Chapter 6 | Major Transportation System Improvements & Actions

1. Overview
2. Recommended Major Improvements & Actions
1. OVERVIEW

Plan 2045 makes a variety of recommendations to be undertaken during the planning period. Chapter 5 included recommendations related to TSM&O. This chapter will detail major transportation system improvements and actions recommended for the planning period. A listing of recommended projects, proposals and studies appears in Appendix 1 for transit, roadways and bridges; Appendix 2 for non-motorized modes, Appendix 6 for specialized transportation services, and Appendix 8 for goods movement.

The recommended projects described in this chapter are in various stages of development: some are purely conceptual vision projects, while others have been more fully defined through planning work, design, or engineering, or specification and are programmed within the fiscally-constrained element of Plan 2045. All of the recommended projects require development before the costs can be finalized for their implementation. These short-, medium-, and long-term transportation improvement projects all support Plan 2045’s strategic goals and desired outcomes.
The Plan’s strategic framework guides the investments that are recommended for various aspects of the transportation system. The connection between these recommended investments and the Plan’s goals and desired outcomes is summarized below:

> The goal of enhancing the regional environment will be supported by actions and strategies that should reduce congestion, decrease greenhouse gas emissions, improve air and water quality, and preserve open space. Among the transportation investments and initiatives that will support this goal are those that provide safe and convenient pedestrian and bicycle travel; manage rail and vehicular congestion; encourage mass transit use by increasing capacity, integration, and accessibility; modernize infrastructure through replacements and rehabilitations that maximize efficiency and useful life; and consider a range of environmental issues and impacts in planning and evaluation studies.

> Improving the regional economy will bring sustainable growth and accommodate the mobility of people and goods in the NYMTC planning area. Planned and programmed projects that support this goal will increase transportation connectivity and efficiency, modernize or replace bridges and other linking facilities; encourage Transit-Oriented Development (TOD) and complementary land-use policies; and optimize the movement of freight to, from, within and through the multi-state metropolitan region through rail and roadway improvements.

> Initiatives and projects that will pursue the goal of improving the regional quality of life in order to realize improved mobility, safety, and accessibility, and a resulting vibrancy in communities. These include rehabilitating or replacing facilities, and managing traffic flows and congestion to mitigate security and safety risks; coordinating planning to address the special needs of pedestrians, bicyclists, persons with disabilities, and older adults; conducting impact studies in dialogue with the public and community stakeholders; improving transportation experiences, including travel times, ease of connectivity, and accessibility, through modernization and expansion projects; and considering negative externalities, community needs, and environmental impacts throughout the planning process.

> The goal of providing convenient and flexible transportation will be supported by actions and strategies that will help increase the regional transportation system’s connectivity, reliability, and ridership. These include modernizing infrastructure through replacements and rehabilitations that maximize efficiency, safety, and ease of access; increasing multi-modal, inter-regional, and intra-regional transit choices, expanding the capacity and reach of passenger and freight transportation infrastructure; and considering special needs individuals and underserved communities throughout the planning process.

> The goal of building the case for obtaining resources to implement regional investments will be aided by recommended actions and strategies that enhance the ability to finance coordinated, prioritized projects with a variety of funding methods.

> Actions and strategies that will promote coordinated, ongoing safety and security measures to reduce the rate of annual injuries and fatalities will assist in pursuing the goal of enhancing transportation safety and security. The initiatives and projects relating to this goal include consideration of pedestrian and bicyclist safety in roadway planning; rehabilitating or replacing outdated facilities through modernizations and improvements to mitigate safety and security risks; managing traffic flows and congestion; and enhanced data collection.

> The goal to improve the resiliency of the transportation system will be support by projects and actions that focus on “hardening” the transportation system and by evolving partnerships among agencies to help reduce impacts of disasters on the movement of goods and people.

> Finally, preserving the existing transportation system will be supported by system preservation projects that will keep transit infrastructure in a state of good repair; preserve existing roadways, bridges and tunnels; protect the existing freight network; and preserve exiting pedestrian and bicycle facilities.
2. RECOMMENDED MAJOR IMPROVEMENTS & ACTIONS

Plan 2045’s recommended improvements and actions fall into two distinct categories: programmed projects that are in the Plan’s fiscally-constrained element and aspirational projects, proposals and studies that are in the Plan’s vision element. Programmed projects in the fiscally-constrained element are sufficiently developed that likely costs and potential funding are defined. The aspirational vision projects are those projects, proposals, and studies that are relatively undefined and in almost all cases do not have an identified source of funding. Vision projects are often moved into the constrained Plan when they are sufficiently defined.

Fiscal constraint is an important federal requirement and threshold in the metropolitan transportation planning process. Fiscal constraint requires that revenues in transportation planning and programming (Federal, State, local, and private) are identified and “are reasonably expected to be available” to implement the metropolitan long-range Regional Transportation Plan and the Transportation Improvement Program, while providing for the operation and maintenance of the existing highway and transit systems. Plan 2045’s fiscal constraint is described and established in Chapter 7. Generally, when a project is placed in the fiscally-constrained element of the Plan, it becomes eligible to receive federal transportation funding for its implementation.

Generally, over time, projects in the fiscally-constrained element of the Plan move into the Transportation Improvement Plan (TIP), which is a program of prioritized transportation improvements identified by NYMTC members for implementation using federal funding in whole or in part. Projects on the TIP are well defined, with the anticipated schedule and cost of each improvement. As the TIP represents the first five years of the Plan 2045 planning period, it is consistent with its goals, objectives and policies. The TIP is an enabling document which makes federal reimbursement of project expenses possible. The TIP is linked to the financial analysis in Chapter 7, but the projects are not included in the lists of projects in Appendix 1 of this Plan.
CATEGORIES OF MAJOR IMPROVEMENTS & ACTIONS

One category of recommended investments and initiatives recommended by Plan 2045 is focused on preserving the transportation system, while others enhance the capacity and accessibility of the system, and expand its reach and integration. The following list of significant investments and initiatives are categorized as preserving or enhancing the system, and each is important to the region as a whole and to the strategic vision of sustainable regional growth.

PRESERVING THE TRANSPORTATION SYSTEM

Many capital investments in the NYMTC planning area are directed to the preservation of the region’s extensive and relatively old transportation infrastructure. System preservation is a critical part of Plan 2045’s strategic framework that protects past investments in the system and support a platform for future investment.

System preservation is to be accomplished through day-to-day Operations and Maintenance (O&M) as well as lifecycle replacement, rehabilitation or reconstruction of all system components, including public transit facilities and equipment; roadways, bridges, and tunnels; and non-motorized transportation infrastructure such as walkways, trails, paths, and greenways.

ENHANCING THE TRANSPORTATION SYSTEM

Capital investments and projects also address the need to enhance capacity and accessibility of transportation in the NYMTC planning area. These type of investments will help create a framework to support growth in a more sustainable fashion by bringing together local land use decisions and regional transportation investment decisions and focusing transportation and development projects to produce complementary and more sustainable outcomes.
MAJOR METROPOLITAN TRANSPORTATION INVESTMENTS
NYMTC’s adopted procedures for major projects are as follows:

a) Major projects will be identified by sponsoring agencies working in the context of the regulations and NYMTC.

i) For the purposes of the NYMTC transportation planning process, major projects are considered to be those with an estimated total cost of $100 million or more to be funded through federal financial assistance and/or any other projects identified by FHWA as major projects.

ii) For transit projects that do not include FHWA funding, the major project requirements do not apply. Transit projects that have no FHWA funding would only be subject to FTA’s New Starts process and NEPA requirements.

iii) Projects meeting the thresholds for major projects that are multi-modal in nature are subject to the major project requirements for all of the alternatives being considered. Both the major projects and the New Starts/NEPA processes will apply to multi-modal projects.

b) Once identified, the major project must be specified in NYMTC’s Regional Transportation Plan.

i) The major project must be specified in the constrained element of the Plan, except in cases where it is defined as a pure planning study. Then it may be specified in the Plan’s vision element.

   (1) If the NEPA process has commenced for the project, it must be specified in the constrained element as a prerequisite for federal review of a Draft Environmental Impact Statement and for federal funding to be used to begin preliminary design.

   ii) The major project specification in the Plan must include a purpose and need statement, a description of a reasonable range of alternatives for the major project, particularly for projects in the constrained element – a range of potential project costs and contingencies related to the alternatives if appropriate, and descriptions of potential environmental justice/Title VI implications of the project, critical environmental areas that might be affected by the project and historic preservation implications of the project.

   (1) The costs specified in the major project specification must be accounted for in the Plan’s long-range fiscal assessment.

   iii) All applicable public review requirements related to the amendment of the Plan must be followed to specify a major project.

c) Once specified in the Plan, the major project will be subject to the applicable federal requirements and FHWA guidance.

Plan 2045’s Appendix 9 contains information on major that fulfills these requirements under the NYMTC operating procedures for programmed projects in the fiscally-constrained element. Those projects are itemized here, with detailed information available in the appendix:

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BRONX

Bronx River Parkway Bridge Replacements  Total
Projected Cost ($ million): $270.0
Projected Completion Year: 2026;
Category: Preservation

Bruckner Expressway Bridge Replacement  Total
Projected Cost ($ million): $292.0;
Projected Completion Year: 2021;
Category: Preservation

Bruckner Expressway Viaduct Rehabilitation (Phases 1 & 2)
Total Projected Cost ($ million): $330.0
Projected Completion Year: 2021
Category: Preservation

Major Deegan Expressway Bridge Rehabilitations
Total Projected Cost ($ million): $182.0, $100.0
Projected Completion Year: 2022, 2025
Category: Preservation

Cross-Bronx Expressway Bridge Rehabilitations
Total Projected Cost ($ million): $269.0
Projected Completion Year: 2022
Category: Preservation
BROOKLYN

Brooklyn-Queens Expressway Rehabilitation from Sands Street to Atlantic Avenue
Total Projected Cost ($M): $1,710.8
Projected Completion Year: 2025
Category: Preservation

Belt Parkway Bridge Replacements
Total Projected Cost ($ million): $108.2, $263.7
Projected Completion Years: 2018, 2021
Category: Preservation

QUEENS

Kew Gardens Interchange Phases 2B & 3
Total Projected Cost ($ million): $155.0, $330.0
Projected Completion Years: 2020, 2021
Category: Enhancement

Brooklyn-Queens Expressway Bridge Rehabilitation
Total Projected Cost ($ million): $195.0
Projected Completion Year: 2026
Category: Preservation

Great Streets Vision Zero – Queens Boulevard
Total Projected Cost ($ million): $103.0
Projected Completion Year: 2024
Category: Enhancement

MANHATTAN

Harlem River Drive Viaduct Replacement
Total Projected Cost ($ million): $195.3
Projected Completion Year: 2018
Category: Preservation

West 79th Street Bridge Rehabilitation
Total Projected Cost ($ million): $127.6
Projected Completion Year: 2021
Category: Preservation

11th Avenue Viaduct Reconstruction
Total Projected Cost ($ million): $118.5
Projected Completion Year: 2022
Category: Preservation

STATEN ISLAND

Bayonne Bridge Navigational Clearance Project
Total Projected Cost ($ million): $1,600.0
Projected Completion Year: 2019
Category: Enhancement

Goethals Bridge Replacement
Total Projected Cost ($M): 1,500.0
Projected Completion Year: 2019
Category: Enhancement
MULTI-BOROUGH

Brooklyn Bridge, Manhattan Bridge & Ed Koch Queensboro Bridge Seismic Retrofits
Total Projected Cost ($ million): $175.0, $175.0, $175.0
Projected Completion Years: 2028, 2025, 2025
Category: Preservation

Ed Koch Queensboro Bridge Upper Roadways Replacement
Total Projected Cost ($ million): $250.0
Projected Completion Year: 2021
Category: Preservation

Rehabilitation of Brooklyn Bridge Approaches
Total Projected Cost ($ million): $287.5
Projected Completion Year: 2021
Category: Preservation

Broadway Bridge Rehabilitation
Total Projected Cost ($ million): $158.5
Projected Completion Year: 2020
Category: Preservation

Kosciuszko Bridge Replacement
Total Projected Cost ($ million):
$ 685.0 (Phase 1) and $330.495 (Phase 2)
Projected Completion Year:
2017 (Phase 1) and 2020 (Phase 2)
Category: Enhancement

NASSAU COUNTY

Nassau Hub Transit Initiative
Total Projected Capital Cost ($ million):
$400.0 (full build out, in 2012 $), $95 million (initial operating segment (IOS), in 2012 $)
Projected Completion Years:
2021 (IOS), 2035 (full build out)
Category: Enhancement

SUFFOLK COUNTY

NY 347 Corridor Reconstruction & Green Route Implementation (remaining phases)
Total Projected Cost ($ million): $565.0
Projected Completion Year: 2032
Category: Enhancement

MAJOR TRANSIT INVESTMENTS

As noted in NYMTC procedures for major projects:

ii) For transit projects that do not include FHWA funding, the major project requirements do not apply. Transit projects that have no FHWA funding would only be subject to FTA’s New Starts process and NEPA requirements.

Given the differing requirements for major transit projects, Plan 2045’s recommended major transit investments which are programmed in the fiscally-constrained element do not appear in Appendix 9 but are outlined here:

NEW YORK CITY

Second Avenue Subway Phases 2-4
The Second Avenue Subway project will ultimately include an 8.5-mile two-track line along Second Avenue from 125th Street to the Financial District in Lower Manhattan. In addition to the three new stations that opened on January 1, 2017 as part of Phase 1, thirteen new accessible stations compliant with the Americans with Disabilities Act will be constructed. Design and environmental review activities for Phase 2 (E.96th St to E.125th St.) are now underway by the MTA. Plan 2045 includes Phases 3 and 4 in the fiscally-constrained element. Category: Enhancement

Select Bus Service (SBS) Projects
SBS projects that are being planned and implemented in New York City will improve the speed, reliability, and appeal of bus transit by bringing elements of bus rapid transit (BRT) into the operation of specific transit routes. The projects are jointly developed by MTA New York City Transit (NYCT) and New York City Department of Transportation (NYCDOT). The routes currently recommended for implementation are listed below. Category: Enhancement

> 14th Street, Manhattan
Projected Implementation: 2018 or 2019

> Bushwick–Downtown Brooklyn
Projected Implementation: 2020

> Flatbush Avenue, Brooklyn
Projected Implementation: 2020
MTA Communications-Based Train Control (CBTC) Subway Enhancements
Currently in operation on the L and 7 subway lines, CBTC enables the MTA to address heavy passenger demand and record subway ridership by reducing subway headways, safely spacing trains more closely together, and adding passenger capacity to the subway system as a whole. Near-term plans are for installing CBTC on the Queens Blvd., Culver, and 8th Avenue Subway Lines as well as supportive ancillary equipment.

Category: Enhancement

James A. Farley Building Redevelopment, Moynihan Station Phase 2
This project redevelops the historic James A. Farley building as a 1.1 million SF mixed-use transportation hub, featuring a new sky-lit train hall constructed within the original Farley courtyard, with direct access to the train platforms below, which at one time serviced USPS operations in the building. The project, sponsored by the Moynihan Station Development Corporation, will expand the existing Penn Station rail complex to the west and dramatically increase both the amount of concourse space and the number of vertical circulation points for passengers between the platforms and street-level, thereby easing congestion across the facility and speeding the loading and unloading of trains. Additional elements of the project include: restoration of the building’s historic architectural features; a 32nd Street pedestrian corridor linking the train hall with the development west of 9th Avenue; continuing service as a postal facility, including the original retail postal lobby on 8th Avenue; 675,000 SF of private commercial development of the remainder of the building, primarily for office and retail use; and, structural and resiliency reinforcements to the building and train shed below it.

The project will be completed through a public-private partnership arrangement with a projected cost is $1.6 billion and completion year of 2020.

Category: Enhancement

Canarsie Power Project
This project includes the addition of three electric power substations and related improvements to the Canarsie Line and tube and the addition of vertical circulation elements at Bedford Avenue (Brooklyn) and 1st Avenue (Manhattan) stations. These improvements will allow additional peak-hour trains to be operated thereby relieving existing train crowding, and reducing dwells and uneven loading conditions on trains. These improvements will also relieve existing platform and stair congestion, easing travel conditions and improving operating reliability.

Construction is projected to be completed in 2021 at a cost of approximately $300 million.

Category: Enhancement

Jamaica Capacity Improvements
The project includes the creation of a new platform and tracks at the Jamaica station, the LIRR’s central hub and main transfer point. The new platform and tracks at Jamaica station will allow the LIRR to more easily re-route trains, take tracks out of service and support supplemental train service to and from Atlantic Terminal. The project will also modernize the Jamaica Station infrastructure, which was built in 1913, streamline the existing track configuration and speed service.

Construction is projected to be completed in 2021 at a cost of approximately $140 million.

Category: Enhancement
**LONG ISLAND**

**LIRR East Side Access**
The project will connect the LIRR’s Main and Port Washington lines in Queens to a new terminal beneath Grand Central Terminal in Manhattan. The new connection will increase the LIRR’s capacity into Manhattan and dramatically shorten commuting time from Long Island and eastern Queens to Manhattan’s East Side when opened for service in 2025 at a cost of approximately $4.7 billion ($2.4 billion of which is programmed in the FFYs 2017-21 TIP).

*Category: Enhancement*

**LIRR Ronkonkoma Branch Second Track Project**
The project entails the construction of an uninterrupted second track between Farmingdale and Ronkonkoma on the LIRR Ronkonkoma Branch. The Second Track Project will improve service and reliability on the Ronkonkoma Branch, spur economic activity and improve LIRR service to Long Island MacArthur Airport.

Construction is projected to be completed in 2019 at a cost of approximately $250 million.

*Category: Enhancement*

**Nicolls Road Multimodal Corridor**
The Locally Preferred Alternative for this corridor is comprised of two BRT routes operating from Stony Brook in the north to Patchogue in the south and connecting key destinations including Stony Brook University, Stony Brook University Hospital, Suffolk County Community College Ammerman Campus, St. Joseph’s College, Ronkonkoma Hub, Long Island MacArthur Airport, and Patchogue Village. In addition, the route will create a transit link between the three lines of the LIRR, providing a connection between LIRR stations at Stony Brook, Ronkonkoma, and Patchogue. The corridor will also feature a hiking/biking trail adjacent to the route, offering residents and commuters with an additional mode of access to the corridor.

This project is slated for completion in 2020 at a cost of approximately $80 million.

*Category: Enhancement*

**LIRR Expansion Project**
The Metropolitan Transportation Authority’s (MTA) Long Island Rail Road (LIRR) is proposing the LIRR Expansion Project from Floral Park to Hicksville (the “Proposed Project” or “LIRR Expansion Project”). The Proposed Project extends 9.8 miles between the...
LOWER HUDSON VALLEY

**MNR Penn Station Access**
The project will open a new MNR link directly into Penn Station via the New Haven Line and Amtrak’s Hell Gate Line. Only three miles of new track alongside existing tracks on an existing right-of-way and no new tunnels would need to be built for this project. As part of this project, MNR will build four new stations in the Bronx, Co-op City, Morris Park, Parkchester, and Hunts Point.

This project is slated for completion in 2023 at a cost of $695 million.

*Category: Enhancement*

**Lower Hudson Transit Link**
A program of integrated transit-supportive infrastructure projects along the I-287/I-87 corridor, including the parallel and connecting arterial highways, within Rockland and Westchester counties. The project will initiate implementation of the consensus regional transit plan put forth by the Mass Transit Task Force convened by NYSDOT, the New York State Thruway Authority and partnering agencies. The various project elements include new distinctive buses, shelters and modern passenger amenities at a combination of existing and proposed new bus stop locations; pedestrian safety and operational improvements at the bus stop/shelter locations and adjacent intersections along Routes 59/119/9; and an Integrated Corridor Management system to maximize efficiencies of the existing traffic and transit networks. Collectively, the project elements will seek to enhance the quality and reliability of the existing east-west transit service in the corridor by laying the foundation for introducing BRT service, as well as improve the overall safety and traffic operations for all users of the transportation network.

This project is slated for completion in 2018 at a cost of approximately $90 million.

*Category: Enhancement*

**Route 110 Bus Rapid Transit**
The project will introduce a BRT system to the Route 110 corridor and will require roadway and traffic signal modifications, including dedicated bus lanes, traffic signal priority, queue jumps, stations, and other capacity improvement measures. The route will provide a necessary connection between the regional assets along the route including the Walt Whitman Mall, Huntington, Melville, SUNY-Farmingdale, and the Amityville LIRR.

This project is slated for completion in 2021 at a cost of $28 million.

*Category: Enhancement*
VISION PROJECTS & STUDIES
As indicated earlier, aspirational vision projects are those projects, proposals, and studies that are relatively undefined and in almost all cases do not have an identified source of funding. Vision projects are often moved into the constrained Plan when they are sufficiently defined. The following vision projects and studies are notable for their potential to define major and/or regionally-significant investments in the medium- and long-term future.

NEW YORK CITY

Hunts Point Interstate Access Improvement Project
The purpose of the project is to provide improved interstate access between the Bruckner (I-278) and Sheridan (I-895) expressways and the Hunts Point Peninsula, reducing the use of local streets by automobiles and trucks traveling to and from the commercial businesses located on the peninsula. In addition, the project will address structural and operational deficiencies related to the existing infrastructure within the established project limits.

Arthur E. Sheridan Expressway Enhancement Project
This project will enhance the Arthur V. Sheridan Expressway (I-895) to provide the community with a safe & accessible route to the waterfront and park in Bronx.

Brooklyn and Manhattan Waterfront Greenways
These projects focus on the continued development and design of greenways along the waterfront in Brooklyn and Manhattan. See Appendix 2 for additional details.

Hudson River Valley Greenway Link
The Hudson River Valley Greenway is actually a multicounty network of trails which generally bracket the Hudson River extending from Lower Manhattan to Troy, New York. This project will address a missing link in the Greenway between northern Manhattan and the Old Croton Aqueduct in Yonkers.

New York City Smart Truck Management Plan
The New York City Department of Transportation is leading an effort that aims to enhance the economic vitality and quality of life for all New Yorkers by providing for the safe, efficient, and environmentally responsible movement of goods. The Smart Truck Management Plan’s goals are to: improve safety for all road users; reduce truck-related congestion; improve trucking industry environmental performance; create a culture of compliance with truck-related regulations; support New York City’s economy through more efficient goods movement and deliveries; expand partnerships with the freight and trucking industry; and identify, evaluate, and invest in essential freight corridors. The Smart Truck Management Plan will identify and implement a series of regulatory, procurement, and partnership strategies, and produce a city-wide and series of borough truck freight plans.

Hudson Tunnel Project
The purpose of the Hudson Tunnel Project is to preserve the current functionality of Amtrak’s Northeast Corridor (NEC) service and New Jersey Transit’s commuter rail service between New Jersey and Penn Station by repairing the deteriorating North River Tunnel; and to strengthen the NEC’s resiliency to support reliable service by providing redundant capability under the Hudson River for Amtrak and NJ TRANSIT. Construction of the new Hudson Tunnel is expected to take approximately seven years after obtaining the environmental approvals, permits and real estate, and subject to availability of a steady stream of funding. After the new tunnel is complete, rehabilitation of the existing NEC rail tunnel beneath the Hudson River (the North River Tunnel) will take another three years. A preliminary schedule aims to complete the new tunnel in 2026 to enable the planned rehabilitation of the existing tunnel to be complete in 2030.

Hudson Yards Right-of-Way Preservation Project
In Manhattan, it is anticipated that the Hudson Tunnel Project will utilize concrete casings previously incorporated into plans for the ongoing Hudson Yards development to preserve a right-of-way for additional rail tunnel connections to the Penn Station complex. Concrete casing sections No. 1 and No. 2 have been
constructed beneath 11th Avenue, and the Eastern Rail Yard. Concrete Casing Section No. 3 beneath the Western Rail Yard would complete the protective ROW construction beneath the Hudson Yards development.

Amtrak Gateway Program
This program is a critical part of Amtrak’s NEC planning that will address the need for trans-Hudson tunnel redundancy and added capacity for commuter, regional and long-distance intercity services. It will address critical capacity issues, safety, and operational needs in the congested segment of the NEC stretching from Newark, NJ to the west side of Manhattan.

Port Authority Bus Terminal Replacement
Following several years of preliminary planning, the Port Authority of New York and New Jersey has taken formal steps toward planning for the redevelopment of the outmoded Port Authority Bus Terminal, which opened in 1950. The agency’s Board of Commissioners approved a ten-year capital program in early 2017 allocating an initial $3.5 billion toward the cost of a replacement facility, and funding to improve conditions at the existing facility. The Board also authorized funds to initiate formal planning for the PABT Redevelopment Program as well as for intermediate actions to maintain sufficient bus staging and storage on both sides of the Hudson River. Initial planning and external engagements suggest a consensus on the need to replace this critical transit facility in West Midtown. Planning challenges include safeguarding the neighborhood quality of life, achieving more efficient bus network and terminal operations, and evaluating multi-modal strategies to serve forecast growth in the commuter and intercity markets that rely on the PABT and other capacity-constrained trans-Hudson transit connections.

Cross Harbor Goods Movement Program
In January 2016, the FHWA issued a Record of Decision (ROD) for the Tier 1 Final Environmental Impact Statement (FEIS) for the Cross Harbor Freight Program. The primary purpose of the Cross Harbor Freight Program (CHFP) is to improve the movement of the freight across New York Harbor between the east-of-Hudson and west-of-Hudson regions. By improving the movement of goods across the harbor, the project would provide near-term and long-term improvements to the regional freight network, reduce truck traffic congestion, improve air quality, and provide economic benefits. After analyzing a number of alternatives, the Enhanced Railcar Float Alternative and the Rail Tunnel Alternative (a double track tunnel with vertical clearances to accommodate double stack intermodal service) were selected as the two preferred alternatives. These two alternatives will be further developed in the upcoming Tier 2 analysis.
Brooklyn-Queens Connector (BQX)
The BQX is a new, state-of-the-art streetcar system being planned by the City of New York. The BQX will be efficient and emissions-free and it will run on tracks flush with the existing roadway. Possibly constructed without overhead catenary wires or underground power sources, it will also be resilient against major weather and flood events. BQX trains will be ADA (Americans with Disabilities Act) accessible and will accommodate bicycle parking. The BQX will link neighborhoods along a 16-mile route from Astoria to Sunset Park. Stops are expected to be approximately ½ mile apart and the line will connect to up to 10 ferry landings, 30 different bus routes, 15 different subway lines, 116 Citi Bike stations, and 6 LIRR lines. It will travel primarily in dedicated lanes, separated from traffic and bicycles along the route. This project is anticipated to cost approximately $2.5 billion to construct and approximately $30 million per year to operate and maintain. Construction of this project could begin in 2019.

Van Wyck Expressway Capacity & Access Improvements to John F. Kennedy (JFK) Airport
The purpose of the project is to provide increased capacity on the Van Wyck Expressway between the Kew Gardens Interchange and JFK Airport to improve vehicular access to and from the airport. In addition, the project will address the operational, geometric, and structural deficiencies on the Van Wyck Expressway between the Kew Gardens Interchange and JFK Airport. A reasonable range of alternatives is currently being developed and will be refined during the NEPA scoping process in consideration of agency and public comments received. Notice of the Environmental Impact Statement (EIS) was published in the Federal Register on June 1, 2017.

LaGuardia AirTrain
As part of the LaGuardia Airport redevelopment program, the Port Authority is initiating planning for a project to create an AirTrain between the redeveloped airport terminals and Willets Point, Queens, providing a convenient and reliable link between airport and the LIRR and No. 7 subway at the Willets Point stations, thereby improving access to the Manhattan Central Business district, the Borough of Queens, and Nassau and Suffolk counties.

LONG ISLAND

Long Island Motor Parkway Trail
The Long Island Motor Parkway, also known as the historic Vanderbilt Parkway, was the first roadway designed for automobiles only. Parts of the parkway survive today in sections of other roadways and as a bicycle trail in Queens. Nassau County now seeks to develop an 18 mile continuous, multi-use trail that will utilize the route of the historic parkway. When implemented, the new Motor Parkway Trail will once again provide an important recreational connection through Nassau County, but this time for hikers and bicyclists. Furthermore, the Trail will provide an important alternative transportation link between communities, open space resources and employment centers for those wishing to walk or bike through Nassau County to these destinations. The full project is expected to be completed in segments by 2030 at a cost of about $25 million.

Shoreham Deep Water Port Feasibility Study
The proposed Deep Water Port would be located at the long-since abandoned nuclear power plant in Shoreham, Suffolk County. The majority of goods delivered to Long Island currently arrive by truck. This facility would provide a place where cargo can arrive by ship and reduce the truck traffic currently utilizing our roads, bridges and tunnels. The study will determine potential market(s), assess the viability of direct marine transfers of imports from New York City metropolitan area ports, and evaluate whether the potential advantages of the Shoreham site are sufficient to overcome any existing constraints.

Sagitkos State Parkway/Sunken Meadow State Parkway Operational Study
In addition to the transit options for the Sagtikos Parkway being investigated by Suffolk County as part of Connect Long Island, NYSDOT is conducting an operational study from Southern State Parkway to NY25A, including the parallel roadways in the towns of Islip and Smithtown to determine future repairs required.
I-84 Capacity Improvements between the Connecticut State Line and I-684
This project will improve capacity on I-84 in conjunction with similar improvements on I-84 in Connecticut.

Central Avenue Bus Rapid Transit
The 14.4-mile long Central Avenue corridor serves Westchester County between White Plains and the Bronx, linking Westchester to New York City. Major destinations along the corridor include downtown White Plains, Westchester County Center, the shopping areas along Central Avenue, Cross County Shopping Center, Yonkers Raceway, the New York City Subway, and Bee-Line System routes. In 2016, a Transit Signal Priority (TSP) system consisting of 48 intersections and three queue jumps became operational at key intersections in White Plains, Greenburgh and Yonkers. The next phase will be an overall BRT service in the corridor which would reduce travel times, attract new riders, improve mobility, create an integrated and customer friendly transit service, and improve operating efficiency. Additional elements that could be implemented include limited stop operations, preferential lane treatments, and attractive stations with customer amenities, faster fare collection, brand identity, and alignment with TOD in the corridor.

Transit Improvements in East-West Corridors
A planning analysis of two major east-west Bee-Line System bus routes has been completed. The analysis looked at the Route 13, serving Ossining, Tarrytown, White Plains and Port Chester, and the Route 7, extending from Yonkers to Mount Vernon to New Rochelle, and recommended bus stop consolidations, alternative routing and roadway/traffic treatments to improve the efficiency of bus operations. Implementation of the recommendations will begin in 2017.

Brewster Village Walkable Community Initiative
The Village of Brewster in Putnam County is undertaking a TOD revitalization initiative along their Main Street corridor that includes a multi-modal subsurface parking structure that will mitigate congestion, attract new riders to the adjacent MNR train station while connecting to the PART and HART bus services, all of which furthers regional economic development opportunities.
CSX River Line, Second Track
Trains dispatched from Selkirk Yard near Albany, New York travel south along the west shore of the Hudson River through Rockland County to yards in Northern New Jersey. Passenger trains are absent from this heavily used route south of Selkirk, which has seen some lengthening and addition of passing sidings to accommodate rail traffic growth and improve reliability. CSX is planning capacity expansions along this route.

Nanuet TOD Plan
The Town of Clarkstown in Rockland County has been awarded a grant from the New York State Energy Research and development Authority under the Cleaner, Greener Communities Program. The grant will be used toward developing a plan to redevelop Nanuet into a mixed-use, transit-oriented neighborhood centered on a new Multi-Modal transit station.

REGIONAL

NEC Future
In December 2016 the Federal Railroad Administration released the Tier 1 Final Environmental Impact Statement (FEIS) for NEC Future, the comprehensive planning effort for the NEC rail line from Washington, D.C. to Boston. The Selected Alternative maintains and improves service on the existing NEC between Washington, D.C., and Boston; provides a mix of services (Intercity, Intercity-Express and Intercity-Corridor and Regional rail); provides for upgrades to the communication and signaling systems where needed to permit higher-density operations; modernizes the NEC catenary system to support higher speeds and includes electrification of new segments; includes new stations and physical improvements to stations; incorporates an upgraded and electrified Hartford/Springfield Line, connecting to the NEC at New Haven; and includes chokepoint relief projects, new track, curve modifications and new segments at key locations throughout the corridor to support additional service, increase performance, and eliminate capacity and operational constraints. The Tier 1 FEIS does not allow construction to begin on the Selected Alternative, but rather provides a framework to inform a series of project-level planning efforts to determine and evaluate site-specific details.

Empire Corridor
NYSDOT and the FRA are evaluating potential improvements and projects to intercity passenger rail service within the Empire Corridor, which proceeds north from NYC to Albany, turns west to Schenectady, passes through Utica, Syracuse, Rochester, and Buffalo, then terminates at Niagara Falls. Work has been ongoing on a Tier I EIS analyzing a range of alternatives for introducing high-speed passenger rail service on the Empire Corridor. A Final EIS should be released by the end of 2017 and then specific improvement projects can be evaluated and planned.

Cross Sound Connection Study
This high-level feasibility study is evaluating potential Long Island Sound crossing locations along the north shore of Nassau and Suffolk counties on Long Island (generally north of the Long Island Expressway) and along the north shore of Long Island Sound in Westchester County and southwestern Connecticut.