIRR stations at a level that would stimulate development or changes in land use patterns, and therefore would not result in induced growth in Long Island. Any induced development in Long Island would be a result of capacity-building projects for LIRR, such as the East Side Access project, which will provide LIRR access to Grand Central Terminal and which will be completed irrespective of the Project.

Overall, the Project is not expected to induce additional growth beyond the Project Area.

XI. Irretrievable Commitments of Resources

There are a number of resources, both natural and man-made, that would be expended in the construction and operation of the 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 Project.

The resources are considered irretrievably committed because their reuse for some purpose other than for the Project would be unlikely. The development associated with the 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 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.

XII. Summary Evaluation of the Project and its Alternatives

ESD has considered carefully the facts, analyses and conclusions set forth in the FEIS, as summarized above. It also has reviewed in detail the hundreds of comments that have been submitted, the testimony that has been provided, and the oral comments that have been made on the DEIS, as well as ESD's responses to those comments and testimony. In light of all the information in the record, ESD has determined to issue the findings required under SEQRA with respect to the Project, as set forth in Section XIII, below. It has made this determination after balancing the many substantial benefits that will result from the Project against the significant adverse impacts identified in the FEIS and these findings. With respect to the Project's benefits, ESD notes that among other things it will:

- eliminate long-standing blight, underutilization and economic stagnation in the Project Area;

- foster construction of one of the most significant environmentally sustainable, state-of-the-art, transit-oriented mixed-use projects ever developed in this country, centered around the busiest train station in North America;

- effectuate significant improvements to area subway stations and transit connections with Penn Station to help this key intermodal transportation hub accommodate anticipated future ridership growth;

- support the reconstruction of Penn Station and effectuate major improvements to the connections between Penn Station and the surrounding area – positioning the area to accommodate and attract passengers and evolving technological and business and commercial needs and practices – and thereby advance the State's "major objective" of resolving the "pressing public safety and transportation issue" presented by Penn Station's current substandard condition, determined by the State Legislature to be a "top priority" for ESD and other State agencies;

- support the potential expansion of Penn Station, and thereby contribute to a critically-needed infrastructure improvement currently under consideration by federal and state agencies;

- help meet the demand for housing (including affordable housing) in New York City;

- effectuate public realm improvements (including new publicly accessible open space, improvements to pedestrian circulation, and shared streets); and

- generate substantial tax revenue through job creation and economic activity.

At the same time, ESD recognizes that the Project will result in numerous significant environmental impacts, as identified in the FEIS and summarized above. The FEIS thoroughly analyzed those impacts and paid particular attention to identifying measures that will avoid or minimize them to the maximum extent practicable. Yet even after the effect of all such practicable mitigation measures is taken into account, the Project will result in many significant adverse impacts that cannot be mitigated. ESD has committed to continue its efforts to refine the

mitigation measures aimed at addressing many of these impacts – particularly those affecting transportation – over the course of Project development. Of particular importance, ESD has committed to require Project developers to undertake TMP studies in consultation with ESD and DOT at several points in Project implementation, and to consult with ESD, MTA and NYCT with respect to transit mitigation at the time each Project building undergoes development. ESD also will continue to consult with OPRHP with respect to various impacts on architectural resources as specified in the LOR, DPR with respect to mitigation of open space impacts, and DOE's Division of Early Childhood Education with respect to mitigation of potential early childhood program impacts. ESD also will seek designation as a consulting party in the federal historic review process for the Penn Station expansion project. These commitments will assure that mitigation measures are optimized to address the Project's impacts to the maximum extent practicable in light of real-world conditions as the Project unfolds. Finally, ESD will incorporate each of the Project developers' impact avoidance measures and mitigation obligations as set forth in the FEIS and summarized above into a "Memorandum of Environmental Commitments" that will be enforceable under the Project documents.

ESD has taken into account not only the effectiveness of the measures imposed to mitigate the Project's significant adverse impacts, but the reasonable alternatives available to avoid or reduce them. ESD rejects the Lower Density Alternative because it would not substantially avoid or reduce the significant adverse impacts that would occur with the Project, would not capitalize on the Project Area's unmatched rail and 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 and residential space, which would offer less incentive for construction of the new office and residential buildings, potentially delaying or forestalling their construction. Similarly, the Lower Density Alternative would foster and support economic growth to a lesser extent than the 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 Project. It would also generate less funding for the reconstruction and potential expansion of Penn Station.

XIII. Conclusions and Certification of Findings Required by SEQRA

Having considered the DEIS and the FEIS, including the comments on the DEIS and responses thereto, and comments received on the FEIS, and the preceding written facts and conclusions, ESD finds and certifies that:

(1) the requirements of Article 8 of the New York Environmental Conservation Law and its implementing regulations, 6 N.Y.C.R.R. Part 617, have been met;

(2) consistent with social, economic and other essential considerations from among the reasonable alternatives available, the Project is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as

conditions to the decision those mitigative measures that the FEIS and this Findings Statement have identified as practicable.

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