

Northeast Corridor Capital Investment Plan

Fiscal Years 2018-2022

May 2017





Congress established the Northeast Corridor Commission (the Commission) to develop coordinated strategies for improving the Northeast’s core rail network in recognition of the inherent challenges of planning, financing, and implementing major infrastructure improvements that cross multiple jurisdictions. The expectation is that by coming together to take collective responsibility for the NEC, these disparate stakeholders will achieve a level

of success that far exceeds the potential reach of any individual organization.

The Commission is governed by a board comprised of one member from each of the NEC states (Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, and Maryland) and the District of Columbia; four members from Amtrak; and five members from the U.S. Department of Transportation (DOT). The Commission also includes non-voting representatives from four freight railroads, states with connecting corridors and several commuter operators in the Region.



Contents

Letter from the Chair	1
Executive Summary	2
Introduction	4
Priorities	12
Top Ten NEC-Wide Priorities	12
Washington, DC to Newark, DE	14
Newark, DE to Trenton, NJ	18
Trenton, NJ to Newark, NJ	22
Newark, NJ to New Rochelle, NY	26
New Rochelle, NY to New London, CT	32
New London, CT to Boston, MA	38
Project Information Appendix	42
Baseline Capital Charge Program	44
Special Projects	48



EXPRESS TO NY.
FULLY IS OUR WAY
THE HIGHWAY.

Amtrak

Great Escape

INFORMATION

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Information Behind Stairway One

Information

Letter from the Chair



The Northeast Corridor region is an economic powerhouse. It generates \$3 trillion in annual economic output and is home to more than 51 million people and four of the ten largest metropolitan areas in the United States. The Northeast Corridor (NEC, or Corridor) rail line is the backbone of the region carrying over 820,000 passengers each day. Its infrastructure supports eight commuter rail operators that deliver hundreds of thousands of workers to several of our nation's largest economic centers. Amtrak services on the NEC carry more passengers within the Northeast than all airlines combined.

The Corridor also carries 50 daily freight trains bringing shale oil, coal, gravel, vehicles, and other manufactured goods to and from international ports and manufacturing plants throughout North America.

This economic activity relies on aging infrastructure, much of which dates back to the period between the Civil War and the New Deal. A \$38 billion state-of-good-repair backlog of assets must be replaced simply to sustain today's rail services. The Corridor's aging infrastructure is already subject to service disruptions caused by infrastructure failures, rail traffic congestion, and other factors that cost the economy \$500 million per year in lost productivity. A loss of all NEC services for just one day could cost the economy an estimated \$100 million.

The Northeast Corridor Capital Investment Plan: Fiscal Years 2018-2022 (the Plan) is a path toward restoring a state of good repair and building a foundation for growth. Though constrained by project planning and resource considerations, the Plan is not constrained by funding realities. The Plan prioritizes the top state-of-good-repair projects that should advance if additional funding became available based on commuter/intercity shared usage, age and condition, criticality for maintaining existing service, and project readiness. Most of these projects would replace century-plus-old bridges and tunnels that are deteriorating and at risk of severing service. Replacement assets generally would be built alongside existing assets without causing service disruptions for most of the construction period. All projects identified could commence construction in the next five years if additional funding became available.

This Plan includes the \$3.3 billion in capital investment shared by states, commuter railroads, and Amtrak through the Baseline Capital Charge (BCC) Program created by the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy (Cost Allocation Policy). While the BCC Program will fund basic infrastructure normalized replacement to support existing services in the short term, the Cost Allocation Policy calls for a federal-state partnership to address the \$38 billion state-of-good-repair backlog and ensure long-term service viability.

Existing investment in the NEC already supports manufacturing and construction industry jobs in as many as 22 states. Higher levels of investment could grow that impact while building a modern railroad to support the international competitiveness of our nation's most productive economic region. We look forward to working with Congress to build the funding partnership needed to make this aspiration a reality.

A handwritten signature in black ink that reads "James Redeker". The signature is written in a cursive, flowing style.

James Redeker
Commissioner, Connecticut Department of Transportation
Co-Chair, Northeast Corridor Commission

Executive Summary

The Northeast Corridor Capital Investment Plan (the Plan) documents the investments required over the next five years to reverse decades of deterioration and to modernize our shared national asset for future economic growth. The Plan combines anticipated investments based on available funding and resources with capital investments that could occur with additional funding to restore and improve the condition of the NEC. The Plan was developed in collaboration with eight states, the District of Columbia, the United States Department of Transportation, Amtrak, and eight commuter rail agencies.

States, commuter railroads, and Amtrak will provide approximately \$3.3 billion over the next five years in basic infrastructure capital funding. These dollars will be invested in the territories in which their railroads operate through the Baseline Capital Charge (BCC) Program created by the Cost Allocation Policy adopted by the Commission in 2015. The BCC Program covers the normalized replacement of basic infrastructure assets (rail, ties, signals, etc.) along the NEC to support existing service. This funding does not address the \$38 billion state-of-good-repair backlog or improvement projects. Without additional investment to replace failing assets, BCC Program funding levels leave the NEC at risk of being unable to support existing service.

This Plan prioritizes the top initiatives that could be advanced in the next five years to reduce the state-of-good-repair backlog if additional funding became available. These priorities include basic infrastructure backlog elimination to ramp up the replacement of older assets like signal and electric power supply systems that date back to the 1930s and Major Backlog Projects that would replace the NEC's century-plus-old bridges and tunnels that are quickly deteriorating and at risk of severing service. While states, commuter railroads, and Amtrak have committed to funding the BCC Program to support annual asset replacement requirements in the short term, a federal-state partnership is needed to address the state-of-good-repair backlog and ensure long-term service viability.

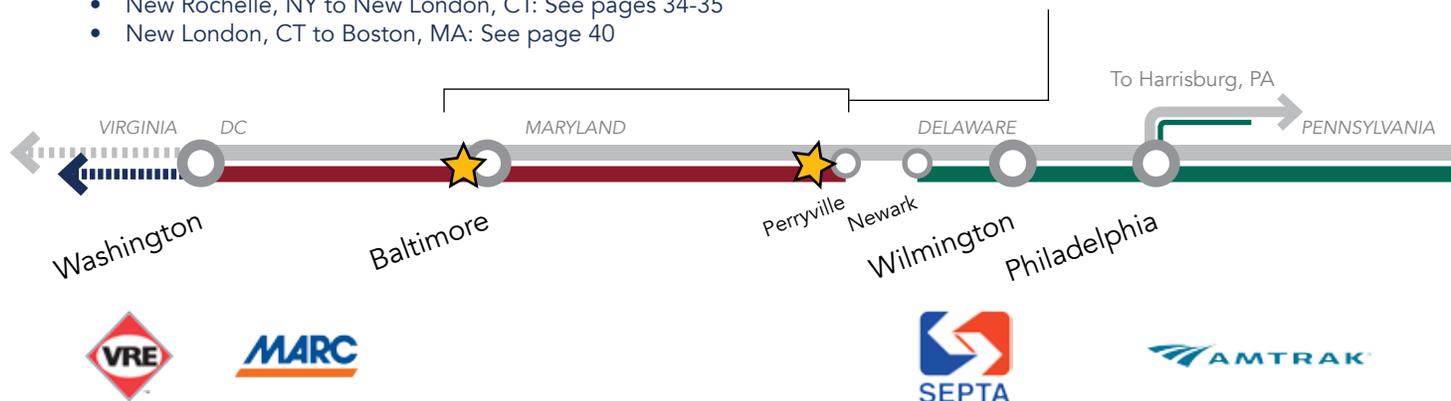
Top ten NEC-wide unfunded priorities

★ Basic Infrastructure Backlog Elimination

- Washington, DC to Newark, DE: See page 16
- Newark, DE to Trenton, NJ: See page 19
- Trenton, NJ to Newark, NJ: See page 24
- Newark, NJ to New Rochelle, NY: See page 30
- New Rochelle, NY to New London, CT: See pages 34-35
- New London, CT to Boston, MA: See page 40

★ Baltimore & Potomac Tunnel See page 15

★ Susquehanna River Bridge See page 16



Funding availability and gap for FY18-22

Programs/ Projects	State, Commuter Railroad, and Amtrak BCCs	Federal Grants and Other State or Amtrak Sources	Funding Gap	Total
Basic Infrastructure	\$3,326,895,000	\$0	\$296,617,000	\$3,623,512,000
Baseline Capital Charge Program (Normalized Replacement)	\$3,326,895,000	See Note B	\$0	\$3,326,895,000
Basic Infrastructure Backlog Elimination	\$0	\$0	\$296,617,000	\$296,617,000
Special Projects: Gateway Program	\$0	\$55,736,000	\$10,317,109,000	\$10,372,845,000
Major Backlog Projects	\$0	\$55,736,000	\$9,877,109,000	\$9,932,845,000
Improvement Projects	\$0	\$0	\$440,000,000	\$440,000,000
Special Projects	\$0	\$6,030,870,000	\$8,837,133,000	\$14,868,003,000
Major Backlog Projects	\$0	\$938,308,000	\$4,139,700,000	\$5,078,008,000
Improvement Projects	\$0	\$5,092,562,000	\$4,697,433,000	\$9,789,995,000
Strategic Initiatives	\$0	\$0	See Note D	\$0
Total	\$3,326,895,000	\$6,086,606,000	\$19,450,859,000	\$28,864,360,000

Notes: A) The Plan covers the NEC main line and connecting corridors identified on pages 4-5. Detailed breakdowns are available in the Project Information Appendix. B) States and/or commuter railroads may at their discretion use local sources, Federal Transit Administration (FTA) Formula Grants, or a combination of sources to meet their BCC obligations. C) Figures assume the Commission approves increasing the BCC level of investment from 80 percent to 100 percent of normalized replacement starting in FY19. D) Strategic Initiatives only have broad ranges available at this time for construction cost estimates, much of which would take place beyond the five-year window.

★ **Sawtooth Bridge**
See page 27

★ **East River Tunnel**
See page 29

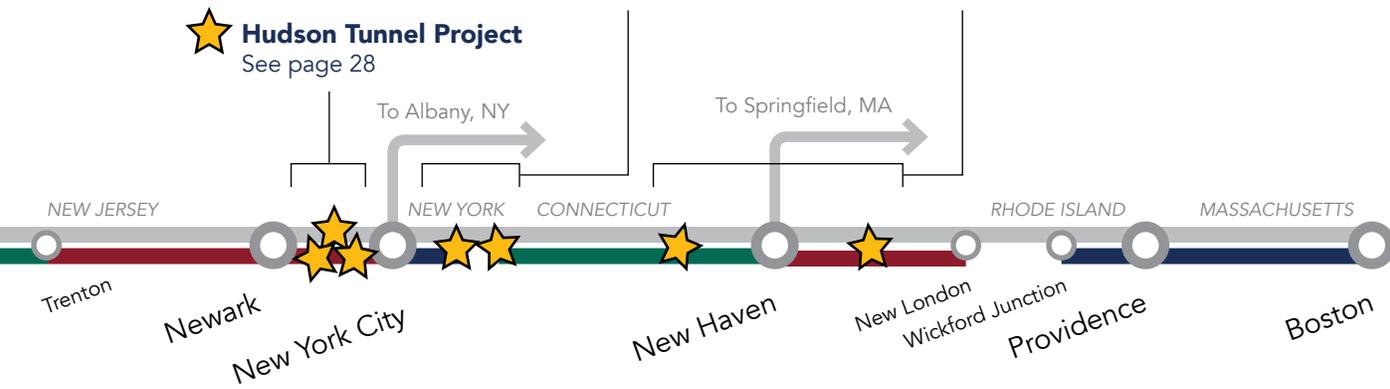
★ **Devon Bridge**
See page 33

★ **Portal North Bridge**
See page 28

★ **Pelham Bay Bridge**
See page 29

★ **Connecticut River Bridge**
See page 34

★ **Hudson Tunnel Project**
See page 28



Introduction

The Northeast Corridor Commission

Congress established the Northeast Corridor Commission (the Commission) to develop coordinated strategies for improving the Northeast's core rail network in recognition of the inherent challenges of planning, financing, and implementing major infrastructure improvements that cross multiple jurisdictions. The expectation is that by coming together to take collective responsibility for the NEC, these disparate stakeholders will achieve a level of success that far exceeds the potential reach of any individual organization.

The Northeast Corridor

The Northeast Corridor (NEC, or Corridor) supports over 820,000 trips each day, 780,000 on eight commuter railroads and over 40,000 on Amtrak's various intercity services. The 457-mile main line railroad still includes many bridges and tunnels that date back to the period between the Civil War and the New Deal. Service disruptions caused by infrastructure failures, rail traffic congestion, and other factors already cost the economy \$500 million per year in lost productivity. Without higher levels of capital investment, those losses are likely to grow. A loss of all NEC services for just one day would cost the economy an estimated \$100 million.

The NEC Capital Investment Plan

The NEC Capital Investment Plan (the Plan) is a requirement of the Fixing America's Surface Transportation (FAST) Act (49 U.S.C. §24904(a)) and was developed in collaboration with eight states, the District of Columbia, the United States Department of Transportation, Amtrak, and eight commuter rail agencies.

The Plan documents the investments required over the next five years to reverse decades of deterioration and to modernize our shared national asset for future economic growth. The Plan combines anticipated investments based on available funding and resources with capital investments that could occur with additional funding to restore and improve the condition of the NEC.

The Plan is focused on the NEC main line and connecting corridors to Harrisburg, Pennsylvania; Spuyten Duyvil, New York; and Springfield, Massachusetts. (Shown in dark blue at right.) This infrastructure supports a broader network of connecting corridors that feed additional commuter rail and Amtrak lines onto the NEC.

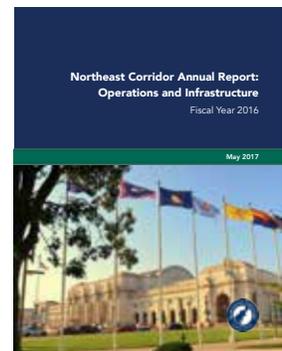
Northeast Corridor Annual Report: FY16

The NEC Capital Investment Plan has a companion document in the NEC Annual Report which documents the operational performance of NEC trains and the implementation of the capital program in federal fiscal year 2016 (FY16).

The Report also contains recommendations for improving planning for and reporting on capital projects.

The Report is a requirement of the FAST Act and was developed in collaboration with eight states, the District of Columbia, the United States Department of Transportation, Amtrak, and eight commuter rail agencies.

Download a copy of the report at:
www.nec-commission.com.





Why do we invest in the Northeast Corridor?

The Northeast Corridor is more than commuter and intercity passenger rail service between Boston, Massachusetts and Washington, DC. The Northeast Corridor region is a global center for commerce, finance, health care, and education. It is home to one-third of all Fortune 100 companies and six of the country's ten top-ranked research universities. The Northeast Corridor region is also home to one in five jobs in the United States and has an annual gross domestic product (GDP) of \$3 trillion. Only four nations in the world have a higher GDP.

The Northeast Corridor supports the livelihoods of our people and economy. We invest in its infrastructure to:

- Maintain the safety and security of the passenger rail network.
- Provide mobility to over 820,000 daily passengers on over 2,100 daily trains.
- Compete in a global business environment.
- Sustain construction, supply, and manufacturing jobs in as many as 22 states.
- Spark economic development along the Corridor.
- Renew aging assets well over 100 years old.
- Ensure the Corridor is resilient and able to accommodate future growth.

The Northeast Corridor requires investment to maintain and improve its ability to provide reliable service. There is a \$38 billion state-of-good-repair backlog of assets beyond their useful life that have become more prone to cause service disruptions and more costly to maintain. At current funding levels, the backlog continues to grow every year. Without sufficient investment to begin to address the state-of-good-repair backlog, the NEC will eventually fail to support existing service. If service were to deteriorate to the point of complete shutdown, it could cost the economy up to \$100 million every day by paralyzing travel on the regional highway network and the national aviation system.

What capital investments are needed?

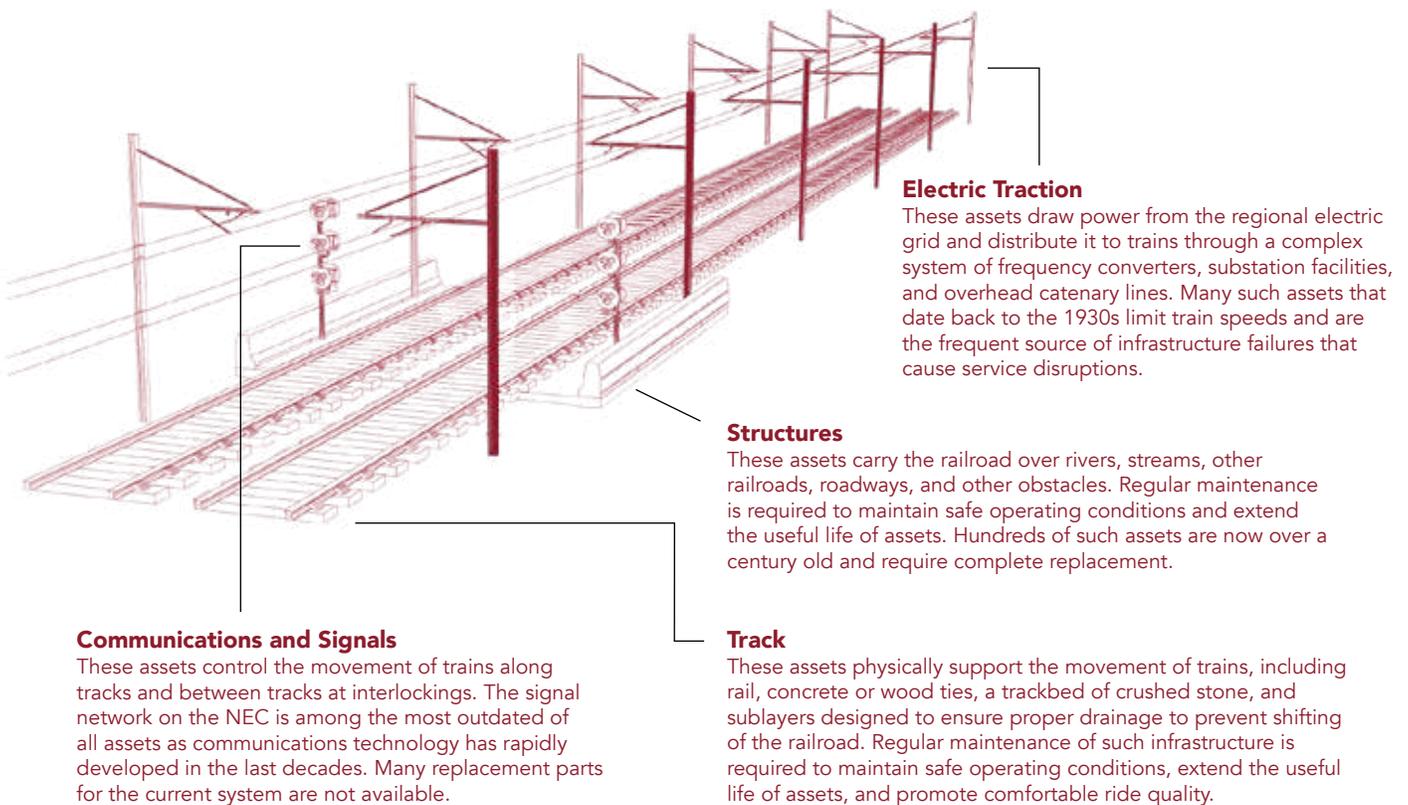
Additional funding is needed for both basic infrastructure backlog elimination and Major Backlog Projects. Basic infrastructure backlog elimination would ramp up the replacement of backlog assets like signal and electric power supply systems that date back to the 1930s.

Major Backlog Projects would replace the NEC's century-plus-old bridges and tunnels that are quickly deteriorating and at risk of severing service. Of the 15 projects identified as Major Backlog, only the Walk Bridge Program in Connecticut is funded for construction. Portal North Bridge in New Jersey completed final design in 2010 and is shovel-ready but unfunded. Preliminary engineering and environmental review for the Susquehanna River Bridge and the Baltimore & Potomac Tunnel replacement projects in Maryland will be completed in 2017 — thanks to \$82 million in federal investment — but also have no funding to advance into final design or construction.

What is the state-of-good-repair backlog?

Infrastructure assets have a useful life, which can vary from a few years to many decades, after which they should be replaced. The population of assets beyond their useful life is called the NEC state-of-good-repair backlog and contains both basic infrastructure assets, like rail ties and electric wire, and major assets, like tunnels and large movable bridges. Some infrastructure assets can continue to be operated safely beyond their useful life, though they become more expensive to maintain and more vulnerable to failures that cause service disruptions. Failure to address the state-of-good-repair backlog will make it impossible to sustain existing NEC services.

Basic infrastructure assets



State-of-good-repair backlog

Asset Name	Replacement Value*	Asset Name	Replacement Value*
Basic Infrastructure Backlog	\$11,600,000,000	Pelham Bay Bridge	\$410,000,000
Track	\$1,500,000,000	East River Tunnel	\$750,000,000
Structures	\$8,200,000,000	Hudson River Tunnel	\$10,000,000,000
Communications and Signals	\$700,000,000	Sawtooth Bridge	\$1,300,000,000
Electric Traction	\$1,200,000,000	Highline Renewal	\$400,000,000
Major Backlog Projects	\$26,460,000,000	Portal North Bridge	\$1,700,000,000
Connecticut River Bridge	\$660,000,000	Susquehanna River Bridge	\$1,700,000,000
Devon Bridge	\$1,500,000,000	Bush River Bridge	\$400,000,000
Saugatuck Bridge	\$400,000,000	Gunpowder River Bridge	\$550,000,000
Walk Bridge	\$1,170,000,000	Baltimore & Potomac Tunnel	\$4,520,000,000
Cos Cob Bridge	\$1,000,000,000	Total State-of-Good-Repair Backlog	\$38,060,000,000

*Replacement values as provided by the infrastructure owner/ coordinating agency.

Who funds NEC capital investments?

In September 2015, the Northeast Corridor states and Amtrak agreed to share operating *and* capital costs — **over \$1 billion annually** — to support commuter and intercity rail service throughout the NEC. This Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy (the Policy) also set up a framework for stakeholders to increase collaboration, transparency, and accountability. The final piece of this partnership framework — a robust federal pledge to help restore the Corridor to a state of good repair — remains unfulfilled.

(1) States and commuter railroads

States and commuter railroads will provide approximately \$1.8 billion over the next five years in capital funding. These dollars will be invested in the territories in which their railroads operate through the Baseline Capital Charge (BCC) Program created by the Policy.

The BCC Program replaces and repairs basic infrastructure assets (rail, ties, signals, etc.) along the Corridor to preserve existing service in the short term. The BCC Program alone does not address state-of-good-repair backlog elimination or improvement projects. Without simultaneous investment in backlog projects, BCC Program funding levels leave the NEC at risk of being unable to support existing service.

States and commuter railroads also are committed to funding the construction of a variety of Improvement Projects over the next five years, both on shared- and sole-benefit infrastructure.

(2) Amtrak

Amtrak is funding approximately \$1.5 billion in the BCC Program over the next five years. Amtrak’s Acela Express and Northeast Regional services, which operate on the Northeast Corridor, are the only Amtrak routes that generate an operating revenue surplus. The Fixing America’s Surface Transportation (FAST) Act, signed into law in December 2015, encourages Amtrak to reinvest those dollars back into the Corridor, rather than redirecting those funds to offset operating losses on other Amtrak national routes.

There is significant competition for these dollars. Amtrak may use them to fulfill their BCC Program obligation. However, they will also be necessary for Railroad Rehabilitation and Improvement Financing (RRIF) program loan repayments for new high-speed trainsets. Amtrak may also require these dollars to serve as part of a local match for potential federal grants to advance state-of-good-repair backlog elimination projects.

(3) Federal Government

Despite the federal government’s interest in the NEC, Congress has historically failed to provide funding to eliminate the state-of-good-repair backlog to ensure the long-term viability of the NEC’s commuter and intercity service. Reinforcing this federal government responsibility was a pillar of the partnership framework agreed to in the Policy that established the BCC Program funded by states, commuter railroads, and Amtrak.

Fortunately, Congress memorialized many of the recommendations of the Policy in law when it passed the FAST Act in 2015, including the creation of a Federal-State Partnership for State of Good Repair Program. If appropriated, this program could begin to advance basic infrastructure backlog elimination and Major Backlog Projects in a fashion similar to other federal grants for highway and transit projects.

Funding sources for NEC capital investments

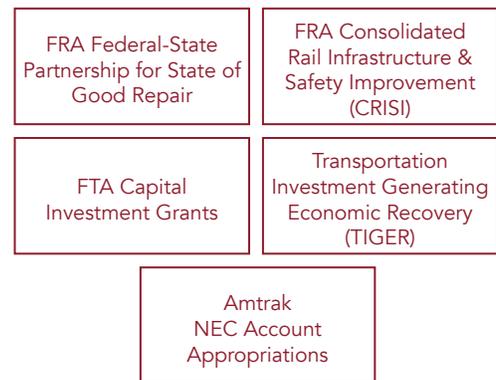
Dedicated sources of funding

Capital programs from these agencies are committed to providing funding for the normalized replacement of capital assets through the BCC Program.



Potential discretionary sources of funding

Capital investments to reduce the state-of-good-repair backlog are eligible for funding through these federal grant programs.



Types of programs and projects

Programs/ Projects	Description
Basic Infrastructure	
Baseline Capital Charge Program (Normalized Replacement)	<p>The Baseline Capital Charge (BCC) Program primarily covers the normalized replacement of existing capital assets (excluding major bridges and tunnels) with charges allocated to service operators based on methods described in the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy.</p> <p>The Policy requires NEC infrastructure owners to develop the first two years of the Plan with sufficient geographic specificity to demonstrate whether each operator's BCC will be expended in its territory. This demonstration of geographic specificity will be a tool for anticipating BCC expenditures and potential investment shortfalls. An owner must use BCCs for eligible investments in an operator's territory in the year.</p> <p>Two of the four NEC infrastructure owners, Connecticut DOT and Metro-North Railroad, fund replacement of existing capital assets at rates beyond those allocated by the Policy in order to reduce the state-of-good-repair backlog in their segments.</p> <p>For detailed information on the BCC Program, see the Project Information Appendix starting on page 44.</p>
Basic Infrastructure Backlog Elimination	<p>Basic infrastructure backlog elimination represents unfunded basic infrastructure needs that would expedite the pace of replacing existing capital assets to reduce the state-of-good-repair backlog and improve the quality and reliability of rail services.</p>
Special Projects	
	<p>Special Projects include all other project types (i.e., Major Backlog Projects, Improvement Projects, and Strategic Initiatives). Special Projects are funded through a mix of sources, which may include but are not limited to: federal grants; funds from state and/or commuter railroad capital programs; and other sources of discretionary funding.</p> <p>This Plan breaks out Special Projects that are a part of the Gateway Program, a comprehensive investment strategy between Newark, NJ and Penn Station New York. This area is not only the most severe bottleneck on the NEC, but also the geographic region with the highest concentration of Major Backlog Projects identified as NEC-wide priorities.</p> <p>For detailed information on Special Projects, see a table of contents on page 48 of the Project Information Appendix.</p>
Major Backlog Projects	<p>Major Backlog Projects would replace the NEC's century-plus-old bridges and tunnels that are quickly deteriorating and at risk of severing service. Of the 15 projects identified as Major Backlog, nine are listed as critical NEC-wide priorities outlined on pages 12-13. Only one Major Backlog Project, the Walk Bridge Program in Connecticut, is funded for construction.</p>
Improvement Projects	<p>Improvement Projects cover all other investments aimed at growing or upgrading the existing asset base to improve reliability, expand capacity, reduce travel time, or enhance the passenger experience.</p>
Strategic Initiatives	<p>Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.</p>

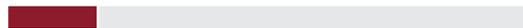
Funding availability and gap for FY18-22

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Special Projects: Gateway Program	\$0	\$55,736,000	\$10,317,109,000	\$10,372,845,000
Major Backlog Projects	\$0	\$55,736,000	\$9,877,109,000	\$9,932,845,000
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Total	\$3,326,895,000	\$6,086,606,000	\$19,450,859,000	\$28,864,360,000

Notes: A) The Plan covers the NEC main line and connecting corridors identified on pages 4-5. Detailed breakdowns are available in the Project Information Appendix. B) States and/or commuter railroads may at their discretion use local sources, Federal Transit Administration (FTA) Formula Grants, or a combination of sources to meet their BCC obligations. C) Figures assume the Commission approves increasing the BCC level of investment from 80 percent to 100 percent of normalized replacement starting in FY19. D) Strategic Initiatives only have broad ranges available at this time for construction cost estimates, much of which would take place beyond the five-year window.

Program Highlight: Federal-State Partnership for State of Good Repair

\$20-25M anticipated in FY17 appropriations



14-18% of \$140M authorized for FY17

What: Created in the FAST Act, the Federal-State Partnership for State of Good Repair Program would fund capital projects that reduce the state-of-good-repair backlog of railroad assets.

Local Match Required: Federal investment in this program will leverage a match (minimum 20 percent) from eligible applicants, which include Amtrak, state departments of transportation, and transit agencies.

Top Ten NEC-Wide Unfunded Priorities

What are the NEC-wide priorities in need of additional funding?

This Plan prioritizes the top projects that could be advanced in the next five years if additional funding became available. While states, commuter railroad agencies, and Amtrak have committed to funding the BCC Program to preserve existing services in the short term, additional funding needs to be leveraged to eliminate the state-of-good-repair backlog and ensure long-term service viability.

Criteria for selecting NEC-wide unfunded priorities

Criteria	Description
Shared Use	NEC-wide priority projects must benefit both commuter and intercity rail.
Age and Condition	The oldest infrastructure assets on the NEC are well over 100 years old and are incurring more maintenance costs to ensure the assets remain functional. Priority is given to projects that will improve reliability by replacing the oldest assets beyond their useful lives.
Critical Need	Priority is given to projects that are critical to continued operation of existing service along the Corridor. If service were to deteriorate to the point of complete shutdown, it could cost the economy up to \$100 million every day and paralyze travel in the Northeast.
Project Readiness	Project planning takes time. The process includes multiple stages of design, consultations with local communities, and environmental reviews. Priority is given to projects that are ready to begin construction in the next five years. In many cases, these projects have already had federal investment in planning and design which would be wasted without dollars for construction.



★ Basic Infrastructure Backlog Elimination

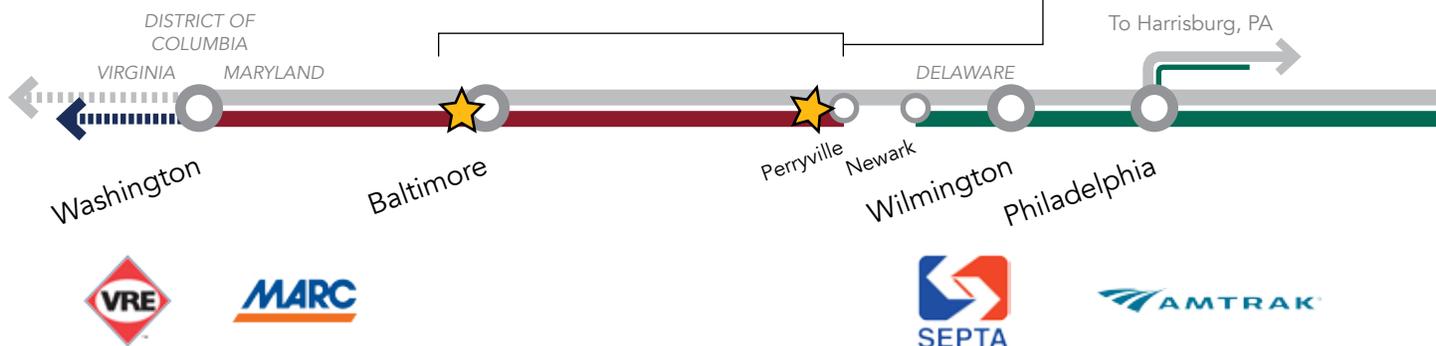
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★ Baltimore & Potomac Tunnel

See page 15

★ Susquehanna River Bridge

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★ **East River Tunnel**
See page 29

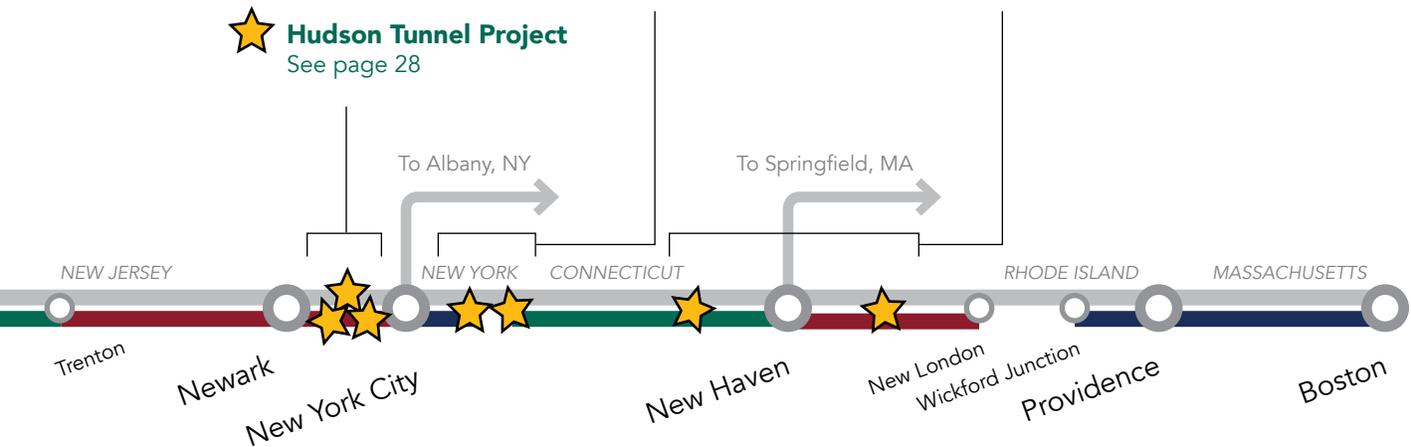
★ **Devon Bridge**
See page 33

★ **Portal North Bridge**
See page 28

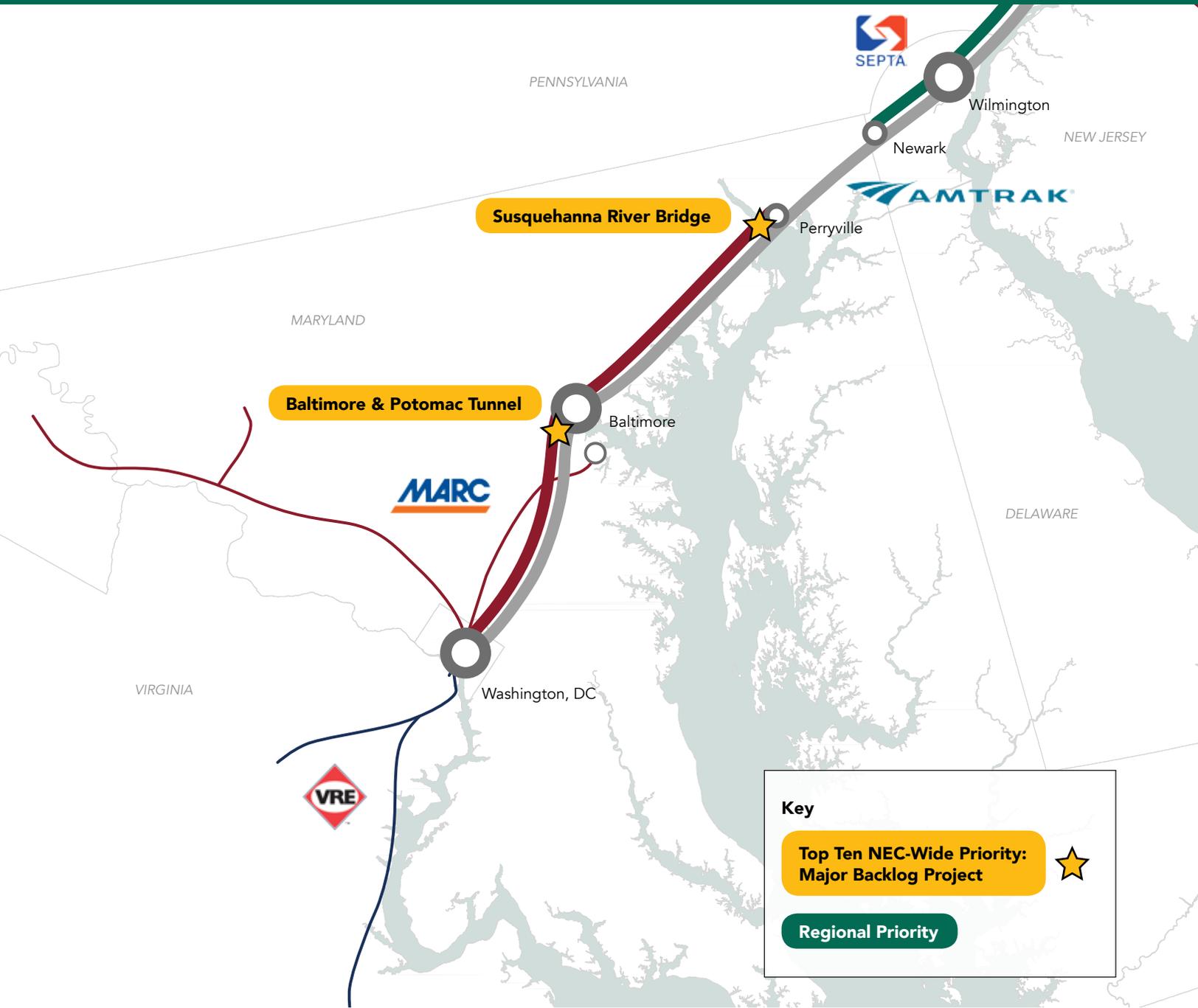
★ **Pelham Bay Bridge**
See page 29

★ **Connecticut River Bridge**
See page 34

★ **Hudson Tunnel Project**
See page 28



Priorities: Washington, DC to Newark, DE



Washington Union Station is the **second** busiest station in the United States.



The Baltimore & Potomac Tunnel was built in 1873, when **Ulysses S. Grant** was president and the Preakness Stakes horse race first took place in Baltimore, MD.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- Baltimore & Potomac Tunnel Replacement
- Susquehanna River Bridge Replacement

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- None in this region

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between Washington, DC and Newark, DE should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades

Major Backlog Project



BALTIMORE & POTOMAC TUNNEL REPLACEMENT

\$0M funded for FY18-22

0% of \$555M need for FY18-22
Expended prior to FY18: \$67M. Total cost: \$4,520M

Existing Conditions: The Baltimore & Potomac Tunnel, built in 1873, runs underneath central Baltimore City and is a key chokepoint in the Corridor. The B&P Tunnel underwent rehabilitation in the 1980s, but that effort was not intended to be a permanent fix. The tunnel requires ongoing maintenance. High saturation of water in the soil beneath the tunnel causes its aging floor slabs to sink, forcing Amtrak to make repeated repairs.

Right-of-way is also reduced from four to two tracks in the tunnel. Due to its tight curvature and aged structural conditions, the tunnel limits train speeds to 30 mph—down from 60 mph. The Final Environmental Impact Statement (FEIS) released in November 2016 stated, “The tunnel is also functionally obsolete and unable to meet current and future rail demands due to the combination of its vertical and horizontal track alignment, i.e., its grades and curves.”

Project Scope: This project would replace the aging B&P Tunnel with a new four-track tunnel on an improved alignment to eliminate the current chokepoint for MARC and Amtrak trains near Baltimore Penn Station.

Project Benefits: This project would not only improve rail service reliability and safety, but also accommodate the future growth of and demand for commuter and intercity passenger rail.

Project Status: In 2010, Maryland was awarded a \$60 million HSIPR grant to complete preliminary engineering and environmental review of options to augment or replace the B&P Tunnel. In March 2017, the Federal Railroad Administration issued a Record of Decision, thus allowing the B&P Tunnel Replacement project advance to final design and construction.



There is no funding (federal or otherwise) available for additional phases at this time. With additional federal funding, the B&P Tunnel could advance to final design and construction in FY18-22.

For more information, please visit the project website at www.bptunnel.com

Major Backlog Project



SUSQUEHANNA RIVER BRIDGE REPLACEMENT

\$0M funded for FY18-22

0% of \$675M need for FY18-22
Expended prior to FY18: \$24.5M. Total cost: \$1,700M

Existing Conditions: The Susquehanna River Bridge was built in 1906. The bridge constricts the NEC from four to two tracks and requires trains to reduce speeds for nearly one-mile due to the condition of the bridge.

The existing bridge is required to open approximately a dozen times per year for boats to pass, but its current design is not suited for the task. A crew of over 30 workers is required to manually open the bridge, essentially de-constructing and re-constructing the railroad each time. The process of opening the Susquehanna River Bridge is much more expensive than opening a modern-day movable bridge, which would require just one bridge operator.

Project Scope: This project would replace the movable Susquehanna River Bridge with two parallel two-track fixed bridges, each high enough to allow boats to pass underneath without opening. The existing bridge would be removed after the first bridge is in service to accommodate construction of the second bridge.

Project Benefits: This project would improve service reliability, lower operating costs, accommodate future growth of commuter and intercity passenger rail, and increase speeds for intercity service.

Project Status: PE and NEPA activities will be completed in FY17.



There is no funding (federal or otherwise) available for additional phases at this time. With additional federal funding, the Susquehanna River Bridge could advance to final design and construction in FY18-22.

For more information, please visit the project website at www.susrailbridge.com

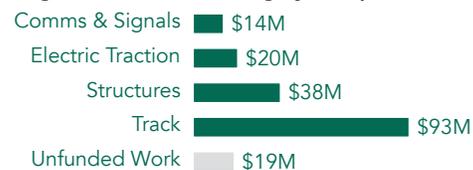
Basic Infrastructure Backlog Elimination

WASHINGTON, DC TO NEWARK, DE

Amtrak

Existing Conditions: Some of the NEC's most heavily congested segments exist between Washington, DC and Newark, DE. Congestion and capacity issues are particularly notable south of Baltimore, MD where the railroad is limited to two or three tracks and relies upon legacy signal systems that were designed primarily to accommodate freight trains, rather than high volumes of passenger rail service. The northern portion of this segment between Baltimore and Newark, DE, which runs alongside the Chesapeake Bay, has significant track maintenance issues related to unstable ground conditions in that area.

Regional FY18-19 Funding by Discipline:



Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Substation upgrades throughout the region would help meet the demands of a capacity-constrained power system. Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions. Proactive, regular maintenance of track and electric traction assets produces long-term cost-savings by preventing severe deterioration, which requires higher-levels of investment to return assets to a state of good repair.

List of all Special Projects from Washington, DC to Newark, DE

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Amtrak

Major Backlog Projects

- Baltimore & Potomac Tunnel Replacement ★
- Bush River Bridge Replacement
- Gunpowder River Bridge Replacement
- Susquehanna River Bridge Replacement ★

Improvement Projects

- *Baltimore Penn Station Infrastructure Improvements*
- Baltimore Penn Station Master Plan
- *Maryland Section Reliability Improvements*
- *Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements*
- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*
- Washington Union Station 2nd Century Plan
- *Washington Union Station: Claytor Concourse Modernization*
- Washington Union Station: Track 22 Rehabilitation

Strategic Initiatives

- Delaware
- Maryland
- Northeast Corridor South

Delaware DOT

- Claymont Regional Transportation Center
- *Delaware Third Track Program*
- *Newark (DE) Regional Transportation Center*

Maryland DOT

- BWI Thurgood Marshall Airport Station Improvements and 4th Track Project
- *BWI Thurgood Marshall Airport Station Interim Improvements*
- Hanson Interlocking
- MARC Station - Bayview
- MARC Station Improvements - West Baltimore
- MARC Storage - Northeast Maintenance Facility
- MARC Storage Improvements - Martin Airport

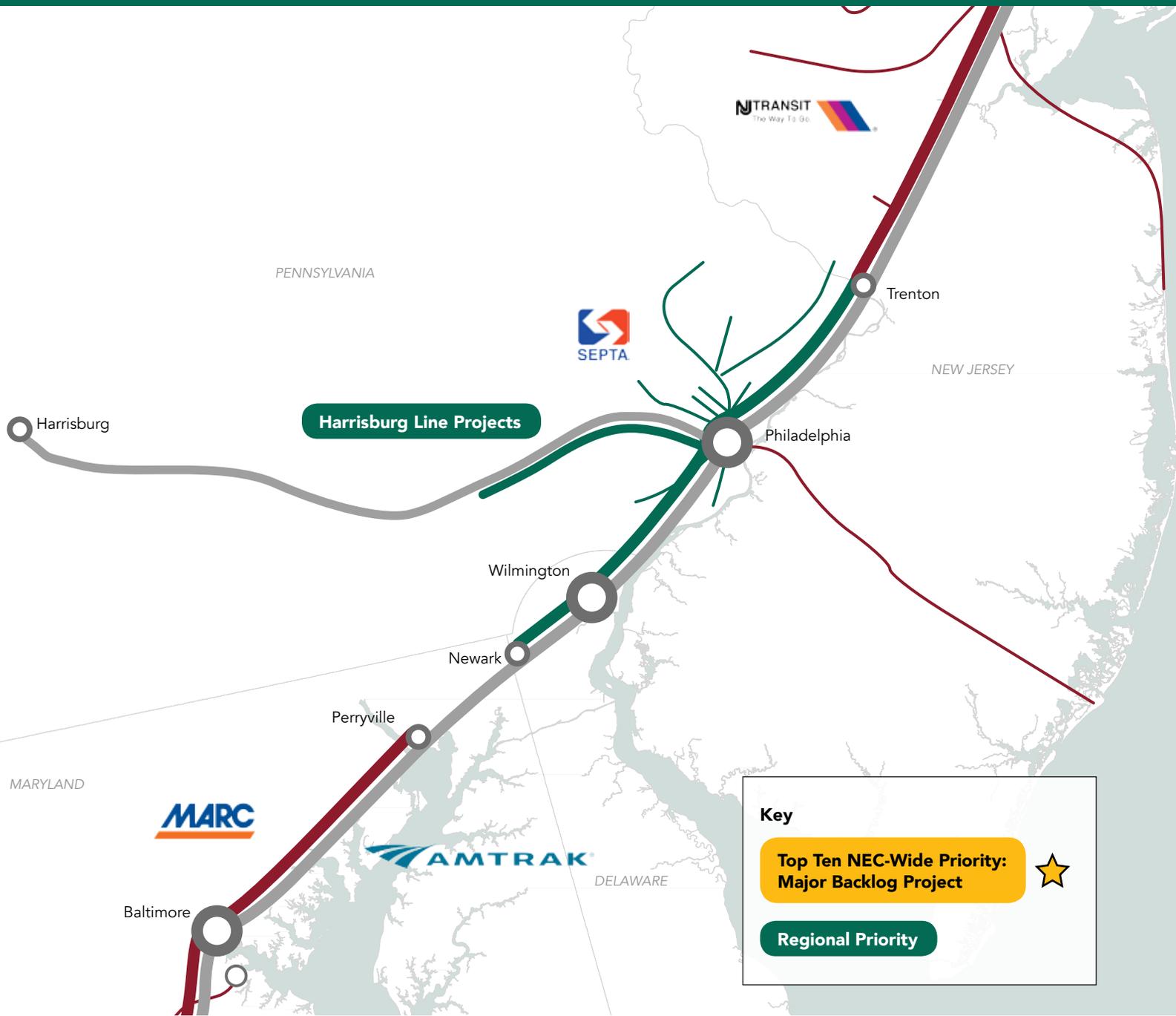
Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Priorities: Newark, DE to Trenton, NJ



Delaware's Wilmington Station, built in 1907, was designed by renowned architect **Frank Furness** to showcase the strength of the locomotive.



SEPTA's Paoli/ Thorndale Line, which overlaps with Amtrak's Keystone service from New York to Harrisburg, is the system's busiest line.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- None in this region

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- Harrisburg Line Projects

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between Newark, DE and Trenton, NJ should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades

Basic Infrastructure Backlog Elimination

NEWARK, DE TO TRENTON, NJ

Amtrak

Existing Conditions: The soon-to-be-completed Delaware Third Track Program will improve track capacity between Newport, DE and Wilmington, DE; however, additional track capacity is still needed between Wilmington and Claymont, DE and congestion issues hamper operations in the Philadelphia terminal area where SEPTA regional rail lines interface with the NEC. In addition, this portion of the NEC, particularly between Wilmington and North Philadelphia, hosts an overhead catenary system dating back to 1928, which is in the most critical need of repair and/or replacement on the NEC.

Regional FY18-19 Funding by Discipline:



Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Substation upgrades throughout the region would help meet the demands of a capacity-constrained power system. Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions. Proactive, regular maintenance of track and electric traction assets produces long-term cost-savings by preventing severe deterioration, which requires higher-levels of investment to return assets to a state of good repair.

List of all Special Projects from Newark, DE to Trenton, NJ

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Amtrak

Improvement Projects

- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*
- Philadelphia 30th Street Station District Plan Implementation
- Wilmington Maintenance of Equipment Facility - Complex Replacement

Strategic Initiatives

- Delaware
- Northeast Corridor South
- Pennsylvania

Delaware DOT

- Claymont Regional Transportation Center
- Delaware Third Track Program
- Newark (DE) Regional Transportation Center

NJ TRANSIT

- NJ TRANSITGRID

Pennsylvania DOT

- Harrisburg Line Interlocking Improvements
- Harrisburg Line Station Improvements

SEPTA

- *30th Street to Arsenal Signals and ROW Improvements*
- 30th Street West Catenary Replacement
- Ardmore Station Improvements - Phase 1
- Ardmore Station Improvements - Phase 2
- *Exton Station Improvements*
- *Frazer Rail Shop and Yard Upgrade*
- Harrisburg Line - 3rd Track Paoli to Frazer ●
- Harrisburg Line - Zoo to Thorndale OCS Replacement & ROW Clearing ●
- Harrisburg Line - Zoo to Thorndale Signal Upgrade ●
- *Levittown Station Improvements*
- Paoli Transportation Center - Phase 1 (ADA & Infrastructure)
- Paoli Transportation Center - Phase 2
- *Villanova Station Improvements*
- West Barracks Yard

Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Connecting Corridor: Philadelphia, PA to Harrisburg, PA

Connecting the state's largest city with the state capital, the Harrisburg Line extends 104 miles across Pennsylvania and is owned by Amtrak. Both Amtrak and SEPTA operate passenger service on this corridor, with a daily average ridership of over 24,000 passengers on SEPTA alone. Despite large investments by the Commonwealth of Pennsylvania and Amtrak, additional work is needed to bring this corridor to a state of good repair.



HARRISBURG LINE PROJECTS

\$0M funded for FY18-22

0% of \$200M need for FY18-22
Expended prior to FY18: \$0M. Total cost: \$300M

Existing Conditions: The Harrisburg Line includes service from both SEPTA's Paoli/Thorndale Line (from Philadelphia, PA to Thorndale, PA) and Amtrak's Keystone service (from New York, NY to Harrisburg, PA). Work is needed to bring this connecting corridor to a state of good repair.

Project Scopes: Three projects would improve the condition and performance of the Harrisburg Line.

(1) 3rd Track Paoli to Frazer: This project would reinstall a third track on the 4 mile segment from Paoli to Frazer. In addition to the track work, the project would include overhead contact system, signal, and right-of-way work all of which is needed to operate on the new track. All work would occur in the existing right-of-way. This project is an estimated \$50 million unfunded need.

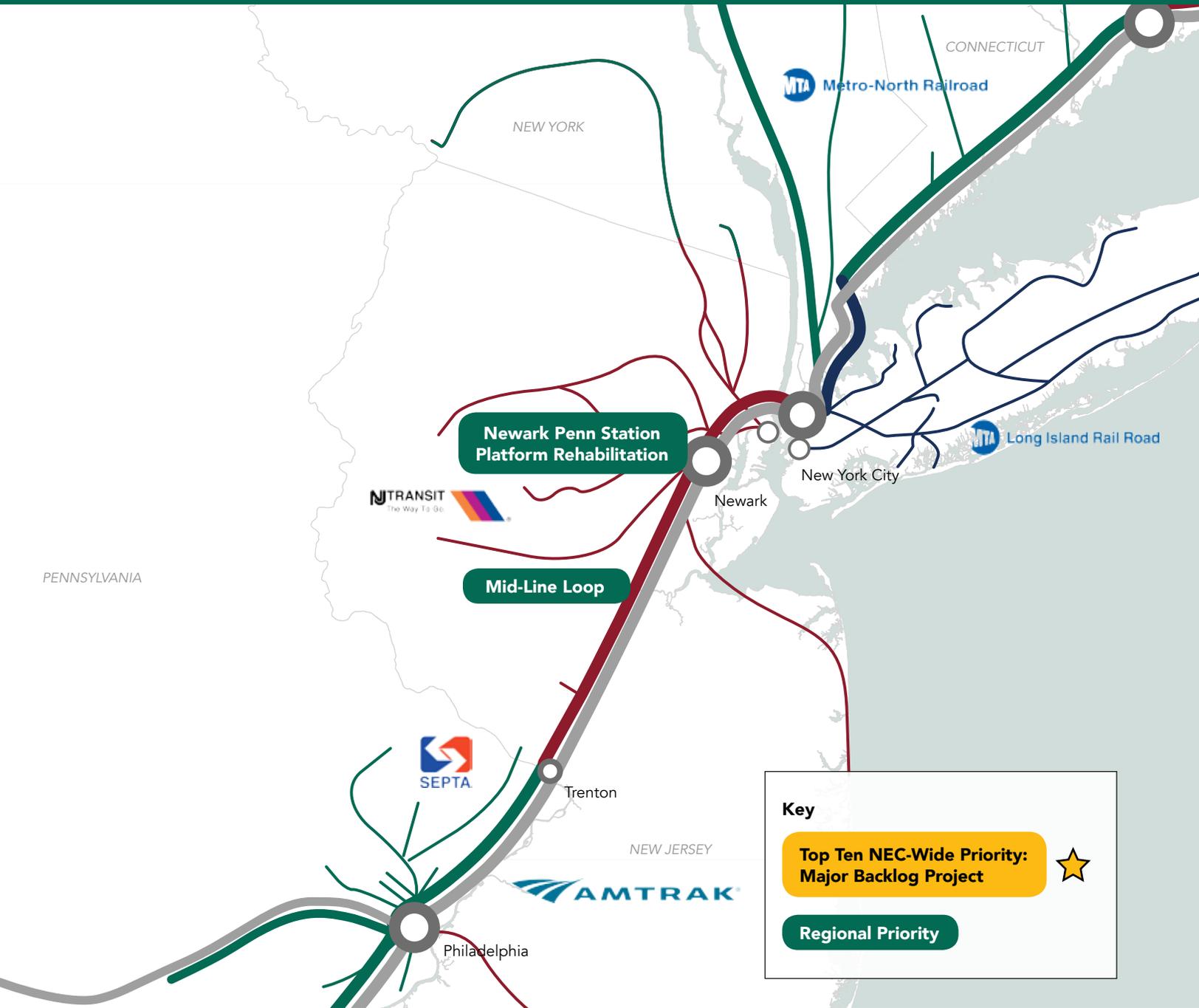
(2) Zoo to Thorndale Overhead Contact System Replacement and Right-of-Way Clearing: This project would replace and upgrade the overhead contact system and clear right-of-way. This project is an estimated \$200 million unfunded need.

(3) Zoo to Thorndale Signal Upgrade: This project would include signal upgrades, including retiring the current manned towers and implementing Rule 261 signaling from Paoli to Thorndale. This project is a \$50 million unfunded need.

Project Benefits: The projects would rehabilitate assets beyond their useful life and improve operational efficiency and system reliability.

Project Statuses: Project schedules are dependent on funding and Amtrak availability.

Priorities: Trenton, NJ to Newark, NJ



NJ TRANSIT operates more than **400 weekday trains** on its Northeast Corridor service.



Newark Penn Station's main waiting room features medallions illustrating the history of transportation.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- None in this region

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- Mid-Line Loop
- Newark Penn Station Platform Rehabilitation

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between Trenton, NJ and Newark, NJ should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Wood Tie and Timber Crosstie Replacement
- Surfacing

Regional Priority



MID-LINE LOOP

\$0M funded for FY18-22

0% of \$208M need for FY18-22
Expended prior to FY18: \$5.4M. Total cost: \$350M

Existing Conditions: NJ TRANSIT's Northeast Corridor Line is the busiest line in its commuter rail system. Nearly half of peak commuter trains begin or end at a storage yard near North Brunswick, NJ. As trains leave the yard and enter the NEC main line towards New York, however, they must cross three tracks at grade. This complex crossing requires trains to have long gaps in service to ensure that trains successfully complete the crossing. This configuration not only reduces capacity on the Corridor, but also creates delays for NJ TRANSIT trains waiting to enter the NEC and for Amtrak trains waiting to provide space for NJ TRANSIT.

Project Scope: This project would construct a new above-grade connection — the Mid-Line Loop — between existing and planned train storage facilities and the New York-bound local track of the NEC. The crossover would eliminate at-grade movements that create conflicts between commuter and intercity trains.

Project Benefits: An investment in the Mid-Line Loop would reduce delays for riders and support expansion of service to a new station. The new above-grade connection would open up capacity for all users while improving reliability for NJ TRANSIT services. The capacity created would also help enable the goal of 160-mph speeds on Acela, as well as support future express service patterns planned by NJ TRANSIT.

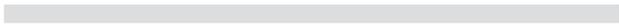
Project Status: Advancement of the project is currently on hold due to the lack of funding. Additional funding is required for final design and construction.

Regional Priority



NEWARK PENN STATION PLATFORM REHABILITATION

\$0M funded for FY18-22



0% of \$130M need for FY18-22
Expended prior to FY18: \$0.3M. Total cost: \$130M

Existing Conditions: Newark Penn Station currently serves both Amtrak, NJ TRANSIT, and the Port Authority Trans-Hudson (PATH) transit system. Platforms A, B, C, and D at Newark Penn Station are in need of repair and rehabilitation. The level-boarding platforms have buckled over time due to expansion issues with the joints, thereby complicating boarding conditions for passengers.

Project Scope: This project would include the design and rehabilitation of Platforms A, B, C, and D, as well as their roof/canopy structures. This project may also include any other repairs deemed necessary by the initial structural assessment from Amtrak.

Project Benefits: This project would create a safer platform environment and boarding conditions for Amtrak and NJ TRANSIT passengers by bringing station areas to a state of good repair and into compliance with USDOT regulations.

Project Status: A structural assessment is planned to begin in FY17. The results of this assessment may lead to revised scopes and cost estimates. Additional funding is needed to proceed with final design and construction of improvements needed for the four platforms.

Basic Infrastructure Backlog Elimination

TRENTON, NJ TO NEWARK, NJ

Amtrak

Existing Conditions: Significant investments in basic infrastructure were recently undertaken in this region as part of the New Jersey High Speed Rail Improvement Program (HSRIP). Through HSRIP—which spanned just east of Trenton, NJ through New Brunswick, NJ—Amtrak improved track alignment, installed constant tension catenary, and constructed a new substation and frequency converter. In addition, NJ TRANSIT signal system investments in HSRIP territory (including the conversion to Rule 562 signaling and signal block optimization) have also contributed to improved capacity and reliability. However, the NEC segments in this region outside the scope of HSRIP (i.e., between New Brunswick and Newark, NJ and the Trenton station area) remain functionally obsolete and capacity constrained.

Regional FY18-19 Funding by Discipline:



Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions. Proactive, regular maintenance of track assets produces long-term cost-savings by preventing severe deterioration, which requires higher-levels of investment to return assets to a state of good repair.

List of all Special Projects from Trenton, NJ to Newark, NJ

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Amtrak

Improvement Projects

- Adams Substation
- Newark Penn Station Platform Rehabilitation ●
- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*

Strategic Initiatives

- New Jersey
- Northeast Corridor South

NJ TRANSIT

- *County Yard*
- *Delco Lead Safe Haven Facility Project*
- Edison Station
- Elizabeth Station
- Hunter Flyover
- Jersey Avenue Station
- Metuchen Station
- Mid-Line Loop ●
- New Brunswick Station
- *NJ TRANSITGRID*
- North Brunswick Station
- North Elizabeth Station
- Princeton Junction Station

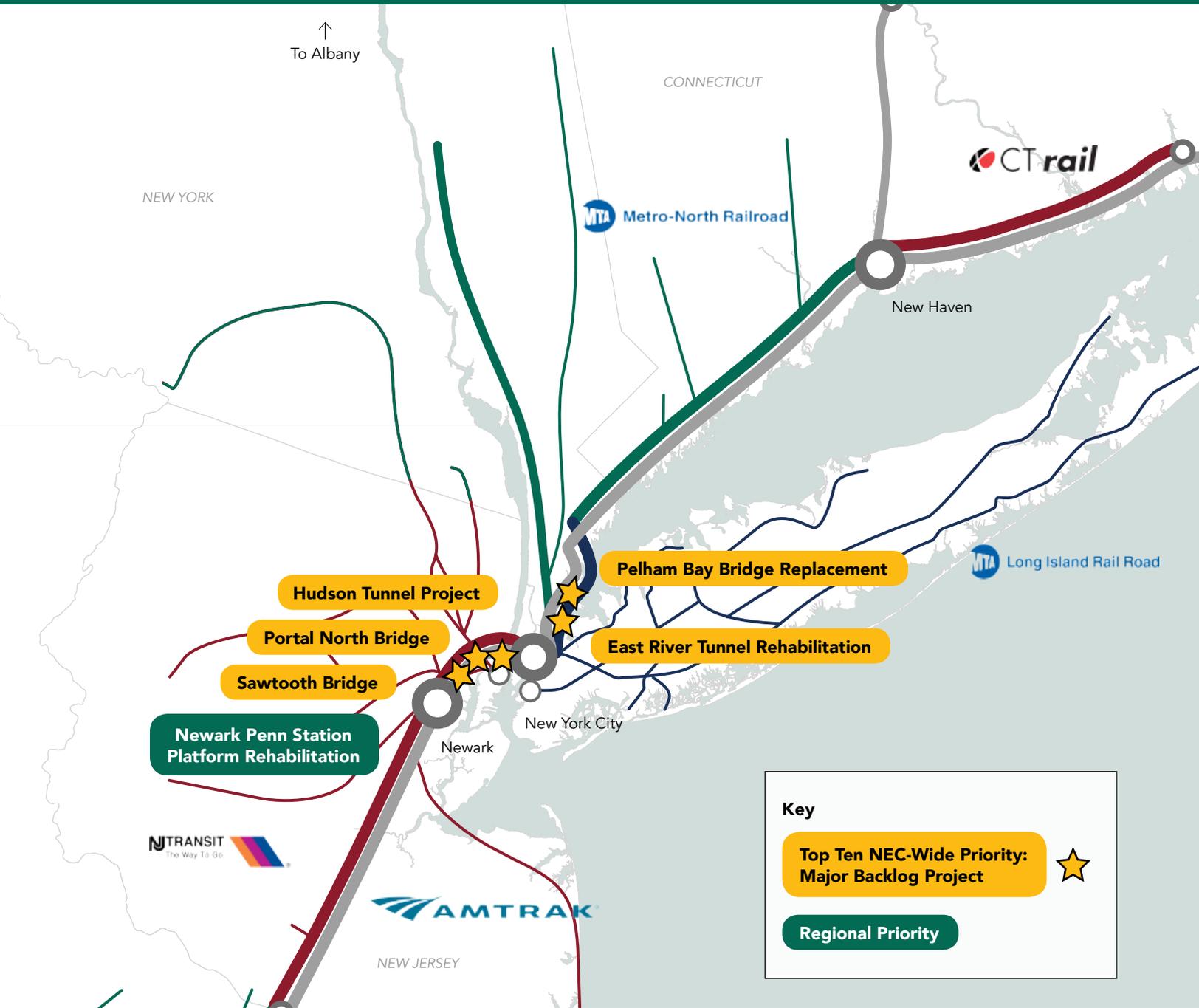
Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Priorities: Newark, NJ to New Rochelle, NY



Portal North Bridge was completed in 1910, the same year that **President William H. Taft** introduced the baseball tradition of the Presidential first pitch.



New York Penn Station is the **busiest** Amtrak station with over 10 million boardings in 2015.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- Gateway Program: Sawtooth Bridge
- Gateway Program: Portal North Bridge
- Gateway Program: Hudson Tunnel Project
- East River Tunnel Rehabilitation
- Pelham Bay Bridge Replacement

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- Newark Penn Station Platform Rehabilitation

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between Newark, NJ and New Rochelle, NY should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades
- Sunnyside Yard Frequency Converter Replacement/Upgrades

Major Backlog Project



Gateway Program: SAWTOOTH BRIDGE

\$0M funded for FY18-22

0% of \$1,254M need for FY18-22
Expended prior to FY18: \$2M. Total cost: \$1,300M

Existing Conditions: The Sawtooth Bridge carries the NEC over the NJ TRANSIT Morristown Line and the PATH rail line. The bridge is in a state of serious distress and is well beyond possibility of rehabilitation.

Project Scope: As part of the Gateway Program, this project would replace the existing, structurally deficient bridge spans with four-track structures. Construction staging is complex because of the intensity of use of the NEC as well as intense usage on the railroad crossings below the structures.

Project Benefits: The replacement of this bridge would support an expansion of capacity as envisioned under the Gateway Program. When replaced, capacity would be increased from a two-track to a four-track right-of-way. A continuous third and fourth track would be essential to unlocking the full capacity gains promised by larger projects, including a new Portal North Bridge and new Hudson River Tunnels. This additional capacity would enable both Amtrak and NJ TRANSIT to increase service and would greatly improve reliability by creating the flexibility to divert trains to alternative tracks when there are disruptions on the line.

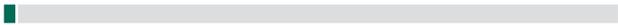
Project Status: This project is undergoing the PE/ NEPA process. Additional funding is required for final design and construction.

Major Backlog Project



**Gateway Program:
PORTAL NORTH BRIDGE**

\$35M funded for FY18-22



2.7% of \$1,298M need for FY18-22
Expended prior to FY18: \$121M. Total cost: \$1,700M

Existing Conditions: This century-old, swing-span bridge over the Hackensack River carries approximately 450 trains daily between Newark, NJ and Penn Station New York. The existing bridge is a major bottleneck and source of delay of train traffic. It has limited vertical clearance and must routinely be opened for maritime traffic. The bridge is functionally obsolete and experiences frequent mechanical failures, creating major delays for this section of the NEC. The risk of continued and increasing unplanned outages due to malfunctioning of the obsolete bridge cannot be mitigated by routine maintenance.

Project Scope: As a part of the Gateway Program, this project would replace the century-old Portal Bridge with a new high-level, fixed-span bridge that would eliminate future malfunctions.

Project Benefits: This project would eliminate the bottleneck that current hampers service along the Corridor.

Project Status: Amtrak and NJ TRANSIT have completed final design and environmental review to replace the existing bridge.



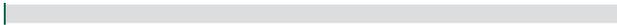
In 2015, a TIGER Grant was awarded to New Jersey to complete early action construction items. **Full construction of the new Portal North Bridge can begin as soon as funding can be secured.**

Major Backlog Project



**Gateway Program:
HUDSON TUNNEL PROJECT**

\$20.7M funded for FY18-22



0.3% of \$7,380M need for FY18-22
Expended prior to FY18: \$89M. Total cost: \$10,000M

Existing Conditions: Every weekday, almost 200,000 passengers use the Hudson River Tunnel to travel between New Jersey and Manhattan. The tunnel was built in 1910 and, although operational and safe, was inundated and significantly damaged by Hurricane Sandy in 2012. The tunnel today continues to deteriorate due to deposits of corrosive minerals causing ongoing damage to the bench walls, embedded steel, track, and signaling and electrical components. An extended outage of the tunnel is needed in order to completely replace damaged systems and to rehabilitate the tunnel.

Project Scope: As a part of the Gateway Program, this project includes the design and construction of a new two-track tunnel beneath the Hudson River to enable the future rehabilitation and modernization of the existing two-track tunnel (referred to as the North River Tunnel). These improvements must be achieved while maintaining uninterrupted commuter and intercity rail service and by optimizing the use of existing infrastructure. Existing service can only be maintained by the construction of a new, two track tunnel connecting to existing Penn Station that will carry existing rail traffic during the rehabilitation of the North River Tunnel. Taking one track out of service at a time without the new tunnel would reduce total capacity for Amtrak and NJ TRANSIT, impacting 200,000 passengers on 450 trains each weekday.

Project Benefits: The Hudson Tunnel Project would preserve the functionality of the Hudson River rail crossing and strengthen the resilience of the NEC. The new two-track tunnel would increase operational flexibility and reliability, while also enabling the original tunnel to be rehabilitated without major service disruptions.

Project Status: Preliminary engineering and environmental review are underway with the Federal Railroad Administration as the lead agency and NJ TRANSIT as the NEPA manager. Additional funding is required to complete final design and begin construction.

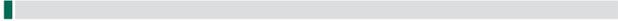
More information is available at www.hudsonstunnelproject.com.

Major Backlog Project



EAST RIVER TUNNEL REHABILITATION

\$11M funded for FY18-22



2.2% of \$497M need for FY18-22
Expended prior to FY18: \$20M. Total cost: \$750M

Existing Conditions: The East River Tunnel consists of four tubes that connect Manhattan to Long Island and are used for Amtrak and MTA Long Island Rail Road services. The tubes, constructed in 1909, require significant upgrades and rehabilitation in order to achieve a state of good repair, due to continually worsening conditions of the tunnel structure.

Project Scope: This project would rehabilitate all four East River tunnels from New York Penn Station to near East Portal at a planned cost of \$80M per year. Each tunnel is approximately 13,000 feet in length. To rehabilitate the track and drainage systems would require removing and replacing track and ballast; installing new welded rail, impedance bonds, and I-joints; cleaning the drainage system and installing new covers; and removing and replacing the third rail for the entire length of all four East River Tunnels.

Project Benefits: This project and its new modern high-density signal system would increase capacity, reduce delays, and improve safety by supporting the implementation of positive train control technology.

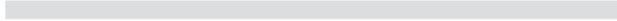
Project Status: Additional funding is required for final design and construction of improvements.

Major Backlog Project



PELHAM BAY BRIDGE REPLACEMENT

\$0M funded for FY18-22



0% of \$170M need for FY18-22
Expended prior to FY18: \$1.4M. Total cost: \$410M

Existing Conditions: The Pelham Bay Bridge, built in 1907, is a two-track movable bridge that carries the NEC over the Hutchinson River in Bronx, NY. The bridge has reached the end of its useful life and requires extensive ongoing maintenance. Its obsolete and aging components have forced Amtrak to restrict speeds to 45 mph. The bridge has a lift span that is manned by a bridge operator. Today, the bridge still opens frequently for marine traffic and occasionally fails to properly close, creating a block for Amtrak service between Boston and New York. Though some components have been recently upgraded, including substructure work for the approach spans done under the ARRA program, this bridge will not be in a state of good repair until the movable span is replaced.

Project Scope: This project would replace the century-old movable Pelham Bay Bridge with a new high-level fixed bridge with clearance for marine traffic.

Project Benefits: This project would increase reliability and may offer opportunities to increase capacity for Amtrak and proposed Metro-North Railroad service through the Penn Station Access project.

Project Status: Additional funding is required for final design and construction of improvements.

Regional Priority



NEWARK PENN STATION PLATFORM REHABILITATION

\$0M funded for FY18-22

0% of \$130M need for FY18-22
Expended prior to FY18: \$0.3M. Total cost: \$130M

Existing Conditions: Newark Penn Station currently serves both Amtrak, NJ TRANSIT, and the Port Authority Trans-Hudson (PATH) transit system. Platforms A, B, C, and D at Newark Penn Station are in need of repair and rehabilitation. The level-boarding platforms have buckled over time due to expansion issues with the joints, thereby complicating boarding conditions for passengers.

Project Scope: This project would include the design and rehabilitation of Platforms A, B, C, and D, as well as their roof/canopy structures. This project may also include any other repairs deemed necessary by the initial structural assessment from Amtrak.

Project Benefits: This project would create a safer platform environment and boarding conditions for Amtrak and NJ TRANSIT passengers by bringing station areas to a state of good repair and into compliance with USDOT regulations.

Project Status: A structural assessment is planned to begin in FY17. The results of this assessment may lead to revised scopes and cost estimates. Additional funding is needed to proceed with final design and construction of improvements needed for the four platforms.

Basic Infrastructure Backlog Elimination

NEWARK, NJ TO NEW ROCHELLE, NY

Amtrak

Existing Conditions: This region is one of the busiest and most densely traveled sections of railroad in the United States. Current peak service levels exceed capacity such that even minor disruptions can result in significant delays. To support future service levels and further mitigate damage incurred by Superstorm Sandy, upgrades and renewals of basic infrastructure will be necessary and are planned to occur as major, capacity-enhancing projects, such as Gateway and East Side Access, progress in the coming years. Meanwhile, targeted investments, such as the Zero Defects turnout renewal program in the New York Penn Station terminal area, help maintain key basic infrastructure assets in a state of good repair.

Regional FY18-19 Funding by Discipline:



Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing
- Substations Upgrades
- Sunnyside Yard Frequency Converter Replacement/Upgrades

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Substation upgrades throughout the region—along with the installation of two additional 20 megawatt frequency converters in the existing Sunnyside Yard facility—would help meet the demands of a capacity-constrained power system. Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions.

List of all Special Projects from Newark, NJ to New Rochelle, NY

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Gateway Program

Major Backlog Projects

- Highline Renewal and State of Good Repair
- Hudson Tunnel Project ★
- Portal North Bridge ★
- Sawtooth Bridge ★

Improvement Projects

- Harrison Fourth Track
- Hudson Yards Concrete Casing
- NJ TRANSIT Storage Yard
- Penn Station Expansion
- Portal South Bridge
- Secaucus Station and Loop Tracks
- Planning and Program Management

Amtrak

Major Backlog Projects

- East River Tunnel Rehabilitation ★
- Pelham Bay Bridge Replacement ★

Improvement Projects

- Hunter Yard Maintenance of Way Facilities Upgrade
- Moynihan Station (Phase 2)
- Newark Penn Station Platform Rehabilitation ●
- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*
- *Next Generation High Speed Fleet Infrastructure: Sunnyside Yard Facility Improvements*

Strategic Initiatives

- New Jersey
- Northeast Corridor North
- Northeast Corridor South

Long Island Rail Road

- East River Tunnel - Right of Way Infrastructure Improvements
- Penn Station New York - LIRR Projects
- *River-to-River Rail Resiliency Project (R4)*

Metro-North Railroad

- *Penn Station Access*

MTA Capital Construction

- *Harold Interlocking*

NJ TRANSIT

- Hunter Flyover
- NJ TRANSITGRID
- Penn Station New York - NJ TRANSIT Projects

Key

Project is Fully Funded

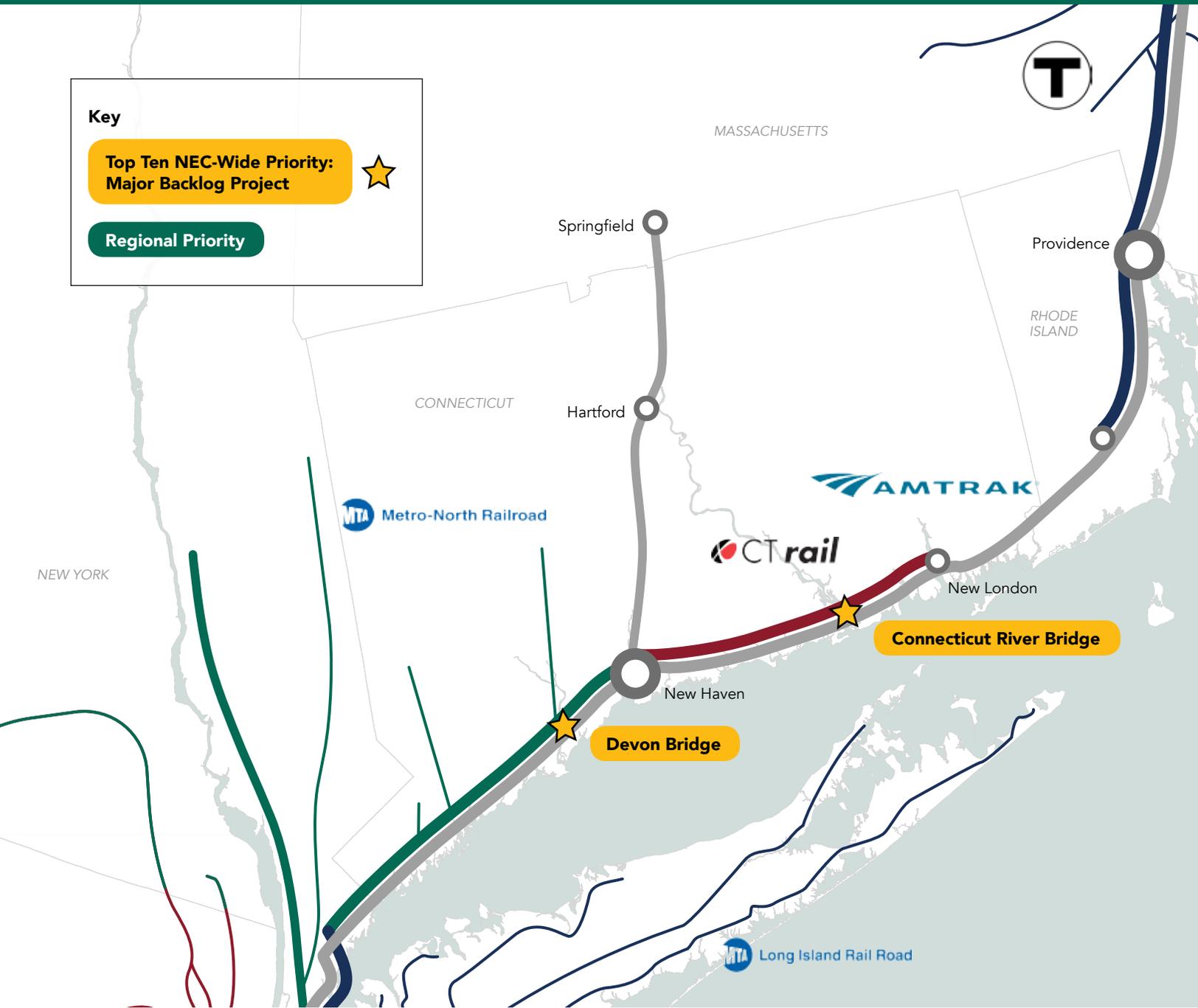
Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Priorities: New Rochelle, NY to New London, CT

Key

- Top Ten NEC-Wide Priority: Major Backlog Project 
- Regional Priority 



Service on Connecticut's Shore Line East began with the intention to **reduce congestion** along Interstate 95, which runs parallel to the system.



New Haven Union Station carries nearly **2,000 daily passengers**, making it the busiest station in Connecticut and the tenth busiest Amtrak station.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- Devon Bridge
- Connecticut River Bridge

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- None in this region

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between New Rochelle, NY and New London, CT should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Culvert and Bridge Repair
- Track Replacement
- Wood Tie and Timber Crosstie Replacement
- Surfacing

Major Backlog Project



DEVON BRIDGE

\$0M funded for FY18-22

0% of \$1,500M need for FY18-22
Expended prior to FY18: \$40M. Total cost: \$1,500M

Existing Conditions: Devon Bridge, constructed in 1905 and rehabilitated in 1990, carries four New Haven Line tracks over the Housatonic River between Stratford and Milford, CT. Like the state's other movable bridges, Devon has experienced severe deterioration. In 2010, Connecticut DOT funded a feasibility study to examine the engineering needs on the bridge and options for improvement. The study recommended a full replacement of the bridge, as well as short-term repairs (which began in 2012) to ensure reliability and safety. While short-term repairs have lengthened the useful life of this asset, the long-term replacement of this bridge is required. Connecticut DOT has Devon Bridge as the second most critical movable bridge for replacement after the Walk Bridge Replacement Program which is already funded for construction.

Project Scope: This project would design and construct a four-track replacement bridge.

Project Benefits: The replacement of Devon Bridge would relieve the potential for a long-term major disruption of service along the NEC.

Project Status: The Connecticut DOT has \$50M in programmed funds to complete initial designs of the replacement structure.



If additional funding were available, this project could advance to final design in 2020 with construction beginning in 2021.

Major Backlog Project



CONNECTICUT RIVER BRIDGE

\$0M funded for FY18-22

0% of \$414M need for FY18-22
Expended prior to FY18: \$2.3M. Total cost: \$660M

Existing Conditions: Completed in 1907, the Connecticut River Bridge is one of the oldest assets on the NEC between New Haven, CT and Boston, MA. The frequent opening and closing of the bridge—over 3,000 times per year—puts high demands on its aging components, increasing maintenance costs, and reducing reliability for both railway and marine traffic. A century of operation in a marine environment, coupled with the age of the structure has taken its toll and speeds are restricted to 45 mph. Many key elements of the bridge have reached the end of their design life and require extensive maintenance to remain in operable condition.

Project Scope: This project would replace the Connecticut River Bridge.

Project Benefits: The new design and configuration of a replacement bridge would improve reliability and offer higher speeds for both Amtrak and Shore Line East trains.

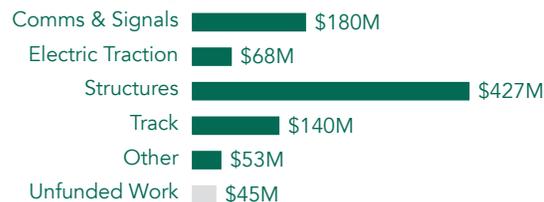
Project Status: An environmental assessment and preliminary design have been completed, awaiting Federal Railroad Administration approval. However, there are no identified funding sources for final design or construction.

Basic Infrastructure Backlog Elimination

**NEW ROCHELLE, NY TO NEW HAVEN, CT
Metro-North Railroad and Connecticut DOT**

Existing Conditions: Metro-North Railroad and Connecticut DOT own their respective portions of the NEC between New Rochelle, NY and New Haven, CT. Connecticut has been funding replacement of existing capital assets at rates beyond those allocated by the Cost Allocation Policy in order to reduce the state-of-good-repair backlog. By FY22, Connecticut DOT will have fully replaced the catenary system in its territory, though additional investments in track and undergrade bridges are required to clear the state-of-good-repair backlog. Basic infrastructure in Metro-North Railroad territory is considered to be largely in a state of good repair.

FY18-22 Funding by Discipline:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- The Connecticut DOT has \$20M in need for structures work (such as culvert replacements and repairs to fixed undergrade bridges) in FY18-19, and \$25M in need for track work (which includes cyclical replacement of ties, switches, and interlockings) in FY21.
- Metro-North Railroad has an approved capital plan through FY19. Unfunded investments in FY20-22 will be informed by the MTA 2020-2039 Capital Twenty Year Needs Assessment and subsequent five-year capital program.

Benefits of Additional Investment: For Connecticut DOT, additional investment in its structures would prevent slow orders and outages, which is critical to providing safe and reliable service. Additional track investments would allow for continual repair and improvement to track drainage to ensure that investments in ties and switches last their full useful lives.

Basic Infrastructure Backlog Elimination

NEW HAVEN, CT TO NEW LONDON, CT

Amtrak

Existing Conditions: This region received significant investments in basic infrastructure during the late 1990s prior to the launch of Amtrak's Acela service. Some of the investments made during that time include the installation of advanced signal systems and constant tension catenary systems, curve modifications, and grade crossing eliminations. However, Shore Line East commuter service sometimes faces reliability and capacity challenges in this region as several of its commuter rail stations currently lack double-sided platforms.

Regional FY18-19 Funding by Discipline:

Comms & Signals | \$0.1M
 Electric Traction | \$0.4M
 Structures ■ \$7M
 Track ■ \$13M
 Unfunded Work | \$1.5M

Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions. Proactive, regular maintenance of track assets produces long-term cost-savings by preventing severe deterioration, which requires higher-levels of investment to return assets to a state of good repair.

List of all Special Projects from New Rochelle, NY to New London, CT

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Amtrak

Major Backlog Projects

- Connecticut River Bridge Replacement ★

Improvement Projects

- Clinton Interlocking
- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*

Strategic Initiatives

- Northeast Corridor North

Connecticut DOT

Major Backlog Projects

- Cos Cob Bridge Replacement
- Devon Bridge Replacement ★
- Walk Bridge Program

Improvement Projects

- *New Haven Line Network Infrastructure Upgrade*
- *New Haven Line Stations Improvements*
- New Haven Yard Master Complex Improvements
- New Haven-Hartford-Springfield Rail Program Phase 3B - 5
- *NHHS Commuter Station Improvements*
- *Shore Line East Track & Catenary Improvements*
- SLE Stations Improvements

Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Connecting Corridor: New Haven, CT to Springfield, MA

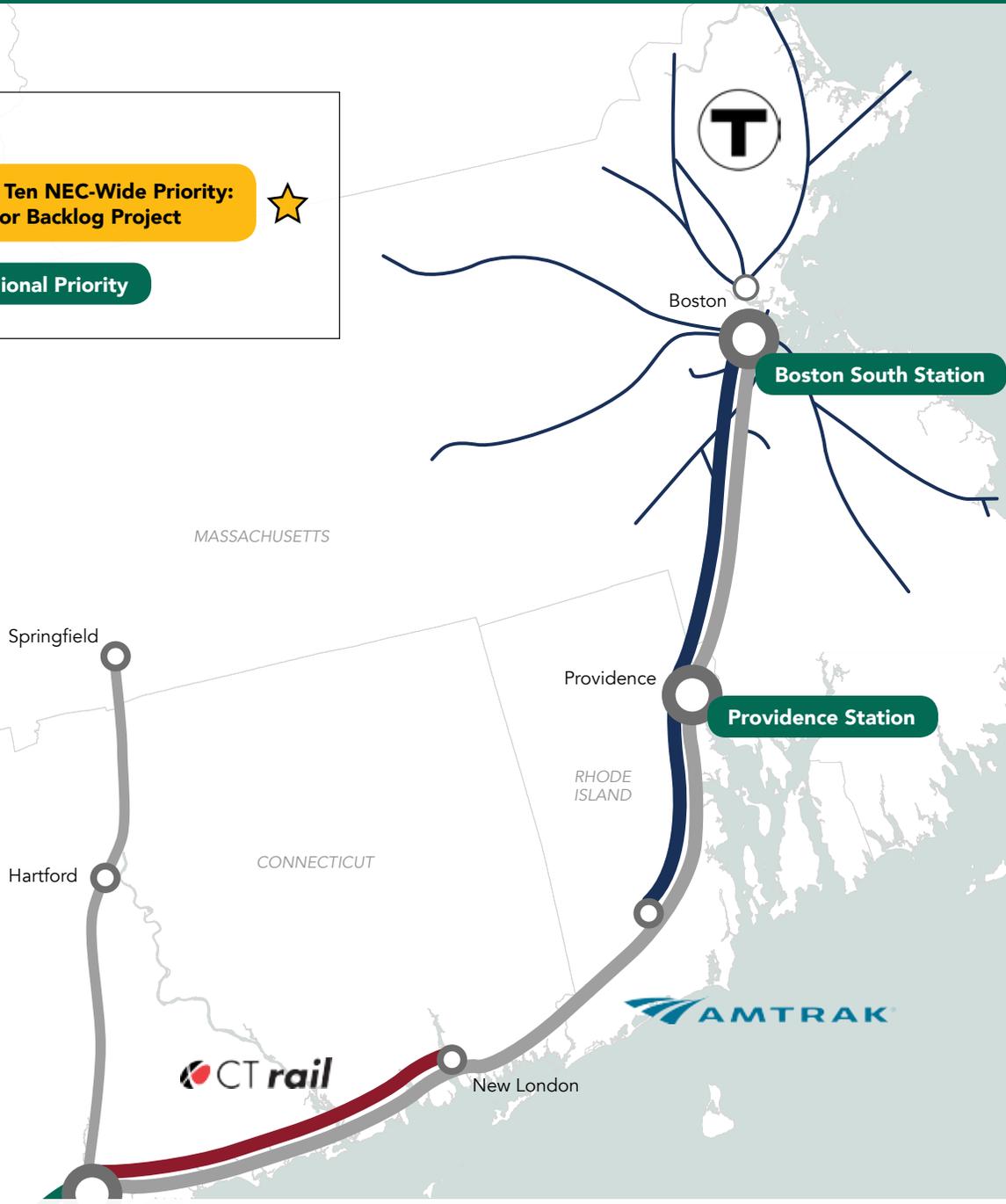
The 60-mile corridor that connects New Haven, CT to Springfield, MA is owned by Amtrak, currently the sole operator of passenger rail. Freight service is operated by CSX, Connecticut Southern, and Pan Am Southern. The New Haven-Hartford-Springfield (NHHS) Rail Program is a multi-year investment to rebuild and upgrade infrastructure along this corridor, including the installation of a second track that will permit commuter service. *CTrail* is scheduled to begin operating its Hartford Line in early 2018.

In addition to the second track between New Haven and Hartford, the initial NHHS Program will upgrade Wallingford, Meriden, Berlin, and Hartford stations, overhaul the signal and communications system, and rehabilitate or replace many bridges and culverts. Additional funding for future phases would restore a full double track railroad capable of operating 25 trains per day between New Haven and Springfield.

Priorities: New London, CT to Boston, MA

Key

- Top Ten NEC-Wide Priority: Major Backlog Project 
- Regional Priority 



Plans for the new Pawtucket/Central Falls Station in Rhode Island will **restore commuter rail service** to the area that stopped in 1981.



Boston South Station was the busiest station in the US in the early 1900s, serving over **36 million passengers** a year.

Highlighted priorities in need of additional funding:

Top Ten NEC-Wide Priority: Major Backlog Project



Major Backlog Projects are the replacements of century-plus-old major bridges and tunnels and are critical in ensuring that the Corridor continues to serve as a network between Washington, DC and Boston, MA. These priorities are ready to begin construction within the next five years if funding became available.

- None in this region

Regional Priority

These priorities are additional projects with funding needs highlighted at the discretion of the local states and/or commuter railroads.

- Providence Station
- Boston South Station

Top Ten NEC-Wide Priority: Basic Infrastructure Backlog Elimination



While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken between New London, CT and Boston, MA should additional funding be secured to begin to reduce the state-of-good-repair backlog:

- Wood Tie and Timber Cross-tie Replacement
- Surfacing

Regional Priority



PROVIDENCE STATION

\$0M funded for FY18-22

0% of \$15M need for FY18-22
Expended prior to FY18: \$0M. Total cost: \$32M

Existing Conditions: Providence Station was relocated in the 1980s. Its current location lacks strong intermodal connections to ensure passengers can seamlessly travel to Providence Station for destinations along the Corridor, including Boston, MA. Numerous companies in Boston have decided to locate additional offices in Providence, thereby increasing the importance for service between the two cities. The current station is also in need of reprogramming of interior space to better reflect the needs of today's travelers.

Project Scope: This project includes short-term interior layout changes, emergency platform egress, and pedestrian access improvements to the station. Long-term actions could include connections to adjacent retail centers, enhanced bus/intermodal connections, increased parking, and station expansion.

Project Benefits: This project would improve the customer experience, increase accessibility, and enhance security. The long-term benefits of this project would include better station access and integration with local transit options, as well as new capacity for high-speed services.

Project Status: Current project development through a Federal Railroad Administration high-speed rail grant includes a full assessment of the station's condition, 30 percent design for recommended short-term improvements, and an environmental review on the preferred alternative. Additional funds are needed for this project to advance to construction.

Regional Priority



BOSTON SOUTH STATION

\$0M funded for FY18-22

0% of TBD need for FY18-22
Expended prior to FY18: \$36M. Total cost: TBD

Existing Conditions: Boston South Station is the anchor of the northern half of the NEC, serving Amtrak and eight lines on the MBTA commuter rail system. With over 320 daily trains, South Station is Amtrak’s third-busiest station on the NEC and the busiest in the MBTA commuter rail system. South Station is currently operating at capacity, creating a significant bottleneck and a major obstacle to increasing service. Due to limited space at the nearby Southampton Street Yard, trains are stored on station tracks, eating up the already scarce capacity. For passengers, the station’s tracks are exposed to the elements, forcing riders to travel through rain, snow, and cold temperatures to reach their trains.

Project Scope: This project would expand Boston South Station for future growth. State funding and a HSIPR grant are funding preliminary engineering and environmental review. The project is expected to dramatically increase capacity at the station. Plans may include new tracks and new passenger facilities, as well as additional storage space for MBTA trains.

Project Benefits: This project would support the growth of MBTA and Amtrak service, as well as create a superior passenger experience while building upon the Station’s existing architectural legacy.

Project Status: Preliminary engineering and environmental review is wrapping up. Additional funding is required to advance the project to final design and construction.

Basic Infrastructure Backlog Elimination

NEW LONDON, CT TO BOSTON, MA

Amtrak

Existing Conditions: This region continues to benefit from significant investments in basic infrastructure made during the late 1990s prior to the launch of Amtrak’s Acela service. However, congestion issues and capacity constraints exist between Canton Junction and Boston South Station as several MBTA commuter service lines interface with the NEC along this stretch of railroad. In addition, while Amtrak trains run on state-of-the-art, constant tension catenary in this region, they must contend with a marginally-sufficient power supply, which can affect train operations elsewhere on the corridor.

Regional FY18-19 Funding by Discipline:

- Comms & Signals █ \$12M
- Electric Traction | \$0.7M
- Structures █ \$28M
- Track █ \$31M
- Unfunded Work █ \$3.7M

Amtrak NEC-Wide FY20-22 Funding for all Disciplines:



Scope for Potential Additional Investment to Begin to Address Basic Infrastructure Backlog: While the most critical basic infrastructure investments are covered through the Baseline Capital Charge (BCC) Program, the following basic infrastructure activities could be undertaken should additional funding be secured:

- Wood Tie and Timber Crosstie Replacement
- Surfacing

Prior to additional funding being secured for the above activities, cost estimates, scopes of work, and schedules would need to be further developed. More effort would be needed to determine the collective prioritization and sequencing of these activities NEC-wide if funding was secured for additional basic infrastructure investments.

Benefits of Additional Investment: Additional investment in basic track maintenance activities, such as wood tie replacement and surfacing, help enhance the overall performance of the railroad and contribute to ride quality benefits and fewer speed restrictions. Proactive, regular maintenance of track assets produces long-term cost-savings by preventing severe deterioration, which requires higher-levels of investment to return assets to a state of good repair.

List of all Special Projects from New London, CT to Boston, MA

The following is a list of Special Projects (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives) located in this region. Please see the Project Information Appendix for a complete listing of all NEC projects.

Amtrak

Improvement Projects

- New England Interlocking Improvements
- *Next Generation High Speed Fleet Infrastructure: Ride Quality Investment*
- *Next Generation High Speed Fleet Infrastructure: Safety Mitigation*
- *Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements*

Strategic Initiatives

- Massachusetts
- Northeast Corridor North

Massachusetts DOT

- Route 128 Station Improvements

MBTA

- Back Bay Station Restroom Renovation
- Boston South Station ●
- MBTA Layover Facilities - Pawtucket Layover Facility
- MBTA Station Improvements - Mansfield Station
- MBTA Station Improvements - Ruggles Street Station
- MBTA Station Improvements - South Attleboro Station
- Spandrel Beam Repair

Rhode Island DOT

- *Pawtucket/ Central Falls Station*
- Providence Station ●
- RIDOT Stations: Warwick/ T.F. Green Airport

Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Project Information Appendix

Baseline Capital Charge Program

The Baseline Capital Charge (BCC) Program primarily covers the normalized replacement of existing capital assets (excluding major bridges and tunnels) with charges allocated to service operators based on methods described in the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy. Two of four NEC infrastructure owners, Connecticut DOT and Metro-North Railroad, fund replacement of existing capital assets at rates beyond those allocated by the Policy in order to reduce the state-of-good-repair backlog in their segments.

Amtrak FY18-19 Forecast

BCC Segment	FY18 Expenditure Forecast	FY19 Expenditure Forecast
1. Boston Terminal	\$0	\$0
2. Boston - Providence	\$23,684,561	\$20,800,318
3. Providence - Wickford Junction	\$5,522,993	\$9,276,980
4. Wickford Junction - New London	\$5,056,925	\$7,303,020
5. New London - New Haven	\$8,629,366	\$11,845,221
8. New Rochelle - Harold	\$3,666,367	\$6,824,455
9. Harold - F Interlocking	\$2,116,273	\$2,644,032
10. F Interlocking - PSNY	\$14,673,492	\$20,926,495
11. Penn Terminal	\$22,050,824	\$9,013,047
12. PSNY - Trenton	\$97,075,617	\$102,880,172
13. Trenton - Morris	\$3,213,031	\$18,050,219
14. Morris - Holmes	\$6,571,194	\$19,984,860
15. Holmes - Shore	\$20,752,518	\$3,319,932
16. Shore - Girard	\$3,580,276	\$3,899,749
17. Girard - Philadelphia 30th Street	\$7,157,679	\$3,851,247
18. Philadelphia 30th Street - Arsenal	\$11,512,990	\$12,190,938
19. Arsenal - Marcus Hook	\$13,182,641	\$13,180,795
20. Marcus Hook - Bacon	\$28,176,201	\$53,584,380
21. Bacon - Perryville	\$8,591,564	\$7,117,395
22. Perryville - WAS	\$53,336,499	\$78,244,853
23. Washington Union Terminal	\$6,129,684	\$9,804,062
24. WAS - CP Virginia	\$1,326,499	\$1,656,149
25. Springfield - New Haven	\$684,530	\$2,861,713
26. Poughkeepsie - Spuyten Duyvil*	N/A	N/A
27. Spuyten Duyvil - PSNY	\$832,430	\$3,130,937
28. Penn - 36th Street	\$0	\$0
29. 36th Street - Thorndale	\$8,641,892	\$24,890,610
30. Thorndale - Harrisburg	\$23,026,870	\$27,568,643
31. System-wide	\$31,507,705	\$22,485,398
Total	\$410,700,621	\$497,335,621

Amtrak FY20-22 Forecast

Territory/ Discipline	FY20 Expenditure Forecast	FY21 Expenditure Forecast	FY22 Expenditure Forecast
NEC Track	\$253,404,026	\$252,662,751	\$237,288,163
NEC Structures	\$90,832,036	\$91,121,715	\$101,026,717
NEC Communications and Signals	\$71,205,650	\$72,639,583	\$53,483,930
NEC Electric Traction	\$27,021,726	\$64,148,644	\$86,562,067
National Network Track	\$30,673,758	\$14,309,242	\$14,738,519
National Network Structures	\$4,855,903	\$4,909,388	\$5,506,281
National Network Communications and Signals	\$648,334	\$651,739	\$655,246
National Network Electric Traction	\$1,337,125	\$1,444,095	\$1,444,095
Systemwide Track	\$523,187	\$538,883	\$555,049
Systemwide Structures	\$8,386,448	\$8,386,448	\$9,541,724
Systemwide Program Management	\$13,581,986	\$13,522,361	\$13,522,361
Total	\$502,470,179	\$524,334,849	\$524,324,152

*Segment 26 from Poughkeepsie and Spuyten Duyvil is exempt from the Plan

Connecticut DOT FY18-22 Program (BCC Segment 6: New Haven Line, CT)

BCC Segment	FY18 Program	FY19 Program	FY20 Program	FY21 Program	FY22 Program
Track - C Program	\$25,000,000	\$15,000,000	\$28,000,000	\$25,000,000	\$30,000,000
Structures - S Program	\$11,000,000	\$12,000,000	\$15,000,000	\$15,000,000	\$18,000,000
NHL Bridge Replacement Program	\$120,000,000	\$30,000,000	\$30,000,000	\$50,000,000	\$50,000,000
NHL Movable Bridge Repairs	\$30,000,000	\$18,500,000	\$0	\$0	\$0
NHL Catenary Replacement Program*	\$20,000,000	\$20,000,000	\$0	\$0	\$0
NHL Signal System Replacement Program	\$19,500,000	\$35,000,000	\$25,000,000	\$25,000,000	\$68,000,000
NHL Substation Program*	\$0	\$0	\$0	\$0	\$0
Positive Train Control*	\$0	\$0	\$0	\$0	\$0
Total	\$225,500,000	\$130,500,000	\$98,000,000	\$115,000,000	\$166,000,000

Note: Funding figures reflect programmed dollars to be spent over multiple years, not expenditure forecasts. BCC-eligible expenditures are still likely in years that show no values.

Metro-North Railroad FY18-22 Program (BCC Segment 7: New Haven Line, NY)

BCC Segment	FY18 Program	FY19 Program	FY20 Estimate	FY21 Estimate	FY22 Estimate
Track	\$720,000	\$800,000	\$3,760,000	\$5,750,000	\$6,010,000
Stations and Structures	\$2,740,000	\$16,290,000	\$1,030,000	\$2,400,000	\$4,690,000
Communications and Signals	\$2,530,000	\$0	\$1,980,000	\$2,270,000	\$920,000
Electric Traction	\$220,000	\$40,000	\$2,000,000	\$13,000,000	\$13,000,000
System Wide Support	\$11,420,000	\$7,370,000	\$5,280,000	\$13,350,000	\$15,160,000
Total	\$17,630,000	\$24,500,000	\$14,050,000	\$36,770,000	\$39,780,000
Stations - Sole Benefit	\$2,230,000	\$0	\$1,440,000	\$1,980,000	\$2,040,000

Note: Funding figures reflect programmed dollars to be spent over multiple years, not expenditure forecasts. MTA has an approved capital program for 2015-2019. FY20-22 funding figures are estimates based on planned capital investments and historic funding levels.

Metro-North Railroad FY18-22 Program (Connecting Corridor: Hudson Line)

Not subject to PRIIA Section 212

BCC Segment	FY18 Program	FY19 Program	FY20 Estimate	FY21 Estimate	FY22 Estimate
Track	\$8,210,000	\$8,550,000	\$16,960,000	\$30,520,000	\$33,090,000
Stations and Structures	\$13,650,000	\$1,790,000	\$11,800,000	\$30,170,000	\$31,740,000
Communications and Signals	\$25,680,000	\$4,600,000	\$55,030,000	\$20,580,000	\$9,280,000
Electric Traction	\$100,000	\$100,000	\$7,500,000	\$7,500,000	\$7,500,000
Hudson Line Shop and Yard	\$415,290,000	\$0	\$0	\$30,000,000	\$0
Total	\$462,930,000	\$15,040,000	\$91,290,000	\$118,770,000	\$81,610,000

Note: Funding figures reflect programmed dollars to be spent over multiple years, not expenditure forecasts. MTA has an approved capital program for 2015-2019. FY20-22 funding figures are estimates based on planned capital investments and historic funding levels.

Special Projects by Coordinating Agency

The following is a list of NEC Special Projects organized by the coordinating agency and project type (which include Major Backlog Projects, Improvement Projects, and Strategic Initiatives), listed alphabetically. Special Projects are funded through a mix of sources, which may include but are not limited to: federal grants; funds from state and/or commuter railroad capital programs; and other sources of discretionary funding.

Key

Project is Fully Funded

Highlighted Special Projects in need of additional funding:

- Top Ten NEC-Wide Priority Project ★
- Regional Priority ●

Gateway Program

Major Backlog Projects

- Highline Renewal and State of Good Repair50
- Hudson Tunnel Project ★51
- Portal North Bridge ★52
- Sawtooth Bridge ★53

Improvement Projects

- Harrison Fourth Track54
- Hudson Yards Concrete Casing55
- NJ TRANSIT Storage Yard56
- Penn Station Expansion57
- Portal South Bridge.....58
- Secaucus Station and Loop Tracks.....59
- Planning and Program Management60

Amtrak

Major Backlog Projects

- Baltimore & Potomac Tunnel Replacement ★61
- Bush River Bridge Replacement.....62
- Connecticut River Bridge Replacement ★63
- East River Tunnel Rehabilitation ★64
- Gunpowder River Bridge Replacement65
- Pelham Bay Bridge Replacement ★66
- Susquehanna River Bridge Replacement ★67

Improvement Projects

- Adams Substation68
- Baltimore Penn Station Infrastructure Improvements...69
- Baltimore Penn Station Master Plan70
- Clinton Interlocking.....71
- Hunter Yard Maintenance of Way Facilities Upgrade ...72

- Maryland Section Reliability Improvements.....73
- Moynihan Station (Phase 2).....74
- New England Interlocking Improvements75
- Newark Penn Station Platform Rehabilitation ●76
- Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements77
- Next Generation High Speed Fleet Infrastructure: Ride Quality Investment.....78
- Next Generation High Speed Fleet Infrastructure: Safety Mitigation.....79
- Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements.....80
- Next Generation High Speed Fleet Infrastructure: Sunnyside Yard Facility Improvements.....81
- Philadelphia 30th Street Station District Plan Implementation82
- Washington Union Station 2nd Century Plan83
- Washington Union Station: Claytor Concourse Modernization84
- Washington Union Station: Track 22 Rehabilitation.....85
- Wilmington Maintenance of Equipment Facility - Complex Replacement.....86

Strategic Initiatives

- Delaware87
- Maryland88
- Massachusetts89
- New Jersey.....90
- Northeast Corridor North91
- Northeast Corridor South92
- Pennsylvania.....93

Connecticut DOT

Major Backlog Projects

- Cos Cob Bridge Replacement94
- Devon Bridge Replacement ★95
- Walk Bridge Program.....96

Improvement Projects

- New Haven Line Network Infrastructure Upgrade97
- New Haven Line Stations Improvements.....98
- New Haven Yard Master Complex Improvements.....99
- New Haven-Hartford-Springfield Rail Program Phase 3B - 5100
- NHHS Commuter Station Improvements.....101
- Shore Line East Track & Catenary Improvements102
- SLE Stations Improvements103

Delaware DOT

- Claymont Regional Transportation Center 104
- Delaware Third Track Program..... 105
- Newark (DE) Regional Transportation Center..... 106

Long Island Rail Road

- East River Tunnel - Right of Way Infrastructure Improvements 107
- Penn Station New York - LIRR Projects 108
- River-to-River Rail Resiliency Project (R4)..... 109

Maryland DOT

- BWI Thurgood Marshall Airport Station Improvements and 4th Track Project 110
- BWI Thurgood Marshall Airport Station Interim Improvements..... 111
- Hanson Interlocking 112
- MARC Station - Bayview 113
- MARC Station Improvements - West Baltimore..... 114
- MARC Storage - Northeast Maintenance Facility..... 115
- MARC Storage Improvements - Martin Airport..... 116

Massachusetts DOT

- Route 128 Station Improvements 117

MBTA

- Back Bay Station Restroom Renovation..... 118
- Boston South Station ● 119
- MBTA Layover Facilities - Pawtucket Layover Facility. 120
- MBTA Station Improvements - Mansfield Station..... 121
- MBTA Station Improvements - Ruggles Street Station 122
- MBTA Station Improvements - South Attleboro Station .. 123
- Spandrel Beam Repair 124

Metro-North Railroad

- Penn Station Access..... 125

MTA Capital Construction

- Harold Interlocking 126

NJ TRANSIT

- County Yard..... 127
- Delco Lead Safe Haven Facility Project 128
- Edison Station 129
- Elizabeth Station 130
- Hunter Flyover..... 131
- Jersey Avenue Station..... 132
- Metuchen Station..... 133
- Mid-Line Loop ● 134
- New Brunswick Station 135
- NJ TRANSITGRID..... 136
- North Brunswick Station 137
- North Elizabeth Station..... 138
- Penn Station New York - NJ TRANSIT Projects 139
- Princeton Junction Station 140

Pennsylvania DOT

- Harrisburg Line Interlocking Improvements..... 141
- Harrisburg Line Station Improvements 142

Rhode Island DOT

- Pawtucket/ Central Falls Station 143
- Providence Station ● 144
- RIDOT Stations: Warwick/ T.F. Green Airport 145

SEPTA

- 30th Street to Arsenal Signals and ROW Improvements 146
- 30th Street West Catenary Replacement..... 147
- Ardmore Station Improvements - Phase 1..... 148
- Ardmore Station Improvements - Phase 2..... 149
- Exton Station Improvements..... 150
- Frazer Rail Shop and Yard Upgrade..... 151
- Harrisburg Line - 3rd Track Paoli to Frazer ● 152
- Harrisburg Line - Zoo to Thorndale OCS Replacement & ROW Clearing ● 153
- Harrisburg Line - Zoo to Thorndale Signal Upgrade ● 154
- Levittown Station Improvements 155
- Paoli Transportation Center - Phase 1 (ADA & Infrastructure)..... 156
- Paoli Transportation Center - Phase 2 157
- Villanova Station Improvements..... 158
- West Barracks Yard..... 159

Special Projects: Gateway Program (Major Backlog)

Gateway Component: Highline Renewal and State of Good Repair

- **Coordinating Agency:** Amtrak
 - **Partner Agency:** NJ TRANSIT
 - **Type:** Major Backlog Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would include the replacement of many assets between Newark, NJ and Penn Station, NY including short span bridges; electric catenary, aerial structures, and transmission lines; electrical and mechanical components on Dock Bridge; and Newark Penn Station pedestrian facilities. Advancement of this project is unfunded.
 - **Justification:** Much of the existing NEC infrastructure between Newark, NJ and Penn Station, NY is reaching the end of its useful life and must be replaced. Once new capacity is created under the Gateway Program and before service is expanded, elements of the NEC Highline would be upgraded to bring the infrastructure to a state of good repair.
 - **Changes to Service:** This project would ensure that infrastructure renewal and state of good repair is achieved prior to service expansion. Once complete, service would be expanded as envisioned under the Gateway Program.
-

Funding Information:

Total Project Cost: \$400,000,000

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2017 - 2019
- Construction: 2019 - 2026

Additional federal funding could be used for:

- Final Design
- Construction

Gateway Component: Hudson Tunnel Project

Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would construct a new two-track rail tunnel beneath the Hudson River and rehabilitate and modernize the existing two-track North River Tunnel, which was inundated with corrosive salt water during Superstorm Sandy and continues to deteriorate without comprehensive rehabilitation. Additional funding is required for construction. The project has been accepted by the FTA into project development for its Capital Investment Grant - Core Capacity grant program but still requires funding for construction. The project is the subject of an Emerging Projects Agreement with USDOT which will lay the technical groundwork for obtaining federal Railroad Rehabilitation & Improvement Financing (RRIF) and/or Transportation Infrastructure Finance and Innovation Act (TIFIA) loans for construction of the project.
- **Justification:** Service reliability in the North River Tunnel has been compromised because of the damage to tunnel components caused by Superstorm Sandy, which inundated both tubes with seawater in October 2012. Chlorides from the seawater remain in the tunnel's concrete liner and bench walls, causing ongoing damage to the bench walls, imbedded steel, track, and signaling and electrical components, requiring an extended outage of the tunnel in order to completely replace damaged systems and rehabilitate the tunnel. These improvements must be achieved while maintaining uninterrupted commuter and intercity rail service. Existing service can only be maintained by the construction of a new, two-track tunnel connecting to the existing Penn Station that would carry existing rail traffic during the rehabilitation of the North River Tunnel. Taking one track out of service at a time without the new tunnel would reduce total capacity for Amtrak and NJ TRANSIT by 75%, impacting 200,000 passengers on 450 trains each weekday.
- **Changes to Service:** No major service outages are anticipated as the new Hudson Tunnel will be constructed off corridor. Once the new tunnel is complete, existing rail service will be re-routed through the new tunnel and one tube of the existing tunnel in order for rehabilitation work to take place in the North River Tunnel. Existing service levels will be maintained during North River Tunnel rehabilitation.

Funding Information:

Total Project Cost: \$10,000,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$50,000,000, Amtrak General Capital Appropriation (prior years)
- State/Local Funds, \$35,000,000, The Port Authority has committed to reimburse Amtrak for half the cost of the Preliminary Engineering contract, up to \$35 million.
- State/Local Funds, \$3,800,000, NJ TRANSIT has committed in kind services up to \$1.9 million each year for conducting the NEPA process.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$30,342,913	\$20,735,879	\$0	\$0	\$0	\$0	\$20,735,879
Unfunded		\$1,471,849,983	\$1,471,849,983	\$1,471,849,983	\$1,471,849,983	\$1,471,849,983	\$7,359,249,917

Schedule:

Milestone(s):

- NEPA: Apr 2016 - Mar 2018
- PE: Apr 2016 - Jun 2018

Additional federal funding could be used for:

- Construction

Gateway Component: Portal North Bridge Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the century-old swing-span Portal Bridge over the Hackensack River with a new two-track, fixed-span bridge, allowing a modest expansion of capacity. Amtrak and NJ TRANSIT have completed final design and environmental review. The project has been accepted by the FTA into project development for its Capital Investment Grant - Core Capacity grant program but still requires funding for construction. The project is the subject of an Emerging Projects Agreement with USDOT which will lay the technical groundwork for obtaining federal Railroad Rehabilitation & Improvement Financing (RRIF) and/or Transportation Infrastructure Finance and Innovation Act (TIFIA) loans for construction of the project.
- **Justification:** The existing Portal Bridge, which hosts about 450 trains per day traveling between Newark, NJ and Penn Station, NY, is a major bottleneck and source of delay of train traffic. It has limited vertical clearance and must routinely be opened for maritime traffic. The bridge is functionally obsolete and experiences frequent mechanical failures, resulting in a single point-of-failure on the NEC and substantial delays. The risk of continued and increasing unplanned outages due to malfunctioning of the obsolete bridge cannot be mitigated by maintenance.
- **Changes to Service:** As the new bridge will be constructed off corridor, no major outages are anticipated. A modest increase in NJT capacity is planned with the new bridge due to longer train lengths enabled by the new fixed span.

Funding Information:

Total Project Cost: \$1,700,000,000

Funding Sources:

- ARRA/HSIPR Grant, \$38,500,000, For final design
- Non-BCC Amtrak Funds, \$15,500,000, Amtrak contribution to Preliminary Design
- State/Local Funds, \$15,500,000, NJ TRANSIT contribution to Preliminary Design
- Other Federal Grant, \$16,000,000, TIGER Grant to NJT for Early Construction Work
- Non-BCC Amtrak Funds, \$35,000,000, Amtrak FY18 GCAP

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$16,000,000	\$35,000,000	\$0	\$0	\$0	\$0	\$35,000,000
Unfunded	X	\$46,255,000	\$167,209,000	\$247,115,000	\$358,465,000	\$444,371,000	\$1,263,415,000

Schedule:

Milestone(s):

- Construction: Feb 2017 - Mar 2018
- Construction: Apr 2018 - Jun 2024

Additional federal funding could be used for:

- Construction

Gateway Component: Sawtooth Bridge

Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace an existing structurally deficient two-track bridge with new four-track structures where the NEC crosses over other rail lines between Newark, NJ and Penn Station, NY. Construction staging would be complex because of the intensity of use of the NEC as well as the intensity of rail traffic below the structure. Additional funding is required for design and construction.
- **Justification:** The Sawtooth Bridge is in a state of serious distress and well beyond possibility of rehabilitation. When replaced, capacity will be increased from two to four tracks to complement other aspects of the Gateway Program.
- **Changes to Service:** As both a resiliency and a capacity project, the replacement of this bridge will support an expansion of capacity as envisioned under the Gateway Program.

Funding Information:

Total Project Cost: \$1,300,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$2,033,008, Amtrak GCAP 2016-2017

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,033,008	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$250,888,846	\$250,888,846	\$250,888,846	\$250,888,846	\$250,888,846	\$1,254,444,230

Schedule:

Milestone(s):

- NEPA: Dec 2017 - Mar 2017
- PE: Mar 2017 - Sep 2018
- Construction: Aug 2019 - Dec 2023

Additional federal funding could be used for:

- Final Design
- Construction

Special Projects: Gateway Program (Improvements)

Gateway Component: Harrison Fourth Track

- **Coordinating Agency:** Amtrak
 - **Partner Agency:** NJ TRANSIT
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would construct approximately 2,000 feet of new embankment, track, signals, and electric traction systems through Harrison, NJ, which would enable relocation of the PATH westbound track to a new alignment. Additional funding is needed for design and construction.
 - **Justification:** This project would allow construction of a new fourth main track through the same territory using the former PATH track alignment. This is another increment in creating the full four-track Gateway Program alignment between Newark, NJ and Penn Station, NY.
 - **Changes to Service:** This project would accommodate a growth in trans-Hudson rail service as envisioned under the Gateway Program.
-

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2017 - 2022
- Construction: 2022 - 2027

Additional federal funding could be used for:

- PE
- NEPA
- Final Design

Gateway Component: Hudson Yards Concrete Casing

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** Long Island Rail Road, NJ TRANSIT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project is constructing an underground concrete casing to protect the future potential right-of-way of a Hudson River rail tunnel that would connect the NEC in New Jersey to Penn Station, NY. The project extends west from 10th Avenue in Manhattan, under 11th Avenue, to its termination point at 30th Street in the vicinity of 12th Avenue.
- **Justification:** This project protects the only viable right-of-way for a future Hudson River rail tunnel that would connect the NEC in New Jersey to Penn Station, New York, which runs directly under the Hudson Yards development project, where a private developer is constructing millions of square feet of commercial and residential properties, including a skyscraper taller than the Empire State Building.
- **Changes to Service:** Temporary impacts to LIRR Maintenance of Equipment facility at the West Side Yard in Manhattan.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Other Federal Grant, \$185,000,000, 2013 Disaster Relief Appropriations Act
- Non-BCC Amtrak Funds, \$25,200,000, Amtrak GCAP
- Other Federal Grant, \$50,000,000, 2013 Disaster Relief Appropriations Act
- Non-BCC Amtrak Funds, \$5,500,000, Amtrak GCAP
- State/Local Funds, \$5,500,000, LIRR
- State/Local Funds, \$5,500,000, NJT

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$25,621,895	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$110,000,000	\$110,000,000	\$110,000,000	\$110,000,000	\$0	\$440,000,000

Schedule:

Milestone(s):

- Construction: Aug 2013 - Feb 2017
- Construction: Dec 2014 - Jan 2017

Additional federal funding could be used for:

- Construction

Gateway Component: NJ TRANSIT Storage Yard

- **Coordinating Agency:** Amtrak
 - **Partner Agency:** NJ TRANSIT
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would locate a new rail yard in New Jersey to support capacity and service increase goals of the Gateway Program. Additional funding is needed for design and construction.
 - **Justification:** A rail yard in New Jersey would provide the layover storage and maintenance facilities necessary to optimize the new capacity enabled by track and station expansion projects associated with the Gateway Program.
 - **Changes to Service:** This project would accommodate a growth in trans-Hudson rail service as envisioned under the Gateway Program.
-

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2022 - 2024
- Construction: 2024 - 2028

Additional federal funding could be used for:

- Not available.

Gateway Component: Penn Station Expansion

- **Coordinating Agency:** Amtrak
 - **Partner Agencies:** NJ TRANSIT, Long Island Rail Road
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would expand Penn Station New York to add new tracks, platforms, and concourse space to facilitate a growth in rail service in coordination with other Gateway Program investments to expand capacity. Additional funding is needed for design and construction.
 - **Justification:** Penn Station New York is a pinch point at the center of the NEC, with 21 tracks accommodating some 1,300 average weekday train movements. The expansion of Penn Station tracks, platforms, and concourses is necessary to accommodate a growth in trans-Hudson rail service that will be enabled by additional elements of the Gateway Program.
 - **Changes to Service:** This project would accommodate a growth in trans-Hudson rail service as envisioned under the Gateway Program, as well as potentially help facilitate other planned service improvements to the station. The planned increase in rail capacity is in response to strong year-over-year growth in demand for trans-Hudson commuting, particularly on NJ TRANSIT services.
-

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2018 - 2022
- Construction: 2022 - 2030

Additional federal funding could be used for:

- Not available.

Gateway Component: Portal South Bridge

- **Coordinating Agency:** Amtrak
 - **Partner Agency:** NJ TRANSIT
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would construct a new high-level two-track Portal South Bridge to complete the four-track right-of-way across the Hackensack River.
 - **Justification:** This project is another increment in completing a modern, four-track right-of-way on the NEC between Newark, NJ and Penn Station, NY. It is necessary to accommodate the ongoing and forecasted growth of services into Penn Station, NY.
 - **Changes to Service:** This project would accommodate a growth in trans-Hudson rail service as envisioned under the Gateway Program.
-

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2018 - 2022
- Construction: 2022 - 2028

Additional federal funding could be used for:

- Not available.

Gateway Component: Secaucus Station and Loop Tracks

- **Coordinating Agency:** Amtrak
 - **Partner Agency:** NJ TRANSIT
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would expand the Secaucus Station platform system and approach tracks to support the growth of train movements through this territory and to accommodate the additional capacity provided by Portal South bridge. This project would also include loop tracks at Secaucus Junction which would provide a physical track connection to the NEC on the upper level of Secaucus Station from existing NJ TRANSIT rail lines located on the lower level.
 - **Justification:** This project is another increment in completing a modern, four-track right-of-way on the NEC between Newark, NJ and Penn Station, NY. It is necessary to accommodate the ongoing and forecasted growth of services into Penn Station, NY and to create a one-seat ride for MTA Metro-North Port Jervis and Pascack Valley lines and NJT Main-Bergen services into Penn Station New York.
 - **Changes to Service:** This project would accommodate a growth in trans-Hudson rail service as envisioned under the Gateway Program and allow a one-seat ride for MTA Metro-North Port Jervis and Pascack Valley lines and NJT Main-Bergen services into Penn Station New York.
-

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Final Design: 2021 - 2024
- Construction: 2024 - 2028

Additional federal funding could be used for:

- Not available.

Gateway Program: Planning and Program Management

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** The Gateway Program would create four main line tracks between Newark, NJ and New York, NY, the most severe bottleneck on the NEC. Several of the Gateway project elements are now progressing into design or construction and are carved out for the purposes of the NEC Capital Investment Plan, including the Hudson Tunnel Project, Portal North Bridge, Hudson Yards Concrete Casing, and the Sawtooth Bridge. The investments listed here focus on planning and program management for the rest of the program. Cost estimates for the full program are not yet complete as many project elements remain in early stages of development.
- **Justification:** The Gateway Program is a multi-decade planning vision to double corridor capacity between Newark, NJ and Penn Station New York, including in the first phase, preserving existing service and improving resiliency, and bringing critical infrastructure assets to a state of good repair. The Program is needed to meet steady, growing demand for trans-Hudson rail service into Manhattan, and to rehabilitate the existing Amtrak North River Tunnel, the only passenger rail connection of the NEC between Manhattan and points south, without disrupting service.
- **Changes to Service:** When all the Gateway Program project elements are complete, including the expansion of Penn Station New York, NJT and Amtrak service can be increased to roughly double the existing peak levels of service.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Non-BCC Amtrak Funds, \$1,742,375, Amtrak GCAP FY14
- Non-BCC Amtrak Funds, \$3,412,896, Amtrak GCAP FY15
- Non-BCC Amtrak Funds, \$3,749,999, Amtrak GCAP FY16
- Non-BCC Amtrak Funds, \$5,000,000, Amtrak GCAP FY17

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,275,079	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$30,168,068	\$71,109,659	\$59,884,629	\$73,334,581	\$69,786,390	\$304,283,327

Schedule:

Milestone(s):

- Conceptual Design: Jan 2015 - Mar 2017

Additional federal funding could be used for:

- Not available.

Special Projects: Amtrak (Major Backlog)

Baltimore & Potomac Tunnel Replacement

Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the aging B&P Tunnel, a key chokepoint where the right-of-way is reduced from four to two tracks and the tunnel's tight curvature require trains to reduce speeds to 30 mph. The existing tunnel is in need of constant monitoring and maintenance at high cost. This project would replace the existing two-track tunnel with a new four-track tunnel on an improved alignment. Preliminary engineering and environmental review were funded by a \$60 million High-Speed Intercity Passenger Rail (HSIPR) grant and will be completed in summer 2017. Additional funding is required for final design and construction.
- **Justification:** Built in 1873, the existing two-track tunnel is nearing the end of its useful life. Improvements are required in order to maintain operations through this section of Baltimore and additional tracks are needed to meet future demand.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$4,520,000,000

Funding Sources:

- ARRA/HSIPR Grant, \$60,000,000
- Non-BCC Amtrak Funds, \$5,750,000, Amtrak GCAP FY17
- Other Federal Grant, \$1,467,389, SAFETEA-LU funding for inspection of existing tunnel.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,750,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$85,000,000	\$100,000,000	\$110,000,000	\$130,000,000	\$130,000,000	\$555,000,000

Schedule:

Milestone(s):

- NEPA: Apr 2011 - Mar 2017
- PE: Nov 2013 - Mar 2017
- Final Design: Oct 2017 - Dec 2021
- Construction: Oct 2018 - Dec 2030

Additional federal funding could be used for:

- Final Design
- Construction

PE and NEPA activities will be completed in FY17. Given the importance of the project, Amtrak has allocated a portion of its limited resources to keep advancing the design, but at a slower pace than what could be achieved with proper funding. Amtrak does not have the resources to commit to construction.

Bush River Bridge Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the half-mile long Bush River Bridge connecting Edgewood and Perryman, Maryland that was completed in 1913 and currently carries Amtrak, MARC commuter, and Norfolk Southern freight trains. Planning and design for a replacement bridge would explore constructing a new fixed bridge with enough clearance to allow boats to pass below, significantly improving mobility for both maritime and rail traffic. Planning would also consider options for providing additional capacity for intercity, commuter, and freight railroad operations. No funding is available for advancing any aspect of this project.
- **Justification:** Service reliability is under threat due to aging bridge components, which require continued maintenance. During the peak season, over twenty employees are required to open the bridge for passing boats using antiqued mechanisms to open and close the overhead power supply catenary wires and to manually unbolt the tracks. Bridge opening and closing failures can be highly disruptive. For example, a failed bridge closure in 2012 caused a 10-hour delay for all NEC traffic between New York and Washington, DC.
- **Changes to Service:** Potential changes to service directly linked to this project are not known at this time.

Funding Information:

Total Project Cost: \$400,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$5,000,000	\$5,000,000	\$10,000,000	\$25,000,000	\$100,000,000	\$145,000,000

Schedule:

Milestone(s):

- Conceptual Design: 2018 - 2018
- PE: 2019 - 2020
- NEPA: 2019 - 2020
- Final Design: 2020 - 2021
- Construction: 2021 - 2025

Additional federal funding could be used for:

- Conceptual Design
- PE
- NEPA
- Construction

Connecticut River Bridge Replacement Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Connecticut DOT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the Connecticut River Bridge between Old Saybrook and Old Lyme, CT that carries Amtrak and Shore Line East trains. Completed in 1907, it is the oldest movable bridge between New Haven, CT and Boston, MA. The bridge has a movable span that is raised up to allow boats to pass. By law, the bridge must remain open from May through September for recreational boats to pass and closes only when trains approach. Plans would replace the Connecticut River Bridge with a new design that improves reliability and offers higher speeds for Amtrak and Shore Line East trains. Preliminary design is underway, but no funding is available for final design or construction.
- **Justification:** A century of operation in a marine environment, coupled with the age of the structure, has taken its toll and speeds are restricted to 45 mph. Many key elements of the bridge have reached the end of their design life and require extensive maintenance to remain in operable condition. The frequent opening and closing of the bridge – over 3,000 times per year – puts high demands on its aging components, increasing maintenance costs for Amtrak and reducing reliability for both railway and marine traffic.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$660,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$2,250,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$4,000,000	\$20,000,000	\$40,000,000	\$100,000,000	\$250,000,000	\$414,000,000

Schedule:

Milestone(s):

- Final Design: 2017 - 2020
- Construction: 2021 - 2025

Additional federal funding could be used for:

- Final Design
- Construction

East River Tunnel Rehabilitation

Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** Long Island Rail Road, NJ TRANSIT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would rehabilitate East River Tunnel tubes 1 and 2 which connect Penn Station, NY to Queens, NY. Each tunnel is approximately 13,000 feet in length. Through this project, both tunnel tubes will be gutted to the concrete liner and entirely rebuilt with new bench walls, communication systems, and electrical and signaling conduit. Rehabilitation of the track and drainage systems will require removal and replacement of track and ballast, new welded rail installations, new impedance bond installations, new I-joint installations, drainage system cleaning, and the removal and replacement of the third rail for the entire length of each tube. Some funding is available through FRA Superstorm Sandy recovery grants, but a significant funding gap remains.
- **Justification:** The East River Tunnel tubes are in desperate need of rehabilitation and improvement, due to continually worsening conditions of the tunnel structure given both its age and damage related to Superstorm Sandy, to ensure continuation of operations for LIRR, New Jersey Transit, and Amtrak.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$750,000,000

Funding Sources:

- Other, \$19,600,000, Superstorm Sandy FRA Relief Funds and Insurance Claims

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,600,000	\$11,000,000	\$0	\$0	\$0	\$0	\$11,000,000
Unfunded		\$0	\$4,700,000	\$1,000,000	\$240,000,000	\$240,000,000	\$485,700,000

Schedule:

Milestone(s):

- Conceptual Design: Apr 2015 - Jan 2016
- Final Design: Feb 2016 - Sep 2020
- Construction: Oct 2020 - Sep 2025

Additional federal funding could be used for:

- Final Design
- Construction

Gunpowder River Bridge Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the Gunpowder River Bridge, an approximately one-mile long crossing between Chase and Joppa, MD. It carries Amtrak, MARC commuter, and Norfolk Southern freight trains. Design options for consideration include a higher-capacity four-track bridge that would increase service potential and reliability for Amtrak, MARC, and freight service. Potential for a separate freight track would also be examined as part of the plan, which would facilitate freight service at all times of day. No funding is available for design or construction.
- **Justification:** The existing Gunpowder River Bridge was completed in 1913. Worsening infrastructure conditions have led to more intensive maintenance and costs. Freight trains are restricted to nighttime operations over the bridge, as the two tracks are at capacity during normal passenger rail operating hours.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$550,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$5,000,000	\$5,000,000	\$10,000,000	\$25,000,000	\$100,000,000	\$145,000,000

Schedule:

Milestone(s):

- Conceptual Design: 2018 - 2018
- PE: 2019 - 2020
- NEPA: 2019 - 2020
- Final Design: 2020 - 2021
- Construction: 2021 - 2026

Additional federal funding could be used for:

- NEPA
- Final Design
- Construction

Pelham Bay Bridge Replacement

Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Metro-North Railroad
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the century-old movable Pelham Bay Bridge, which crosses the Hutchinson River in the Bronx, NY, with a new high-level fixed bridge with clearance for marine traffic. Additional funding is required for design and construction of improvements.
- **Justification:** The Pelham Bay Bridge was built in 1907. The movable span consists of a two-track 82-foot long through truss. This bridge creates a bottleneck by constricting traffic down to speeds of 45 mph. The aging bridge still opens frequently for marine traffic and occasionally fails to properly close, creating a block for Amtrak service between Boston and New York. This asset will not be in a state of good repair until the movable span is replaced and the approach span substructure is completely rehabilitated.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$410,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$1,375,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$5,000,000	\$5,000,000	\$10,000,000	\$50,000,000	\$100,000,000	\$170,000,000

Schedule:

Milestone(s):

- PE: 2018 - 2019
- Final Design: 2020 - 2021
- Construction: 2021 - 2025

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

Susquehanna River Bridge Replacement Top Ten NEC-Wide Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the existing two-track movable Susquehanna River Bridge with two modern high-level, fixed structures, each with two tracks. The project would benefit commuter and intercity rail as well as Norfolk Southern, which uses the segment to access the Port of Baltimore. Using a \$22 million High-Speed Intercity Passenger Rail (HSIPR) grant, preliminary engineering and environmental review are wrapping up in FY17. Additional funding is required for final design and construction.
- **Justification:** Built in 1906, the existing two-track bridge is nearing the end of its useful life. The current bridge requires trains to reduce speeds for almost a mile due to its condition. A new asset is required in order to maintain operations through this section of Maryland and additional tracks are needed to meet future demand.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,700,000,000

Funding Sources:

- ARRA/HSIPR Grant, \$22,000,000
- Non-BCC Amtrak Funds, \$2,500,000, Amtrak GCAP

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$6,200,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$20,000,000	\$30,000,000	\$125,000,000	\$200,000,000	\$300,000,000	\$675,000,000

Schedule:

Milestone(s):

- NEPA: Jun 2013 - Apr 2017
- PE: Jun 2013 - Apr 2017
- Final Design: May 2017 - Oct 2020
- Construction: Jun 2020 - Oct 2025

Additional federal funding could be used for:

- Final Design
- Construction

PE and NEPA activities will be completed in FY17 but there is no funding (federal or otherwise) available for additional phases at this time. The project could theoretically advance to design and construction during FY18-22 but the rate at which work could be accomplished would depend on when additional federal funding is secured, and the magnitude of the additional federal funding.

Special Projects: Amtrak (Improvements)

Adams Substation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would construct a new substation in Adams, NJ. The project would address the need for additional transformation capacity to properly operate electric trains in this area, given increased train traffic and plans for a new NJ TRANSIT station in New Brunswick. Additional funding is required for design and construction.
- **Justification:** Due to increased rail traffic in the Adams / New Brunswick area, there is an increasing need for additional transformation capacity to properly operate electric trains in this area. Failure to complete this project could subject Amtrak to an inability to provide sufficient levels of traction power to both Amtrak and NJ Transit trains in this area.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$36,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$5,000,000	\$10,000,000	\$10,000,000	\$0	\$0	\$25,000,000

Schedule:

Milestone(s):

- Final Design: Oct 2018 - Sep 2019
- Construction: 2019 - 2020

Additional federal funding could be used for:

- Final Design
- Construction

Baltimore Penn Station Infrastructure Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will construct two additional platforms to support scheduled Acela overtakes of Northeast Regional and MARC trains. The scope includes a new Track 8 (F) platform, including new vertical access and canopy. The Track 3 existing low-level platform will be rebuilt as an accessible high-level facility, including repairs to the existing elevator and stairs. Additional track, signal, and electric traction improvements are also included to support the platform addition and improvement.
- **Justification:** The reconstruction of the existing platform and the construction of a new platform are required to support scheduled increases to the high-speed rail service, specifically overtakes of Northeast Regional and MARC trains in both the southbound and northbound directions.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$43,000,000

Funding Sources:

- Other, \$43,000,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$1,000,000	\$1,000,000	\$1,000,000	\$20,000,000	\$20,000,000	\$0	\$42,000,000
Unfunded	0	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Conceptual Design: Mar 2017 - Oct 2017
- NEPA: Oct 2017 - Oct 2018
- PE: Oct 2017 - Oct 2018
- Final Design: Apr 2018 - Oct 2018
- Construction: Jan 2019 - Jan 2021

Additional federal funding could be used for:

- None. This project is fully funded.

Baltimore Penn Station Master Plan

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would provide a comprehensive and integrated approach for Baltimore Penn Station to advance key near-term state-of-good-repair projects while establishing a development framework to leverage under utilized assets and accommodate future growth and redevelopment, potentially through a public private partnership. Baltimore Penn Station is Amtrak's 8th busiest station serving nearly one million riders and an additional two million commuter passengers each year. Additional funding is required for design and construction of improvements.
- **Justification:** Baltimore Penn Station is challenged by aging infrastructure that is not conducive modern train operations. Both passenger and employee facilities are in need of improvement, and multimodal connectivity is strained by the station's current configuration. Efforts to advance state-of-good-repair programs, improve rail operations to accommodate additional Acela service, and the pursuit of a private-public partnership for large-scale redevelopment will set the future course to realize Baltimore Penn Station as a vibrant transportation hub interwoven within an integrated mixed-use urban district.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$100,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$9,700,000, Amtrak GCAP (FY15, FY16, & FY17)
- State/Local Funds, \$300,000, MTA Joint Benefits Program FY16

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$8,700,000	\$11,240,000	\$14,540,000	\$16,250,000	\$18,000,000	\$68,730,000

Schedule:

Milestone(s):

- Conceptual Design: May 2017 - Feb 2018
- PE: Mar 2018 - Apr 2019
- Final Design: Apr 2018 - Apr 2019
- Construction: Begin Jan 2020

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

Notes:

Schedule information provided refers to anticipated first phase of master development with additional SOGR work.

Clinton Interlocking

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Connecticut DOT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would include the construction of a new, wired universal interlocking in Clinton, CT that would split the current 16-mile long block between Guilford and View Interlockings. Construction would include the installation of turn-outs, rail, ties, sub-grade, ballast, components of the overhead catenary system, signal transformers, signals cables, signal bridges, switch heaters, switch machines, switch houses, instrument houses, and interlocking lighting. Additional funding is necessary for construction.
- **Justification:** A new interlocking in Clinton would increase the flexibility of Shore Line East and Amtrak operations. This new interlocking would enable SLE trains to flexibly service the existing and future platforms at Clinton and Madison stations and make greater use of the Clinton siding, a short stretch of third track along the south side of the NEC. By enabling SLE trains to use all platforms and tracks in the area, the interlocking would enable Amtrak and SLE to expand services while reducing train conflicts and their resulting delays.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$32,030,000

Funding Sources:

- Non-BCC Amtrak Funds, \$1,580,000, Amtrak General Capital

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$832,500	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$15,000,000	\$15,450,000	\$0	\$0	\$0	\$30,450,000

Schedule:

Milestone(s):

- Final Design: Nov 2015 - Sep 2017
- Construction: Oct 2017 - Sep 2019

Additional federal funding could be used for:

- Construction

Hunter Yard Maintenance of Way Facilities Upgrades

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would bring the maintenance of way facilities at Hunter Yard in New Jersey up to a state of good repair to meet operational needs. Currently, the facility is used solely by the track group within Amtrak. The intent would be to consolidate several engineering disciplines at one facility including structures and communications and signals. Amtrak Police would also be relocated to this expanded facility as well. These functions are currently largely based at Newark Penn Station. A phased construction would necessitate a temporary relocation of existing Amtrak forces at this location. Additional funding is required for construction.
- **Justification:** The current facilities are at the end of their useful life and do not meet current operational needs. A new consolidated facility at Hunter would allow for more effective and efficient production activities, including a greater ability to store equipment for work gangs. Resiliency is also an important element of this project with the intent to raise the entire facility by 5 feet to protect against flooding in the future.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$34,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$9,000,000	\$17,000,000	\$8,000,000	\$0	\$0	\$34,000,000

Schedule:

Milestone(s):

- Final Design: Oct 2008 - Sep 2014
- Construction: Oct 2017 - Jun 2020

Additional federal funding could be used for:

- Construction

Maryland Section Reliability Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will upgrade 30 miles of existing Track 1 in Maryland and make associated signal system and track upgrades for higher speed operations on the Washington-to-Baltimore section of the NEC. In addition, a new 1,050 foot side platform will be constructed on Track 1 at New Carrollton Station, with associated vertical access and other required modifications to connect to the underground station.
- **Justification:** This section of the NEC operates at or near capacity today and is not able to reliably absorb increases in service without additional infrastructure improvements. This project targets reductions in congestion-related delays and provides new overtake capacity between different classes of service (high-speed, conventional, and commuter), allowing the faster, high-speed trains to pass slower trains. These improvements, along with structural and operational changes, optimize use of this infrastructure and provide the necessary capacity to meet the Service Plan requirements.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail Fleet, Amtrak intends to add six additional round trips between New York and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail Fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$40,200,000

Funding Sources:

- Non-BCC Amtrak Funds, \$1,100,000, FY17 Amtrak GCAP
- Non-BCC Amtrak Funds, \$300,000, FY16 Amtrak GCAP
- Other, \$38,800,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,500,000	\$13,200,000	\$6,200,000	\$12,000,000	\$0	\$0	\$31,400,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jan 2017 - Aug 2020

Additional federal funding could be used for:

- None. This project is fully funded.

Moynihan Station (Phase 2)

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Other, Long Island Rail Road
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project expands Penn Station New York into the historic James A. Farley Post Office building, which will function as a joint Amtrak and Long Island Rail Road facility. Phase 1, which was completed in FY17, included the expansion and enhancement of the 33rd Street Connector between Penn Station and the West End Concourse; the extension and widening of the West End Concourse to serve nine of Penn Station’s eleven platforms; new vertical access points and passenger circulation space; new entrances into the West End Concourse through the 31st and 33rd Street corners of the Farley building; and installation of an emergency ventilation system to improve life safety. Phase 2 (currently underway and associated with the funding and schedule information below) includes the construction of a new train hall occupying a sky-lit atrium section in the Farley building; construction of an emergency platform ventilation system at the perimeter of the Farley building; and improvements to the 33rd Street sub-street corridor connecting Penn Station and Moynihan Station. Moynihan Station Development Corporation (MSDC), the building owner, is coordinating the design of non-train hall work in collaboration with Amtrak and Long Island Rail Road. The project is being managed by the MSDC, a subsidiary of the Empire State Development Corporation, a public benefit corporation of the state of New York and the Port Authority of New York New Jersey, in cooperation with Amtrak and Long Island Rail Road.
- **Justification:** When Moynihan Station’s train hall construction project is complete, Amtrak will be in a position to move its primary operations into the new facility, which will improve passenger comfort and security, relieve congestion, and enhance accessibility for passengers with disabilities in the busiest train station in the nation.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,597,000,000

Funding Sources:

- Other, \$105,000,000, RRIF Loan
- Other, \$150,000,000, Port Authority of New York & New Jersey
- Other, \$100,000,000, Long Island Rail Road
- Other Federal Grant, \$62,000,000, Congestion Mitigation and Air Quality (CMAQ) and Resilience
- Other, \$550,000,000, Empire State Development Corporation

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$13,065,230	\$339,000,000	\$320,000,000	\$295,000,000	\$0	\$0	\$954,000,000
Unfunded		\$224,000,000	\$211,000,000	\$195,000,000	\$0	\$0	\$630,000,000

Schedule:

Milestone(s):

- Construction: Mar 2016 - Jun 2019

Additional federal funding could be used for:

- Construction

New England Interlocking Improvements

- **Coordinating Agency:** Amtrak
- **Type:** Improvement Project
- **Partner Agency:** MBTA
- **Benefit:** Shared

Project Information

- **Scope:** This project would install new interlockings in Mystic, CT (\$31.5 million) and Hebronville, MA (\$14.4 million). Construction would include the installation of turn-outs, rail, ties, sub-grade, ballast, overhead catenary, signal transformers, signals cables, signal bridges, switch heater, switch machines, switch houses, instrument houses, and interlocking lighting.
- **Justification:** These new interlockings would provide operating flexibility, improve reliability, and allow for future maintenance outages and track possessions.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$45,890,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$500,000	\$1,500,000	\$21,720,000	\$22,170,000	\$0	\$45,890,000

Schedule:

Milestone(s):

- Final Design: Oct 2018 - Sep 2018
- Construction: 2019 - 2021

Additional federal funding could be used for:

- Final Design
- Construction

Notes:

MBTA would be a project partner for the new interlocking in Hebronville, MA. The new interlocking in Mystic, CT would be an Amtrak sole use asset.

Newark Penn Station Platform Rehabilitation

Regional Priority

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project involves improvements to the condition, appearance and functionality on Platforms A, B, C and D in Newark Penn Station. Both Amtrak and NJ TRANSIT have responsibility to maintain to a state of good repair. To date, work on Platform E has been completed. This scope of this project includes the design and rehabilitation of Platforms A, B, C, and D; their roof/ canopy structures; and any other repairs deemed necessary by the initial structure assessment. The results of the structural assessment, which is planned to begin in FY17, may lead to a revised project scope and cost.
- **Justification:** The project would create a safer platform environment and boarding conditions for passengers by bringing station areas to a state of good repair and into compliance with USDOT regulations. Due to expansion issues that have occurred over time, the joints at level-boarding platforms are buckling. In many cases, the expansion joints correspond to skewed bearing locations on the viaduct below, complicating the issues at the expansion joints. This project would improve safety and accessibility for all commuters, including physically challenged customers that board and deboard both Amtrak and NJ TRANSIT trains.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$130,303,000

Funding Sources:

- BCCs, \$303,000, BCCs used for initial structural assessment of the platforms.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$303,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$26,000,000	\$26,000,000	\$26,000,000	\$26,000,000	\$26,000,000	\$130,000,000

Schedule:

Milestone(s):

- Feasibility: Jul 2017 - Jan 2018
- Conceptual Design: Feb 2018 - Sep 2019
- PE: Feb 2018 - Sep 2019
- Final Design: Oct 2019 - Sep 2020
- Construction: Oct 2020 - Sep 2022

Additional federal funding could be used for:

- Final Design
- Construction

Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will satisfy the anticipated maintenance requirements of a new High Speed Rail (HSR) fleet and an increase in service operations. The project scope includes the design and construction of infrastructure improvements for Ivy City Maintenance and Coach Yard Facility (also known as the Washing Terminal Yard) to support the Next Generation HSR Trainsets. The project elements funded by the RRIF loan include: (1) HSR Trainset Service and Inspection (S&I) Shop: A new single-track, 1-story HSR S&I facility attached to the existing HSR S&I building; (2) HSR Train Scanner (an 18' x 28' train diagnostic facility): foundation with support bungalow and electric and telecommunications located before the Car Wash; (3) Three new HSR storage tracks located at the northeast end of the yard with separate lead track; (4) Coach Yard Improvements: extension of three stub tracks (Repair 1 and 2, and Mail 1) with paved platforms between tracks, including demolition of two existing buildings within the yard; (4) Electrification of four existing non-electrified tracks for additional storage capacity (5) Electrify Track 1 Storage: Construct track with Overhead Contact System (OCS) to accommodate the increased need for the storage; and (6) an Office Trailer Shell to accommodate a staff of 21 people (Alstom) with electric and telecommunication service which will be metered an Alstom account.
- **Justification:** A new and expanded facility is necessary for commissioning, inspection, service, and maintenance of new HSR equipment, which is expected to be delivered between 2020 and 2022. The facility will improve equipment and operational reliability throughout the Northeast Corridor.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail fleet, Amtrak intends to add six additional round trips between New York, NY and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail Fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$95,600,000

Funding Sources:

- Other, \$95,600,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,800,000	\$25,450,000	\$45,900,000	\$20,450,000	\$0	\$0	\$91,800,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Mar 2018 - Mar 2020

Additional federal funding could be used for:

- None. This project is fully funded.

Next Generation High Speed Fleet Infrastructure: Ride Quality Investment

- **Coordinating Agency:** Amtrak
- **Partner Agency:** This is a shared project on the NEC spine that will benefit all commuter rail operators.
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project, which consists of two parts, will establish reference surfacing on those portions of the NEC main line maintained by Amtrak. The first project element is developing the database necessary for computer controlled track surfacing. The second is the acquisition of three sets of equipment for the ongoing surfacing of the NEC. Reference surfacing systems have the capability to correct track geometry error better than the system Amtrak presently uses, which will result in an overall better ride quality with more durable results.
- **Justification:** The expected results will be a track quality better than current methods. The amount of time between tamping will increase, and the wear and tear on track and vehicle equipment will decrease. This will result in higher quality track geometry and, in turn, higher ride quality and passenger comfort.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail fleet, Amtrak intends to add six additional round trips between New York, NY and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$67,000,000

Funding Sources:

- Other, \$67,000,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$400,000	\$1,600,000	\$11,000,000	\$43,000,000	\$11,000,000	\$0	\$66,600,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Selection of methodology/ proof of concept: 2017 - 2018
- Survey, design, and equipment purchase: 2019 - 2021

Additional federal funding could be used for:

- None. This project is fully funded.

Next Generation High Speed Fleet Infrastructure: Safety Mitigation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** This is a shared project on the NEC spine that will benefit all / several of commuter rail operators.
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will make several investments to allow Amtrak to permit operation of Tier III Trainsets on the NEC at up to the maximum speed for Class 8 track of 160 mph. Amtrak undertook a detailed and lengthy risk analysis that demonstrates that this standard can be met with a limited investment in infrastructure improvements designed to limit intrusions on to the right of way and/or high-speed tracks in designated high-speed zones expected to be used by Acela. These investments include 195 miles of security fencing, 12 miles of guardrails, and 10 crowders.
- **Justification:** These investments will increase intercity travels speeds and reduce overall travel time.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail Fleet, Amtrak intends to add six additional round trips between New York and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail Fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$90,000,000

Funding Sources:

- Other, \$90,000,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$15,000,000	\$22,500,000	\$22,500,000	\$30,000,000	\$0	\$0	\$75,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction

Additional federal funding could be used for:

- None. This project is fully funded.

Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** The project scope includes the design and construction of infrastructure improvements for Southampton Street Yard to support the Next Generation High-Speed Rail (HSR) Trainsets. The project elements funded by the RRIF loan include: (1) a HSR Train Scanner (an 18' x 28' train diagnostic facility): foundation with support bungalow and electric and telecommunications located before the Car Wash; (2) new storage/ service ready tracks with a paved access platform for servicing operations; and (3) an office trailer shell with telecommunications and HVAC for a staff of 10 (Alstom).
- **Justification:** A new and expanded S&I facility is necessary for commissioning, inspection, service, and maintenance of new Next Generation High-Speed Rail equipment, which is expected to be delivered between 2020 and 2022. The facility will improve equipment and operational reliability throughout the Northeast Corridor.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail Fleet, Amtrak intends to add six additional round trips between New York and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail Fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$4,500,000

Funding Sources:

- Other, \$4,500,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$108,000	\$192,000	\$4,200,000	\$0	\$0	\$0	\$4,392,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Sep 2018 - Jul 2019

Additional federal funding could be used for:

- None. This project is fully funded.

Next Generation High Speed Fleet Infrastructure: Sunnyside Yard Facility Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** The project scope includes the design and construction of infrastructure improvements for Sunnyside Yard in Queens, NY to support the Next Generation High-Speed Rail (HSR) trainsets. The project elements funded by the RRIF loan include: (1) HSR Trainset Service and Inspection (S&I) Shop: A new separate two-track, 2-story HSR S&I facility, including welfare space on the second floor; (2) Two HSR train scanners (an 18' x 28' train diagnostic facility): foundation with support bungalow and electric and telecommunications located before the HSR facility; and (3) Three new storage/ service ready tracks with a run-through track and improvements to the Eastward Engine Track.
- **Justification:** A new and expanded high-speed rail facility is necessary for commissioning, inspection, service, and maintenance of new Next Generation High-Speed Rail equipment, which is expected to be delivered between 2020 and 2022. The facility will improve equipment and operational reliability in New York and throughout the Northeast Corridor.
- **Changes to Service:** With the full deployment of the Next Generation High Speed Rail Fleet, Amtrak intends to add six additional round trips between New York and Washington, DC, which would allow for service every 30 minutes during peak periods. The Next Generation High Speed Rail Fleet would also facilitate full hourly service between New York and Boston.

Funding Information:

Total Project Cost: \$339,900,000

Funding Sources:

- Other, \$339,900,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$10,300,000	\$82,000,000	\$160,000,000	\$85,300,000	\$0	\$0	\$327,300,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Apr 2018 - Nov 2020

Additional federal funding could be used for:

- None. This project is fully funded.

Philadelphia 30th Street Station District Plan Implementation

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** SEPTA, Pennsylvania DOT
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project includes immediate and long-term improvements in passenger and rail facilities and up to 10 million square feet of transit-oriented development over existing rail yards. Immediate work would include design and construction to bring 30th Street Station to a state of good repair and to enhance passenger facilities to alleviate congestion and accommodate future growth. Future work would build off the Philadelphia 30th Street Station District Plan, completed in June 2016. Additional funding is required for design and construction.
- **Justification:** Philadelphia 30th Street Station is Amtrak’s third busiest station in the nation and Pennsylvania’s busiest intermodal station serving Amtrak, Southeastern Pennsylvania Transportation Authority (SEPTA) and NJ TRANSIT. Heavy utilization of the station coupled with deferred maintenance has left 30th Street Station in a state of disrepair. An estimated growth of 3.5 percent in annual ridership will stress state-of-good-repair issues and push the station beyond its operating capacity unless the station is adapted to accommodate this growth.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$6,500,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$5,420,000, Amtrak GCAP

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,420,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$7,328,000	\$37,952,000	\$29,850,000	\$22,200,000	\$24,800,000	\$122,130,000

Schedule:

Milestone(s):

- Feasibility: Jun 2014 - Jun 2016
- Conceptual Design: Oct 2016 - Sep 2020

Additional federal funding could be used for:

- PE
- NEPA
- Final Design

Notes:

Milestones above are for overall master plan implementation. Additional milestones for overall master plan implementation are TBD. Initial milestones for SOGR projects and the master plan station improvement concepts (Station Retail, Concourse and Plaza Improvements) are as follows: (1) Feasibility, start 10/16, end: TBD (2) Conceptual Design, start 10/16, end TBD.

Washington Union Station 2nd Century Plan

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** Maryland DOT, VRE, Union Station Redevelopment Corporation, Federal Railroad Administration
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would build on the 2012 Washington Union Terminal Master Plan which outlined a long-term vision to redevelop the station to address capacity constraints and aging infrastructure as well as coordinate with the air rights project known as Burnham Place. The near-term program consists of modernizing the Claytor Concourse, implementing platform improvements for Tracks 15/16, electrifying Tracks 8/9, rehabilitating Track 22 for revenue service, and fully repairing the subbasement structural components. Two of these near-term projects--the Claytor Concourse Modernization and Track 22 Rehabilitation--and their associated funding information have been extracted as stand-alone projects within this document. All of these near-term projects are funded for design which is expected to be completed by the end of FY17. Construction funds are needed for the bulk of the track work beginning in FY18. Near-term elements will be advanced in parallel with the preparation of an Environmental Impact Statement (EIS) for long-term improvements such as doubling rail passenger capacity and train capacity by modernizing and expanding station facilities and rail infrastructure. Improvements would also integrate three million square feet of transit-oriented development over the existing rail yard. Additional funding is required for design and construction of these long-term improvements once the EIS is complete in FY19 (tentatively).
- **Justification:** The Washington Union Station complex, including passenger, operational, and train handling facilities and infrastructure, is not in a state of good repair. Long-term, the Washington Union Station Expansion Project is evaluating alternatives for station redevelopment to meet growing demand for commuter and intercity rail.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$10,000,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$49,400,000, Amtrak GCAP Investments prior to FY17.
- Other Federal Grant, \$2,350,000, FRA Federal Railroad Safety Infrastructure Improvement Grant. This is the federal funded portion of the FRA grant Amtrak has received for the North Hangar safety improvements project. Matching funds will be provided via non-federal funds through Amtrak.
- Non-BCC Amtrak Funds, \$3,350,000, Amtrak FY17 GCAP.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$3,350,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$90,605,000	\$124,105,000	\$13,160,000	\$13,610,000	\$13,610,000	\$255,090,000

Schedule:

Milestone(s) for near-term projects:

- Feasibility: Nov 2013 - Jun 2014
- Conceptual Design: Jun 2014 - Nov 2014
- PE: Nov 2015 - Apr 2016
- Final Design: Apr 2016 - Dec 2017
- Construction: Jun 2017 - Jun 2020

Additional federal funding could be used for:

- Construction

Washington Union Station Component: Claytor Concourse Modernization

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** Maryland DOT, VRE
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will modernize the Washington Union Station Claytor Concourse to provide additional passenger space, waiting areas, improved amenities, an expanded Metropolitan Lounge (formerly known as Club Acela) and safety egress improvements.
- **Justification:** These improvements are needed to correct safety egress issues as well as capacity limitations and to improve the overall passenger experience for Amtrak and commuter riders.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$65,000,000

Funding Sources:

- Other, \$65,000,000, RRIF Loan

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$9,026,960	\$23,342,226	\$21,879,574	\$10,751,240	\$0	\$0	\$55,973,040
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jan 2017 - Jul 2020

Additional federal funding could be used for:

- None. This project is fully funded.

Notes:

This project should be considered as part of the overall Washington Union Station 2nd Century Plan. However, it has been broken out as a stand-alone project in the FY18-22 Capital Investment Plan, due to its separate and discrete RRIF Loan funding source.

Washington Union Station Component: Track 22 Rehabilitation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** VRE
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** The Washington Union Station Track 22 Rehabilitation project provides for construction of an additional revenue track and platform to serve the run through tracks at Washington Union Station. The new platform and track will increase rail capacity on the run-through level at Washington Union Station. This project will also include new Americans with Disabilities Act (ADA) compliant vertical circulation elements from the North Hangar area of the Claytor Concourse at Washington Union Station.
- **Justification:** In addition to providing current and future operational flexibility, the Project is essential to maintaining rail operations during the construction of the Subbasement Structural Replacement project. The run through rail tunnel bisects the historic station at the basement level. A lower level basement, running underneath the tunnel is known as the Subbasement and is home to a number of critical station infrastructure. The existing structure supporting the run through tracks above the Subbasement is beyond its useful life and requires replacement. Reconstruction of the Subbasement will require track outages for extended periods of time. In an effort to maximize construction efficiency and maintain rail service during subbasement reconstruction, it has been determined through operations simulations that additional rail capacity is required. The Project will provide additional rail capacity during subbasement construction, allowing for the efficient construction of a critical state-of-good-repair project.
- **Changes to Service:** Upon completion of construction of the project, the platform and track infrastructure associated with Track 22 will be available for revenue service. Both Amtrak and VRE will benefit from an additional platform on the run-through tracks, increasing capacity for operations on the lower level.

Funding Information:

Total Project Cost: \$38,382,375

Funding Sources:

- Non-BCC Amtrak Funds, \$1,522,391, Amtrak FY15 General Capital to undertake Design work.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$30,745,900	\$7,636,475	\$0	\$0	\$0	\$38,382,375

Schedule:

Milestone(s):

- Final Design: Apr 2016 - Jun 2017
- Construction: Jul 2017 - Jan 2019

Additional federal funding could be used for:

- Construction

Wilmington Maintenance of Equipment Facility - Complex Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would fully replace the Maintenance of Equipment Repair Shop (Buildings 1 & 2) at the Amtrak Maintenance Complex in Wilmington, DE. The project has completed the 30% design phase, and additional funding is needed to complete design work and construct the facilities.
- **Justification:** As the Repair Shop has exceeded its life expectancy, this state-of-good-repair project is necessary for proper maintenance of Amtrak’s maintenance-of-way equipment and would also allow Amtrak to relocate off-site materials management function.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$343,000,000

Funding Sources:

- Non-BCC Amtrak Funds, \$5,000,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,712,080	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$34,300,000	\$75,925,000	\$75,925,000	\$75,925,000	\$75,925,000	\$338,000,000

Schedule:

Milestone(s):

- Final Design: Oct 2018 - Sep 2019
- Construction: 2019 - 2022

Additional federal funding could be used for:

- Final Design
- Construction

Special Projects: Amtrak (Strategic Initiatives)

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

Delaware

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Delaware DOT
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This strategic initiative could advance two track projects to improve on-time performance in Delaware. First, Holly Interlocking would be rearranged to improve speeds north of the interlocking. Second, signals and track alignments could be made to optimize the use of Track 1 between Holly and Landlith Interlockings. Together, this package of track projects could improve on-time performance, facilitate higher speed operations, and add overall line capacity.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Track	Rearrange Holly Interlocking to improve speeds to any tracks north of Holly.	On-time performance
Track	Improve signals and track alignment to optimize use of Track 1 between Holly and Bell and Bell and Landlith Interlockings.	On-time performance

Funding Information:

- Estimated Project Cost: \$250M - \$500M
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 3-5 years
- Current Project Phase: Feasibility

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Maryland

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This strategic initiative would include four track projects and one communications and signals project that could improve reliability for both the Maryland Area Regional Commuter (MARC) and Amtrak. The track projects would add additional crossovers at select locations to allow for greater train routing options, while the communications and signals project could add capacity by breaking up one of the longest signal blocks on the NEC around BWI Thurgood Marshall Airport Station. The additional track crossovers would create greater train routing options for both MARC and Amtrak along the mostly three-track stretch of the Corridor. In some cases, the crossovers can also serve as important, interim measures until other key projects (such as BWI Fourth Track and the Baltimore & Potomac Tunnel) are completed.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Track	Add the missing #20 (45mph) "23" move at CP Ave. as an early action supplement to the Washington Terminal Master Plan and VRE Midday Storage Yard Project.	On-time performance
Track	Straight-rail Track 1 to Track 2 at Bridge Interlocking with a 21 crossover south of West Baltimore (interim measure until BWI Fourth Track and Baltimore & Potomac Tunnel rehabilitation are complete).	On-time performance
Track	Add a 32 crossover at Winans Interlocking (interim measure until the BWI Fourth Track and Baltimore & Potomac Tunnel replacement projects are complete).	On-time performance
Communication & Signals	Shorten blocks lengths and relocate and add signals in and around BWI Thurgood Marshall Airport Station.	On-time performance
Track	Add a 23 crossover at Oak Interlocking. This would be an early-action item for the Susquehanna River Bridge replacement project.	Reliability

Funding Information:

- Estimated Project Cost: \$250M - \$500M
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 3-5 years
- Current Project Phase: Feasibility

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

Massachusetts

- **Coordinating Agency:** Amtrak
- **Partner Agency:** MBTA
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This strategic initiative would provide comprehensive work on track, communications and signals, and electric traction. (1) The track project would include turnout replacements to allow for higher-speed (80mph) diverging moves at both Holden and Hebronville Interlockings. (2) Signal improvements at Cove Interlocking would also improve the reliability of service provided by all operators. (3) Finally, the installation of a new electric traction substation at Southampton Street Yard would be of significant value to Amtrak—the sole electric traction operator in the territory. The closest nearby substation is located in Sharon, Massachusetts, approximately eighteen miles southwest of Boston, along the Northeast Corridor. A new substation would provide additional electric traction power, as well as improve redundancy and reliability.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Track	Replace Holden Interlocking 31 turnout with 80mph turnout (#32.7) and Hebronville Interlocking 24 turnout with 80mph turnout.	On-time performance
Communication & Signals	Improve signals at Cove Interlocking.	Reliability
Electric Traction	Install new substation in Southampton Street Yard.	Reliability

Funding Information:

- Estimated Project Cost: \$0 - \$250M
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 3-5 years
- Current Project Phase: Feasibility

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

New Jersey

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This multi-disciplinary strategic initiative would advance work in New Jersey across three major disciplines: (1) The most far-reaching projects are upgrades to communications and signals, particularly the installation of high-density signaling between County and Dock Interlockings; and bi-direction signaling to allow for more efficient use of the limited capacity at Sunnyside Yard in Queens, NY. (2) Track projects would facilitate more efficient movement of NJ TRANSIT trains on and off the Corridor, particularly with the construction of a new westbound access route to Morrisville Yard and a new Westbound Waterfront Connection. (3) Electric traction projects would advance state-of-good-repair goals through a new substation in Sunnyside Yard and the relocation of the existing substation in Kearny, NJ. Both NJ TRANSIT and Amtrak rely on a robust electric traction system on this stretch of the Corridor. Together, this package of communication and signals, track, and electric traction projects would improve on-time performance, reliability, and capacity, all ultimately designed to achieve greater flexibility for both NJ TRANSIT and Amtrak.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Track	Create a new westbound access route to Morrisville Yard from Track 4, instead of the current Track 3 route.	On-time performance
Communication & Signals	Upgrade signals between North Penn and Girard interlockings to full-speed/ full-functionality reverse signaling.	Reliability
Communication & Signals	Upgrade to fully bi-directional signaling and convert all principle turnouts to power from hand-thrown in Sunnyside Yard.	Reliability
Track	Construct new Westbound Waterfront Connection to allow for expanded travel from Hoboken to southwest side of NEC (i.e., Trenton, NJ).	Reliability
Electric Traction	Install new substation in Sunnyside Yard.	Reliability
Electric Traction	Relocate existing Kearny Substation.	Resiliency
Communication & Signals	Add 30 mph cab signaling to 30th Street Station tracks, including: Platforms 7, 8, 9 & 10, as well as tracks N3, N5, 36th St. Connection, and the Berry track.	Resiliency

Funding Information:

- Estimated Project Cost: \$500M - \$1B
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 5-10 years
- Current Project Phase:

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

Northeast Corridor North

- **Coordinating Agency:** Amtrak
- **Partner Agencies:** Long Island Rail Road, Metro-North Railroad, Connecticut DOT, Rhode Island DOT, Massachusetts DOT, MBTA
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This strategic initiative would include several infrastructure investments in the areas of electric traction, track, and communications and signal systems that would be beneficial to the Northeast Corridor’s North End (from Penn Station New York to Boston, MA). Most of this package’s investments would modernize the communications and signal systems in this section of the Corridor, including converting existing aspect signals to go/ no-go signals and transitioning from cab and wayside signaling to cab, no wayside signaling. Together, this package of investments would build resiliency while also maximizing the operating potential of the Corridor.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Track	Replace all existing mainline turnouts without movable point frogs.	Improves ride quality & reduces vehicle maintenance needs.
Communication & Signals	Convert from cab and wayside signaling to cab, no wayside (Rule 562) signaling.	On-time performance
Communication & Signals	Add full-speed/ full-functionality reverse signaling to tracks not so equipped.	Resiliency
Communication & Signals	Convert existing air machine switches to electric power switches.	Reliability
Communication & Signals	Convert existing aspect signals to go/ no-go signals.	On-time performance
Electric Traction	Replace overhead catenary system from Penn Station, NY to New Rochelle, NY.	Reliability

Funding Information:

- Estimated Project Cost: \$500M - \$1B
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 5-10 years
- Current Project Phase: Feasibility

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

Northeast Corridor South

- **Coordinating Agency:** Amtrak
- **Partner Agency:** VRE, Maryland DOT, Delaware DOT, SEPTA, Pennsylvania DOT, NJ TRANSIT
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** The southern end of the NEC —from Washington, DC to Penn Station, NY — as well as the Harrisburg Line, uses a century-old overhead catenary system. To modernize this portion of the NEC, this initiative could replace the aging overhead catenary system with a modern, constant-tension catenary system, akin to the catenary system found on the northern end of the NEC (from New Haven, CT to Boston, MA). In addition, signal improvements could be made to optimize train movements, including adding full-speed/ full-functionality reverse signaling to all unequipped tracks and full-speed reverse signaling to existing reverse signaling systems. Taken together, this package of investments would create better reliability and resiliency, while also maximizing the operating potential of the Corridor.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Electric Traction	Replace overhead catenary system from Washington, DC to Penn Station, NY.	Reliability
Electric Traction	Install two additional electric traction power frequency converters: Richmond Road, PA and Jerrico Park, MD.	Reliability
Electric Traction	Replace main electric transmission line between Safe Harbor, PA and Royalton, PA.	Reliability
Track	Replace all mainline turnouts without movable point frogs.	
Communication & Signals	Convert from cab and wayside signaling to cab, no wayside (Rule 562) signaling.	On-time performance
Communication & Signals	Add full-speed/ full-functionality reverse signaling to tracks not so equipped.	Resiliency
Communication & Signals	Convert existing air machine switches to electric power switches.	Reliability
Communication & Signals	Convert existing aspect signals to go/ no-go signals.	On-time performance

Funding Information:

- Estimated Project Cost: Over \$1B
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 5-10 years
- Current Project Phase: Feasibility

Strategic Initiatives are packages of blended projects that incorporate elements of both unfunded basic infrastructure investments and improvements to modernize the railroad. These initiatives were developed for the first time in this iteration of the NEC Capital Investment Plan and should be considered in a conceptual development phase. Significant work remains to refine individual project scopes, costs, and schedules, as well as their appropriate collective prioritizing and sequencing.

Pennsylvania

- **Coordinating Agency:** Amtrak
- **Partner Agency:** SEPTA
- **Type:** Strategic Initiative
- **Benefit:** Shared

Package Information:

- **Scope:** This strategic initiative could provide a combination of upgrades for track and communications and signals projects in the territory that encompasses both the Southeastern Pennsylvania Transportation Authority (SEPTA) and Amtrak. The communications and signals project would install full-speed/ full-functionality reverse signaling and Rule 562 signaling on the NEC (between Girard and Lehigh Interlockings) and on the Harrisburg Line (between Bryn Mawr and Park Interlockings). The track project could install turnback and storage tracks on the NEC and Harrisburg Lines (at Hook and Caln Interlockings, respectively). These modernization projects would achieve notable advancements in operational flexibility and more efficient train movements, which contributes to better on-time performance and reliability during unforeseen outages, and have the potential to generate line capacity.

Elements:

Primary Discipline	Modernization Element	Primary Benefit
Communication & Signals	Upgrade signals between Park and Bryn Mawr Interlockings and Girard and Lehigh Interlockings to full-Speed/ full-functionality reverse signaling and Rule 562 signaling.	Reliability
Track	Rebuild Grundy Interlocking as a universal interlocking with all #20 or #24 crossovers.	On-time performance
Track	Replace Hook Interlocking and add SEPTA turnback track.	On-time performance
Track	Add SEPTA storage tracks at Caln, as part of Thorn and Caln Interlocking rationalization and SOGR improvements.	On-time performance

Funding Information:

- Estimated Project Cost: \$250M - \$500M
- Amount Funded: \$0

Schedule:

- Estimated Time Frame: 5-10 years
- Current Project Phase: Feasibility

Special Projects: Connecticut DOT (Major Backlog)

Cos Cob Bridge Replacement

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the existing Cos Cob Bridge that carries four tracks over the Mianus River in Greenwich, CT. Constructed in 1904, it is the busiest movable bridge on the New Haven Line. The bridge is comprised of twelve steel spans with a movable segment at its center that lifts to allow boats to pass below. The bridge received some rehabilitation in 1989. However, this bridge now requires substantial investment to address challenges caused by aging components and deferred maintenance. Recently, an engineering feasibility study was performed that identified near-term repairs to address service reliability and maintenance issues, as well as long-term alternatives for replacement or rehabilitation. Interim repairs will be conducted in the next few years that include replacing the miter rails and deck timber. These investments are included in the BCC Program. This project covers the design for a full replacement of the structure which should begin within the next 5 years.
- **Justification:** Aging moveable bridges pose a big risk of long-term major disruption of service along the NEC. These structures require constant maintenance, are functionally obsolete, and well beyond their useful life.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,000,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$0	\$50,000,000	\$0	\$0	\$50,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- PE
- NEPA
- Final Design

Devon Bridge Replacement Top Ten NEC-Wide Priority

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace the functionally obsolete 111-year-old Devon Bridge. The bridge, which carries four New Haven Line tracks over the Housatonic River, has experienced serious deterioration, and is the next most critical movable bridge for replacement on the New Haven Line portion of the NEC after the Walk Bridge Program. Additional funding is required for design and construction of a replacement bridge.
- **Justification:** Aging moveable bridges pose a big risk of long-term major disruption of service along the NEC. These structures require constant maintenance, are functionally obsolete, and well beyond their useful life.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,500,000,000

Funding Sources:

- FTA Formula Grant, \$40,000,000
- State/Local Funds, \$0

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$25,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$0	\$0	\$0	\$0	\$1,500,000,000	\$1,500,000,000

Schedule:

Milestone(s):

- Conceptual Design: End Jan 2017
- NEPA: End Jul 2017
- PE: End Apr 2018
- Final Design: End Apr 2020
- Construction: Begin Jul 2021

Additional federal funding could be used for:

- Final Design
- Construction

Walk Bridge Program

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will replace the functionally obsolete 120-year-old Walk Bridge which has experienced increasing deterioration of electrical and mechanical components. CTDOT has committed to replace this asset with a combination of federal and state funds. Construction will require an extended continuous outage of two tracks where normally four are operational. This change in track availability could cause changes in schedule, decreases in reliability, or even reductions in service. Two additional capital projects in the vicinity of Walk Bridge will help address these concerns. The construction of CP243 interlocking will shorten the block length between Westport and Norwalk while increasing operational flexibility. Additionally, improvements at Dock Yard including the electrification of the lower Danbury Branch will allow for Metro-North trains to turn at Norwalk without increasing congestion on the main line of the NEC.
- **Justification:** Aging moveable bridges pose a big risk of long-term major disruption of service along the NEC. These structures require constant maintenance, are functionally obsolete, and well beyond their useful life. The situation at Walk Bridge is made worse by the fact that all four tracks reside on one moveable span. A failure of the span severs the entire NEC.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,170,000,000

Funding Sources:

- Other Federal Grant, \$16,000,000, Hurricane Sandy Resiliency
- State/Local Funds, \$29,000,000,
- Other, \$325,000,000, Funding for CP 243 and Dock Yard.
- Other, \$800,000,000, Mix of sources

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$234,100,000	\$366,338,696	\$152,445,725	\$168,523,575	\$120,000,000	\$120,000,000	\$927,307,996
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- NEPA: End Jun 2017
- Final Design: End Apr 2018
- Construction: Begin Oct 2018

Additional federal funding could be used for:

- None. This project is fully funded.

Special Projects: Connecticut DOT (Improvements)

New Haven Line Network Infrastructure Upgrade

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will upgrade the communications network infrastructure along the New Haven Line segment of the NEC by installing fiber optic communication cable and equipment to support closed circuit television safety cameras at vulnerable passenger stations and bridges. This system will also be capable of supporting passenger information displays and other amenities at passenger stations.
- **Justification:** This project is critical to passenger safety and to the resiliency of the overall system. By providing for security cameras that can be monitored off-site, this project allows railroad security and law enforcement personnel a vital tool for preventing crime and terrorist activity.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$70,000,000

Funding Sources:

- Other, \$70,000,000, Mix of state and federal

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$25,000,000	\$35,000,000	\$10,000,000	\$0	\$0	\$0	\$45,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: End 2021

Additional federal funding could be used for:

- None. This project is fully funded.

New Haven Line Stations Improvements

- **Coordinating Agency:** Connecticut DOT
- **Type:** Improvement Project
- **Partner Agency:** Amtrak
- **Benefit:** Shared

Project Information

- **Scope:** This program will upgrade and repair the Stamford and Noroton Heights Stations to ensure continued safe operation and improve the passenger experience. Work will increase canopy and windscreen coverage, provide additional pedestrian paths, repair and replace platform sections that are failing due to their age, and ensure ADA compliance. The program also includes a parking garage and pedestrian bridge for New Haven Station, the new Barnum Station in Bridgeport, and the installation of real time audio and video systems at all main line stations.
- **Justification:** This program is critical not only to address passenger demands for enhancements at the stations, but also to provide repairs for aging platforms that are beginning to fail due to years of exposure salt and de-icing chemicals. This program allows for the continued safe operation of the stations.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$320,000,000

Funding Sources:

- Other Federal Grant, \$10,000,000, TIGER
- State/Local Funds, \$23,000,000,
- State/Local Funds, \$287,000,000, Let's Go CT

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$105,000,000	\$80,000,000	\$50,000,000	\$85,000,000	\$0	\$0	\$215,000,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: End Nov 2018

Additional federal funding could be used for:

- None. This project is fully funded.

New Haven Yard Master Complex Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project is a multi-year initiative that receives funding on an annual basis to store and maintain the rail fleet and spare parts. Connecticut received \$9 million in FTA Emergency Relief funds to install a backup feeder as an alternative power source at New Haven Yard. Additional funding would design and construct other modernization elements, including new facilities to improve efficiency and allow for growth.
- **Justification:** Continued funding for this project is vital to the ability of both the State of Connecticut and Amtrak to effectively store and maintain its passenger rail fleet. The upgrade of the Connecticut commuter fleet requires new facilities to maintain the vehicles and store parts. Lack of funding will jeopardize the significant investment that Connecticut has made in a state of the art rail passenger fleet.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$750,000,000

Funding Sources:

- State/Local Funds, \$36,000,000,
- Other Federal Grant, \$5,000,000, Hurricane Sandy Resiliency

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$60,000,000	\$48,000,000	\$60,000,000	\$75,000,000	\$75,000,000	\$0	\$258,000,000
Unfunded	XXXXXXXXXX	\$100,000,000	\$100,000,000	\$100,000,000	\$0	\$0	\$300,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

New Haven-Hartford-Springfield Rail Program Phase 3B - 5

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** The program is being progressed in phases to rebuild and upgrade infrastructure between New Haven, CT and Springfield, MA. The final phases, not yet funded for construction, include adding a second track between Hartford and Enfield, rehabilitating or replacing many bridges and culverts, and improving stations at Windsor and Windsor Locks. The program also includes costs associated with replacing the elevated track structure through Hartford and the Connecticut River Bridge in Windsor Locks.
- **Justification:** The Hartford to Springfield corridor is extremely underserved by rail, increasing the negative impacts of congestion and stifling the local economy by denying access to jobs and regional markets. This project will increase ridership for the NEC and enhance regional rail travel in New England. These investments will improve reliability and allow for increased service of up to 25 round trips per day.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$110,250,000	\$140,000,000	\$0	\$0	\$250,250,000

Schedule:

Milestone(s):

- Final Design: End 2019
- Construction: Begin 2020

Additional federal funding could be used for:

- Construction

NHHS Commuter Station Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Not available.
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will add additional station stops between New Haven, CT to Springfield, MA including North Haven, Newington, West Hartford, and Enfield. An additional platform at the State Street Station in New Haven is also in construction allowing riders on the new Hartford Line service walk-up access to downtown New Haven.
- **Justification:** The Hartford to Springfield corridor is extremely underserved by rail, increasing the negative impacts of congestion and stifling the local economy by denying access to jobs and regional markets. This project will increase ridership for the NEC and enhance regional rail travel in New England.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$90,000,000

Funding Sources:

- State/Local Funds, \$90,000,000, Let's Go CT

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$30,000,000	\$30,000,000	\$30,000,000	\$0	\$0	\$90,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- None. This project is fully funded.

Shore Line East Track & Catenary Improvements

- **Coordinating Agency:** Connecticut DOT
 - **Partner Agency:** Amtrak
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project will install electric catenary along key stretches of track in Old Saybrook, Guilford, and New London. The project will enable the transition of Shore Line East from diesel-powered trains to electric powered equipment and allow for future service expansion.
- **Justification:** This project, by allowing the use of electric powered equipment on Shore Line East, is critical to plans to use the existing diesel fleet to launch the new Hartford Line Service. The use of electric powered equipment on Shore Line East will also provide benefits to users of the NEC main line.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$20,000,000

Funding Sources:

- State/Local Funds, \$9,000,000,
- State/Local Funds, \$11,000,000,

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$20,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: End Aug 2018

Additional federal funding could be used for:

- None. This project is fully funded.

SLE Stations Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project is a series of investments to expand and improve stations, constructing two high-level platforms, improved waiting areas, and expanded parking at several stations. Work is underway at Clinton, Madison, and New Haven State Street. In addition, the state will expand parking at Guilford and study the feasibility of constructing a new station in Niantic, CT.
- **Justification:** When Shore Line East service was launched in the 1990s, most stations featured a single low-level platform along the eastbound track. As a result, westbound trains have been required to switch tracks to service these stations, which consumes capacity and creates conflicts with other trains. Two high-level platforms with a pedestrian bridge connection is critical to true bi-directional traffic for Shore Line East trains and has the added benefit of increasing capacity on this segment of the NEC.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$50,000,000

Funding Sources:

- State/Local Funds, \$50,000,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$18,000,000	\$15,000,000	\$17,000,000	\$0	\$0	\$0	\$32,000,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

Special Projects: Delaware DOT (Improvements)

Claymont Regional Transportation Center

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will replace the existing Claymont, DE train station. The new station will be located north of the current site to the former Evraz Steel Site in Claymont, Delaware. It will meet all current ADA standards, with two high-level platforms and a pedestrian overpass over the NEC. The new station will be a multi-modal transportation center with improved access for bus transit, bicycles, and pedestrians as well as added parking capacity.
- **Justification:** The current Claymont Station does not meet current accessibility standards although it is ADA compliant in the form of wheel chair lifts to a tunnel under the NEC and mini-high platforms. The tunnel has a flooding risk because of the high water table. The station is also located on a curve of the NEC causing trains to sit at an angle which is not an optimal situation for loading and unloading trains. In addition the 504 parking spaces at are capacity and vehicular and transit access to the station are congested. The project is also coordinated with redevelopment of the former industrial site and will spark economic activity.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$43,612,000

Funding Sources:

- Other Federal Grant, \$10,000,000, TIGER 2016
- State/Local Funds, \$30,000,000,

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$1,000,000	\$2,000,000	\$20,000,000	\$17,000,000	\$0	\$40,000,000
Unfunded		\$0	\$0	\$5,612,000	\$0	\$0	\$5,612,000

Schedule:

Milestone(s):

- NEPA: Jan 2016 - Mar 2017
- Final Design: Apr 2017 - Aug 2018
- Construction: Dec 2018 - Dec 2020

Additional federal funding could be used for:

- Construction

Delaware Third Track Program

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will increase capacity for intercity and commuter service between Wilmington and Newark, DE by eliminating a current two-track bottleneck and installing a third track throughout most of the state. This joint Amtrak/Delaware DOT project is funded by a combination of federal and state sources.
- **Justification:** This project will remedy a choke point south of Wilmington, DE where the NEC, otherwise three tracks, has only two crossing a bridge over Mill Creek. A former third track was removed during NECIP and is being restored to provide capacity and service reliability for intercity and commuter service.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$49,000,000

Funding Sources:

- FTA Formula Grant, \$15,000,000,
- ARRA/HSIPR Grant, \$13,000,000,
- Other, \$13,000,000, FHWA
- State/Local Funds, \$8,000,000, Transportation Trust Fund

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$24,862,000	\$11,629,600	\$0	\$0	\$0	\$0	\$11,629,600
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jul 2013 - Mar 2018

Additional federal funding could be used for:

- None. This project is fully funded.

Newark (DE) Regional Transportation Center

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:** SEPTA
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will construct an updated Regional Transportation Center in Newark, DE that will increase capacity and support additional SEPTA service between Newark and Wilmington, DE. The project includes construction of a new station house, a new platform, a new freight track connection, and a new pedestrian bridge so passengers are not forced to cross an active track. The project will make the station ADA-compliant, eliminate conflicts with freight operations, and permit expansion of regional and commuter service. This project is funded by a combination of federal, state, and local sources.
- **Justification:** Existing station is outdated, non-ADA-compliant, and Amtrak passengers are forced to board/disembark across an active track. The new station will remedy these flaws, serve an adjacent major commercial/industrial park, eliminate conflicts with freight operations, and permit expansion of regional and commuter service.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$57,000,000

Funding Sources:

- ARRA/HSIPR Grant, \$10,000,000, TIGER IV
- FTA Formula Grant, \$11,000,000,
- State/Local Funds, \$36,000,000, State, County, City

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$11,950,000	\$15,850,000	\$0	\$0	\$0	\$0	\$15,850,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- PE: Jul 2013 - Dec 2015
- Final Design: Dec 2015 - Oct 2016
- Construction: Mar 2017 - Dec 2018

Additional federal funding could be used for:

- None. This project is fully funded.

Special Projects: Long Island Rail Road (Improvements)

East River Tunnel - Right of Way Infrastructure Improvements

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project includes several initiatives in the East River Tunnels, including:
 - Stray Current Study;
 - Communications antenna replacement in lines 3 and 4;
 - Total track replacement in line 4; and
 - 1st Avenue substation replacement.

Work would evaluate and mitigate stray current in the tubes, improve radio system infrastructure in the tunnels and on the platforms at Penn Station New York used by Amtrak and LIRR, renew track and track-bed infrastructure in East River Tunnels 3 & 4, and install a new fully operational AC-DC traction power substation to replace a substation that was damaged by Hurricane Sandy. These projects would improve reliability and reduce delays and maintenance costs by replacing and/or upgrading existing equipment. Some funding for these improvements is available. Additional funding is required for other improvements.

- **Justification:** Track and antenna replacement are state-of-good-repair projects to resolve existing and identified deficiencies. The Stray Current Study will identify source of stray current causing base corroded rail and will identify means to contain it. The new substation will replace a traction power substation damaged during Hurricane Sandy.
- **Changes to Service:** Investment required to maintain reliable performance to support existing levels of service.

Funding Information:

Total Project Cost: \$88,500,000

Funding Sources:

- Other, \$82,000,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$14,300,000	\$17,900,000	\$16,000,000	\$16,000,000	\$16,000,000	\$16,000,000	\$81,900,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jan 2017 - Dec 2022

Additional federal funding could be used for:

- Not available.

Penn Station New York - LIRR Projects

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will widen and raise the ceiling of the 33rd Street Corridor at Penn Station New York. This project will also repair and improve other assets at Penn Station New York. Work would include replacing elevators and escalators, upgrading customer service facilities, installing new HVAC equipment, improving lighting, and rehabilitating platforms. Elevators and escalators assets have reached the end of their useful life, stairways are in poor condition, and rehabilitation or upgrades are needed to HVAC, platforms, and lighting. Some funding for these improvements is available. Additional funding is required for other improvements.
- **Justification:** It has been determined by an outside inspection agency that the 22 year old elevators and escalators have reached the end of the useful life. Stairways have been repeatedly repaired but are in a state of deterioration. HVAC equipment continuously fails and requires modernization. Platforms have become worn and require rehabilitation. The lighting has become dull over the years and the station requires better lighting.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$253,500,000

Funding Sources:

- State/Local Funds, \$83,500,000,
- State/Local Funds, \$170,000,000, MTA Capital Plan Amendment

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$11,098,000	\$62,300,000	\$64,551,000	\$54,751,000	\$42,500,000	\$0	\$224,102,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

Notes:

The MTA Board amended the MTA 2015-19 Capital Program in February 2017 to include the new Penn Station-33rd Street Corridor project, which would improve customer experience and flow throughout the LIRR concourse with additional space, upgraded lighting, and digital information screens.

River-to-River Rail Resiliency Projects (R4)

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This program will protect the East River Tunnels and the West Side Yard against flood hazards to ensure connectivity at New York Penn Station for Amtrak, LIRR, and NJ TRANSIT. The program consists of multiple elements, including West Side Yard perimeter protection and drainage improvements, hardening the Queens Portals of the East River Tunnels, resiliency improvements within the East River Tunnels, including the installation of permanent emergency generators, and waterproofing of the entrances and manhole/conduit points of entry to two ventilation facilities.
- **Justification:** This project will enhance weather resiliency.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$108,100,000

Funding Sources:

- Other, \$108,100,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,500,000	\$26,375,000	\$26,375,000	\$26,375,000	\$26,375,000	\$0	\$105,500,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Conceptual Design: Sep 2016 - Sep 2017

Additional federal funding could be used for:

- None. This project is fully funded.

Special Projects: Maryland DOT (Improvements)

BWI Thurgood Marshall Airport Station Improvements and 4th Track Project

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would add a fourth track to nine miles of the NEC between the Odenton MARC Station and the Halthorpe MARC Station. Additional improvements would include the construction of a new station and the reconfiguration of the platforms to allow boarding from all four tracks. The current three track layout only allows boarding at the two outside tracks. Additional funding is required for final design and construction.
- **Justification:** The BWI Rail Station is the eight busiest Amtrak station on the NEC and serves approximately 148 Amtrak and MARC trains each day. The existing track capacity and station configuration does not meet current and future needs. The project would alleviate current and future operational and capacity constraints by doubling the platform capacity at the station and adding nine miles of fourth track in this heavily traveled section of the NEC between Baltimore and Washington, DC.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$544,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$12,200,000	\$7,000,000	\$65,000,000	\$180,000,000	\$280,000,000	\$544,200,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Final Design
- Construction

BWI Thurgood Marshall Airport Station Interim Improvements

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will complete renovation of the existing BWI Thurgood Marshall Airport Station building to provide improved customer service, accessibility, and security. The project involves interior station improvements including new ADA-compliant restrooms; updated interior finishes and lighting; exterior station improvements to windows, the roof, and canopies; and a new pedestrian connector bridge between the north garage to the existing pedestrian bridge over the tracks.
- **Justification:** This project will provide improved customer service, accessibility, and security to MARC and Amtrak riders.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$9,502,000

Funding Sources:

- FTA Formula Grant, \$6,351,000, Additional funding spent in prior fiscal years.
- State/Local Funds, \$3,151,000, Additional funding spent in prior fiscal years.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$77,000	\$2,323,000	\$5,000,000	\$0	\$0	\$0	\$7,323,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- PE: Oct 2013 - Dec 2013
- Final Design: Dec 2013 - Oct 2016
- NEPA: Nov 2013 - Jan 2014
- Construction: May 2017 - Jan 2021

Additional federal funding could be used for:

- None. This project is fully funded.

Hanson Interlocking

- **Coordinating Agency:** Maryland DOT
 - **Partner Agency:** Amtrak
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project would improve operational flexibility at New Carrollton station and reduce delays for Amtrak and MARC service. A new interlocking would allow universal moves and reduce conflicts that occur when trains must pass other trains stopped at New Carrollton. Construction of Hanson Interlocking would also advance a state of good repair by allowing for the retirement of aging Landover Interlocking.
- **Justification:** This project will expand capacity and reduce congestion by enabling express and local trains to operate simultaneously in both directions.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$36,600,000

Funding Sources:

- FTA Formula Grant, \$8,000,000, Additional funding spent in prior fiscal years.
- State/Local Funds, \$2,000,000, Additional funding spent in prior fiscal years.
- Non-BCC Amtrak Funds, \$26,600,000, Balance of funding required is funded by Amtrak through written agreement for the cost sharing.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,018,000	\$8,000,000	\$8,000,000	\$0	\$0	\$0	\$16,000,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Conceptual Design: Jun 2007 - Jun 2009
- Final Design: Jun 2007 - Jul 2009
- Construction: Oct 2011 - Dec 2023

Additional federal funding could be used for:

- Not available.

Notes:

Balance of funding required is funded by Amtrak through written agreement for the cost sharing - \$20,014,000

MARC Station - Bayview

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would build a new MARC station at Bayview Medical Center in Baltimore with two high-level platforms, a pedestrian access bridge and elevators, as well as associated track, signal, and catenary infrastructure investments between Bay and Point Interlockings. Additional funding is required for design and construction.
- **Justification:** A new station at Bayview is proposed to provide a convenient station for MARC riders northeast of Baltimore and to improve regional access to the Johns Hopkins Bayview Medical Center.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$79,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$250,000	\$500,000	\$1,100,000	\$85,500,000	\$0	\$87,350,000

Schedule:

Milestone(s):

- Conceptual Design: Jan 2018 - Mar 2020

Additional federal funding could be used for:

- Not available.

MARC Station Improvements - West Baltimore

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would reconstruct the West Baltimore MARC Station to add high-level platforms and bring the station into ADA compliance. The West Baltimore MARC Station improvement may be incorporated into the B&P Tunnel Replacement Project because the tunnel’s selected Preferred Alternative (Alternative 3B) can incorporate the new MARC station into its alignment. Funding levels here assume the West Baltimore MARC Station project remains a stand-alone project. Conceptual design is completed, but additional funding is required to complete NEPA documentation, project engineering, and construction.
- **Justification:** This project would improve the passenger experience and bring the station into ADA compliance.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$32,000,000

Funding Sources:

- FTA Formula Grant, \$2,741,000, Includes work done prior to FY17
- State/Local Funds, \$2,402,000, Includes work done prior to FY17

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$88,000	\$66,000	\$3,200,000	\$0	\$0	\$0	\$3,266,000
Unfunded		\$75,000	\$200,000	\$2,725,000	\$4,500,000	\$12,000,000	\$19,500,000

Schedule:

Milestone(s):

- Conceptual Design: Feb 2010 - Jun 2015
- Final Design: Sep 2016 - Jun 2019
- Construction: Sep 2019 - Mar 2022

Additional federal funding could be used for:

- Not available.

Notes:

Project may or may not proceed in FY17 and is contingent on start date for B&P Tunnel Project’s design and construction.

MARC Storage - Northeast Maintenance Facility

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would construct a new MARC maintenance facility north of Baltimore in Cecil County, Maryland. The new facility would support existing and expanded MARC Penn Line operations by consolidating maintenance and layover functions to a MARC-controlled facility.
- **Justification:** This project would address the need for additional Penn Line storage, consolidate maintenance and inspection functions, and support future growth and service expansion.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$370,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$4,000,000	\$51,000,000	\$40,000,000	\$268,000,000	\$0	\$363,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

MARC Storage Improvements - Martin Airport

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will construct additional storage tracks and related infrastructure at the Martin State Airport Facility. MARC trains lack adequate storage along the Penn Line and often are required to run empty trains between Perryville and Baltimore, MD, using up track capacity and increasing operating costs.
- **Justification:** The new facility will accommodate current operational needs and projected ridership growth on the MARC system.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$16,465,000

Funding Sources:

- FTA Formula Grant, \$7,832,000, Additional funding spent in prior fiscal years.
- State/Local Funds, \$8,633,000, Additional funding spent in prior fiscal years.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$439,000	\$200,000	\$8,591,000	\$6,360,000	\$0	\$0	\$15,151,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- NEPA: Apr 2016 - Apr 2019
- Final Design: May 2016 - Mar 2017
- Construction: Jan 2018 - Jan 2021

Additional federal funding could be used for:

- Not available.

Special Projects: Massachusetts DOT (Improvements)

Route 128 Station Improvements

- **Coordinating Agency:** Massachusetts DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** Route 128 Station is one of the busiest stations in Massachusetts and services both Amtrak and commuter rail. This project would replace the interior elevators and escalators, which have reached their useful life, along with other interior upgrades to lighting and restrooms. The roof system is also reaching its life expectancy and would need to be replaced.
- **Justification:** Not available.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$11,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

Special Projects: MBTA (Improvements)

Back Bay Station Restroom Renovation

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** The Back Bay Station Restroom Renovation will significantly upgrade the customer experience at the Station, particularly for medium- and long-range travelers taking Keolis and Amtrak trains. The \$1.4M renovation is designed to elevate the restrooms to “airport quality,” separating each restroom into entry, lavatory and water closet zones and increasing the number of fixtures, particularly in the women’s restroom. The design is modern, clean and bright and uses resilient materials to ensure long-term durability while allowing for the heavy use of a transportation hub. The renovation necessitates track-level plumbing work that requires Amtrak staff support of approximately 25 nights.
- **Justification:** The Back Bay Station Restroom Renovation will significantly upgrade the customer experience at the Station, particularly for medium- and long-range travelers taking Keolis and Amtrak trains.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- \$1,400,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

Boston South Station

Regional Priority

- **Coordinating Agency:** MBTA
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would expand Boston South Station for future growth. The terminal is currently operating at capacity, in terms of train movements and passengers, creating a significant bottleneck and a major obstacle to service expansion. State funding and a HSIPR grant are funding preliminary engineering and environmental review. Additional funding is required for final design and construction.
- **Justification:** Not available.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available

Funding Sources:

- ARRA/HSIPR Grant, \$27,574,659, Federal Aid PARS #FRHSR0073
- State/Local Funds, \$8,908,734, MassDOT Program #X124020

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$0	\$0	\$0	\$0	TBD

Schedule:

Milestone(s):

- NEPA: Jul 2012 - Jun 2017
- PE: Oct 2015 - Jun 2017

Additional federal funding could be used for:

- Not available.

MBTA Layover Facilities - Pawtucket Layover Facility

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will implement improvements to the existing Pawtucket Layover Facility, where the MBTA stores and services some trains for the Providence/Stoughton Line. Enhancements will allow MBTA to perform fueling and some light equipment maintenance in Pawtucket, relieving pressure on other MBTA facilities. Phase 1, completed in 2013, included a 700 ft. inspection pit. Phase 2 is to install layover fluid handling equipment and other associated equipment. It includes systems for dispensing of diesel fuel, sanding, anti-freeze, and lube oil, some electrical work, and fencing.
- **Justification:** Not available.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$21,985,929

Funding Sources:

- FTA Formula Grant, \$4,300,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$1,868,933	\$1,900,457	\$0	\$0	\$0	\$0	\$1,900,457
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Final Design: Apr 2016 - Nov 2016

Additional federal funding could be used for:

- Not available.

MBTA Station Improvements - Mansfield Station

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will make improvements to heavily used Mansfield Station which currently is not fully accessible. The project includes pedestrian ramps and stairways to make platforms accessible for inbound and outbound passengers, replacement of existing mini-high platforms which are in poor condition with ADA-compliant mini-high platforms, platform repaving, new tactile strips along both platforms, new lighting, guard rails, bollards, signage, curb cuts, and improvements in parking lots for better accessibility.
- **Justification:** Not available.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$13,100,000

Funding Sources:

- FTA Formula Grant, \$156,250
- FTA Formula Grant, \$1,657,391
- State/Local Funds, \$11,286,359

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$156,250	\$2,745,188	\$3,456,852	\$0	\$0	\$4,883,086	\$11,085,126
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Oct 2016 - Apr 2018

Additional federal funding could be used for:

- Not available.

MBTA Station Improvements - Ruggles Street Station

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will construct a new platform and make other improvements at Ruggles Station to enable all inbound and outbound MBTA trains to serve the station and to increase system capacity along this segment of the NEC. The project will improve accessibility by upgrading the existing elevators and adding one new elevator in the lower busway, and make interior and exterior repairs to bring the station to code. A TIGER grant partially funds this project, which is part of a larger initiative to modernize the Ruggles Station which requires additional funding for full construction.
- **Justification:** Today, more than 30 percent of inbound trains bypass Ruggles Station, requiring more than 500 inbound passengers to transfer from MBTA Commuter Rail to the MBTA Orange Line at Back Bay then backtracking to Ruggles, commonly known as the "Back Bay Detour." The new platform will provide service improvements for the MBTA Commuter Rail passengers and add operational flexibility for MBTA Commuter Rail and Amtrak. With full service to Ruggles Station, Commuter Rail ridership to the area surrounding the station will grow as station area employment and Boston region population grows.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$46,000,000

Funding Sources:

- Other Federal Grant, \$30,000,000, TIGER Grant

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$1,280,968	\$15,226,918	\$11,412,506	\$778,248	\$0	\$0	\$27,417,672
Unfunded	X	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$0	\$16,000,000

Schedule:

Milestone(s):

- Final Design: End Sep 2016
- Construction: Feb 2017 - Mar 2019

Additional federal funding could be used for:

- Not available.

MBTA Station Improvements - South Attleboro Station

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will improve South Attleboro Station including rehabilitation of stairways, pedestrian walkways, establishment of a new bus stop for RIPTA, accessible parking improvements, pedestrian crossings, and two side-by-side mini-high platforms. Emergency repairs currently are underway, but permanent improvements are needed.
- **Justification:** This project is to ensure the safety of customers who use the station and will allow the station to remain open. The pedestrian bridge repairs across the tracks will ensure passengers can gain access to the inbound platform.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$3,900,000

Funding Sources:

- FTA Formula Grant, \$400,000
- State/Local Funds, \$3,500,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$9,861	\$210,000	\$2,018,770	\$1,500,000	\$0	\$0	\$3,728,770
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Final Design: Jul 2016 - Jun 2017

Additional federal funding could be used for:

- Not available.

Spandrel Beam Repair

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will repair a beam that spans across columns running perpendicular to an opening that gives access to the NEC. It is a part of the massive retaining/curtain wall that provides support of loads from an adjacent corridor to the southwest. This work is ongoing and located north of Forest Hill before Green Street Station off Williams Street in Jamaica Plain.
- **Justification:** This is a safety and state-of-good-repair investment.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$2,900,000

Funding Sources:

- State/Local Funds, \$2,900,000, Revenue Bond Grant (includes pre FY17 spending)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$750,000	\$350,000	\$0	\$0	\$0	\$1,700,000	\$2,050,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Not available.

Special Projects: Metro-North Railroad (Improvements)

Penn Station Access

- **Coordinating Agency:** Metro-North Railroad
 - **Partner Agency:** Amtrak
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project will open a new Metro-North Railroad link directly into Penn Station New York from the New Haven Line in Westchester and the State of Connecticut. Four new Metro-North stations will be built in the Bronx – near Co-op City, Morris Park, Parkchester/Van Nest, and Hunts Point. The project also includes upgrading the power and signal systems along the Hell Gate Line; adding new interlockings and tracks, and modifying existing ones and curves on a portion of the line; replacing existing over-the-street railroad bridges as necessary; and upgrading the Bronx River Bridge.
 - **Justification:** Penn Station Access will add resiliency and redundancy to the existing Metro-North New Haven Line service to Manhattan, providing greater mobility, access, connectivity, and travel times savings for existing and new Metro-North customers and helping to address Grand Central Terminal (GCT) capacity issues. The project will substantially reduce travel times between Manhattan’s West Side and areas within Metro-North’s East-of-Hudson service territory; provide a new one-seat ride from NHL communities to jobs, shopping and other destinations on Manhattan’s West Side; and improve regional connectivity and mobility by completing direct connections at Penn Station among all of the New York area’s regional and intercity rail carriers—Metro-North, LIRR, New Jersey Transit, and Amtrak. Furthermore, the four new stations will increase access from East Bronx communities to employers on Manhattan’s West Side and along I-95 in Westchester and the State of Connecticut and access to East Bronx employers from the same areas. The benefits above will be cost-effective by largely using existing infrastructure.
 - **Changes to Service:** Not available.
-

Funding Information:

Total Project Cost: \$695,000,000

Funding Sources:

- Other, \$695,000,000, MTA 2015-2019 Capital Program; the MTA is currently evaluating the timing of FY17 expenditures relative to the budget.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- None. This project is fully funded.

Special Projects: MTA Capital Construction (Improvements)

Harold Interlocking

- **Coordinating Agency:** MTA Capital Construction
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will construct new conflict-free train routes through Harold Interlocking, the busiest switch point on the NEC. Located in Queens, NY, this interlocking sorts Amtrak, LIRR, and NJ TRANSIT trains as they travel north and east of Penn Station or access Sunnyside Yard for service and storage. The project, which utilizes HSIPR funds, will greatly improve reliability, on-time performance, and travel time for all rail services.
- **Justification:** The project, which utilizes HSIPR funds, will greatly improve reliability, on-time performance, and travel time for all rail services operating through the Harold Interlocking.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$612,500,000

Funding Sources:

- ARRA/HSIPR Grant, \$612,440,932

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$63,520,000	\$13,910,000	\$69,460,000	\$94,500,000	\$70,510,000	\$0	\$248,380,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: End Jul 2023

Additional federal funding could be used for:

- None. This project is fully funded.

Special Projects: NJ TRANSIT (Improvements)

County Yard

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will expand the existing County Storage Yard from its current footprint to include an unused part of an adjacent rail freight yard. The Delco Lead project, with County Yard improvements, will provide safe storage capacity for up to 444 rail cars in the event of flooding at other locations.
- **Justification:** County Yard supports the interrelated investments described for the New Jersey High-Speed Rail Improvement Program and the Mid-Line Loop, and is a key resiliency project designed in response to Superstorm Sandy. The project will also support future service expansion by providing additional train storage.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$125,000,000

Funding Sources:

- State/Local Funds, \$111,549,518, State of New Jersey's Transportation Trust Fund (TTF)
- FTA Formula Grant, \$13,450,482, Federal Transit Administration

The project is largely fully funded with a mixture of Federal and State Funding

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$7,000,000	\$13,000,000	\$20,000,000	\$40,000,000	\$45,000,000	\$0	\$118,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- NEPA: Jan 2013 - May 2016
- Final Design: Jun 2013 - Jul 2017
- Construction: Jul 2017 - Dec 2021

Additional federal funding could be used for:

- None. This project is fully funded.

Delco Lead Safe Haven Facility Project

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will construct a safe haven storage facility on the NEC south of the New Brunswick station to protect rail rolling stock against damage resulting from a storm surge. A service and inspection facility that is part of the project will facilitate the rapid return of equipment to service following a storm event. This project is supported by FTA Emergency Relief Program funds.
- **Justification:** The project will provide resilient storage for rail cars and service and inspection (S&I) capabilities to facilitate the rapid return to service of stored rolling stock equipment following an extreme weather event. The S&I Facility will be utilized for daily inspections and required equipment service at County Yard. Furthermore, the Delco Lead tracks would potentially be used in the future in conjunction with the proposed Mid-Line Loop and North Brunswick Station projects.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$245,992,000

Funding Sources:

- State/Local Funds, \$61,498,090, State of New Jersey's Transportation Trust Fund (TTF)
- FTA Formula Grant, \$184,493,910, Multiple FTA Grants (7)

The Project is generally fully funded with a mixture of State and Federal Funding. Although most of the funds have not been officially conveyed to NJ Transit yet, the funds will be allocated to the project once the funding is received.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$11,261,000	\$45,000,000	\$50,000,000	\$55,000,000	\$50,000,000	\$34,731,000	\$234,731,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- PE: Oct 2014 - Feb 2016
- NEPA: Dec 2014 - Feb 2016
- Final Design: Mar 2016 - Jul 2017
- Construction: Mar 2017 - Oct 2021

Additional federal funding could be used for:

- None. This project is fully funded.

Edison Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would relocate an existing freight turn-out switch to a location north of Plainfield Avenue by Edison Station and then extend the existing outbound high-level platform by 425 feet for a total platform length of approximately 1,020 feet. Additional funding is required for design and construction.
- **Justification:** The extended platform will result in smoother passenger boarding and deboarding as well as shorter dwell times.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$7,072,000

Funding Sources:

- State/Local Funds, \$174,000, NJ Transportation Trust Funds (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$174,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$6,898,000	\$0	\$0	\$0	\$6,898,000

Schedule:

Milestone(s):

- Feasibility: Apr 2006 - Jun 2006

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

The completion of the Design Phase, and the commencement and completion of the Construction Phase, are currently on hold due to the lack of funds committed to the project.

Elizabeth Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would reconstruct two side high-level concrete passenger platforms and two station buildings including new elevators, stairs, ticketing offices, operational office spaces, and retail spaces. Additional funding is required for design and construction.
- **Justification:** NJ TRANSIT plans to reconstruct the Elizabeth, NJ commuter rail station in its entirety with needed upgrades to bring the station up to current ADA compliance standards. The station activities will also accommodate a proposed future fifth track along the NEC planned to be built by Amtrak. The upgraded rail station will also provide longer platforms for NJ TRANSIT trains.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$55,000,000

Funding Sources:

- State/Local Funds, \$1,572,000, State of New Jersey's Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$15,000,000	\$15,000,000	\$15,000,000	\$7,000,000	\$0	\$52,000,000

Schedule:

Milestone(s):

- PE: Jul 2013 - Sep 2016
- Final Design: May 2017 - May 2018
- Construction: Jun 2018 - Dec 2021

Additional federal funding could be used for:

- PE
- Final Design
- Construction

This project is to be constructed under a "Design/ Build" contract with a contractor/ consultant team to selected in Spring 2017. Upon the issuance of Notice to Proceed to the design/ build team, the consultant will complete certain aspects of the design while the contractor begins constructing the same.

Hunter Flyover

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would construct an elevated viaduct structure to allow for NJ TRANSIT’s Newark-bound Raritan Valley Line trains to cross over and above the NEC tracks to merge with the NEC’s eastbound local track in order to continue their movement towards Newark. Additional funding is required for design and construction.
- **Justification:** Currently, Newark-bound Raritan Valley Line trains must travel along the westbound local track or cross the NEC at grade to reach the eastbound local track. NJ TRANSIT identified the need for a flyover that would eliminate at-grade crossings, thereby reducing conflict between trains, increasing capacity for NJ TRANSIT and Amtrak, and enabling NJ TRANSIT to improve Raritan Line service.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$209,000,000

Funding Sources:

- State/Local Funds, \$2,000,000, State of New Jersey’s Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$25,500,000	\$35,000,000	\$40,000,000	\$45,000,000	\$23,000,000	\$168,500,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

The Design Phase is not advancing at this time due primarily to the lack of funding.

Jersey Avenue Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would reconstruct the existing station including new eastbound and westbound platforms. These improvements would be complemented by the addition of a new commuter parking lot that would be connected to the station via a pedestrian overpass. This project is being coordinated with the construction of NJ TRANSIT’s Delco Lead Project. Additional funding is required for design and construction.
- **Justification:** The purpose of the Jersey Avenue Station improvements is to make this station ADA accessible by installing new high-level platforms and elevators.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$48,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$5,000,000	\$7,000,000	\$15,000,000	\$16,000,000	\$5,000,000	\$48,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

Advancement of the project is currently on hold due to the lack of funds.

Metuchen Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would extend the existing outbound high-level platform at Metuchen Station by 360 feet. Additional funding is required for design and construction.
- **Justification:** The extended platform will result in smoother passenger boarding and deboarding as well as shorter dwell times.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- State/Local Funds, \$198,000, State of New Jersey’s Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$198,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$2,000,000	\$2,000,000	\$722,000	\$0	\$0	\$4,722,000

Schedule:

Milestone(s):

- Conceptual Design: Nov 2013 - Nov 2014

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

The Project is currently on hold due to the lack of funding to complete the design phase, and thereafter to complete the construction phase.

Mid-Line Loop Regional Priority

- **Coordinating Agency:** NJ TRANSIT
 - **Partner Agency:** Amtrak
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project would construct a new above-grade connection between existing and planned train storage facilities and the NY-bound local track of the NEC. The crossover would eliminate at-grade movements that create conflicts between commuter and intercity trains. Preliminary engineering is currently underway. Additional funding is required for final design and construction.
- **Justification:** The Mid-line Loop will eliminate at-grade movements that create conflicts between commuter and intercity trains. In doing so, this new infrastructure will open up capacity for all users while improving reliability for NJ TRANSIT services that today must wait for a slot to open before they can cross tracks to begin New York-bound service. The capacity created will help enable the New Jersey High-Speed Rail Program’s goal of 160-mph speeds on Acela, as well as support future express service patterns planned by NJ TRANSIT.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$350,000,000

Funding Sources:

- State/Local Funds, \$5,375,000, State of New Jersey’s Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,375,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$44,625,000	\$40,000,000	\$53,000,000	\$40,000,000	\$30,000,000	\$207,625,000

Schedule:

Milestone(s):

- PE: Sep 2013 - Feb 2017

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

Advancement of the project is currently on hold due to the lack of funding.

Notes:

Preliminary 30% Design activities on the project ground to a halt in 2014. If funding is eventually allocated to the project the PE activities will commence again.

New Brunswick Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would extend the current eastbound platform at New Brunswick Station by approximately 230 feet. Additional funding is required to design and construct an extension of the westbound platform and upgrade customer amenities at the station. The station is slated to undergo significant rehabilitation of its exterior brick façade; installation of new lighting, windows, HVAC system, and escalator; and painting.
- **Justification:** This major commuter rail station on NJ TRANSIT's NEC Line is in need of repairs in order to lengthen the useful life of the facility and to contain the cost to maintain the station.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$9,674,000

Funding Sources:

- State/Local Funds, \$2,982,000, State of New Jersey's Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$600,000	\$2,382,000	\$0	\$0	\$0	\$0	\$2,382,000
Unfunded		\$4,000,000	\$4,500,000	\$4,318,000	\$0	\$0	\$12,818,000

Schedule:

Milestone(s):

- PE: Apr 2013 - Mar 2017
- Final Design: Apr 2017 - Mar 2018
- Construction: Nov 2018 - Apr 2020

Additional federal funding could be used for:

- PE
- Final Design
- Construction

The completion of the Design Phase, and the commencement and completion of the Construction Phase, are currently on hold awaiting Amtrak's approval of a Project Initiation (PI) form to permit access to the right-of-way.

NJ TRANSITGRID

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will create a microgrid power generation and distribution system as a backup to the regional power network, allowing transit systems to function during storms or other times when the centralized power grid is compromised. NJ TRANSITGRID will incorporate renewable energy, distribution generation, and other technologies to provide resilient power to key NJ TRANSIT stations, maintenance facilities, bus garages, and other buildings. The project will also provide resilient electric traction power to NJ TRANSIT trains on critical corridors, including portions of the NEC, to continue to operate even when the traditional power grid fails.
- **Justification:** SuperStorm Sandy highlighted the need for infrastructure improvements to increase the resilience of the region’s transit system to withstand another major climatological event. NJ TRANSIT partnered with the U.S. Department of Energy and other agencies to evaluate opportunities to develop an independent power generating system to permit the operation of core train services in the event of power outages. This collaboration resulted in the NJ TRANSITGRID Project with the intent on constructing a “Microgrid Electric Power Generating System” that will provide a resilient power source to energize portions of the NEC, NJ TRANSIT’s Morris & Essex rail line, and the Hudson-Bergen Light Rail. The completion of this project will also provide resilient power at selected rail stations and bus maintenance facilities.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$557,353,000

Funding Sources:

- State/Local Funds, \$100,252,000, State of New Jersey’s Transportation Trust Fund (TTF)
- FTA Formula Grant, \$409,764,814, Two FTA Section 5324 Grants
- Other, \$67,336,186

The project is generally fully funded with a mixture of State, Federal and other local funds

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,547,000	\$90,050,000	\$113,000,000	\$134,000,000	\$155,000,000	\$76,756,000	\$568,806,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- NEPA: Dec 2014 - May 2017
- PE: May 2016 - Jan 2017
- Final Design: Feb 2017 - Aug 2017
- Construction: Dec 2017 - Oct 2021

Additional federal funding could be used for:

- None. This project is fully funded.

North Brunswick Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project would build a new rail station along the NEC in the town of North Brunswick, NJ. The scope includes the construction of two center island platforms, each approximately 1,020 feet in length to support the NEC's 12-car trains. Also included is a new station building, parking facilities, and all related building systems including public address, security, conveyance, and passenger information systems. Due to its location on the NEC, the construction work will need to be divided over 2 phases. Funding is required for design and construction.
- **Justification:** This project is being coordinated with the planned Mid-Line Loop project. The project is also being advanced with a private real estate developer who intends to convert nearby vacant land into a major residential/commercial complex.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$100,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	 	\$15,000,000	\$20,000,000	\$25,000,000	\$30,000,000	\$0	\$90,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

As this station work is connected with the construction of the Mid-Line Loop Project, all design work is currently on-hold due to the lack of funding.

North Elizabeth Station

- **Coordinating Agency:** NJ TRANSIT
 - **Partner Agency:**
- **Type:** Improvement Project
 - **Benefit:** Sole

Project Information

- **Scope:** This project would rehabilitate the existing high-level concrete platform and replace the tactile warning edge material on both the eastbound and westbound platforms at North Elizabeth Station. Additional funding is required for construction.
- **Justification:** An inspection indicated that there is advanced deterioration of the expansion joints, rub rail, and the concrete deck on both the eastbound and westbound high-level platforms.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$2,000,000

Funding Sources:

- State/Local Funds, \$281,000, State of New Jersey’s Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$281,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$1,000,000	\$719,000	\$0	\$0	\$0	\$1,719,000

Schedule:

Milestone(s):

- Final Design: Nov 2010 - Oct 2011
- Construction: Mar 2017 - Nov 2017

Additional federal funding could be used for:

- Construction

Advancement of the project is currently on hold due to funding limitations.

Penn Station New York - NJ TRANSIT Projects

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would make much needed improvements to Penn Station New York. Among the projects being advanced are extending the existing Central Concourse to allow for more vertical access to existing train platforms, improving the existing Hilton Corridor so it better connects between vertical access points to platforms, and improving signage and wayfinding to facilitate the safe and efficient movement of passengers and visitors. While some funding is programmed for this work, additional funding is needed to make all the necessary improvements.
- **Justification:** Construction of the multiple planned improvement projects at Penn Station New York will primarily be targeted on improving commuter safety and convenience. These projects will address serious vertical access and egress issues that currently exist between platforms and the various other levels of the station in an effort to increase capacity and improve the passenger experience.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$75,000,000

Funding Sources:

- FTA Formula Grant, \$11,018,000, Federal Transit Administration

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,000,000	\$6,018,000	\$0	\$0	\$0	\$0	\$6,018,000
Unfunded		\$13,982,000	\$10,000,000	\$10,000,000	\$15,000,000	\$15,000,000	\$63,982,000

Schedule:

Milestone(s):

- Conceptual Design: Nov 2015 - Aug 2016

Additional federal funding could be used for:

- Feasibility
- PE
- Final Design
- Construction

Princeton Junction Station

- **Coordinating Agency:** NJ TRANSIT
- **Type:** Improvement Project
- **Partner Agency:** Amtrak
- **Benefit:** Shared

Project Information

- **Scope:** This project will install a tactile edge panel at each of the three platforms where passengers load onto trains bound for Trenton and Newark as well as the local Dinky to Princeton. Interim repairs to the platforms will also be undertaken as needed.
- **Justification:** An inspection indicated that there is advanced deterioration of the tactile warning surface in addition to the three platforms themselves. This work will bring the station up to a state of good repair for the benefit of the stations users.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$1,000,000

Funding Sources:

- State/Local Funds, \$797,000, State of New Jersey’s Transportation Trust Fund (TTF)

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$500,000
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Final Design: Jul 2011 - Oct 2011
- Construction: May 2017 - Jun 2018

Additional federal funding could be used for:

- Construction

Special Projects: Pennsylvania DOT (Improvements)

Harrisburg Line Interlocking Improvements

- **Coordinating Agency:** Pennsylvania DOT
 - **Partner Agency:** Amtrak, SEPTA
 - **Type:** Improvement Project
 - **Benefit:** Shared
-

Project Information

- **Scope:** This project would fully replace and modernize multiple interlockings on the Harrisburg Line to advance a state of good repair and to support future passenger rail expansion for both SEPTA and Amtrak. Zoo Interlocking is fully designed and ready for construction but lacks funding. Preliminary engineering is complete for Bailey, Potts, Paoli, Wynnfield, Villa, and Nova Interlockings, but all require additional funding for final design and construction.
 - **Justification:** Not available.
 - **Changes to Service:** Not available.
-

Funding Information:

Total Project Cost: \$465,000,000

Funding Sources:

- Not available.

By Fiscal Year: Expenditures by fiscal year are not available.

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Final Design

Final design would need approximately \$13 million and could be completed in 2018-2019 if funding were to become available.

Harrisburg Line Station Improvements

- **Coordinating Agency:** Pennsylvania DOT
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:**

Project Information

- **Scope:** This project will eventually modernize virtually all of the Amtrak stations along the Harrisburg Line. PennDOT is leading construction of four new stations at Middletown, Mount Joy, Coatesville, Parkesburg, and Downingtown. All of the new stations will provide ADA access with high-level boarding platforms, improved/expanded parking, and multimodal connections. These projects will improve the passenger experience and lead to community and economic development. Middletown, Mount Joy, and Coatesville are fully funded while Parkesburg and Downingtown still requires additional funding for construction.
- **Justification:** Not available.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$110,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$36,000,000	\$30,000,000	\$23,000,000	\$14,000,000	\$0	\$0	\$67,000,000
Unfunded	 	\$0	\$10,000,000	\$30,000,000	\$32,000,000	\$30,000,000	\$102,000,000

Schedule:

Milestone(s):

- Construction: End 2025

Additional federal funding could be used for:

- Not available.

Completion of station projects is dependent on availability of Amtrak labor.

Special Projects: Rhode Island DOT (Improvements)

Pawtucket/ Central Falls Station

- **Coordinating Agency:** Rhode Island DOT
- **Partner Agency:** MBTA
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will build a new infill commuter rail station along MBTA's Providence Line in Pawtucket, RI with an anticipated opening in 2019/2020. The scope includes station platforms, track sidings, a pedestrian overpass, and associated pedestrian access points. The project was the recipient of a 2016 USDOT TIGER Award.
- **Justification:** The new Pawtucket/Central Falls Station will provide Rhode Island's densest urban communities located between Providence and Attleboro with access to commuter rail service. This station will provide relief to overcrowded stations in Providence and South Attleboro, while attracting new riders from adjacent residential redevelopment areas that would take advantage of proximity to transit for access to jobs in Boston and Providence.
- **Changes to Service:** The station would be served by MBTA trains traveling between Providence and South Attleboro. The number of trips is to be determined.

Funding Information:

Total Project Cost: \$40,000,000

Funding Sources:

- Other Federal Grant, \$13,100,000, TIGER
- FTA Formula Grant, \$18,000,000, FTA 5307
- State/Local Funds, \$3,000,000, Municipal
- State/Local Funds, \$5,900,000, State

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$1,000,000	\$10,000,000	\$18,000,000	\$9,000,000	\$2,000,000	\$0	\$39,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Feasibility: End Jun 2007
- NEPA: End Jan 2017
- PE: End Dec 2016
- Final Design: Sep 2017 - Jul 2018
- Construction: Dec 2017 - Dec 2019

Additional federal funding could be used for:

- None. This project is fully funded.

Providence Station Regional Priority

- **Coordinating Agency:** Rhode Island DOT
 - **Partner Agency:** Amtrak
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project would construct interior layout changes, emergency platform egress, and pedestrian access improvements to Providence Station. The PE/NEPA phase includes a full assessment of the station’s condition, development of short- and long-term improvements for both the station’s interior and exterior, 30 percent design for recommended short-term improvements, and an environmental review on the preferred alternative. Long-term actions could include connections to adjacent retail centers, enhance bus/ intermodal connections, increased parking, and station expansion. RIDOT is pursuing a separate project to develop a transit hub adjacent and connected to Providence Station.
- **Justification:** Providence Station was relocated in downtown Providence in the 1980s. The current station is in need of reprogramming of interior space to better reflect the needs of today’s travelers. The relocation also created a need for new intermodal connections to ensure that passengers can seamlessly travel to Providence Station for destinations along the Corridor, including Boston, MA. Numerous companies in Boston have also decided to locate additional offices in Providence, thereby increasing the importance for service between the two cities.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$31,800,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$2,000,000	\$4,000,000	\$9,000,000	\$0	\$0	\$15,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Final Design
- Construction

Through an FRA high speed rail grant, RIDOT and Amtrak have identified improvements for Providence Station to be advanced to construction. The study has allowed for NEPA/ PE only. Construction funds are needed.

RIDOT Stations: Warwick/ T.F. Green Airport

- **Coordinating Agency:** Rhode Island DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would expand Warwick/T.F. Green Airport rail station which opened in 2011. In Phase 1 of the project, Rhode Island DOT constructed a station house and a single high-level platform to support the introduction of MBTA commuter rail services to the Airport and to new communities south of Providence. For Phase 2, RIDOT has proposed expanding the station with additional track and platform capacity.
- **Justification:** This project would enable additional commuter rail service and potentially the introduction of Amtrak service at Warwick/T.F. Green Airport rail station.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$40,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$2,000,000	\$3,000,000	\$15,000,000	\$10,000,000	\$10,000,000	\$40,000,000

Schedule:

Milestone(s):

- Feasibility: Sep 2016 - Apr 2017

Additional federal funding could be used for:

- Not available.

Special Projects: SEPTA (Improvements)

30th Street to Arsenal Signals and ROW Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will improve SEPTA's Arsenal Interlocking (near University City Station) and add a new interlocking to support operation of the SEPTA's Airport Line through Amtrak's Phil Interlocking. The project includes installation of new track special work, overhead catenary, signals, and switch and lock mechanisms, as well as the addition of new Positive Train Control (PTC) systems. The existing signal block layout will be modified to ensure safe train operations and braking. Design and construction will progress in phases with construction outages scheduled for the summer of 2017, 2018, and 2019. Once the project is complete, SEPTA will assume maintenance responsibility for Amtrak's tracks on a segment where SEPTA is the sole operator.
- **Justification:** The project will repair assets that are beyond their useful life and improve system reliability.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$42,000,000

Funding Sources:

- State/Local Funds, \$42,000,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$3,800,000	\$12,100,000	\$13,700,000	\$12,200,000	\$0	\$0	\$38,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- PE: Begin Oct 2014
- Final Design: End Nov 2017
- Construction: Feb 2017 - Jun 2020

Additional federal funding could be used for:

- None. This project is fully funded.

30th Street West Catenary Replacement

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will replace and modernize the SEPTA overhead catenary system from 30th Street Station westbound to K and Zoo Interlockings, an area that includes SEPTA's Powelton Yard. Work also includes repairs to aging catenary support structures, foundations, retaining walls, tunnels, and site drainage.
- **Justification:** The project will rehabilitate assets beyond their useful life and improve system reliability.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$77,000,000

Funding Sources:

- State/Local Funds, \$77,000,000

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$2,000,000	\$1,300,000	\$8,700,000	\$21,000,000	\$18,100,000	\$12,900,000	\$62,000,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- PE: Begin Feb 2015
- Final Design: End Feb 2018
- Construction: Sep 2018 - Jul 2023

Additional federal funding could be used for:

- Construction

Ardmore Station Improvements - Phase 1

- **Coordinating Agency:** SEPTA
- **Type:** Improvement Project
- **Partner Agency:** Pennsylvania DOT
- **Benefit:** Shared

Project Information

- **Scope:** This project will make several improvements to Ardmore Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor to make the station fully ADA compliant. Improvements are being advanced in phases. Phase 1 of this project includes a new station building, high-level platforms, modifications to the existing pedestrian tunnel, new canopies and passenger shelters, and site and circulation improvements. Additional funding is required for construction of a parking garage (see Ardmore Station Improvements - Phase 2). SEPTA currently leases this station from Amtrak.
- **Justification:** The project will make the station fully accessible as well as improve the customer experience and bring the station into a state of good repair.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$62,300,000

Funding Sources:

- Other Federal Grant, \$5,830,670, FTA Earmark
- FTA Formula Grant, \$14,884,413
- State/Local Funds, \$14,609,687

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$430,000	\$270,000	\$4,000,000	\$11,860,000	\$8,240,000	\$6,770,000	\$31,140,000
Unfunded	XXXXXX	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Final Design: End Jan 2017
- Construction: Jun 2017 - Jun 2022

Additional federal funding could be used for:

- Construction

Ardmore Station Improvements - Phase 2

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project is the second phase of Ardmore Station Improvements on SEPTA's Paoli/ Thorndale Regional Rail Line and Amtrak's Keystone Corridor. Improvements are being advanced in phases. Phase 1 of this project includes a new station building, high-level platforms, modifications to the existing pedestrian tunnel, new canopies and passenger shelters, and site and circulation improvements (see Ardmore Station Improvements - Phase 1). Phase 2 includes the construction of a parking garage but is currently unfunded. SEPTA currently leases this station from Amtrak.
- **Justification:** This project will enhance opportunities for use of SEPTA's Paoli/ Thorndale Regional Rail Line and Amtrak's Keystone Corridor.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- Funding is programmed for this project starting in FY23. If funding is made available earlier than the project can be advanced sooner.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$0	\$0	\$2,500,000	\$12,250,000	\$11,301,090	\$26,051,090

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- NEPA
- Final Design
- Construction

Conceptual design is complete. Project schedule is dependent on funding and Amtrak availability.

Exton Station Improvements

- **Coordinating Agency:** SEPTA
- **Type:** Improvement Project
- **Partner Agency:**
- **Benefit:** Shared

Project Information

- **Scope:** This project will implement overall station improvements to Exton Station on SEPTA’s Paoli/Thorndale Regional Rail Line and Amtrak’s Keystone Corridor and will provide full-length high-level boarding. Work includes construction of high-level boarding platforms, ramps and stairs, a new station building, new canopies, and shelters. The project will bring the station to a state of good repair and make the station ADA compliant. SEPTA currently leases this station from Amtrak.
- **Justification:** The project will provide improved station accessibility as well as improve the customer experience and bring the station into a state of good repair. It will also improve environmental conditions by managing stormwater in a sensitive area.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$23,444,157

Funding Sources:

- FTA Formula Grant, \$11,316,530
- State/Local Funds, \$12,127,627

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$5,000,000	\$9,700,000	\$3,900,000	\$0	\$0	\$0	\$13,600,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jun 2015 - Jun 2019

Additional federal funding could be used for:

- None. This project is fully funded.

Frazer Rail Shop and Yard Upgrade

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will make significant renovations and expand the Frazer Rail Shop and Yard facilities. SEPTA is in the process of procuring new locomotives and a fleet of multi-level cars for the Regional Rail System and needs these investments to accommodate the increased fleet size. The initial phase will include significant earthwork and stormwater improvements at the 40-acre site to create space for additional yard tracks. Additional phases of work will include extending three existing storage tracks and adding three new storage tracks; major upgrades to the repair shop and equipment, including the wheel truing machine and drop table; construction of a shop extension, new cleaning track, vehicle washer building, and yardmaster building; and utility upgrades. Also, the roof will be upgraded and mechanical equipment and electrical connections will be replaced.
- **Justification:** The project will allow for the storage and maintenance of SEPTA's new rolling stock to accommodate Southeastern Pennsylvania's increasing demand for regional rail service, which has been consistently growing over the last decade.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$139,603,400

Funding Sources:

- State/Local Funds, \$139,603,400

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$26,200,000	\$38,500,000	\$29,600,000	\$18,200,000	\$7,500,000	\$14,000,000	\$107,800,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Mar 2016 - Dec 2022

Additional federal funding could be used for:

- None. This project is fully funded.

Harrisburg Line - 3rd Track Paoli to Frazer Regional Priority

- **Coordinating Agency:** SEPTA
 - **Partner Agency:**
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project would reinstall a third track on the 4-mile segment from Paoli to Frazer. In addition to the track work, the project will include overhead contact system (OCS), signal, and right-of-way work all of which is needed to operate on the new track. All work will occur in the existing right-of-way. This project is an estimated \$50 million unfunded need.
- **Justification:** The project will improve operational efficiency.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$50,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$5,500,000	\$15,000,000	\$15,000,000	\$14,500,000	\$0	\$50,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction
- Other

Project schedule dependent on funding and Amtrak availability.

Harrisburg Line - Zoo to Thorndale OCS Replacement & ROW Clearing

Regional Priority

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would replace and upgrade the overhead contact system (OCS) and right-of-way (ROW) clearing along SEPTA’s Paoli/Thorndale Regional Rail Line and Amtrak’s Keystone Corridor from Zoo to Thorndale. This project is an estimated \$200 million unfunded need.
- **Justification:** The project will rehabilitate assets beyond their useful life and improve system reliability.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$200,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$20,000,000	\$20,000,000	\$20,000,000	\$20,000,000	\$20,000,000	\$100,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

Project schedule is dependent on funding and Amtrak availability.

Harrisburg Line - Zoo to Thorndale Signal Upgrade Regional Priority

- **Coordinating Agency:** SEPTA
 - **Partner Agency:**
- **Type:** Improvement Project
 - **Benefit:** Shared

Project Information

- **Scope:** This project would upgrade signals along SEPTA’s Paoli/Thorndale Regional Rail Line and Amtrak’s Keystone Corridor from Zoo to Thorndale. Specific project elements would include retiring the current manned towers and implementation of Rule 261 signaling from Paoli to Thorndale. This project is a \$50 million unfunded need.
- **Justification:** The project will rehabilitate assets beyond their useful life and improve system reliability.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$50,000,000

Funding Sources:

- Not available.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$5,000,000	\$20,000,000	\$20,000,000	\$5,000,000	\$0	\$50,000,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- Feasibility
- Conceptual Design
- PE
- NEPA
- Final Design
- Construction

Project schedule is dependent on funding and Amtrak availability.

Levittown Station Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will rebuild Levittown Station on SEPTA's Trenton Regional Rail Line (Northeast Corridor main line) to make the station fully ADA accessible. The project includes station improvements, construction of high-level platforms, elevators, a pedestrian overpass, improved intermodal service connections, and parking expansion. SEPTA currently leases this station from Amtrak.
- **Justification:** The project will make the station fully accessible as well as improve the customer experience and bring the station into a state of good repair.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$36,000,000

Funding Sources:

- State/Local Funds, \$30,355,395
- Other Federal Grant, \$5,644,605, FTA Earmarks

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$8,000,000	\$11,700,000	\$6,200,000	\$0	\$0	\$0	\$17,900,000
Unfunded		\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jul 2015 - Jun 2019

Additional federal funding could be used for:

- None. This project is fully funded.

Paoli Transportation Center - Phase 1 (ADA & Infrastructure)

- **Coordinating Agency:** SEPTA
- **Partner Agency:** Not available.
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project will reconstruct Paoli Intermodal Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor. Phase 1 will make the existing station ADA accessible and include a pedestrian overpass with elevators connecting to parking lots and a new high-level center platform. The outbound parking areas will be reconfigured and pedestrian linkages will be provided throughout the station area such as sidewalks and crosswalks. The project will also include changes to the railroad infrastructure as needed to accommodate the work. The construction cost for Phase 1 is approximately \$40 million. SEPTA and PennDOT are contributing \$26.7 million dollars and Amtrak is providing the balance of funding or \$13.3 million.
- **Justification:** The project will make the station fully accessible as well as improve the customer experience and bring the station into a state of good repair.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$48,000,000

Funding Sources:

- FTA Formula Grant, \$2,978,673, Earmarks
- Non-BCC Amtrak Funds, \$13,332,100
- State/Local Funds, \$23,685,528

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$9,960,000	\$15,250,000	\$12,790,000	\$1,996,301	\$0	\$0	\$30,036,301
Unfunded	X	\$0	\$0	\$0	\$0	\$0	\$0

Schedule:

Milestone(s):

- Construction: Jul 2016 - Dec 2018

Additional federal funding could be used for:

- Construction

Paoli Transportation Center - Phase 2

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would reconstruct Paoli Intermodal Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor. Phase 1 will make the existing station ADA accessible and include a pedestrian overpass with elevators connecting to parking lots and a new high-level center platform (see Paoli Transportation Center - Phase 1). Phase 2 includes an intermodal station complex complete with an additional high-level platform on the outbound side, waiting area and passenger amenities; enhanced bus facilities; and a parking garage. Completion of the complementary Darby Road Bridge Improvements project by PennDOT is required prior to advance of Phase 2 construction. SEPTA leases the station from Amtrak.
- **Justification:** The project will improve accessibility, passenger amenities and intermodal connections. In addition, the new parking garage will provide opportunities for more passengers to access SEPTA and Amtrak service.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: Not available.

Funding Sources:

- State/Local Funds, \$250,000
- Funding is programmed for this project starting in FY23. If funding is made available earlier than the project can advance sooner.

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded	X	\$0	\$0	\$0	\$750,000	\$5,000,000	\$5,750,000

Schedule:

Milestone(s):

- Not available.

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

Conceptual design is complete. Project schedule is dependent on funding and Amtrak availability.

Villanova Station Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Sole

Project Information

- **Scope:** This project will modernize Villanova Station on SEPTA's Paoli/Thorndale Regional Rail Line. Work includes high-level platforms with canopies, a new pedestrian underpass with ramps and stairs, station building exterior improvements, parking lot modifications, stormwater management, and new signage, lighting, passenger amenities, and landscaping. The improvements will make the station fully ADA accessible. The project will be advanced in phases. Phase 1 activities will improve station accessibility, through the construction of a new pedestrian tunnel with access ramps and stairs, and modify the parking lot to improve stormwater management. Phase 2 will build high-level platforms, canopies, and an improved station building. SEPTA currently leases this station from Amtrak.
- **Justification:** The project will make the station fully accessible as well as improve the customer experience and bring the station into a state of good repair.
- **Changes to Service:** Not available.

Funding Information:

Total Project Cost: \$30,600,000

Funding Sources:

- Other Federal Grant, \$5,396,670, FTA Earmark
- State/Local Funds, \$25,203,330

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$6,500,000	\$9,300,000	\$3,600,000	\$0	\$0	\$0	\$12,900,000
Unfunded	 	\$0	\$0	\$0	\$0	\$0	\$0

Phase 2 has no expected work/ available funding within this period.

Schedule:

Milestone(s):

- PE: Begin Feb 2012
- Final Design: End Mar 2017
- Construction: Apr 2016 - Dec 2020

Additional federal funding could be used for:

- None. This Phase 1 is fully funded.

West Barracks Yard

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement Project
- **Benefit:** Shared

Project Information

- **Scope:** This project would construct West Barracks Yard, a new storage facility north of Trenton Station in New Jersey for SEPTA equipment. SEPTA is currently without a storage facility in Trenton and stores trains on station tracks and runs empty trains between Trenton, NJ and Philadelphia, PA. A yard would increase storage capacity, reduce operating costs, and open track and platform space for SEPTA, NJ TRANSIT, and Amtrak. This project is a \$27 million unfunded need.
- **Justification:** This project would allow storage of rail cars outside of flood prone areas and is a cost-effective means to mitigate the risk of damage and allows a quicker turn around for trains, improving operational efficiency and reducing the operational cost of dead heading trains.
- **Changes to Service:** Not available

Funding Information:

Total Project Cost: \$34,300,000

Funding Sources:

- Not available

By Fiscal Year:

	FY17	FY18	FY19	FY20	FY21	FY22	FY18-22 Total
Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Unfunded		\$2,050,000	\$12,500,000	\$11,750,000	\$700,000	\$0	\$27,000,000

Schedule:

Milestone(s):

- PE: Begin Jan 2017
- Final Design: End Mar 2018
- Construction: Oct 2018 - Oct 2020

Additional federal funding could be used for:

- PE
- NEPA
- Final Design
- Construction

Project schedule is dependent on funding and Amtrak availability.

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Back Cover: Philadelphia, Pennsylvania

