

Amtrak's Northeast Corridor Facts and Background Information



Overview

Amtrak owns and operates 363 miles of the 457-mile Northeast Corridor (NEC) between Washington and Boston (a total of 1,219 track miles). Two sections are owned by others: 1) 56 miles on Metro North between New Rochelle, N.Y., and New Haven, Conn.; 2) the state of Massachusetts owns 38 miles between the Massachusetts/Rhode Island border and Boston that is operated and maintained by Amtrak. Amtrak also owns 62 miles of track between New Haven and Springfield, Mass., as well as 104 miles of track (274 track miles) between Philadelphia and Harrisburg.

The NEC is home to one of the busiest, most complex, and most technically advanced rail systems in the world, with over 2,000 trains on Amtrak-controlled segments each weekday. This traffic mix includes freight trains traveling at speeds of 30-50 mph, commuter trains at speeds up to 125 mph, Amtrak *Regional* trains at 110 or 125 mph, and *Acela Express* trains that can reach 150 mph. This makes it the fastest railroad in the Americas, and among the ten fastest in the world.

These trains all share tracks that often are overcrowded. Although the federally funded Northeast Corridor Improvement Project in the early 1980s greatly modernized the capital facilities of the NEC, very little was spent between 1990 and 2002, other than funds used to electrify the route north of New Haven. That changed starting in 2003, with a new emphasis placed on bringing Amtrak's equipment and infrastructure closer to a state of good repair. Amtrak began the process of ramping up a significant capital program and has made substantial progress in addressing the backlog of capital needs throughout its system.

The state of good repair program continued in the current decade with stimulus funding. For the future, Amtrak proposes a "Stair Steps" program to increase corridor speeds and capacity in the near-term, and a Next Generation High-Speed Rail program for the longer-term.

As a result of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), the Northeast Corridor Infrastructure and Operations Advisory Commission was established, and Amtrak is working regularly and collaboratively with the Commission and its members to define and realize a vision for the future of this great regional rail transportation system.

Fiscal 2011 Northeastern Ridership by Route

Acela Express	3.379 million	(Washington-New York-Boston)
Regional (1)	8.615 million	(Newport News-Washington-Boston/Springfield)
Downeaster	0.520 million	(Boston-Portland)
Keystone	1.343 million	(New York-Philadelphia-Harrisburg)
Empire	1.430 million	(New York-Albany-Toronto)
Adirondack	0.125 million	(New York-Albany-Montreal)
Pennsylvanian	0.207 million	(New York-Harrisburg-Pittsburgh)
Vermonter	0.078 million	(Washington-New York-St. Albans, Vt.)
Ethan Allen	0.049 million	(New York-Albany-Rutland, Vt.)

Total: 15.746 million

Notes:

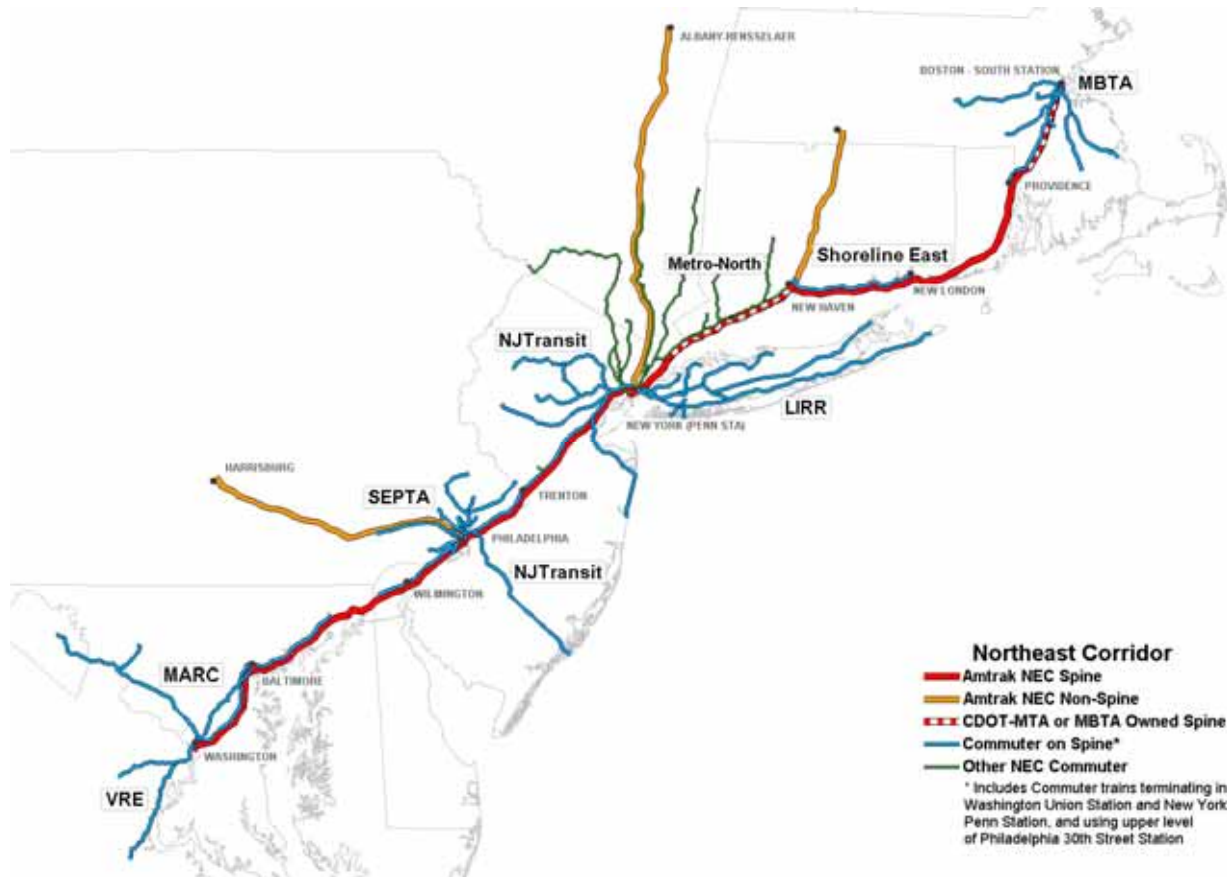
(1) Excludes long-distance train ridership over NEC; includes NEC-only travel of some other short-distance routes shown here.

Nationally, Amtrak ridership in Fiscal 2011 was 30.2 million. The Northeastern services total over half of all ridership nationwide and three-fifths of all passenger revenue. Amtrak serves 77% of the air/rail market between Washington and New York and 54% of the air/rail market between New York and Boston (third quarter, FY11).

Fiscal 2011 Usage of Selected Northeastern Stations

Includes all boardings and alightings:

New York Penn Station	8.996 million
Washington Union Station	4.851 million
Philadelphia 30th Street	3.872 million
Boston (North, South, Back Bay, Route 128)	2.716 million
Baltimore Penn Station	0.953 million
Albany-Rensselaer	0.770 million
New Haven	0.741 million
Wilmington	0.718 million
Newark Penn Station	0.684 million
BWI Marshall Airport	0.662 million
Providence	0.626 million
Harrisburg	0.543 million
Lancaster	0.539 million



Map showing ownership and usage of segments of the Northeast Corridor.

Commuter and Freight Railroads

While Amtrak's intercity trains account for the majority of train-miles on the NEC, eight commuter authorities also provide service over Amtrak-owned and operated infrastructure on the NEC. The number of commuter trains and their ridership has grown steadily in recent years. Today there are 1,862 commuter trains on the NEC with an average weekday ridership of 722,900.

The following authorities provide service over portions of the Northeast Corridor: Massachusetts Bay Transportation Authority, Rhode Island Department of Transportation, Shore Line East (SLE), Long Island Rail Road, New Jersey Transit, Southeastern Pennsylvania Transportation Authority, Delaware Department of Transportation, MARC, and Virginia Railway Express. Amtrak operates the SLE and MARC (Penn Line) services under contract with their respective authorities.

These commuter railroads depend upon Amtrak's NEC track and signal infrastructure and dispatching for their reliable operation of their services. Amtrak also provides track construction, signal, and other engineering services for major commuter railroad infrastructure projects along the NEC.

The NEC plays a vital role in regional freight service, moving virtually all such traffic to and from Brooklyn, Queens, Long Island, and the Delmarva Peninsula. Much traffic serving southern New England, the ports of Baltimore and Wilmington, and power plants in the Baltimore-Washington area uses the NEC. Six freight railroads operate approximately 50 trains a day on the NEC.

Investing in the Northeast Corridor

With ARRA stimulus funding, Amtrak made immediate and significant investments in the NEC, as many projects were ready and awaiting capital funding. By the end of 2010, two fixed bridges had been replaced completely and much-needed improvements to two key movable bridges (the Thames River and Pelham Bay drawbridges) had been completed. The rehabilitation of the fire prevention systems in the New York tunnels and the upgrade of fire alarm systems in New York Penn Station improved accessibility and resilience of our system, while major structural work was completed at shop facilities in Boston and Washington, D.C. The reliability of our communications system was improved with the installation of more than 20 miles of radio transmission cables in our tunnels; an additional 26 miles of redundant communications cable helped to ensure better resilience of our control and communications systems. More than 18 miles of protective fencing was installed along our right-of-way to make the NEC safer for those who live nearby and more secure for the traveling public. Numerous other improvements in roadbed and right-of-way, as well as large-scale rail and tie replacements were also funded.

The 2011 investment program was funded jointly by Amtrak's capital appropriation and ARRA grants. It also encompassed activities ranging from full-scale bridge replacement to tree-cutting and roadbed cleaning. Amtrak replaced three additional fixed bridges with new spans, and made substantial progress on the replacement of the Niantic River drawbridge in Connecticut, which is scheduled for completion in 2012. Some examples of the NEC infrastructure work Amtrak completed in 2011 include:

- 176,602 concrete ties replaced
- 27 track-miles of continuous welded rail installed
- 26 track-miles of signaling upgraded on the Philadelphia-Harrisburg line
- 35 miles of fiber-optic cable installed on the New York and Mid-Atlantic Divisions
- 25 miles of hardware renewed on the electric catenary system

We have extended our ACSES Positive Train Control (PTC) system on the NEC. We have complete PTC functionality on the main spine of the NEC north of New York. By the end of 2012 we will have basic PTC functionality on all of the Keystone Corridor and the NEC south of New York.

Stair Steps to Next Generation High-Speed Rail

Even beyond the investments already made in the NEC, it has significant potential for further development as we move toward our ultimate goal of a high-capacity, dedicated two-track, Next-Generation high-speed rail system (NextGen HSR). The key is a realistic plan that sets attainable goals and establishes realistic timelines. There are opportunities for both fleet and infrastructure improvements and Amtrak is developing plans for the next round of improvements in four “Stair Steps”, which are designed to further transform the NEC into an optimum high-speed rail route:

- *Step 1:* Increase *Acela Express* capacity by 40% with more coaches for existing train sets.
- *Step 2:* Double *Acela Express* frequencies between Washington and New York in peak periods and acquire new high-speed trains to augment existing *Acela* fleet.
- *Step 3:* Complete the NEC “Gateway Project” for substantial new capacity between Newark and New York. Includes two new Hudson River tunnels, additional terminal capacity serving the new Moynihan Station and enhanced New York Penn Station complex in Manhattan, expansion of approach trackage and a new Portal Bridge over the Hackensack River.
- *Step 4:* Expand *Acela Express* frequencies to up to 3 trips per hour in peak periods between Washington and New York and hourly service between New York and Boston, and continue acquisition of additional high-speed train sets. Raise maximum *Acela Express* speeds on the Corridor’s South End, permitting sustained 160 mph operation on select segments and reduce *Acela Express* travel times between Washington and New York substantially.

Amtrak is advancing the planning and development, as appropriate, for each such Stair Step, with particular focus in FY 2013 on Stair Steps 1 and 2, to be completed in 2015 and 2020 respectively. Each Step has many attendant elements that must be completed in the appropriate sequence and align with subsequent Steps and the planning and development efforts of the NextGen HSR system. HSR service and inspection facilities will be lengthened as part of Step 1, and some station, maintenance, crew welfare and track capacity expansions, especially in the congested segment between Baltimore and Odenton, Maryland, are critical elements of Step 2. These two steps will produce a significant increase in high-speed service capacity by 2020, which will leverage the success of our existing *Acela Express* service and continue to improve Amtrak’s financial performance.

Amtrak has received a \$450 million HSIPR grant from the FRA for track needs, electrification installations, and signaling on a 23-mile stretch of track between New Brunswick and Trenton, New Jersey to raise maximum *Acela* speeds from 135 to 160 mph. Several other grants were awarded to individual states or groups of states along the NEC. The FRA has funded an environmental impact study to increase capacity at Boston’s South Station, and preliminary engineering and environmental work for the replacement of the B&P Tunnel in Baltimore (built 1873) and the Susquehanna River Bridge (1906), and the addition of an island platform and a new station building at BWI Airport.

The HSIPR and TIGER grant programs have also funded projects on feeder routes that connect with the NEC. A series of grants will extend double track on Amtrak’s Springfield Line between New Haven and Springfield, Massachusetts, with associated signal, bridge and station improvements. The elimination of the last three grade crossings on the 110 mph Keystone Corridor will likewise be funded by an HSIPR grant; this will be a major step toward the introduction of 125 mph service on this route. Amtrak is also partnering with the FRA and the State of New York to invest in the Empire Corridor, which involves a long-term rail line lease from CSX Transportation.