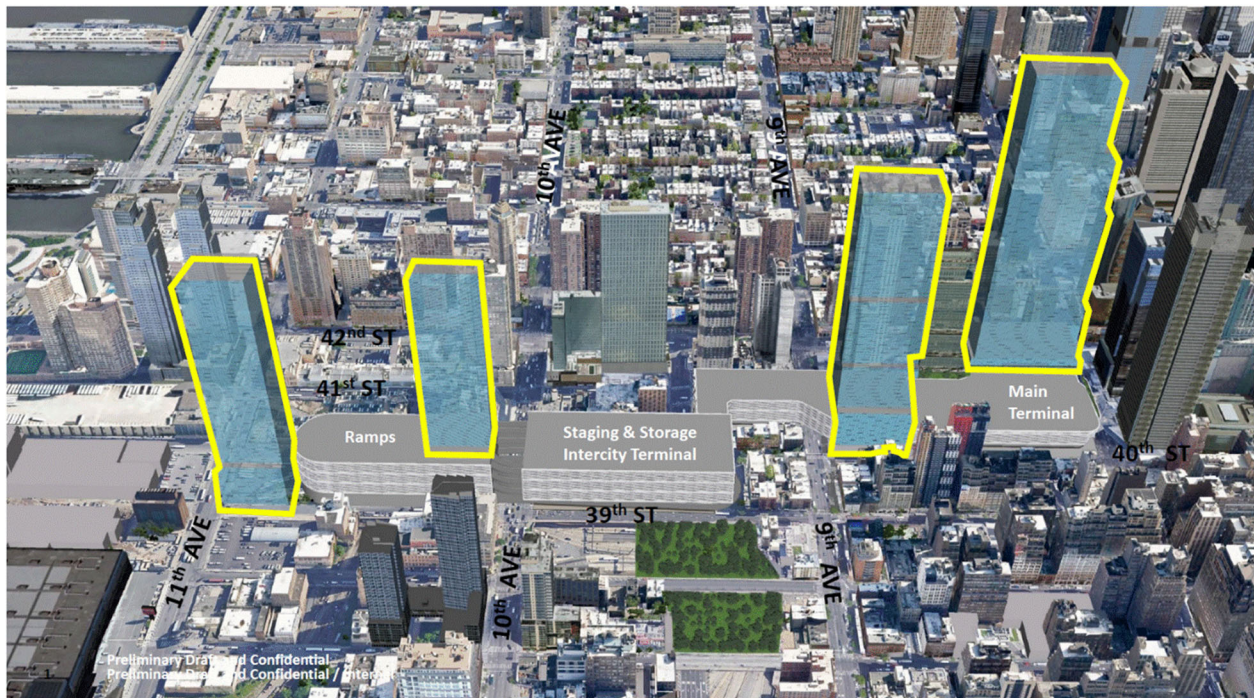


# PORT AUTHORITY OF NEW YORK & NEW JERSEY PORT AUTHORITY BUS TERMINAL REPLACEMENT PROJECT



## PROJECT BRIEFING BOOK

October 18, 2021

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# 1. INTRODUCTION

## 1.1. PURPOSE OF THE PROJECT BRIEFING BOOK

The Port Authority of New York and New Jersey (Port Authority) has released this Project Briefing Book (PBB) as part of information gathering for the Port Authority Bus Terminal Replacement (PABTR) project (the Project). The PBB is for use by entities considering submitting responses to the Request for Industry Feedback (RFIF). The Project RFIF represents a unique opportunity for the construction, design, and developer community to provide important information that will assist the Port Authority in forming the development and procurement strategies for the Project.

Interested parties are encouraged to visit the Project website at [www.pabtreplacement.com](http://www.pabtreplacement.com) to learn more about the Project, current National Environmental Policy Act (NEPA) process status, and associated resource documents.

Questions regarding the Project and the anticipated procurement process may be submitted via email to Megan Connors (“Contact Person”) at [meconnors@panynj.gov](mailto:meconnors@panynj.gov). Firms and teams who intend to participate in the future competitive procurement process for the Project are encouraged to notify the Contact Person via e-mail to receive future updates on the procurement process.

The PBB provides information on the overall Project, as described herein.

## 1.2. PROJECT SUMMARY

### a) Project Components (See Figure 2):

- A new Main Terminal at the location of the existing bus terminal
- A new Intercity & Storage and Staging Facility (West Adjunct) on Ninth Avenue with connections to the Main Terminal and Ramp Structure
- A Ramp Structure and Ninth Avenue underpass to connect the buildings to the Lincoln Tunnel
- Dyer Deck-Over C & D (Publicly accessible open space)
- Private development on Port Authority property.

### b) Project Components Details:

#### i. Main Terminal

The Main Replacement Terminal (Main Terminal) would be Located at Eighth Avenue crossing over Ninth Avenue between 40th Street and 42nd Street and will include:

- Five floors of bus gates
- More than 160 gates for commuter buses
- Direct connection to the Eighth Avenue Subway and Times Square transit hubs
- Best-in-class passenger amenities such as modern facilities, appealing street-facing retail spaces, modernized ticketing areas, and state-of-the-art design

- Best-in-class sustainable design and operation features demonstrating a “net-zero” vision, and
- ADA standards integrated into layout and design.

The Main Terminal will ultimately be connected to the Intercity Bus and Storage and Staging Facility and ramps across 40th Street to create an integrated operation and circulation pattern. Further, a new underpass under Ninth Avenue between 40th Street and 41st Street will minimize bus operations on local streets.

### **ii. Intercity Bus/Storage and Staging (West Adjunct)**

The Intercity Bus/Storage and Staging Facility (also known as the West Adjunct), will be located on the block between Ninth Avenue and Tenth Avenue and between 39th Street and 40th Street.

This facility will accommodate certain curbside intercity buses that currently operate on local streets in the vicinity of the existing terminal. The design is expected to have 40 bus gates dedicated to intercity service.

It will also contain approximately 350 storage spots which will reduce traffic on city streets and through the Lincoln Tunnel during rush hour.

The West Adjunct will serve as a temporary bus terminal for commuters **during** construction of the Main Terminal. The West Adjunct will be converted from temporary commuter operations to the Intercity Bus/Storage and Staging Facility after the completion of the new Main Terminal.

### **iii. Ramp Structure**

The new Ramp Structure will reach from Galvin Plaza to the Main Terminal.

The infrastructure will serve all bus movements into and out of the above-grade bus levels of the Main Terminal to and from the Lincoln Tunnel. This will consist of:

- 350,000 square feet of ramps connecting to the West Adjunct and Main Terminal
- A new two-way underpass under Ninth Avenue that will provide entry and egress to and from the lower level from Dyer Avenue.

The underpass will remove certain bus traffic from neighborhood streets and is expected to reduce congestion on 40th Street and Ninth Avenue.

The new Ramp Structure would provide direct bus access from the Main Terminal to the Lincoln Tunnel and other approaches, while minimizing the need for terminal-bound buses to access local streets. Both the quality of the streetscape and bus reliability will be improved by reducing the need to operate on city streets.

#### **iv. Dyer Deck-Over C & D**

Adjacent to the West Adjunct, below-grade Dyer Avenue will be decked-over on Lots 9 and 10 between 37<sup>th</sup> Street and 39<sup>th</sup> Street and Ninth Avenue and Tenth Avenue.

The Deck-Overs on Dyer Avenue could be used for construction staging during the West Adjunct and Ramp Structure construction, and temporary operations and/or passenger service during construction of the Main Terminal; once construction of the Main Terminal is complete, the Deck-Overs will be converted to provide nearly three and a half acres of new publicly accessible open space.

#### **v. Private Development**

To support the funding of the Project, the Port Authority will seek to monetize approximately eight million square feet (See Table 1) of development rights on Port Authority property in the vicinity of the Proposed Project, consistent with present as-of-right zoning. The Port Authority currently envisions this private development will consist of four (4) mixed-use towers, but input from this RFIF will be considered before determining the program.

### **c) Project Sequence**

#### **i. Dyer Deck-Over C & D**

Construction will begin with early action activities focused on the construction of two deck-over structures south of the existing ramps as shown in figure 14. These deck-overs will be placed over the Manhattan exit/entrance plazas of the south and center tubes of the Lincoln Tunnel.

#### **ii. West Adjunct and Ramp Structure**

Construction of the West Adjunct and Ramp Structure would follow construction of the deck-overs. The West Adjunct would initially be fitted out to operate as a temporary terminal.

#### **iii. Main Terminal and West Adjunct Conversion**

Once the West Adjunct is available for temporary operations, the demolition of the existing terminal and construction of the Main Terminal would begin. Once the Main Terminal is complete and operational, the West Adjunct will be converted from temporary commuter operations to the Intercity Bus/Storage and Staging Facility, and the deck-overs would be converted to public open space.

#### **iv. Complete Tower Construction**

The Port Authority currently envisions that the foundation and cores of the private development will be incorporated, in coordination with Tower Developer, in the design and construction of the Project Components. The completion of the private developments, however, will likely follow completion of the other Project Components.

## 2. EXISTING BUS TERMINAL BACKGROUND

### 2.1. EXISTING TERMINAL FACILITIES/ OPERATIONS

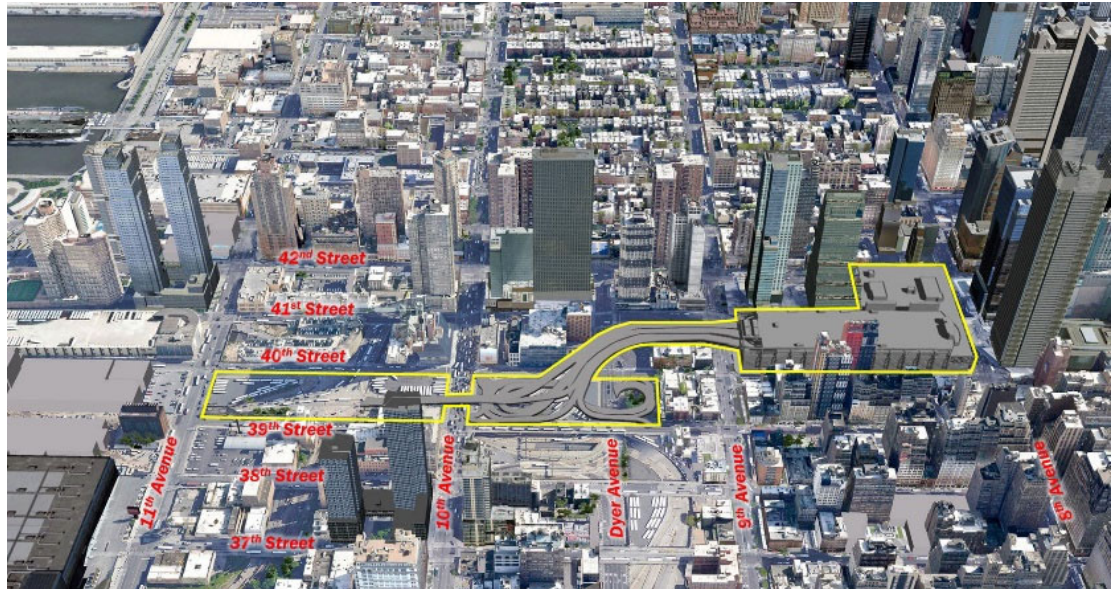


FIGURE 1 - PROJECT SITE LOCATION

#### a) Location:

The Port Authority Bus Terminal (PABT), located on the west side of Manhattan, was first opened for service in 1950 and last underwent major expansion in 1981, when its capacity was increased by 50 percent with the addition of the North Wing. The terminal building occupies approximately one and one-half city blocks between West 40<sup>th</sup> and West 42<sup>nd</sup> Streets and between Eighth and Ninth Avenues. Ramps connecting the PABT to the Lincoln Tunnel are located to the west and south, spanning Galvin Plaza and Dyer Plaza; the 41<sup>st</sup> Street underpass (Greyhound tunnel) affords access to the tunnel.

#### b) Connection to Mass Transit:

The PABT is one of the major Midtown Manhattan transportation hubs. It connects regional/commuter and intercity bus service to 12 New York City Transit (NYCT) subway lines and five NYCT bus routes and offers pedestrian access to some of Manhattan's densest employment locations.

#### c) Current Operations:

The PABT serves an estimated 260,000 passenger trips on a busy weekday, which comprises approximately 23 percent of trans-Hudson trips entering or exiting the Manhattan central business district. The PABT hosts routes for daily commuters throughout New Jersey, eastern Pennsylvania, and the Lower Hudson Valley. It also accommodates intercity bus services to and from locations such as upstate New York, New England, the Mid-Atlantic, and Canada. The PABT does not



currently service Curbside Intercity buses that drop off and pick up from neighborhood streets.

The PABT has historically provided for bus storage and staging by utilizing the terminal as well as nearby surface lots (owned or leased by Port Authority). Bus storage entails midday bus parking and storage for multiple hours between the AM and PM peak periods. Only a portion of the fleet is optimally stored in Manhattan because operators still need to balance fleets (e.g., NJ TRANSIT returns most of its fleet to New Jersey, so buses are available if an issue occurs with trans-Hudson accessibility). Operators also have midday passenger service requirements, bus maintenance needs, and emergency service contingencies. Bus staging is the short-term dwelling of buses waiting to enter the PABT (dwell time of less than an hour; typically, 20 minutes) whereby the bus cannot be left unattended; the bus driver must remain with the bus except for short breaks for personal need.

Terminal efficiency has been improved (and bus traffic on city streets reduced) by recent bus gate reassignments and tighter regulation of the supply of buses and of bus movements inside the terminal. However, additional surface bus parking spaces and the use of surface lots for storage and staging remain necessary.

Currently, the PABT suffers from the pressures of accommodating growing travel demand with aging infrastructure and systems, as well as increasingly problematic functional and physical obsolescence of assets and facilities, and fundamental capacity challenges. Engineering work indicates that a slab replacement project will be needed in the next two decades, unless the terminal is replaced by a new facility. The building's electrical and mechanical systems are also nearing the end of their useful lives. Maintenance data predicts substantial yearly increases in required repairs and decreased capacity. The PABT facility is functionally and operationally obsolete based on:

- Current bus size and weight standards
- Americans with Disabilities Act requirements
- Lack of adequate flexibility and capacity to support forecasted growth in bus demand.

Double-decker buses or a greater number of longer articulated buses cannot be accommodated in much of the terminal given its height restrictions and tight internal roadway geometries.

The passenger experience within the PABT, including the passenger environment (e.g., ticketing areas, gates and queuing areas, restrooms) and aesthetic features (e.g., building design, wayfinding features)—even with recent improvements by the Port Authority—have failed to keep pace with the revitalized character of the surrounding Times Square, Hell's Kitchen, and Hudson Yards neighborhoods, making the PABT an unfitting gateway to the nation's largest city. Moreover, piecemeal improvements to the passenger experience cannot address the fundamental functional and operational deficiencies of the existing PABT facility.

### 3. PROJECT PLANNING OVERVIEW

#### 3.1. OVERVIEW

As these Project Components come together, the anticipated Project layout is shown in the figure 2 massing diagram. At the end of construction, there would be:

- The Main Terminal at Eighth Avenue
- The Intercity Bus/Storage and Staging Facility (or West Adjunct) between Ninth Avenue and Tenth Avenue
- The new Ramp Structure west of Tenth Avenue
- Close to three and a half acres of public open space at Dyer Deck-Over C & D
- Private development at four locations

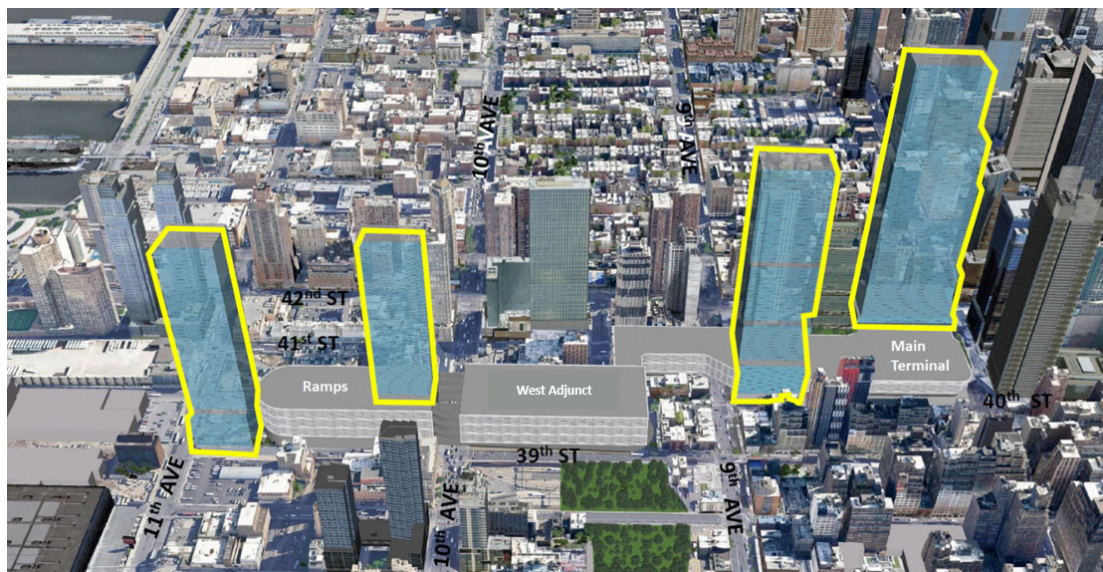


FIGURE 2 - PROJECT OVERVIEW

#### a) Replacement Facility Components:

The Port Authority Bus Terminal Replacement Project (Replacement Facility) (see Figure 5) will comprise the following:

- The Main Terminal, generally occupying the footprint of the existing PABT and ramps between Eighth Avenue and Ninth Avenue between 40<sup>th</sup> Street and 42<sup>nd</sup> Street with an enclosed multi-level portion extending across Ninth Avenue between 40<sup>th</sup> Street and 41<sup>st</sup> Street, an enclosed multi-level portion extending across 40<sup>th</sup> Street, and an underpass under Ninth Avenue between 40<sup>th</sup> Street and 41<sup>st</sup> Street linking Dyer Avenue to the Lower Level.
- An Intercity Bus/Storage and Staging Facility (West Adjunct) for storage and staging and bus operations occupying the western portion of the block between Ninth Avenue and Tenth Avenue between 39<sup>th</sup> Street and 40<sup>th</sup> Street connected to the Main Terminal through an enclosed structure crossing 40<sup>th</sup> Street

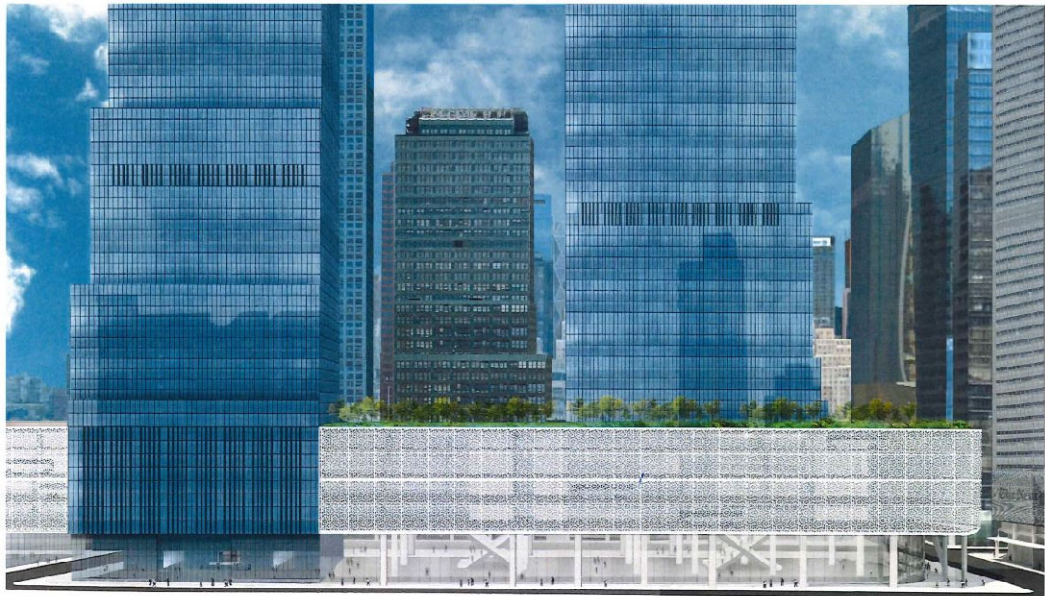
- A new Ramp Structure located west of Tenth Avenue (on Galvin Plaza between Eleventh Avenue and existing Ramp (96) with new ramps crossing Tenth Avenue to connect to the Facility.

**b) Operations**

The Replacement Facility will integrate operations currently occurring within the PABT (commuter service and intercity service) with additional gates for Curbside Intercity buses that currently operate in the vicinity of the PABT, as well as storage space for approximately 350 buses.

The Replacement Facility will provide for storage and staging within the West Adjunct and thus provide for additional efficiencies as compared to the existing PABT with respect to bus operations. This approach will meet the goal reducing use of city streets by buses.

The Port Authority has identified a phased approach to construction of the Project to mitigate disruption to the host community and commuters.



**FIGURE 3 – CONCEPTUAL NORTH WING RENDERING**

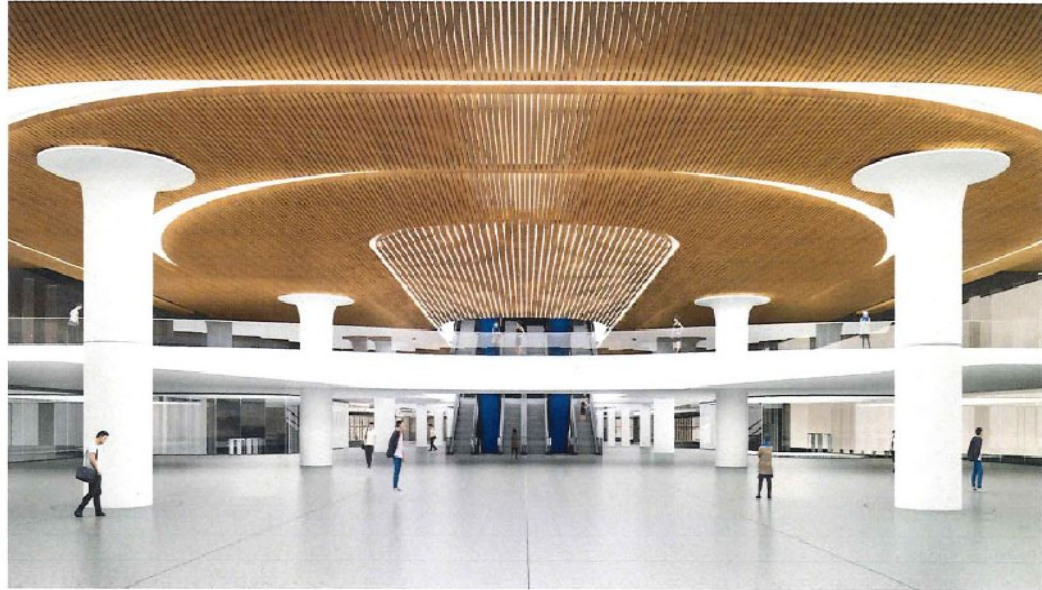


FIGURE 4 – CONCEPTUAL MAIN CONCOURSE E RENDERING

<b>Table 1 – PABTR – Square Foot Breakdown</b>		
<b>Items</b>	<b>Area</b>	<b>Unit</b>
<b>Terminal border by 42nd Street, 8th Ave., 40th Street and 9th Ave:</b>	<b>1,700,000</b>	<b>SF +/-</b>
<b>Terminal over 9th Ave:</b>	<b>73,000</b>	<b>SF +/-</b>
<b>Terminal / Connector borderer by 41st Street, 9th Ave., 40 Street and Dyer Ave:</b>	<b>265,000</b>	<b>SF +/-</b>
<b>West Adjunct:</b>	<b>875,000</b>	<b>SF +/-</b>
<b>Storage / Staging &amp; Intercity Facility &amp; Ramps)</b>	<b>800,000</b>	<b>SF +/-</b>
<b>Ramps under Storage / Staging &amp; Intercity Facility)</b>	<b>75,000</b>	<b>SF +/-</b>
<b>Ramps over 10th Ave:</b>	<b>45,000</b>	<b>SF +/-</b>
<b>Ramps at Galvin Plaza:</b>	<b>315,000</b>	<b>SF +/-</b>
<b>Deck Over - C (partial footprint of Lot 10)</b>	<b>76,000</b>	<b>SF +/-</b>
<b>Deck Over – D (full footprint of Lot 9)</b>	<b>60,000</b>	<b>SF +/-</b>
<b>Tower 1</b>	<b>3,000,000</b>	<b>SF +/-</b>
<b>Tower 2</b>	<b>2,000,000</b>	<b>SF +/-</b>
<b>Tower 3</b>	<b>900,000</b>	<b>SF +/-</b>
<b>Tower 4</b>	<b>2,300,000</b>	<b>SF +/-</b>

## 4. MAJOR PROJECT ELEMENTS



FIGURE 5 – MAJOR PROJECT ELEMENTS

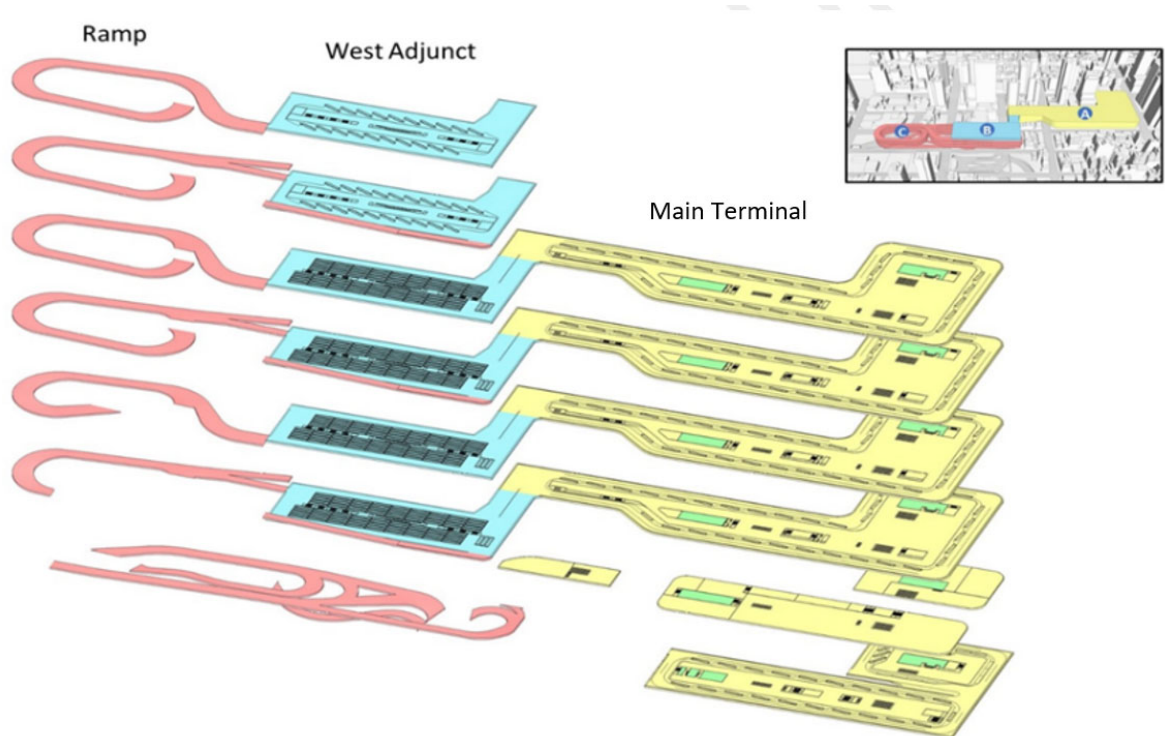


FIGURE 6 – INTEGRATED REPLACEMENT FACILITY

### 4.1. MAIN TERMINAL:

The Main Terminal (or East Facility) will comprise a street-level entry for pedestrians on Eighth Avenue between 40<sup>th</sup> Street and 42<sup>nd</sup> Street (as well as maintaining the existing subway connections below Eighth Avenue). A separate street-level entry would be provided on 42<sup>nd</sup> Street for the potential Private Development. Vertical circulation (i.e., escalators, stairwells, and elevators) will be located in the Main Terminal to carry passengers to the upper gate levels. Retail spaces will be provided

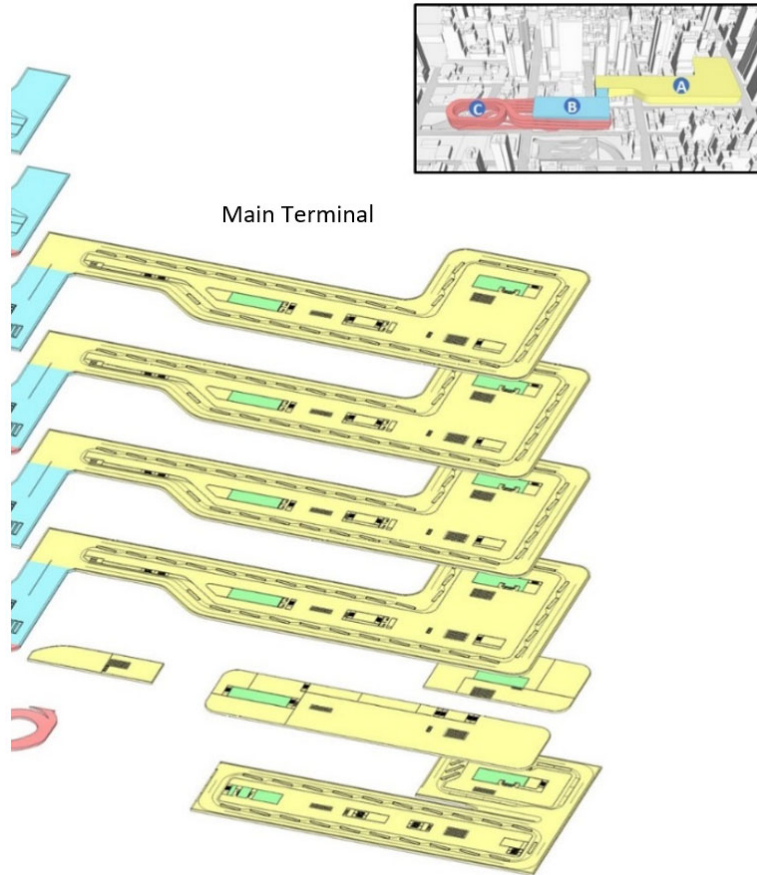
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within the Main Terminal to serve bus passengers as well as the surrounding community.

The ground floor will provide Terminal entrances, passenger amenities, ticketing areas, circulation space, and street-facing retail spaces. Facility and private development loading areas will be located along 41<sup>st</sup> Street. A mezzanine level will provide for Port Authority offices and support space. The Main Terminal will comprise the Lower Level and four (4) operating levels above the mezzanine.

The ground floor and mezzanine levels of the Main Terminal will be constructed within the footprint of the existing PABT. Starting at the first bus operating level, the Main Terminal will extend horizontally above the sidewalks to approximately the curb line on both 40<sup>th</sup> Street and 41<sup>st</sup> Street.

The Main Terminal will also extend over Ninth Avenue and will be connected to the West Adjunct to provide bus circulation to each of the four (4) above-ground operating levels of the Main Terminal. The expanded section of the Main Terminal would connect to the West Adjunct via an above-grade connection west of Ninth Avenue. Buses will access the Main Terminal from the Lincoln Tunnel portals through the West Adjunct and associated ramp system, and to the Lower Level through a new two-way underpass under Ninth Avenue from Dyer Avenue. The existing 40<sup>th</sup> Street bus entrance to the Lower Level and existing 41<sup>st</sup> Street bus exit from the Lower Level will be removed. Each of the operating levels will be accessible to taller buses (providing a minimum clearance of 13 feet 9 inches) and articulated buses.



**FIGURE 7 – MAIN TERMINAL**

**4.2. WEST ADJUNCT:**

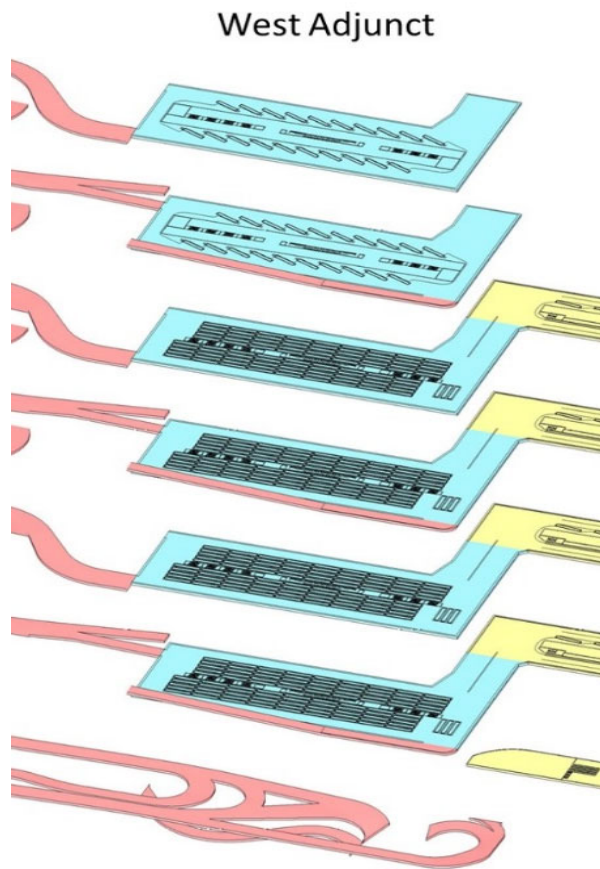
The West Adjunct will occupy the western portion of the block between Ninth Avenue and Tenth Avenue between 39<sup>th</sup> Street and 40<sup>th</sup> Street. The West Adjunct will be integrated with the Main Terminal above Ninth Avenue and will connect the Main Terminal to the Ramp Structure to be located on Galvin Plaza. Existing private buildings located east of the existing PABT ramps will remain. The West Adjunct upper levels will extend horizontally above the 39<sup>th</sup> Street sidewalk and approximately one lane of 39<sup>th</sup> Street.

The street-level space below the West Adjunct will be occupied by new ramps for the Replacement Facility.

The West Adjunct will provide four (4) levels for storage of approximately 350 buses. An additional one (1) to two (2) levels will provide gates for intercity operations (including intercity buses currently operating at curbside in the vicinity of the PABT) above the storage and staging levels.

Buses exiting the Lincoln Tunnel portals will use a new Ramp Structure west of Tenth Avenue to access the West Adjunct and continue to the Main Terminal with

interconnections between each of the Four (4) levels of the West Adjunct and Main Terminal.

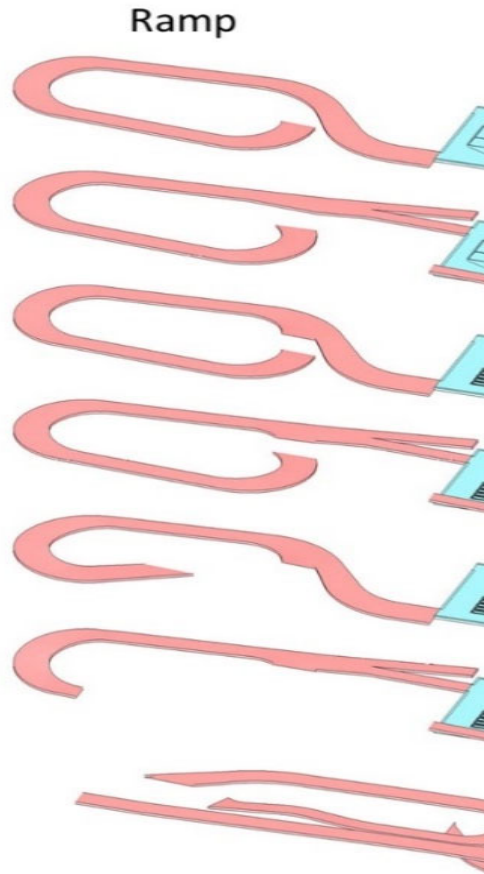


**FIGURE 8 – WEST ADJUNCT**

#### **4.3. RAMP STRUCTURE:**

A new Ramp Structure will be constructed on Galvin Plaza west of Tenth Avenue between 39<sup>th</sup> Street and 40<sup>th</sup> Street. The Ramp Structure will serve all bus movements into and out of the above-grade bus levels of the Replacement Facility from the Lincoln Tunnel. (A new two-way underpass under Ninth Avenue will provide entry/egress to/from the Lower Level and Dyer Avenue.)





**FIGURE 9 – RAMP STRUCTURE**

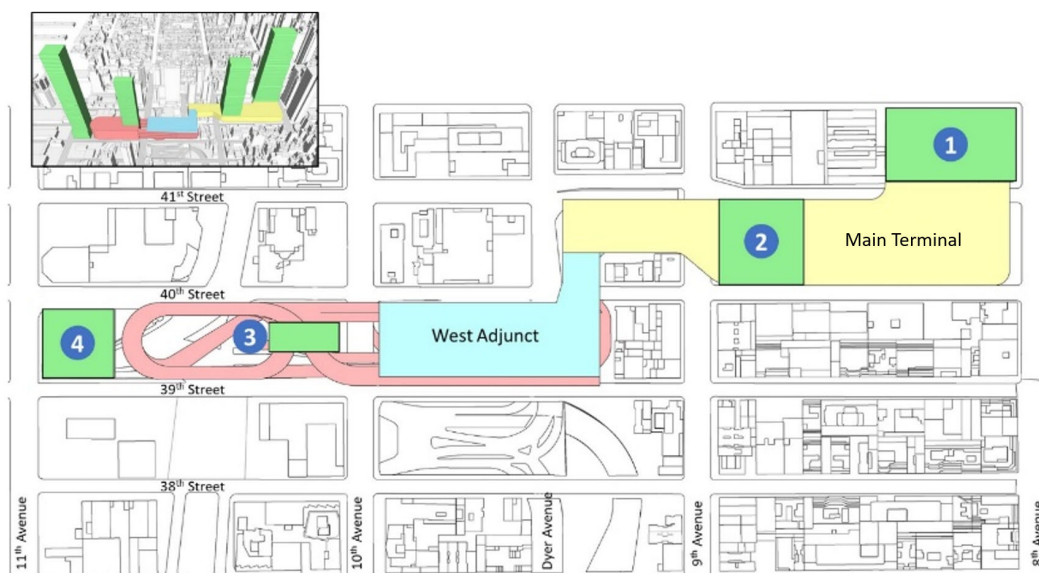
**4.4. PRIVATE DEVELOPMENT**

To support the funding of the Project, the Port Authority will seek to monetize approximately eight million square feet (See Table 1) of development rights on Port Authority property in the vicinity of the Project, consistent with present as-of-right zoning. As detailed below, the Port Authority has illustrated the private development as four mixed-use towers (See Figure 10). These towers would be built over and adjacent to the public improvements (Main Terminal, West Adjunct, Ramp Structure). All private development construction and operations would be coordinated with the public improvements.

The Port Authority’s key goals and objective for development and real estate structure are summarize on table 2 below.

<b>Table 2 – Development and Real Estate Structure</b>	
<b>DEVELOPMENT</b>	<b>REAL ESTATE STRUCTURE</b>
<ul style="list-style-type: none"> <li>Developing approximately eight million square feet as four towers</li> </ul>	<ul style="list-style-type: none"> <li>Preference for dividing development rights among multiple private developers.</li> </ul>

- commercial and residential – on Port Authority property.
  - Building in locations with ramping or other structures below and surrounding, considering necessary phasing and foundation needs.
  - Integrating private development designs into bus terminal designs.
  - Security and code requirements to develop site.
  - Construction to allow for the bus terminal to be operational ahead of completing private development sites.
  - Options to take advantage of the cranes, safety, permits and other site logistics already in place for the Replacement Facility to advance development sites.
  - Option to maintain development site for short term use as staging area for construction of ramps and West Adjunct facility.
  - Flexibility in event that site can be turned over to developer early.
- Allocation of risks and responsibilities for design and construction of facilities and towers.
  - Tolerance for long-term planning, considering bus facilities must be completed prior to most private development.
  - Preference for a sale or ground lease structure.



**FIGURE 10 – POTENTIAL PRIVATE DEVELOPMENT**

- Tower 1: West side of Eighth Avenue between 41<sup>st</sup> Street and 42<sup>nd</sup> Street (up to approximately 3.0 million gross square feet of commercial space)
- Tower 2: East side of Ninth Avenue between 40<sup>th</sup> Street and 41<sup>st</sup> Street (up to approximately 2.0 million gross square feet of commercial space)

- Tower 3: West side of Tenth Avenue between 39<sup>th</sup> Street and 40<sup>th</sup> Street (up to approximately 900,000 gross square feet of mixed-use space)
- Tower 4: East side of Eleventh Avenue between 39<sup>th</sup> Street and 40<sup>th</sup> Street (up to approximately 2.3 million gross square feet of commercial space)

The private development program may incorporate any potential design and/or construction methods that may improve the construction or operational feasibility of private development and increase the value of the development rights.

The illustrative Towers 1 and 2 are envisioned to be constructed above the Main Terminal; numerous elements of the towers and the facility will be integrated. Coordination of the design, construction, and operation of both Towers and the public facility are essential. To ensure this coordination, the Port Authority may consider a master development agreement for both the Main Terminal and the Towers, or separate development agreements.

#### **4.5. CONSTRUCTION-PERIOD OPERATIONS:**

The construction of the Project will occur over an eight-year period, incorporating various levels of activity at multiple locations; impacts will include construction noise, dust, street closings and changes in local traffic patterns for periods of time, and sidewalk closings or shifts in pedestrian walkways. Methods to address vehicular, pedestrian, residential local business, and commuter impacts will be developed as part of an area transportation/traffic management plan (TMP).

During the construction of the Ramp Structure and West Adjunct, operations of bus service will continue at the Existing PABT.

During the remaining years of the construction, operations of bus service will transition to the following locations:

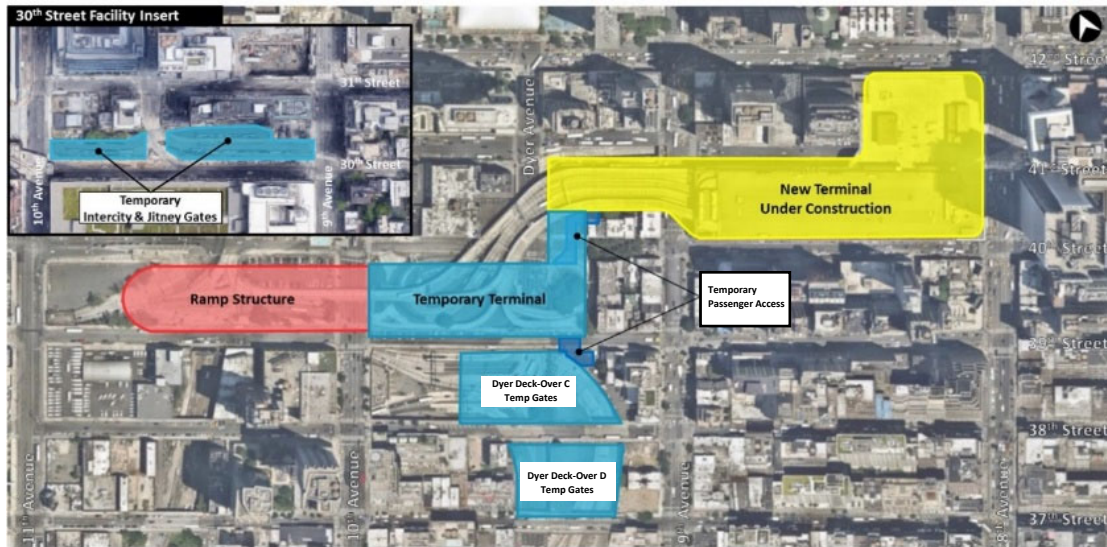
- New structural decks constructed over below-grade Dyer Avenue at the following locations (see Figure 14):
  - Dyer Deck-Over C: West 38<sup>th</sup> Street and West 39<sup>th</sup> Street west of Ninth Avenue (partial footprint of Lot 10)
  - Dyer Deck-Over D: West 37<sup>th</sup> Street and West 38<sup>th</sup> Street west of Ninth Avenue (full footprint of Lot 9)
- The West Adjunct of the Replacement Facility (which, as noted, would be constructed, while the existing PABT remains in operation)
- West 30<sup>th</sup> Street between Ninth Avenue and Tenth Avenue where Dyer Avenue terminates (a location currently used for intercity bus operations and commuter bus storage)

At the end of construction-period, once the new Main Terminal is complete and operational, bus operations will transition from the West Adjunct and 30<sup>th</sup> Street

facilities into the new facility. The West Adjunct will be converted from temporary commuter operations to the Intercity Bus/Storage and Staging Facility.

**TEMPORARY OPERATIONAL AREAS:**

- Shallow sawtooth gates
- Staging proximate to temporary terminal gates
- Additional passenger queue space
- ADA compliance



**FIGURE 11 – POTENTIAL TEMPORARY OPERATIONAL AREAS**

**POTENTIAL CONSTRUCTION IMPACT TO PEDESTRIANS DURING TEMPORARY OPERATIONS**

No direct access between subway and temporary terminals

- Closure of some subway stairs at 8<sup>th</sup> Ave
- Adds on-street crossings at 9<sup>th</sup> Ave and side streets
- ~40% of PABT passengers use subway

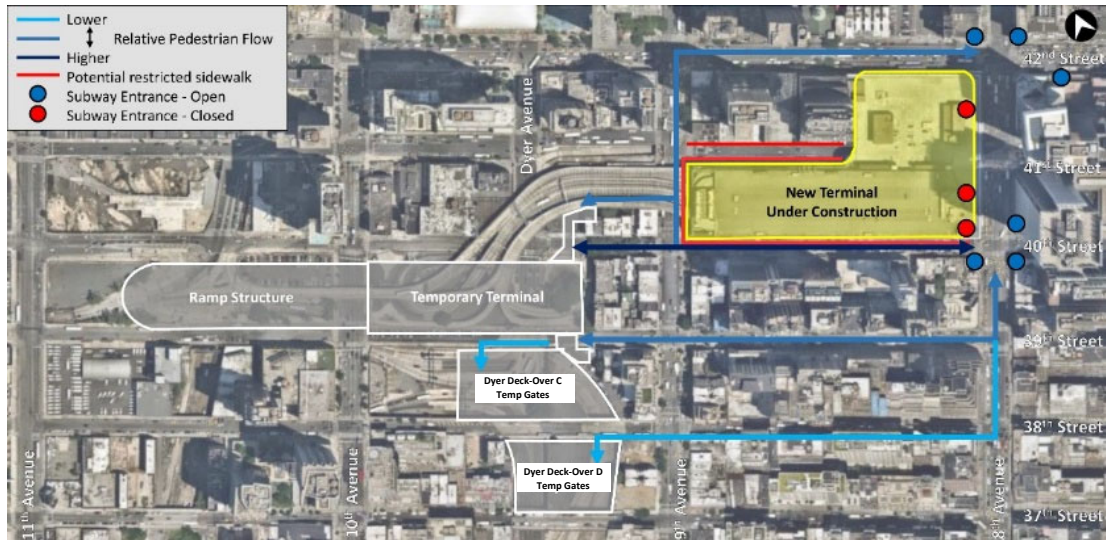


FIGURE 12 – TEMPORARY CONSTRUCTION IMPACT TO PEDESTRIANS

## 5. SUSTAINABILITY

The Replacement Facility will incorporate state-of-the art technology to contribute to its overall sustainability in design and operation of all Project Components: the vision for the Project is “net zero,” defined by the US Department of Energy as “an energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy.” Standards such as Leadership in Energy and Environmental Design (LEED) Zero Carbon, LEED Zero Energy, LEED Zero Water, and LEED Zero Waste can be referenced. These standards are consistent with Port Authority policies at its facilities; for example, the Port Authority has set ambitious greenhouse gas reduction targets, aligned to U.S. and global goals, and is implementing an all-electric bus fleet (unrelated to the PABT) for regular shuttle service at its airports. Further, the Port Authority is also implementing a Clean Construction Program at all facilities, one of the most ambitious programs of its kind among U.S. transportation agencies, that will reduce carbon emissions throughout the design and construction processes.

Consistent with its environmental stewardship approach, the Port Authority will seek to support an all-electric bus future to reduce emissions in the community and in the Replacement Facility. The Port Authority will coordinate with NJ TRANSIT as that agency works towards replacement of its diesel-fueled buses with zero-emission (i.e., electric) buses starting in 2024; by 2032, all new buses purchased must be zero-emission. The NJ TRANSIT fleet conversion is governed by a strategy for reducing Energy Consumption and Emissions from the Transportation Sector, including encouraging electric vehicle adoption, electrifying transportation systems, and leveraging technology to reduce emissions and miles traveled. The Replacement Facility design will provide for the installation of electric charging infrastructure to support the conversion by carriers to electric buses, and the Port Authority will explore rate structures that incentivize such conversions for NJ TRANSIT and other bus operators.

## **6. ARTIFICIAL INTELLIGENCE TECHNOLOGY**

The Port Authority intends to evaluate the use of artificial intelligence (AI) technologies during construction and for the new Replacement Facility. The innovative use of artificial intelligence aligns with the Port Authority strategic priorities of ensuring a world class experience, delivering operational excellence and sustainability using global best practices and deploying 21<sup>st</sup> century technologies.

Purposes of AI during the construction process are to maintain the construction schedule, to identify safety and security concerns early, and to optimize the bus and facility operations, while minimizing potential environmental impacts such as congestion, air quality, and noise. The AI systems would leverage multiple data sources across various aspects of the Project to automate repetitive functions and to optimize staging, use of materials and personnel to help provide a holistic view and prediction of system-wide performance and impacts. Predictive, data-driven insights would help identify areas in which efficiencies can be improved resulting in reducing the overall construction cost and schedule.

The Replacement Facility would incorporate state-of-the art technology with predictive analytics in its design to deliver a world-class facility. State-of-the-art infrastructure technologies monitoring vertical circulation, HVAC, bus locations, bus operations, bathroom cleanliness, pedestrian circulation, and other metrics would feed data into an AI system reporting on the infrastructure health, operational efficiency, and customer experience of the future bus terminal. Building upon the use of AI during construction, there are opportunities to grow the AI system to forecast future demands, optimize on-time-arrivals and gate assignments, provide virtual customer journeys and improved pedestrian routing, deploy autonomous services within the facility, and implement virtual customer services such as chatbots. The AI would contribute to the management of the facility by minimizing life cycle costs and maximizing operational efficiencies to provide best-in-class customer experience.

## 7. PROJECT SEQUENCING

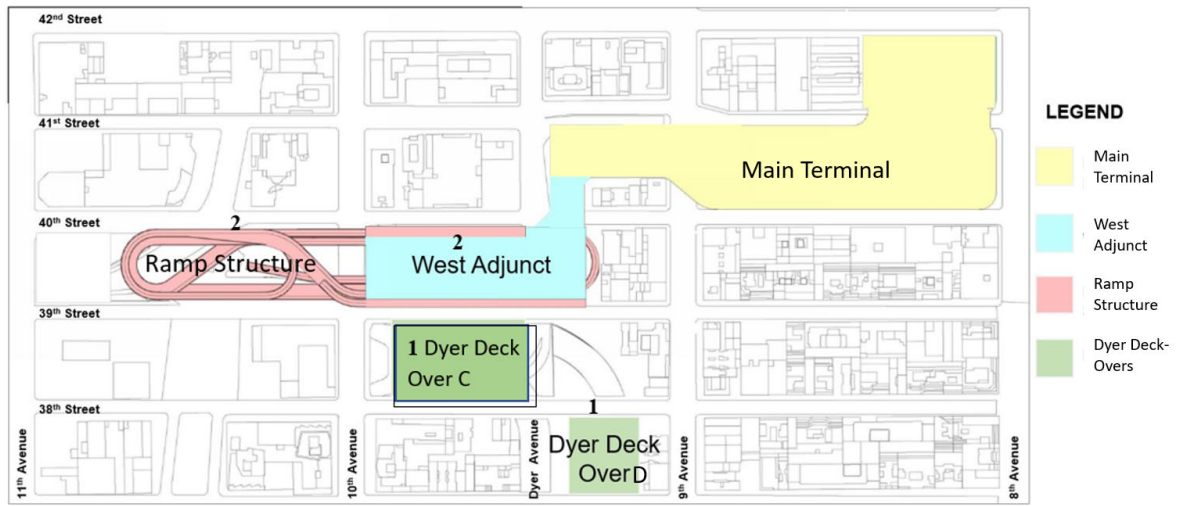


FIGURE 13 – SCHEMATIC PROJECT COMPONENTS

The development of the Replacement Facility will occur in distinct phases as it is imperative to maintain bus operations throughout construction. First, the site must be made ready for construction staging and additional bus staging.

### 7.1. PROPOSED COMPONENTS/ ELEMENT SEQUENCING:

Construction will be phased over an eight-year period to minimize impacts to bus operations, incorporating various levels of activity at multiple locations. The Early Action, 30<sup>th</sup> Street Operational Areas, and West Adjunct and Ramps Phases (see descriptions below) will occur first to enable the transfer of bus operations to storage lots and the West Adjunct temporary terminal while the existing PABT is unavailable. The Main Terminal Phase will include the demolition of the existing terminal and rebuilding the Main Terminal in that location. The Development Tower Phase can occur concurrent with or phased after the construction of the Replacement Facility, to be determined based on feedback from this RFIF.

#### a) Early Action Phase:

Construction will begin with Early Action activities focused on the construction of two deck-over structures (Dyer Deck-Over) to the south and west of the existing PABT. The decks are required for bus operations during construction of the West Adjunct and Main Terminal.



FIGURE 3 - EARLY ACTION PHASE

**b) 30<sup>th</sup> Street Operational Areas**

Select bus operations will be relocated to the 30<sup>th</sup> Street Operational Areas as part of the transfer of operations out of the existing bus terminal during demolition and construction of the Main Terminal.



FIGURE 15 – 30<sup>TH</sup> STREET OPERATIONAL AREAS

**c) West Adjunct and Ramps Phase:**

The next phase of construction will involve selective demolition of existing ramps, the construction of new permanent ramps, and construction of the six (6) story West Adjunct. The foundation and core of planned towers west of 10<sup>th</sup> Avenue will also be constructed during this phase.



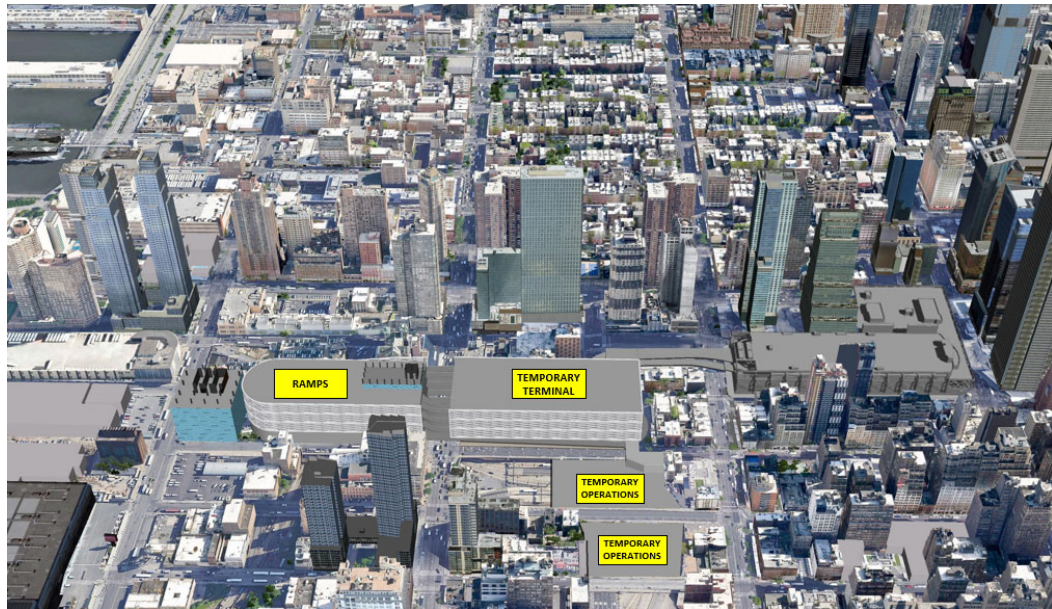


FIGURE 4 - WEST ADJUNCT AND RAMP PHASE

**d) Transfer Bus Operations to Temporary Terminal and Storage Lots**

To fully prepare for the demolition of the existing PABT and construction of the new Main Terminal, all current bus operations will be transferred from the existing PABT to the newly constructed West Adjunct, as well as to the 30th Street Operational Areas and possibly Dyer Deck-Overs.

**e) Main Terminal Phase:**

Once bus operations are completely removed from the existing PABT, construction can begin on the new Main Terminal (including demolition of the existing PABT), foundation and core of the planned towers, and all ramping and access. The final ramp structures will be constructed at the end of this phase as part of converting the West Adjunct to its permanent function as a bus staging area. When ready for operation, bus operations will be transferred into the new Main Terminal after which the West Adjunct will be converted to house four (4) levels of storage and staging and two (2) levels of intercity bus operations. This phase will be complete once all bus operations are in their final configuration, all remaining ramps are complete, and the West Adjunct has been fully converted to bus staging and intercity bus operations.

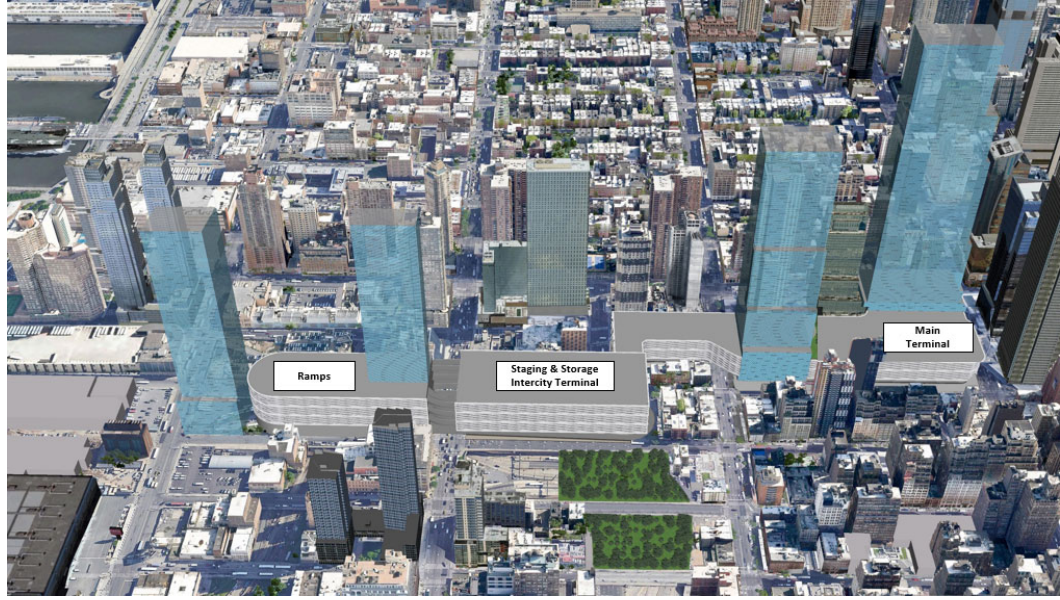


FIGURE 5 – MAIN TERMINAL PHASE

**f) Development Tower Phase:**

The Project envisions the planned private development of over 8 million square feet of development rights. The foundation and cores of the proposed towers must be incorporated in the design and construction of the new Replacement Facility. How best to achieve this will be informed by the RFIF. The development can occur concurrent with or phased after the construction of the new bus replacement facility.



FIGURE 6 - DEVELOPMENT TOWER PHASE

## 8. PROJECT CONSTRAINTS



**FIGURE 7 – UNDERGROUND TUNNELS AND TRAIN LINES**

The Port Authority foresees working with the Developer or the Design-Builder to anticipate, plan, mitigate, and coordinate quality of life, safety, and logistical impacts throughout the life of the construction period.

### **Stakeholder Coordination:**

- Lead Agency
- Project Sponsor
- Federal Agencies
- State Agencies
- City Agencies
- Regional Agencies (ex. MTA)
- Community
- Elected officials.

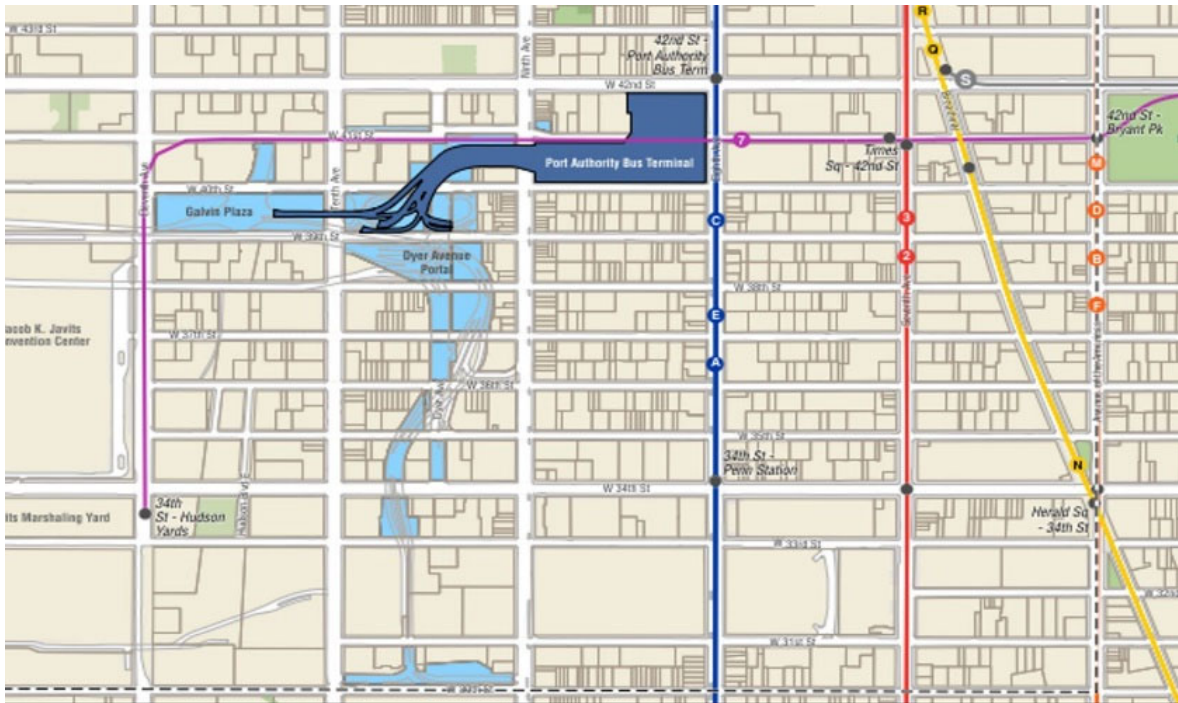


FIGURE 20 – MIDTOWN TRANSPORTATION NETWORK

## 8.1. HOURS OF OPERATIONS AND CLOSURES

The PABT operates 24 hours a day, seven days a week. However, between 1:00AM and 5:30AM, the South Wing is closed, and all departures operate from the North Wing Lower Level. During these times, buses may operate from a gate different from the one used during the day.

Bus Terminal Operations must be maintained during construction of West Adjunct and Ramp Structure. Individual closures of gates and ramps can occur if approved by the Port Authority, as long as Lincoln Tunnel and Bus Terminal Operations are maintained.

Prior to award of the contract, a detailed Traffic Management Plan (TMP) will be developed and guidance regarding closures of ramps, tunnel tubes and Dyer Avenue will be provided to bidders. For the purposes of the RFIF, the respondent should assume that closures of ramps, tunnel tubes and Dyer Avenue will be restrictive.

During construction and design development, ramp phasing and equipment staging plans will mature and necessitate joint planning of required ramp and tunnel closures. At that time full Maintenance of Traffic (MOT) analysis, planning, and required shutdowns would be approved and planned to accommodate the planned schedule and sequence of construction.

## 8.2. CONSTRUCTION CHALLENGES

The following challenges to be addressed have been identified by the Port Authority:

- Construction over and in close proximity to all three (3) tubes of the Lincoln tunnel, with restricted closure hours for the Lincoln tunnel tubes and access ramps.
- Bus operations must be maintained throughout construction.
- Continuous, safe, and protected sidewalk commuters and pedestrians' access to bus operations and subways with deliberate wayfinding signage during construction, along multiple exterior corridors.
- Shielding of construction activities over and close to existing buildings, roads, and bus ramp structures.
- Shielding of construction activities close to residential properties located adjacent to the Project site.
- Limited staging areas for construction and logistics.
- Strong community engagement sensitive to the construction impacts, changing environment, noise, and emissions.

## 9. ENVIRONMENTAL IMPACT STATEMENT

The Port Authority intends to seek federal funding for the Project from the Federal Transit Administration (FTA). Such a request triggers an environmental review of the proposal pursuant to the National Environmental Policy Act (NEPA), with FTA serving as lead federal agency and the Port Authority as the joint lead agency and project sponsor. Consistent with NEPA and FTA regulations, the Port Authority undertook a planning-level scoping process, which engaged stakeholders in the region including New York City, New York state, and New Jersey elected officials, government agencies, community boards, bus carriers, civic organizations, and interested members of the public. On June 4, 2021, The FTA issued the Notice of Intent to Prepare an Environmental Impact Statement in the Federal Register to announce the formal start of the NEPA process. The Project as it is described and presented herein is designated for NEPA purposes as the Locally Preferred Alternative.

Interested parties are encouraged to visit the PABTR Project website at [www.pabtreplacement.com](http://www.pabtreplacement.com) to learn more about the PABTR Project, the current NEPA process status, and associated resource documents.

The Port Authority anticipates completing the (Uniform Land Use Review Procedure) ULURP prior to award.

## 10. PROJECT DELIVERY

The Port Authority recognizes that there are many potential project delivery methods (e.g., Design Build (DB), Public-Private-Partnerships (P-3), Bid-Build (BB), Integrated Project Delivery (IPD), and any combination or variation thereof) to delivery elements of the Project. The Project Components or potential sequences for the Project include Dyer Deck-Over C & D, West Adjunct, Ramp Structure, Main Terminal and West Adjunct Conversion, and Complete Towers Construction.

As such, the Port Authority is currently considering the following the project delivery methods for different Project components:

- DB for Dyer Deck-Over C & D,

- DB for Intercity & Storage and Staging Facility (West Adjunct) and Ramp structure,
- DB for Main Terminal, and Intercity & Storage and Staging Facility (West Adjunct) Conversion,
- Developer Agreement to design and build Towers 1 & 2, Main Terminal and Intercity & Storage and Staging Facility (West Adjunct) Conversion. This agreement may include the ground lease(s) for private development of the mixed-use towers above the terminal. Bus Terminal operations will remain with the Port Authority during and after the construction.
- Or other combination of agreements to complete the Project Components.

## 11. PRELIMINARY TIMELINE

Preliminary Timeline (Estimated). Relocation and operation may begin after 3 years of construction of the Temporary Terminal and Ramps.

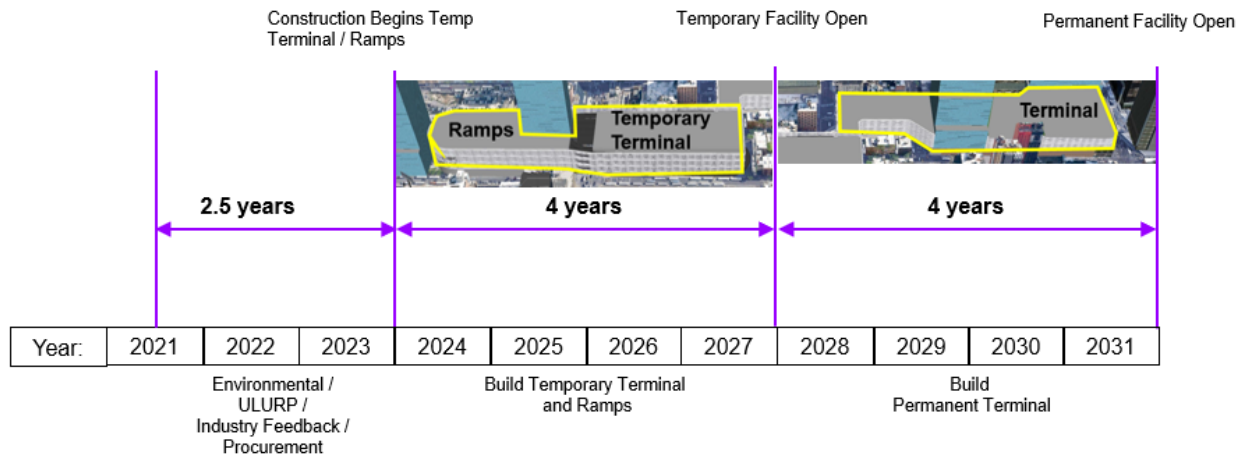


FIGURE 21 – PRELIMINARY TIMELINE

## 12. DBE, MBE/WBE AND SDVOB PARTICIPATION

It is the policy of the Port Authority to encourage disadvantaged business enterprises (DBE), minority business enterprises (MBE), and women-owned business enterprises (WBE) to participate in all facets of the business activities of the Port Authority consistent with applicable laws and regulations. Through its Office of Business Diversity and Civil Rights, the Port Authority conducts its own certification process rather than accepting the certification of any other jurisdiction. Firms should be mindful that the Port Authority’s organizational MBE/WBE participation goals are 20% (MBE) and 10% (WBE). It is also Port Authority policy to encourage service-disabled veteran-owned business enterprises (SDVOB) to participate in agency contracts. As such, the interested parties will be required to make good-faith efforts to achieve a SDVOB subcontracting goal of 3%. The interested parties, in connection with any work for the Project, will throughout the term of the Contract, commit itself to and use good faith efforts to implement an extensive project to utilize Local Business Enterprises.

DBE for federally funded projects: <https://www.panynj.gov/port-authority/en/business-opportunities/supplier-diversity.html>

### **13. FUNDING**

Port Authority is seeking to fund the Project through Port Authority's Capital plan, Development opportunities and potentially Federal funding.

#### **2017-2026 CAPITAL PLAN – PROJECT APPROVAL (2017)**

At its March 2016 meeting, the Board of Commissioners committed to proceed with plans for a new state-of-the-art bus terminal on Manhattan's West Side and voted to include funding for the project as part of the development of the 2017-2026 Capital Plan, which considers both revenues and expenditures. The Board of Commissioners of the Port Authority approved the 2017-2026 Capital Plan on February 16, 2017 that included \$3.0 Billion for the Port Authority Bus Terminal Replacement Project. The 2017-2026 Capital Plan provides approximately \$32 billion in capital investment to fund critical projects for the region during the next 10 years. This plan encompasses a balanced portfolio of more than 600 projects including the replacement of the Port Authority Bus Terminal. The order of magnitude of the Project, excluding the development of high-rise towers is \$7-\$10 billion of which \$3.5 billion was include in spending in the 2017-2026 capital plan period. The details capital plan can be found at the link below:

<https://www.panynj.gov/port-authority/en/about/capital-plan.html>

### **14. CUSTOMER EXPERIENCE**

The selected Contractor must focus on the customer journey and customer experience in all planning, design, construction, fabrication, installation, testing and commissioning of the Projects. The Project should be a complete and integrated system that enables customers to consistently have world-class experiences in a world-class facility.

### **15. REFERENCES**

- Planning level scoping document, section 1.1 (Project Overview) dated: 5/6/19
- SSR 2-10-20 ver.19, Section 1.9
- SSR 2-10-20 ver.19, Sub-Section 1.9.1 – 1.9.5