



## Executive Summary

15-Year Service and Infrastructure Development Plan  
and 5-year Capital Investment Plan  
for the Northeast Corridor





# Executive Summary

**We are about to commence the most ambitious period of reinvestment in the Northeast Corridor's history. Thanks to the work of Congress and the Biden Administration on the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law (BIL), the NEC has its first-ever source of dedicated, multi-year funding, providing the predictability needed to efficiently deliver a major capital program.**

## **The Time is Now to Rebuild the NEC**

After nearly a century of underinvestment, the Northeast Corridor (NEC) finally has a downpayment to address aging infrastructure, create much-needed capacity for additional service, and build a resilient railroad network for the future.

The Northeast Corridor Commission informed the Bipartisan Infrastructure Law through the CONNECT NEC 2035 (C35) program, a first-ever corridor-wide 15-year service development plan guided by the long-term vision set by the Federal Railroad Administration's 2017 NEC FUTURE Record of Decision. C35 defined service goals, infrastructure requirements, and funding needs, while also proposing key principles for a funding program to implement the plan: 1) Make funding predictable and 2) Fund the plan rather than individual projects.

## **The NEC is Critically Important**

The corridor serves as a vital link between people and their jobs, family, and friends, keeping riders off the roads, reducing greenhouse gas emissions, connecting communities, and supporting dense, energy-efficient land use patterns. Daily NEC riders contribute more than \$50 billion annually to the national economy, and an unexpected loss of the NEC for one day alone could cost the nation nearly \$100 million in transportation-related impacts and productivity losses. At its peak just before the coronavirus pandemic, the NEC supported 930,000 trips on an average weekday, including 50,000 Amtrak trips and 880,000 commuter rail trips.

## The CONNECT NEC Process

CONNECT NEC is an ongoing planning process and this update, CONNECT NEC 2037 (C37), builds on the work started in C35. C35 conceptually assessed what could be done in the next 15 years to achieve service and state-of-good-repair goals for the purpose of determining a funding need. C37 begins a transition to defining in much greater detail what will be done to achieve these goals, particularly for projects funded in the near-term. The C37 update to the CONNECT NEC planning process advances several key objectives, including the development and integration of more detailed information on workforce and other delivery coordination, as well as updating service objectives, where applicable, to accommodate post-pandemic shifts in travel demand patterns. A planned 2025 update, C40, will continue to build upon these C37 advancements with a focus on resource and funding availability.



## C37 Benefits

If C37 is fully funded and implemented, in 15 years travelers on the Northeast Corridor will enjoy new trains, new and improved stations, as well as more reliable, faster, and more frequent intercity and commuter rail services. Communities along the corridor will benefit from more reliable, high-quality mobility options, new connections for underserved areas, and additional one-seat rides and express services, which will increase accessibility, improve environmental quality, and provide new economic opportunities.

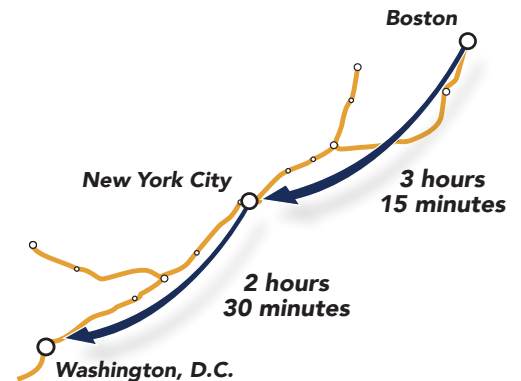


### Mobility and Access

#### + More frequent Amtrak service on modern trainsets

- 50% more Amtrak trains between Boston and New York, with 30 daily round trips, will attract new and support existing riders
- Nearly 100% more Amtrak service between New York and Washington, D.C., with 60 daily round trips
- Amtrak has committed to 2040 Acela trip time goals as shown in graphic on right
- New Acela trains offer nearly 25% more seats at express speeds up to 160 mph

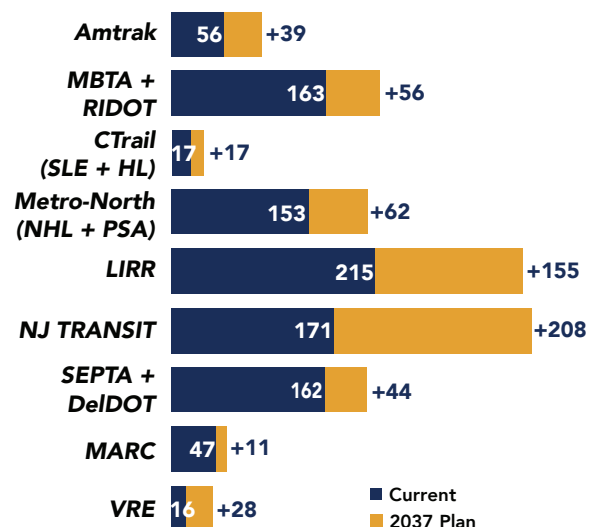
**Acela Trip Time Goals for 2040**



#### + Expanded commuter rail services

- Communities will have 60% more commuter trains to choose from, making rail travel more attractive to both existing and new riders
- MBTA riders will travel from Boston to Providence in less than an hour
- Metro-North riders will enjoy 51 new weekday round trips to Penn Station on the New Haven Line
- MARC service between Washington, D.C. and Baltimore will increase from 27 round trips to 37 round trips per day

**Increase in Daily Round Trips on Corridor by operator**





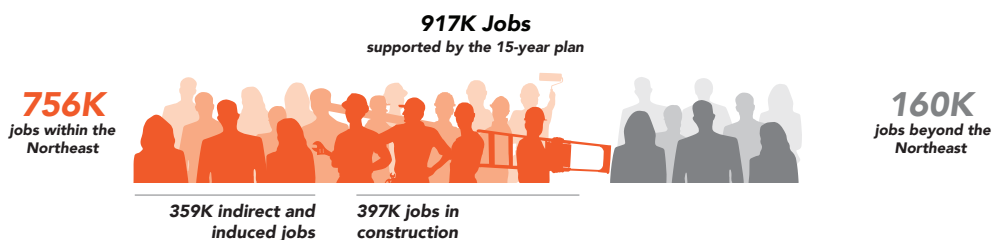
## Connections to Opportunities

### + Expanded access to downtowns, housing, and opportunities

- More than 300,000 households within 15 minutes of new stations will be better connected to the corridor than they are today, including communities in the Bronx, NY; along the Hartford Line in Connecticut; North Brunswick, NJ; as well as Elkton and southeast Baltimore, MD.
- NEC riders will also enjoy the comfort of new one-seat Metro-North service between New York City and Waterbury, CT, and new hourly one-seat Amtrak service between New York City, Hartford, CT, and Springfield, MA.

### + High-quality job and career opportunities

- If fully funded, C37 investment will support over 900,000 jobs over 15 years throughout the United States, including direct jobs that will execute projects, indirect jobs that provide goods and services to support construction, and induced jobs generated by the personal spending of direct and indirect employees.



## Environmental Quality

### + Reduced greenhouse gas emissions by moving more people by train

- An improved NEC and enhanced rail services will accommodate 51 million more travelers each year, shifting approximately 38 million annual car trips and nearly 600,000 short-haul plane trips to rail, in addition to the vehicle and plane trips avoided by millions of travelers using the existing rail system.
- Up to 750,000 metric tons of greenhouse gas emissions will be eliminated annually from new riders choosing rail, in addition to the emissions avoided by millions of travelers using the existing rail system today over more polluting modes.



### + A resilient rail network for a changing climate

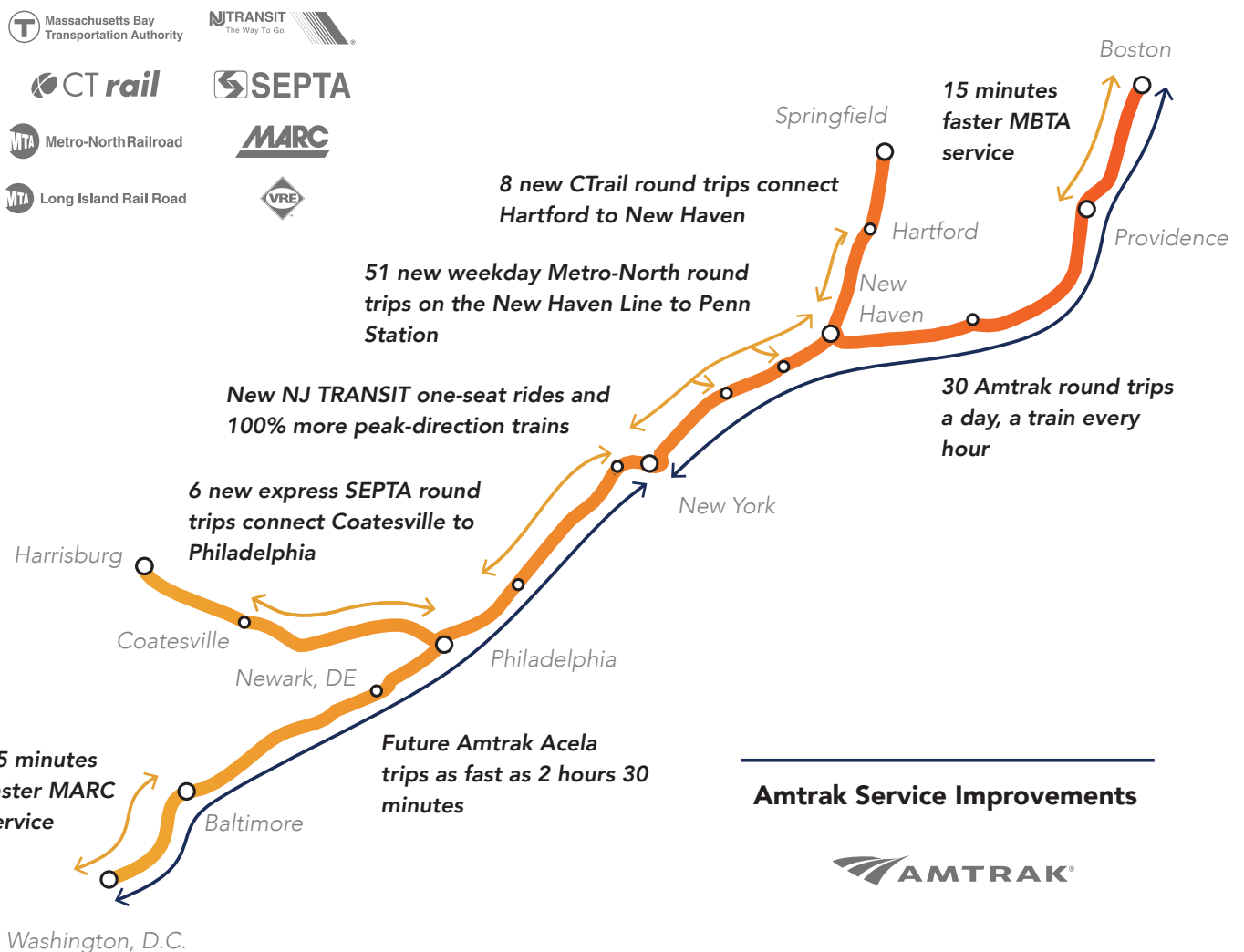
C37 investments in the corridor will keep riders moving reliably, avoiding delays and cancellations due to flooding, extreme heat, severe weather events, or infrastructure failures.



# Rail Service Improvement Highlights

Through C37, commuters and Amtrak travelers across the Northeast corridor will see increases in rail service reliability, frequency, and speed. Riders will experience increased service at peak and off-peak times, a reduction in travel times between key cities, and new stations, giving communities direct access to the corridor's economic hubs.

## Commuter Rail Service Improvements



# Corridor-wide Investment Highlights

Corridor-wide benefits are achieved through the coordinated implementation of new projects and aging asset replacement in every region of the Northeast Corridor.

## ■ New England

### ***In five years***

Hartford Line Rail Program Double Track (Phase 3B) Project  
Providence Station Improvements  
High Capacity Signaling between Boston and Canton

### ***In ten years***

Connecticut River Bridge Replacement  
Massachusetts Third Track Between Readville and Canton

### ***In fifteen years***

Boston South Station Expansion

## ■ Connecticut – Westchester

### ***In five years***

New Haven Line Signal System Replacements  
TIME-2

### ***In ten years***

New Haven Union Station Improvements  
Stamford Station Improvements  
NHL Power Improvement Program  
TIME-1  
WALK Bridge Replacement

### ***In fifteen years***

SAUGATUCK River Bridge Replacement  
DEVON Bridge Replacement

## ■ New York City Metro

### ***In five years***

East River Tunnel Rehabilitation  
Gateway: Portal North Bridge  
Penn Station Access Project

### ***In ten years***

Gateway: Sawtooth Bridges Replacement  
New York Penn Station Reconstruction  
Clark to Ham Constant Tension Upgrade Project

### ***In fifteen years***

Gateway: Hudson Tunnel Project  
Gateway: New York Penn Station Expansion  
County to Newark Catenary Upgrades  
Signal System Upgrades to 562 Program Phase 1: County to Elmore

## ■ Mid-Atlantic North

### ***In five years***

30th Street West Catenary Replacement  
Penn Coach Yard Intercity Trainset Maintenance Facility

### ***In ten years***

Philadelphia 30th Street District Plan  
Harrisburg Line Track 2 Restoration between Paoli and Frazer  
Mid-Atlantic OCS Replacement between Zoo and Paoli

### ***In fifteen years***

Keystone Interlocking Improvements  
Harrisburg Line Signal Upgrade: Park to Zoo

## ■ Mid-Atlantic South

### ***In five years***

Burgos Interlocking  
Aberdeen, MD High-Level Platforms Project

### ***In ten years***

Mid-Atlantic South Signal System Upgrades to 562 Project

### ***In fifteen years***


Washington, D.C. First Street Tunnel  
Frederick Douglass Tunnel Program  
Susquehanna River Bridge Replacement Program  
Baltimore Penn Station Track Capacity Program

### **Assets replaced corridor-wide in 15 years** *based on NECC analysis*

 **1,600**  
miles of main track rehabilitation  
to ensure reliable train service

 **2,500**  
catenary structures replaced  
for improved power and  
higher speed trains

 **400+**  
miles of signals replaced  
for service reliability

 **11**  
rail yards renewed  
to support new trains and service

 **730,000**  
ties replaced  
for smoother journeys

# Financial Strategy

The Bipartisan Infrastructure Law (BIL) provided an installment of significant guaranteed and predictable funding to improve and renew aging Northeast Corridor infrastructure. While BIL funds will go a long way in addressing the backlog of assets on the NEC, long-term, predictable funding beyond FY 2026 is necessary to realize the state-of-good-repair and service benefits of this plan. In addition, sustained and growing annual appropriations, which were authorized but not provided with advanced funding under BIL, to Amtrak's Northeast Corridor Account, the Federal-State Partnership for Intercity Passenger Rail grant program, and other relevant programs will be critical to the corridor's success. Without this additional funding and successful implementation, communities will not realize the full service, access, and environmental benefits in this plan.

## Funding the CONNECT NEC Program

The total cost to implement C37 over the 15-year period is estimated to be \$135 billion in 2023 dollars or, accounting for inflation, \$175 billion in year-of-expenditure dollars. Of that amount, approximately forty percent is funded through existing or expected federal, state, and local sources, leaving a funding gap of about \$100 billion for the full C37.

Over a third of the available funding for C37 is expected to be provided by the Federal-State Partnership for Intercity Passenger Rail grant program. The remainder is funded by federal discretionary grants like CRISI and CIG, Amtrak's annual grants, capital contributions through the Commission's Cost Allocation Policy, and state and local funding. Without predictable funding beyond FY26, agencies may not be able to commit to the necessary long-term investments in project development and design, workforce development, and equipment procurement needed to advance projects.

## Federal-State Partnership for Intercity Passenger Rail Awards

The Federal-State Partnership (FSP) for Intercity Passenger Rail grant program is providing historic investment in the Northeast Corridor (NEC), awarding over \$16 billion to 25 projects. Nearly \$14 billion of this federal funding will support 13 major backlog projects, listed below, making significant progress in addressing the backlog of aging assets on the NEC.

### FY22-23 FSP Awards: Major Backlog

- Connecticut River Bridge Replacement Project (CT)\*
- DEVON Bridge Replacement (CT)
- SAUGATUCK River Bridge Replacement (CT)
- WALK Bridge Replacement (CT)\*
- Pelham Bay Bridge Replacement Project (NY)
- East River Tunnel Rehabilitation Project (NY)\*
- Gateway: Hudson Tunnel Project (NY/NJ)\*
- Gateway: Sawtooth Bridges Replacement (NJ)
- Gateway: Highline Renewal and State of Good Repair: Dock Bridge (NJ)\*
- Susquehanna River Bridge Replacement Program (MD)\*
- Bush River Bridge Replacement Program (MD)
- Gunpowder River Bridge Replacement Program (MD)
- Frederick Douglass Tunnel Program (MD)\*

*\*Funded through construction*



## Next Steps

The unprecedented level of funding support secured through the Bipartisan Infrastructure Law has spurred agencies to ramp up efforts on project development and delivery, and has led the Commission to develop an Implementation Coordination Program to help agencies advance funded projects in the CONNECT NEC program. At the same time, the Commission will continue its corridor-wide planning process with CONNECT NEC 2040 which will consider ridership trends, update service plans, and further address resource constraints and funding availability.

### Future Service Goals

In C37, most operators are planning a significant increase in overall service in the next fifteen years, straining the capacity of the NEC in certain regions even when future infrastructure investments are taken into account. Importantly, the pandemic continues to impact travel and commuting patterns on the NEC. Some commuter services have fewer traditional weekday peak riders, and some have seen higher than average ridership throughout the day and on weekends. Amtrak has seen strong overall ridership recovery with a notable surge in weekend passengers. This emerging ridership profile suggests more consistent all-day and weekend service is increasingly desirable, and these frequencies are included in C37 for many operators. Commission members will continue to analyze ridership and revenue trends as service assumptions are updated in the next plan.

### CONNECT NEC Implementation and Project Delivery

Project sponsors will manage the planning, design, and delivery of individual projects in C37. However, there are significant challenges associated with project delivery on a complex railroad network with multiple operators providing a high level of service. The Commission has launched an Implementation Coordination Program (ICP) to facilitate improved project delivery and enable the successful implementation of CONNECT NEC. While participating in the ICP, Commission members are also examining new delivery methods, balancing the need to invest with the potential impact on customers during construction.

It is also critical to understand resource needs and resource availability across the entire program to establish realistic schedules for the development, design, and construction of individual projects. Amtrak and other NEC infrastructure owners have been advancing aggressive workforce hiring and training programs to increase railroad staff available to deliver these unprecedented capital programs. Commission members will continue to investigate innovative approaches to meeting workforce needs.



