1 Purpose and Need

1.1 INTRODUCTION

The Port Authority of New York & New Jersey (PANYNJ) owns and operates the Midtown Bus Terminal at West 41st Street and Eighth Avenue in Manhattan, New York, commonly known as the "Port Authority Bus Terminal" (PABT). This facility first opened for service in 1950 and last underwent major expansion in 1981, when its capacity was increased by approximately 50% with the addition of the North Wing. The PABT is an aging structure with increasingly problematic functional and physical obsolescence of assets and facilities with systems that require expensive recurrent maintenance and short-term fixes. The PABT also has significant operational constraints and inefficiencies that prevent accommodating existing, as well as future, bus size, weight, technology, and volumes that will prevent meeting forecasted (year 2040) increases in bus ridership demand. The structural slabs for the existing PABT South Wing bus operating levels, critical to supporting the facility, will be functionally obsolete unless significant investments are made in the 2027 to 2037 timeframe.

Beginning in 2013, PANYNJ initiated studies that evaluated options for addressing the continued need to accommodate trans-Hudson commuter and intercity bus travel destined to West Midtown Manhattan and projected growth in ridership. Beginning in 2018, PANYNJ initiated discussions with the Federal Transit Administration (FTA) for potential Federal funding for a project to address trans-Hudson commuter and intercity bus travel and the projected growth in ridership.

The FTA, serving as lead Federal agency, and PANYNJ, the joint lead agency and Project Sponsor, are preparing an Environmental Impact Statement (EIS) to evaluate potential impacts in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4321 et seq.), Council on Environmental Quality's (CEQ) NEPA-implementing regulations (40 CFR §§ 1500-1508[1]), and FTA's *Environmental Impact and Related Procedures (*23 CFR §771[2]) and DOT's Efficient Environmental Reviews for Decision-Making (23 U.S.C. §139). The EIS also memorializes compliance with other applicable Federal environmental laws and regulations, including Section 4(f) of the Department of Transportation Act of 1966,[3] Section 106 of the National Historic Preservation Act of 1966,[4] and Executive Order 12898 on Environmental Justice and FTA Circular 4703.1, *Environmental Justice Policy Guidance for FTA Recipients.*[5] The EIS also addresses, as applicable, the guidelines and methodologies established under the New York State

1 Council on Environmental Quality's (CEQ) NEPA-implementing regulations: https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol37/pdf/CFR-2019-title40-vol37.pdf#page=474
2 FTA's Environmental Impact and Related Procedures: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/NEPA_reg_clean.pdf
3 Section 4(f) of the Department of Transportation Act of 1966: https://www.environment.fhwa.dot.gov/legislation/section4f.aspx
4 Section 106 of the National Historic Preservation Act of 1966: https://www.nps.gov/history/local-law/nhpa1966.htm
5 FTA Circular 4703.1 (Environmental Justice Policy Guidance for FTA Recipients): https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_EJ_Circular_7.14-12_FINAL.pdf

Environmental Quality Review Act (SEQRA) and New York City Environmental Quality Review (CEQR). The EIS identifies elements of the Proposed Project for which Uniform Land Use Review Procedure (ULURP[6]) approval may be sought.

Prior to the FTA commencing the formal NEPA process by issuance of a Notice of Intent (NOI), PANYNJ conducted planning-level scoping (initial scoping) in 2019. This provided an opportunity for stakeholders to comment on relevant subjects, including the purpose and need, 13 project alternatives, and methods to identify a Locally Preferred Alternative. PANYNJ published a Final Scoping Report on January 7, 2021, to the project website (www.pabtreplacement.com), which documented the initial scoping process, and is hereby incorporated by reference.

In conjunction with the NOI, a Draft NEPA Scoping Information Packet (SIP) was made available for public review on June 4, 2021, initiating the formal NEPA scoping process. Virtual public scoping meetings were held on June 23, 2021, and June 24, 2021, at 2:30 p.m. and 6:30 p.m. on each day. Oral comments were received during the virtual sessions and written comments received via e-mail, mail, or web form. A 45-day public comment period extended from June 4, 2021, through July 19, 2021. A Final NEPA SIP was published by PANYNJ on January 20, 2022.

This chapter summarizes the purpose and need as well as the goals and objectives that PANYNJ developed as part of its efforts to analyze options for the PABT. **Chapter 2, "Project Alternatives**," provides additional information on the NEPA process and the alternatives evaluated.

1.2 PLANNING CONTEXT

PANYNJ used a robust and iterative planning process to receive and respond to public input on purpose and need, goals and objectives, and a long list of alternatives. See Appendix A of the May 2019 Planning-Level Draft Scoping Document[7] for a detailed description of the multi-faceted approach to meeting the "Planning and Environmental Linkage" process consistent with 23 CFR Part 450.318.

The initial planning study for the future of the PABT, the Midtown Bus Master Plan Study, was initiated in 2013.[8] The study sought to identify a wide range of alternatives to meet growing bus demand.

In September 2014, the PANYNJ Board of Commissioners approved a $90 million Quality of Commute program[9] to improve on-time performance, upgrade the customer experience, and enhance the conditions of the bus terminal. One feature of this program is PANYNJ's quarterly Commuter Chats with customer surveys (ongoing since Q3 2014), which result in direct, meaningful customer feedback on targeted improvements needed at the terminal.

6 ULURP is a standardized procedure mandated by New York City's Charter for certain actions affecting land use to be publicly reviewed.
7 https://www.panynj.gov/bus-terminals/en/port-authority/planning-level-scoping-process-pabt/resources.html
8 https://old.panynj.gov/bus-terminals/pdf/bus-board-3-19-15u-no-annotations.pdf
9 http://www.panynj.gov/bus-terminals/pabt-quality-of-commute-program.html

Understanding current customer needs will allow planning of the future terminal to provide significant improvements to existing reliability and comfort issues that they experience.

Over the subsequent years, PANYNJ staff engaged the general public, leadership of community groups, and public agencies at various decision-making points regarding the future of the PABT. These outreach efforts not only served to inform the leadership at the agency, but the feedback received also played an important role in shaping alternatives development and ultimate project recommendations.

1.3 EXISTING TERMINAL AND OPERATIONS

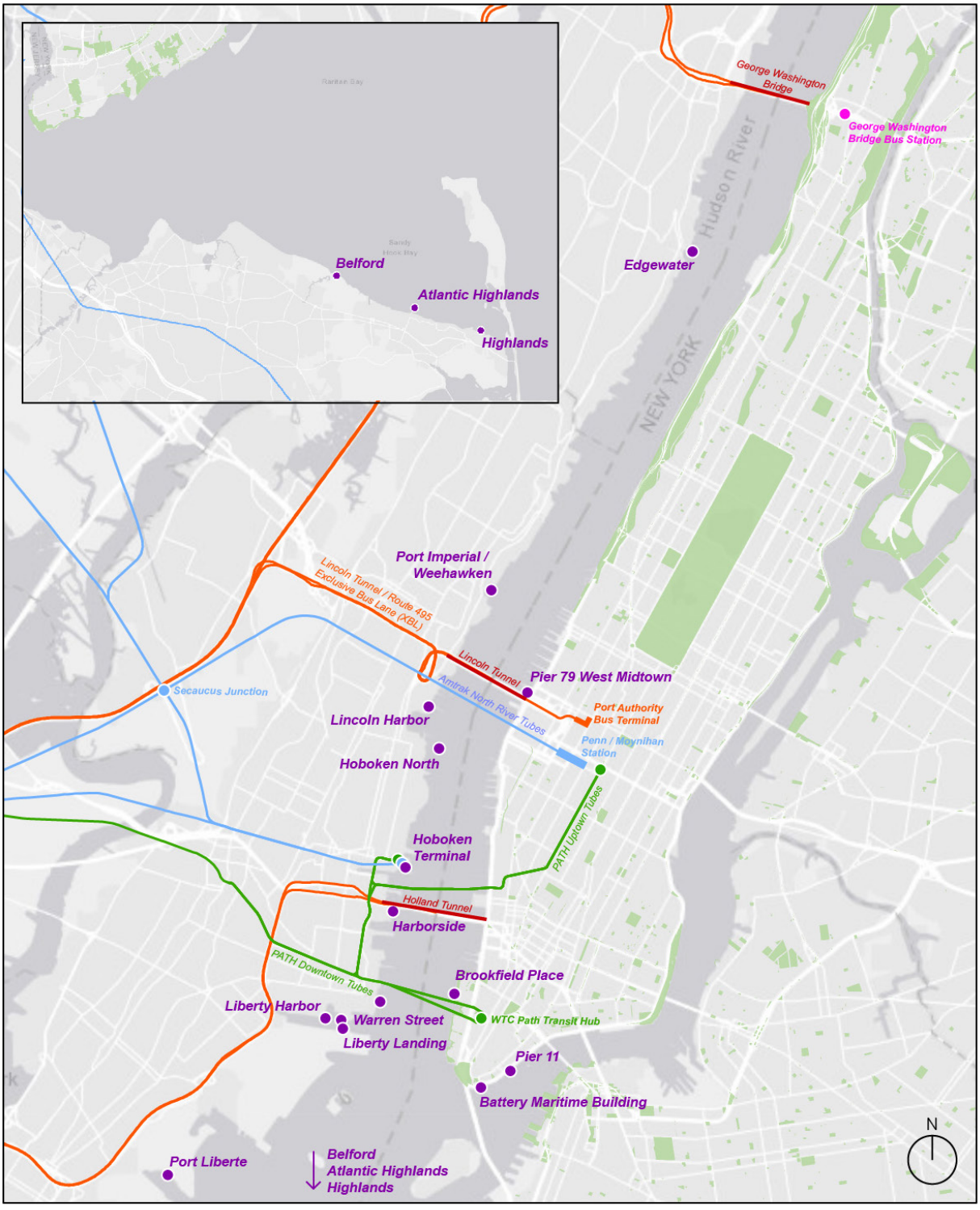
The existing PABT is one of the major Midtown Manhattan transportation hubs. It connects regional, commuter, and intercity bus service to twelve (12) New York City Transit (NYCT) subway lines and five (5) NYCT bus routes, and offers pedestrian access to some of Manhattan's densest employment locations—including Midtown's office, shopping, and entertainment centers, the Fashion and Theater Districts, and Hudson Yards.

The regional bus network relies on interconnected infrastructure comprising the NJ Route 495 (which incorporates the contraflow Exclusive Bus Lane (XBL)), the Lincoln Tunnel (which includes dedicated bus lanes), direct ramps and street-level connections between the Lincoln Tunnel and the PABT, and configurable surface streets for handling Lincoln Tunnel traffic. **Figure 1-1** shows the regional transportation network serving travel between New Jersey and the Manhattan Central Business District (defined as Manhattan below West 60th Street). Buses comprise approximately 24 percent of peak-hour[10] vehicles in the Lincoln Tunnel and carry approximately 91 percent of peak-hour travelers.[11] Most buses that use the Lincoln Tunnel are accommodated at the PABT. Commuter operations at the PABT reached 242,000 passengers on a busy Wednesday in October 2019 and intercity operations reached 24,000 passengers on a busy Friday in August 2019. Total estimated operations on an October weekday in 2019 were 253,000 passengers, or about 21 percent of trans-Hudson passenger trips entering or exiting the Manhattan Central Business District. The PABT accommodates bus routes for daily commuters throughout New Jersey, eastern Pennsylvania, and the Lower Hudson Valley in New York, and intercity bus services. The PABT does not serve all intercity buses (referred to as Curbside Intercity buses) that drop off and pick up from streets in the vicinity of PABT, nor does it service charter, tour-bus, or most jitney services.

[10] Peak hours are considered 7:00 a.m. to 8:00 a.m. and 5:30 p.m. to 6:30 p.m.

[11] PANYNJ staff analysis, based on travel in the Lincoln Tunnel for the 8:00 a.m. to 9:00 a.m. hour in NYMTC Hub Bound Travel Report (2019, Table 14A-1 and Table 16). https://www.nymtc.org/DATA-AND-MODELING/Transportation-Data-and-Statistics/Publications/Hub-Bound-Travel

Figure 1-1. Regional Transportation Network Between New Jersey and the Manhattan Central Business Districts



Source: WSP (2023)

The PABT occupies approximately one and one-half city blocks between West 40th Street and West 42nd Street between Eighth Avenue and Ninth Avenue (**Figure 1-2**). When it opened for service in 1950, typical intercity buses were 35 feet long and 96 inches wide. Today, the typical coach is 45 feet long and 102 inches wide. Due to existing floor-to-ceiling heights within the bus operating levels, double-decker buses cannot fit within the PABT. Additionally, the longer articulated buses that operate on certain commuter routes fit within the PABT but they can be operated only on pull-through gates, as they are too long to use the existing sawtooth gates (gate typologies are illustrated in **Figure 1-3**).

The PABT last underwent major expansion in 1981, when its capacity increased by approximately 50% with the addition of the North Wing. The South and North Wings provide 106 deep sawtooth gates, 61 pull-through gates, and 26 positions for arriving buses to unload passengers on three bus operating levels. In addition, the North Wing provides approximately 50 spaces for midday bus storage. Ramps connecting the PABT to the Lincoln Tunnel are located to the west and south, spanning Galvin and Dyer Plazas; the West 41st Street underpass (Greyhound tunnel) provides access to the PABT Lower Level from Dyer Avenue. Ramp and tunnel connections are shown in **Figure 1-4**.

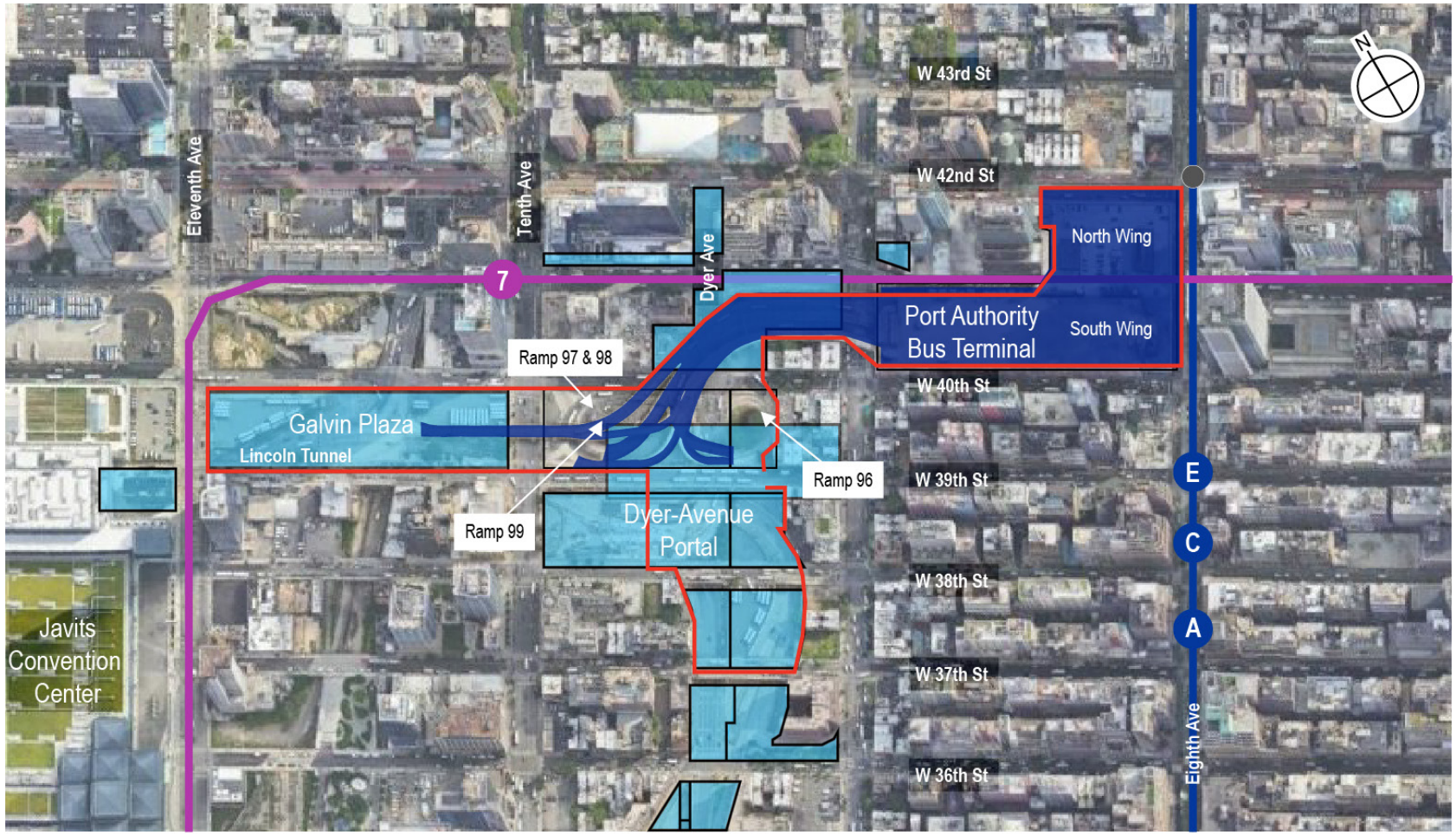
The PABT's South Wing occupies the city block between West 40th Street and West 41st Street from Eighth Avenue to Ninth Avenue. The North Wing of the terminal occupies half of a city block, fronting Eighth Avenue between West 41st Street and West 42nd Street. Each level of the North Wing, except for the ground floor, extends over or under West 41st Street to connect with its counterpart level in the South Wing.

The PABT is configured with three pedestrian levels (subway level, main concourse, and second floor), and three bus levels (lower level, third floor, and fourth floor). In 1963, the fourth floor of the PABT was converted from public parking to bus operations and a three-story public parking garage was erected over the South Wing. It was later expanded to the North Wing fifth floor, providing space for a total of approximately 1,385 cars.

All vehicular access to the two upper bus levels and public parking are from direct ramp connections to and from the Lincoln Tunnel's South and Center Tubes, via Dyer Avenue.[12] The ramps are also accessible from city streets. The Lower Level has three access points. The North Wing is accessible through the Greyhound tunnel at West 41st Street that connects to Dyer Avenue. The South Wing has an on-street entrance on West 40th Street and an on-street exit on West 41st Street.

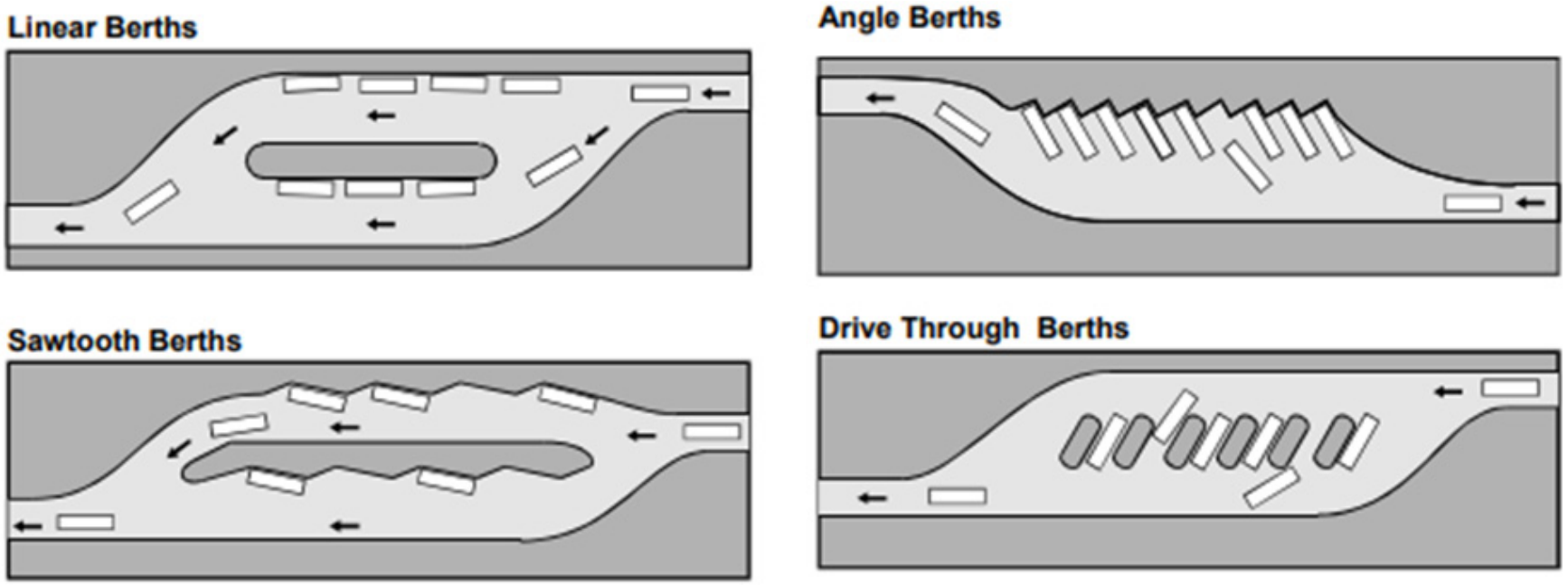
[12] The South Tube provides two eastbound only lanes. The North Tube provides two westbound only lanes. The two-lane Center Tube is bi-directional. During the AM peak period (approximately 6:00 a.m. to 11:00 a.m.), both lanes of the Center Tube operate eastbound. During the PM peak period (approximately 3:00 p.m. to 8:00 p.m.), both lanes operate westbound. During midday and overnight hours, the "far lane" (southern lane) operates eastbound and the "near lane" (northern lane) operates westbound.

Figure 1-2. Existing Port Authority Bus Terminal Facility



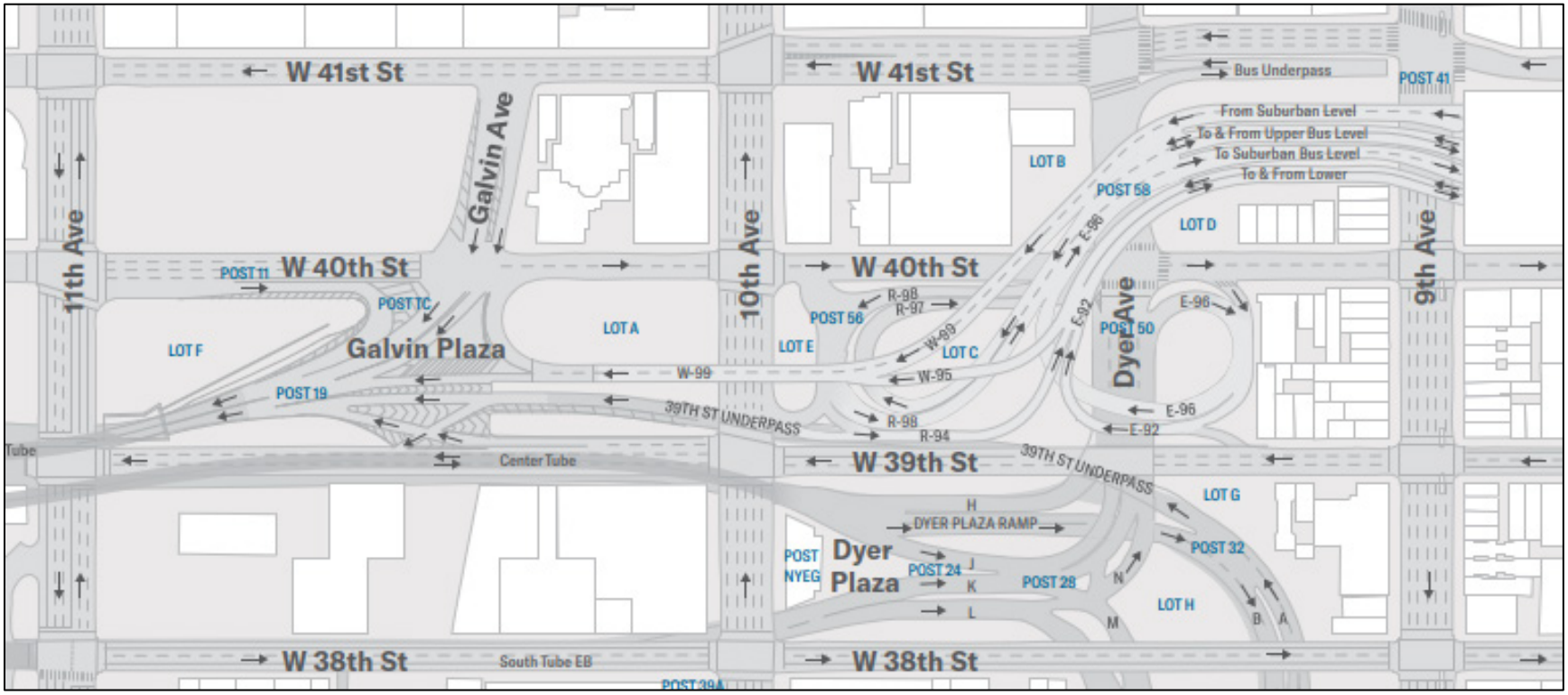
Source: AKRF (2023)

Figure 1-3. Illustration of Bus Gate Typologies



Source: Transportation Research Board; Transit Capacity and Quality of Service Manual
Note: The terms "berth" and "gate" are used interchangeably.

Figure 1-4. Existing Ramps and Tunnel Connections



Source: PANYNJ (2023)

1.4 PURPOSE AND NEED FOR THE PROJECT

The principal purposes of PANYNJ's evaluations of options for the PABT are shown in **Table 1-1**:

Table 1-1. Purpose & Need for the Project

Purpose	Need
1. Address the future of an aging and obsolete facility	The structural slabs for the existing PABT South Wing bus operating levels will be functionally obsolete unless significant investments are made in the 2027 to 2037 timeframe. The PABT also has significant operational constraints and inefficiencies that prevent accommodating existing and future bus size and weight and upgrades in technology.
2. Meet forecasted year 2040 bus ridership for trans-Hudson commuters and intercity bus passengers for services projected to be operating within the PABT	PANYNJ must take a long-term approach to planning for operations. Any solution intended to address the future of an aging facility must also meet the forecasted 2040 passenger demand for trans-Hudson commuter and intercity bus and passenger demand of bus services within the PABT.
3. Improve bus storage and staging to reduce bus idling, relieve on-street congestion, and improve bus network reliability	Bus storage and staging for commuter buses and intercity buses has historically been provided within the terminal and at surface lots (owned or leased by the PANYNJ or bus operators) near the PABT; these surface lots are needed because storage and staging capacity within PABT are limited. These surface lots are not directly connected to the terminal and buses use city streets to move from midday storage lots to terminal gates for PM operations. This reduces the overall number of buses that can operate within the terminal during the PM peak and creates impacts on city streets and air quality.
4. Update the technology and equipment of the PABT and modernize services and amenities for bus passengers using the facility	The existing PABT has aging systems that require ongoing investment to maintain. These systems are not considered state-of-the-art for energy conservation and resiliency. Reliability will be difficult to sustain without significant long-term investments and ongoing expenditure of resources to maintain these assets.

1.4.1 Address the Future of an Aging and Obsolescent Facility

The existing terminal has significant capacity constraints and operational limitations. The PABT facility is functionally and operationally obsolete due to the following:

- Lack of adequate flexibility and capacity to support forecasted growth in bus demand
- Many current and future bus sizes and weight standards cannot be accommodated
- Lack of accessibility pursuant to Americans with Disabilities Act (ADA) requirements[13]

The building's electrical and mechanical systems are also nearing the end of their useful lives. Maintenance forecasts predict yearly increases in required repairs.

[13] The existing PABT was constructed prior to enactment of the Americans with Disabilities Act and is considered grandfathered to these regulations. While PANYNJ has made considerable improvements to expand accessibility, any major construction or repair effort of the PABT would require full ADA compliance.

Engineering analysis completed by PANYNJ indicates that structural slabs for the existing PABT South Wing bus operating levels will be functionally obsolete unless significant investments are made in the 2027 to 2037 timeframe. The extent of required repairs to the concrete slabs, passenger waiting areas, vertical circulation, restrooms, mechanical systems, and compliance with the ADA and other building codes would result in significant reductions in the total number of available gates both during and after such renovation is completed. PANYNJ estimates that renovations would result in a reduction of total gates and an approximately 27% reduction in peak-hour capacity. This is further detailed in **Appendix 9A, "Bus Services**."

The existing PABT bus gate/position configuration does not adequately accommodate peak directional demands, most acutely in the PM peak hour; has insufficient bus storage and staging capacity; and provides inadequate pedestrian facilities (particularly over-crowded queuing areas and vertical circulation elements).

Commuter buses primarily operate on the PABT's third and fourth floors; arriving buses typically drop off passengers along the south-curb arrivals platform, which is heavily congested during the morning peak period. The majority of commuter bus service depart from pull-through gates with multiple loading positions that lack the capability for buses to bypass each other; the bus at the rear gate is invariably delayed by the buses loading in front of it.

Buses waiting for gate availability on the third and fourth floors of the North Wing (the only portion of the PABT that allows buses to recirculate) must loop repeatedly around the narrow roadways if a gate is not available. The southeast corner of the South Wing creates a choke point, as throughput is restricted to one lane. Due to the limited bus staging space, buses wait wherever there are open lanes, causing further congestion. Finally, the ramps do not permit buses to recirculate, and during the PM peak period if a bus has to leave the South Wing it can take up to 30 to 40 minutes to re-enter the terminal, further contributing to terminal congestion and service delays.

Deep sawtooth gates located on the Lower Level of the PABT are designated for intercity bus services. The Lower Level does not have direct access to the Lincoln Tunnel; intercity buses must use city streets to access the tunnel. During peak periods, the deep sawtooth bus gates can lead to delays as buses must back out of the gate, thus requiring other circulating buses to stop for departing buses. Prior to 2020 (pre-COVID-19 pandemic), PABT did not have enough gates to meet demand.[14] Bus companies would request a gate in the terminal, but if PANYNJ could not accommodate them the bus operator would apply for a street permit with the New York City Department of Transportation.

[14] As of this publication, the PABT is operating with a sufficient number of gates to meet bus demand. Forecasts indicate that as bus growth continues post-COVID bus demand will again exceed gate supply.

The existing ramps are also sensitive to disruptions as they are not wide enough to allow the bypass of a stalled bus. When too many buses occupy the outbound ramps, buses back up into the terminal building, blocking circulation paths to existing gates.[15]

Within passenger waiting areas, gates regularly have long passenger queues as the number of buses able to serve the gate are limited by the aforementioned factors.

See **Appendix 1A, "Purpose and Need,"** for additional information relevant to recent trends in PABT operations. See **Appendix 9A** for additional information related to the existing bus operations at the PABT.

1.4.2 Meeting Forecasted Year 2040 Bus Ridership

With its initial construction in 1950, and expansions in 1963 and the early 1980s, the existing PABT struggles to meet the current burgeoning demand of both buses and passengers and is not capable of meeting projected long-term demands. The PABT suffers from constraints that inhibit efficient bus operations and pedestrian circulation. Due to current gate configuration and circulation constraints within the terminal, the PABT currently operates with heavy congestion in the peak morning and evening periods, both for bus movements to and within the PABT and passenger handling at the terminal bus platforms.[16] Even with those constraints, the PABT regularly operates with approximately 764 arriving and departing buses in the PM peak hour, with 620 buses operating in the peak direction. The inadequate capacity presents an ongoing challenge to address street-level traffic congestion, delays, crowding, and service reliability failures.

Today's PABT operations benefit from an operationally flexible Lincoln Tunnel and the efficiencies provided by the contraflow XBL. The XBL alone accommodates more than 72,000 weekday morning (6 a.m. to 10 a.m.) passenger trips[17] and approximately 1,850 bus trips;[18] when coupled with other commuter bus routes (that do not use the XBL), the Lincoln Tunnel handles nearly 100,000 weekday morning peak period transit passenger trips across the Hudson River—more than any other trans-Hudson transit connection, including commuter rail to Penn Station.[19]

The growth in bus demand to the PABT has been robust, and passenger activity at the bus terminal has been growing rapidly.[20] PANYNJ reports annual bus departures at the PABT in its

[15] Typically, initial back-up of buses on the PABT ramps are caused by extreme congestion or an accident/incident in the Lincoln Tunnel. The blocked ramps can then cause back-ups for other buses trying to depart the terminal, which in turn can block access for buses trying to enter the terminal, eventually reaching either city streets or the Lincoln Tunnel.

[16] Peak periods are considered 7:00 a.m. to 10:00 a.m. and 4:00 p.m. to 7:00 p.m. PABT peak hours are 7:00 a.m. to 8:00 a.m. and 5:30 p.m. to 6:30 p.m.

[17] PANYNJ staff analysis, based on NYMTC Hub Bound Travel Data Report (2015 and 2016).

[18] https://panynj.gov/bridges-tunnels/en/lincoln-tunnel/xbl.html

[19] NYMTC's Hub-Bound Travel Data Report (2019) indicates 88,433 express bus passengers accessing the central business district via the Lincoln Tunnel during the morning peak period (7:00 a.m. to 10:00 a.m.) compared to 56,050 rail passengers using NJ TRANSIT rail to New York Penn Station. (Source: NYMTC Hub-Bound Travel Report (2019), Table 14-B).

[20] See **Appendix 1A** for information on PANYNJ's assessment of growth in bus ridership.

Annual Report and uses a Continuous Bus Survey to sample daily estimates of arriving and departing buses and passengers (see **Table 1-2** and **Appendix 1A** for more detail).

Table 1-2. PABT Annual Bus Departures

Year	Bus Departures	Year	Bus Departures
2005*	1,013,000	**2014**	1,166,000
2006*	1,030,000	**2015**	1,179,000
2007*	1,028,000	**2016**	1,193,000
2008*	1,060,000	**2017**	1,199,000
2009*	1,055,000	**2018**	1,203,000
2010	1,117,000	**2019**	1,190,000
2011	1,132,000	**2020****	835,000
2012	1,127,000	**2021****	840,000
2013	1,155,000	**2022****	865,400

Source: PANYNJ (2023), PANYNJ Annual Reports, 2005 through 2022.
* - Bus Departures for 2005 through 2009 are from PANYNJ Tunnels, Bridges & Terminals records.
** - Bus volumes affected by COVID-19 pandemic.

PANYNJ developed a trans-Hudson travel demand forecast between 2013 to 2015 to support planning efforts at the PABT, the Port Authority Trans-Hudson (PATH) system, and other PANYNJ facilities. This forecast was developed using a project-specific model based on the New York Metropolitan Transportation Council's (NYMTC) New York Best Practice Model (NYBPM). The NYBPM incorporated updates to NYMTC's approved regional employment forecast, which had been adopted during the recession in 2011, to reflect the latest economic data and forecasts available in 2013. The project-specific model also included substantial updates to NYMTC's transit networks in New Jersey, in order to reflect the most current information used at the time by NJ TRANSIT and the North Jersey Transportation Planning Authority.

Since the long-term forecasts used to estimate bus ridership destined for West Midtown Manhattan were completed in 2015, they do not account for changes in regional transportation as a result of the COVID-19 pandemic beginning in March 2020. PANYNJ forecasts completed in 2015 are based on demographic assumptions (location of residences and location of employment) that indicate growth trends in both commuter and intercity bus ridership are, and will be, robust and that significant under-served demand may offset any loss of ridership due to remote work in the future. Since these earlier assumptions remain valid, the forecast PANYNJ developed between 2013 to 2015 remains valid as a long-term forecast of bus ridership.[21] Should remote work practices continue to affect commuting behavior following the COVID-19 pandemic, then the timeline for reaching the bus ridership levels projected in these forecasts will be longer.

[21] NYMTC adopted its 2055 Socioeconomic and demographic (SED) forecasts on October 22, 2020. The report on the forecast acknowledges the onset of the COVID-19 pandemic but notes: "While the highly unusual nature of the pandemic and economic crisis may result in as-yet unforeseen changes, there is a stronger basis for the long-term projections and the use of 20-30 year change increments for analytic purposes" (NYMTC, Technical Memorandum 4: 2055 SED Forecasts Executive Summary & Public Comments (page 3)). Further, NYMTC states: "As new data emerges about the full scope of the impact of the pandemic and economic shock on regional employment and population trends, that information will be incorporated into the next vintage of forecasts" (page 3).

Based on data and projections by PANYNJ in coordination with bus operators, the increase to 337,000 passengers per day by the year 2040 includes approximately 42,500 evening peak-hour passenger arrivals and departures.[22] With an average occupancy of about 42 passengers per bus (given differences in bus sizes and with higher occupancy for evening peak-hour commuter and intercity departures), this results in a projection of 1,011 PM peak-hour buses arriving at and departing the terminal. Additional details about operations of the existing PABT, bus forecasts, and subsequent updates can be found in **Appendix 1A**.

The strong, long-term growth in bus ridership is paralleled by projected growth across all transit modes in the trans-Hudson transportation network, much of which is also currently operating at or near capacity.[23] On October 22, 2015, PANYNJ's Board of Commissioners authorized a *Trans-Hudson Commuting Capacity Study*[24] (the Capacity Study) to evaluate a range of strategies for meeting and managing the projected increases in trans-Hudson commuter demand in 2040 to inform its conceptual planning efforts for replacement of the PABT. The fundamental premise of the Capacity Study is that the transportation network that accommodates trans-Hudson commuter demand is an integrated system, as opposed to a series of stand-alone corridors, facilities, and services. Accordingly, the Capacity Study provides an updated overview of that system that considers potential investments in physical transportation infrastructure, operational changes to existing transit services, implementation of emerging technologies, and modifications to public policy – and the prospects for their implementation in the timeframe for planning and implementing the Proposed Project.

The Capacity Study demonstrated that opportunities to shift bus passengers to other modes are limited, given the geographic distribution of regional residences and the constraints of the regional transit networks (*i.e.*, bus riders may not have similar access to rail service and vice versa). This confirms that, despite capacity additions planned throughout the network and efficiencies afforded by advances in technology, efforts to address capacity and operations at the PABT are required. The near-term growth in bus ridership is equally a challenge, in light of required construction (to either repair the PABT or build operational capacity elsewhere) and lack of capacity and reliability on other modes such as rail or ferry, as outlined in the Capacity Study. PANYNJ recognizes that significant new investment in bus facilities is needed to adequately serve today's customers and to prepare for growing regional commuter bus demand. Technology investments, such as bus platooning, are expected to improve operating efficiency and facility productivity—both in the short term and long term—but they will not eliminate the need to address an aging and obsolete facility with capacity constraints.

[22] The evening peak hour is used for developing design options as the operations in the evening create a greater number of challenges than operations in the morning peak.

[23] During pre-COVID-19 pandemic conditions; as of this writing in 2023, transit was approaching 75% of pre-COVID-19 pandemic levels; https://data.ny.gov/Transportation/MTA-Daily-Ridership-Data-Beginning-2020/vxuj-8kew; https://www.panynj.gov/path/en/about/stats.html; https://www.northjersey.com/story/news/transportation/2023/11/01/nj-transit-bus-ridership-bounced-back-covid/71394013007/

[24] Trans-Hudson Commuting Capacity Study - Summary Report: https://www.panynj.gov/content/dam/bus-terminals/Trans-Hudson_Commuting_Capacity_Study-Summary_Report_9-21-16.pdf.

The PABT has historically accommodated a limited number of intercity private bus carriers. These private carriers provide service from the PABT to other points in the Northeast and Mid-Atlantic. Such carriers constitute approximately 10 to 15% of all buses utilizing the terminal. Over the past two decades, the Curbside Intercity bus market in New York City has grown rapidly in comparison to the terminal-based intercity bus volume.[25] The growth of Curbside Intercity service throughout Manhattan, with notable clusters of activity at West Midtown locations such as West 34th Street adjacent to the Jacob K. Javits Convention Center, has been raised as a community concern during PANYNJ stakeholder outreach, with the community hoping on-street bus operations can be accommodated within the terminal.[26]

1.4.3 Update Technology and Equipment and Modernize Services and Amenities

The passenger experience within the PABT, comprised of the passenger environment (ticketing areas, gates and queuing areas, and restrooms), and aesthetic features (building design and wayfinding features)—even with recent improvements—has failed to keep pace with the revitalized character of the surrounding Times Square, Hell's Kitchen, and Hudson Yards neighborhoods, and are unfitting for a gateway transit facility for the nation's largest city. PANYNJ committed over $375 million in the 2017-2026 Capital Plan toward interim improvements, which has been applied toward a series of improvements, including a Quality of Commute program, to address today's most critical needs in the existing terminal building while PANYNJ considers options for addressing the aging facility. Improvements include building systems, communications enhancements, and operational reliability; however, these measures do not, and cannot, address the fundamental operational and space deficiencies of the PABT (such as wayfinding and real-time schedule, gate updates, or broader improvements to accessibility).

1.4.4 Improve Bus Storage and Staging

Bus storage and staging is an important aspect of the existing and future PABT operations. Bus storage and staging for commuter and intercity buses has historically been provided within the terminal and surface lots (owned or leased by PANYNJ or bus operators) in the vicinity of the PABT. While not all of an operator's bus fleet can remain in Manhattan during the midday, the ability to accommodate storage and staging for additional buses would improve operations and reliability.[27] Bus storage entails midday bus parking and storage for multiple hours between the AM and PM peak periods. Bus staging is the short-term dwelling of buses waiting to enter the

[25] A 2018 study from the Chaddick Institute for Metropolitan Development at DePaul University cited a number of factors contributing to projected expansion of intercity bus routes and enhanced service for intercity customers intended to try to make buses more competitive with rail or air shuttle services. This growth in the intercity market comes, in part, with a desire "to move intercity bus service into public transit terminals and Amtrak stations" (p. 19).

[26] Charter, tour-bus, and jitney services are not considered to be within the category of Curbside Intercity buses..

[27] Buses able to remain in Manhattan during the midday avoid an empty non-revenue (i.e., 'deadhead') trip back to New Jersey, and potentially an empty return trip to Manhattan. Buses arriving at the terminal from New Jersey are subject to any congestion west of the Hudson or in the Lincoln Tunnel and must time their arrival to avoid being too early (which may result in idling, recirculating on city streets, or trying to wait inside the terminal) or too late (resulting in service delays). Not all buses are able to remain in Manhattan, even were sufficient midday storage / staging space were created. Buses return to New Jersey to provide midday service, maintenance, or to be available for emergency service contingencies.

PABT (dwell time of less than an hour; typically, 20 minutes), where the bus cannot be left unattended.

Buses that are currently stored at surface lots must use local streets to travel back to the PABT. With limited space within the PABT for staging, buses are sometimes required to circulate on local streets until the scheduled gate becomes available.

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, combined with additional surface bus parking spaces.[28] However, the need for bus storage and staging in close proximity to the terminal remains, especially as bus volumes are projected to rise..

Currently, when a bus arrives at a gate before its scheduled departure, it needs to wait behind another bus at the gate, causing congestion in the terminal that can back up into the ramp system. When staged closer to the gates for departure service, buses can be deployed efficiently in a "just-in-time" manner, moving quickly to the assigned gate to load passengers, reducing delays in the system and thereby resulting in improved on-time performance.

1.5 GOALS AND OBJECTIVES

PANYNJ established six goals and supporting objectives to address the purpose and need for addressing commuter and intercity bus service in West Midtown Manhattan (**Table 1-3**). The supporting objectives further define the goals and afford specific and measurable means to evaluate potential alternatives.

[28] See **Appendix 1A**.

Table 1-3. Goals and Objectives

GOALS	OBJECTIVES
1. Improve Trans-Hudson bus operations	a. Provide direct linkages to Lincoln Tunnel portals. b. Create linkages to bus storage and staging to optimize operations and minimize impact to local streets. c. Accommodate larger buses and new bus technologies.
2. Improve the passenger experience within the Terminal	a. Utilize sustainable building design technologies or practices that enhance environmental performance. b. Incorporate State-of-the-Art building design, communications, and passenger amenities (*e.g.*, gates and queuing areas, ticketing, restrooms, and waiting areas) to promote ease of use and reliability of the passenger experience. c. Foster safety and security improvements in terms of design, operations, and site location.
3. Provide seamless passenger accessibility	a. Maintain or improve connections to transportation systems currently accessible from PABT, in particular NYCT subway and bus, and other modes including bicycle networks, as practicable. b. Maintain or improve pedestrian accessibility between the PABT and traveler origins and destinations. c. Enhance passenger experience and flows within and around the new Bus Facility. d. Minimize impacts to bus passengers during construction.
4. Strive to achieve consistency with local and regional land use plans and initiatives	a. Integrate with West Midtown development projects. b. Provide opportunity for civic space and local retail opportunities. c. Maintain regional economic vitality. d. Integrate with urban fabric and respect community character. e. Minimize impacts to local community during construction.
5. Develop a project that optimizes life-cycle costs	a. Minimize capital cost. b. Minimize operating and maintenance costs. c. Create ability to temporarily close portions of the Facility during off-peak operating hours. d. Allow for phased construction and early initiation of operations. e. Minimize need to build temporary facilities. f. Minimize construction timeframe. g. Provide private development opportunities on PANYNJ properties.
6. Reduce the impacts of bus services on the built and natural environment	a. Reduce bus idling, unnecessary bus circulation, and traffic impacts on local city streets. b. Reduce bus vehicle miles traveled on city streets. c. Reduce bus idling within the Facility.

Source: PANYNJ (2019)