

The Virginia NEWS LETTER

Intercity Passenger Transportation: More Virginians Are Riding The Rails

by Meredith Martin Richards

Introduction

Intercity passenger rail in America is riding the crest of renewed popular interest. More people are choosing to take the train over driving or flying than at any time in the past 50 years. Rail transportation has re-emerged as a viable alternative for millions of Americans who are seeking a fast, safe, comfortable, and affordable alternative to driving on congested and unsafe highways, or flying on crowded, uncomfortable, and frequently inhospitable commercial airplanes. A new generation of rail users has emerged as millennials migrate away from cars and suburbs towards urban lifestyles and multimodal transportation.¹

Ridership has grown not only between states on Amtrak's national passenger rail network, but also within individual states on the company's state-supported train routes that provide regional passenger rail for millions of Americans. Due to its bipartisan leadership and geographic location, Virginia has emerged as one of Amtrak's most successful state partners and is moving steadily toward developing a statewide network of passenger trains that will be within convenient reach of every Virginian. During the past year (FY2017), 1.6 million trips were taken on Amtrak in Virginia, with over 851,000 trips on Virginia's own regional trains.²

In this, the first of a two-part series, we review the resurgence of Virginia's intercity passenger rail service and investments being made for its future.



Meredith Martin Richards

Amtrak in the 21st Century

The story of Amtrak in the last ten years is one of rebirth, reform, and restructuring. Most compellingly, it is a story of the growth of opportunity for developing a nationwide passenger rail system focused on connecting city pairs within its network and making rail travel more convenient and user friendly.

Amtrak has introduced modern amenities that bring conventional-speed rail travel into the 21st century. Among them are tech-friendly features like onboard Wi-Fi, seat-side charging stations, smartphone ticketing, and real-time status updates; user-friendly options like Quiet Cars, Business Class coaches, carry-on bicycle and pet services; and "last mile" intermodal options for bike and car sharing, Lyft contracts, and transit connections at selected stations.

For Amtrak's busy Northeast Corridor, the entire electric locomotive fleet has been replaced with 70 new Siemens-built electric locomotives, while faster, higher capacity trainsets will replace the *Acela* high-speed fleet by 2020. Much-needed bridge and tunnel upgrades for the Northeast Corridor's more-than-100-year-old infrastructure have been designed, with early-phase construction projects underway, including major renovations and expansions for New York Penn Station³ and Washington Union Station.⁴ With its state and local partners, Amtrak's Great American Stations



“Virginia’s Northeast Regionals are part of a relatively new Amtrak business line of trains that are financially supported by the individual states...”

project⁵ is restoring and modernizing many of its 500 stations across the country.

As Amtrak expands and improves its services, passenger demand grows. Today’s Amtrak is setting ridership records,⁶ gaining market share, making profits on some routes and earning enough revenue to recover 94 percent of its operating costs. Amtrak’s national ridership in FY2017 reached a record 31.7 million, a significant jump from the annual average of about 21 million during its first 30 years.⁷ In just the last 17 years, ridership has increased over 51.6 percent.

Busy Northeast Corridor

The busiest passenger corridor in America is in the Northeast between Washington, DC, and Boston. The Northeast Corridor has approximately 2,200 Amtrak, commuter, and freight trains operating over portions of it each day. Amtrak carries more than three times as many riders between Washington, DC, and New York City as all the airlines combined. Its *Northeast Regional* trains connect the commercial and population centers of the Northeast—Washington, DC; Philadelphia; New York; and Boston—with cities and towns in the Northeast and mid-Atlantic states on regional routes of less than 750 miles. In FY 2016, Amtrak carried 12 million passengers on *Acela* and *Northeast Regional* trains—the corridor’s highest ridership ever. Between the Northeast Corridor and connecting corridors in Pennsylvania, Massachusetts, New York, and Virginia, 17.8 million trips were made by Amtrak passengers in 2016.⁸

Thriving State-Supported Services

Virginia’s *Northeast Regionals* are part of a relatively new Amtrak business line of trains that are financially supported by the individual states of origin. These trains operate under annual agreements and state appropriations, which cover 1) the direct operating and capital equipment costs associated with Amtrak’s operations within the state and 2) a share of the indirect costs for services shared by multiple routes as a result of Amtrak’s national operations. Interstate regional routes may be funded through joint agreements involving two or three states.

Amtrak’s state-supported routes grew out of the 2008 Passenger Rail Investment and Improvement Act (PRIIA) (H.R. 2095) Section 209, which required Amtrak and the states to develop a cost-sharing methodology giving the states primary responsibility for costs associated with existing regional services; and for fully funding new routes, route extensions, or added schedule frequencies in the future. The act essentially devolved the costs of regional intercity passenger trains

from Amtrak to the states, and, in so doing, dramatically restructured Amtrak’s relationships with its state partners, including Virginia. During the first fiscal year in which PRIIA Section 209 took effect (FY2014), Amtrak cut \$100 million dollars from its annual budget due to states’ assuming the operating and capital equipment costs of existing short-distance trains.⁹ Altogether, Amtrak has 18 state partnerships,¹⁰ through 21 agencies, which support 29 short-distance (less than 750 miles) routes with over 150 daily trains in every part of the country.

Fast Growing State-Supported Lines

Amtrak’s state-supported regional services are the fastest growing intercity passenger lines in the Amtrak system. Five of them had ridership that topped 1 million¹¹ and four others had ridership in excess of a half million¹² in FY2016. Together they served 15 million passengers in FY2017.

Each of the 18 states has produced the necessary revenue to fulfill the PRIIA Section 209 mandate since it went into effect in October 2013. This is testimony to the value these states place on their intercity passenger rail services and to their constituents’ strong demand for these services. Still, many of these state routes depend upon annual legislative appropriations, which are subject to changing political outcomes from year to year. Few of the cooperating states have developed secure, sustainable sources of dedicated funding for intercity passenger rail. In this regard, Virginia is ahead of the curve and is often cited as a model for other states.

Long-Distance Routes

Amtrak operates 15 long-distance trains on routes ranging in length from 780 to 2,728 miles. These trains accounted for 15 percent of Amtrak’s ridership in FY2017 with a total of 4.6 million passengers, an increase of 0.9 percent over the previous year. Of the 500 stations in the Amtrak network, nearly half are served by these long-distance trains.

These trains, such as Amtrak’s *Crescent* (New Orleans-New York) and *Cardinal* (Chicago-New York) that serve Virginia, are what remain of the historic routes that once dominated rail travel during its heyday in the 19th and early 20th centuries. When Amtrak was created as the National Railroad Passenger Corporation in 1970, it took over what remained of the passenger rail services previously operated by America’s corporate railroads. After running passenger trains at a loss for many years, the railroads simply could not compete with interstate highways, affordable high-powered cars, and cheap gasoline. Of 400 trains

transferred by the railroads to Amtrak, half were immediately removed from service. A fuller history of Amtrak and American passenger rail since the mid-1950s can be found in this author's 2010 *Virginia News Letter*, "Intercity Passenger Rail in Virginia: What's on Track for the Future?"¹³

Essential Connections for Rural Communities

Although today's long-distance Amtrak routes are merely a skeleton of this earlier network, their significance for the communities they serve is more than historical. These legacy trains are the only intercity passenger transportation available for an increasing number of communities in rural America (sometimes referred to as "flyover country") that lack intercity bus and airline service. Eighteen percent of the customers on these routes are traveling to and/or from a rural station. Furthermore, these trains provide the only intercity passenger rail available in 23 of the 46 states in Amtrak's network and the only nearby passenger rail service for 144.6 million Americans.¹⁴

Amtrak also offers over 600 daily *Thruway* buses in 38 states and Canada to extend passenger service to more than 400 communities not served directly by Amtrak trains. These buses transport ticketed passengers between Amtrak stations on schedules coordinated to meet designated trains. Without the Amtrak long-distance trains and these *Thruway* connections, millions of Americans would be stranded without options for intercity passenger transportation.

Environmental Benefits of Rail Travel

In 2017, a total of 6.5 billion passenger-miles¹⁵ were traveled on Amtrak trains.¹⁶ Using the standard equivalency for vehicle occupancy of 1.5 persons per vehicle, 6.5 billion passenger-miles by train means that vehicle travel on America's highways was reduced by 4.3 billion miles.

Amtrak's fleet of locomotives in the Northeast Corridor operates on electrified power grids; the rest of its fleet are diesel fueled and use 32 percent less energy per passenger-mile than automobiles and 20 percent less energy than commercial airplanes. The environmental gains from eliminating 4.3 billion passenger-miles from our highways are substantial. Applying EPA computational formulas, we can determine that in 2017 Amtrak ridership reduced fuel consumption by about 199 million gallons and prevented the release of approximately 1.8 million metric tons of CO₂ into the atmosphere.¹⁷

The ability of rail to make more efficient use of transportation rights of way and dollars spent on infrastructure—thus reducing the need to

build more lanes of highway, which only invites more traffic—is one of the factors driving rail's re-emergence as a sustainable transportation alternative. As one transportation engineer put it: "Trying to solve congestion by making roadways wider is like trying to solve obesity by buying bigger pants."¹⁸ Many of today's larger metropolitan areas are rethinking the roads-only model for reducing congestion. They are investing instead in integrated networks of intercity passenger trains, light rail, subways, trolleys and bus transit to move passengers between cities, from city to suburb, and across the "last mile" for convenient, car-free travel.

Intercity Passenger Rail in Virginia

Thanks to a combination of Virginia's geographic location as the gateway to Washington, DC, and the Northeast Corridor; strong leadership by forward-looking governors; and bipartisan legislative support, Virginia has a vigorous and growing network of long-distance and state-supported intercity passenger trains (**Figure 1**). Amtrak operates between 23 and 26 trains per day in the Commonwealth, serving 21 stations, with *Thruway* buses connecting two more stations (Blacksburg and Virginia Beach). In FY2017, these trains served 1.6 million passengers and brought intercity passenger rail to within 25 miles of 81 percent of Virginians.

All Virginia intercity passenger trains run on main lines owned and operated by Virginia's two Class I freight railroads,¹⁹ CSX and Norfolk Southern. Together, these two railroads own 94 percent of the 3,547 miles of track in the Virginia network.²⁰ Unlike other transportation modalities in America, rail lines are privately owned, and access is, with few exceptions, exclusive to the owner railroad. You will not see, for example, CSX and Norfolk Southern trains operating on the same rail line.

Amtrak Long-Distance Trains Serving Virginia Stations

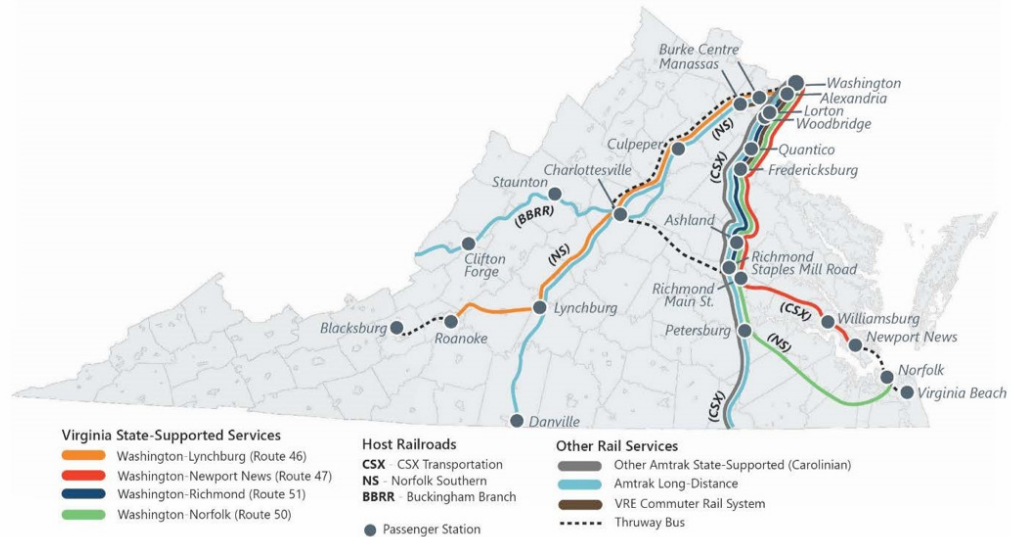
Virginians have long enjoyed intercity passenger rail connections to the South, Southeast, and Midwest, as well as Washington, DC, and the Northeast, through Amtrak's national network trains. All Amtrak long-distance trains originating outside the Northeast and bound for Washington and the Northeast Corridor pass through Virginia, stopping at selected Virginia stations en route (**Table 1**).

Virginia's State-Supported Regional Trains

Virginia sponsors four successful *Northeast Regional* routes, currently with six trains among

"In 2017, a total of 6.5 billion passenger-miles were traveled on Amtrak trains...[meaning] that vehicle travel on America's highways was reduced by 4.3 billion miles."

Figure 1: Map of Virginia Passenger Rail Routes



Source: <http://drpt.virginia.gov/media/2280/va-srp-2017-chapter-2.pdf>

Table 1: Virginia Stops on Long-Distance Routes

Silver Meteor	One daily round trip between Miami and New York Virginia stops: Petersburg, Richmond’s Staples Mill Station, Alexandria
Silver Star	One daily round trip between Miami and New York Virginia stops: Petersburg, Richmond’s Staples Mill Station, Alexandria
Palmetto	One daily round trip between Savannah and New York Virginia stops: Same as above.
Carolinian	One daily round trip between Charlotte and New York Virginia stops: Same as Palmetto plus Fredericksburg and Quantico
Crescent*	One daily round trip between New Orleans and New York Virginia stops: Danville, Lynchburg, Charlottesville, Culpeper, Manassas, Alexandria
Cardinal*	Three-times-weekly service between Chicago and New York via WV Virginia stops: Clifton Forge, Staunton, Charlottesville, Culpeper, Manassas, Alexandria
Auto Train**	One daily round trip between Virginia (Lorton) and Florida (Sanford)

* Daily Thruway bus service provided from Richmond’s Main Street and Staples Mill stations to Charlottesville to meet incoming and outgoing trains

** The longest passenger train in the world, with more than 40 passenger cars and vehicle carriers pulled by two locomotives

them, connecting Roanoke/Lynchburg, Richmond (2), Newport News (2) and Norfolk to Washington, DC, and the Northeast Corridor.

First State-Supported Intercity Train: Washington-Lynchburg Corridor

In October 2009, Virginia launched its first state-supported *Northeast Regional* train from Lynchburg to Washington—the first new passenger service for the Norfolk Southern-owned Piedmont Corridor in over fifty years. In starting the service, Virginia political leaders were responding to public pressure for expanded passenger

rail exerted by a coalition of 22 political jurisdictions, dozens of organizations, and hundreds of citizens mobilized by a Charlottesville-based advocacy group.²¹ Governor Kaine’s administration invested \$43 million in improvements for the Norfolk Southern-owned line, facilities at the Lynchburg station, and refurbished rail equipment. State funds were also reprogrammed to pay for operating the first year of service as a pilot project.

Serving Lynchburg, Charlottesville, Culpeper, Manassas, Alexandria, and Burke Center in Virginia, the Lynchburg train boarded 134,000

passengers in its first year—an increase of 168 percent over the previous year’s Amtrak ridership on the corridor—earning sufficient revenues to make a profit for the state.²² In 2017, the Lynchburg-DC train boarded 190,000 passengers, an increase of 279 percent over Amtrak ridership on the corridor since 2008, which was before the service began.

In terms of ridership, the Lynchburg train is Virginia’s best-performing single daily train among the state-supported regionals. The best-performing station on the route is Charlottesville, with more boarding and alighting passengers annually (84,394 in 2017) than any other station on the entire route, including Washington, DC, and New York.²³

Second State-Supported Intercity Train: Washington-Richmond Corridor

In 2010, Virginia launched its second state-supported *Northeast Regional* between Richmond’s Staples Mill Station and Washington, DC, serving stations in Ashland, Fredericksburg, Quantico, Woodbridge, and Alexandria before crossing the Potomac to Union Station and continuing up the Northeast Corridor. As with the Lynchburg train, this route was a southern extension to an existing Amtrak *Northeast Regional* service between Washington, DC, and New York. Governor McDonnell’s administration appropriated funds to pay the operating costs of the Virginia extension; however, this proved to be unnecessary, as the state’s profits from the Lynchburg service covered the full costs of the new Richmond train.

The new Washington-Richmond train joined four daily trains already serving Richmond at Staples Mill. These were part of Amtrak’s network of short-distance trains but have since been adopted by the state as part of its fleet of six state-funded *Northeast Regionals* under the terms of PRIIA. Two of the dailies originate in Newport News with extended service to Williamsburg and Richmond’s Main Street Station and *Thruway* bus connections to Virginia Beach. The two Newport News trains are currently the only ones serving Richmond’s downtown station, a National Historic Landmark that had suffered extensive flood and fire damage and been idle since 1975. It was renovated by the city and reopened in 2003.

First Train to Norfolk in 35 Years

In December 2012, the state-funded Richmond *Northeast Regional* was extended to Norfolk, restoring passenger service to that city for the first time in over 35 years. This extension was made possible through a \$116 million state investment in Norfolk Southern’s Heartland Corridor.

An agreement between the Virginia Department of Rail & Public Transportation (DRPT) and Norfolk Southern provided for up to three daily round-trip frequencies of the Norfolk extension for a period of 20 years. After a slow start and an adjusted schedule, in 2017 the Washington-Norfolk service reached 155,000 passengers and \$11 million in operating revenue, with profits of \$1.9 million.

First Train to Roanoke in 38 Years

In November 2017, the high-performing Lynchburg *Northeast Regional* was extended to Roanoke, bringing passenger rail back to this historic railroad town after 38 years. The culmination of years of effort by city leaders and area legislators, the return of passenger rail to Roanoke received popular support throughout the region. Amtrak *Thruway* buses between Blacksburg and Roanoke extend the train’s connectivity to the Virginia Tech community.

The extension to Roanoke required over \$101 million in state/city-funded projects. These included improvements in Norfolk Southern-owned infrastructure that shifted freight away from the passenger line and created a new, level boarding platform.

During the first three months of the Roanoke extension, ridership on the *Northeast Regional* grew 13 percent, and the monthly passenger load factor²⁴ (basically the percentage of available seats filled on an average day) rose to 81 percent.²⁵ This load factor strongly indicates a need for additional seating capacity.

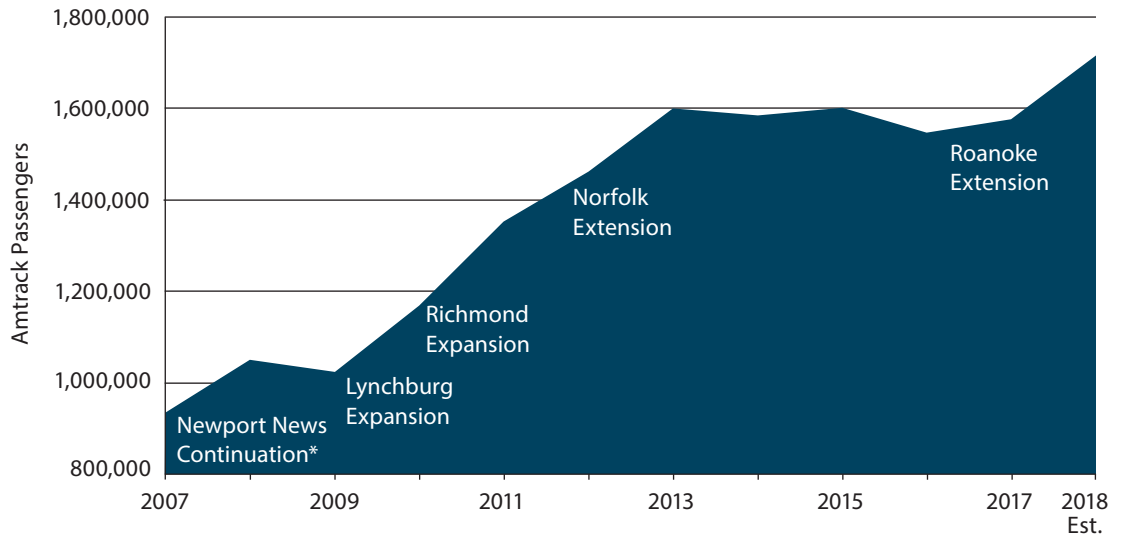
Added Frequencies and Ridership Growth

Virginia’s regional trains have proven to be remarkably successful, with steep ridership gains (a 75 percent increase between 2006 and 2017) corresponding to each added frequency, as shown in **Figure 2**. Over a third of Amtrak’s entire ridership gains nationwide from 2011 to 2015 were due to increased ridership in Virginia.²⁶ Ticket revenues on Virginia’s regionals exceed their operating costs, and four Virginia *Northeast Regionals* are among the top six most profitable routes in the entire Amtrak system.²⁷ In 2017, the six Virginia regionals together carried 851,443 passengers, logging 169 million passenger-miles,²⁸ and removing 112.7 million vehicle miles from our highways. The environmental impacts from these trains in 2017 meant that 5.1 million fewer gallons of gas were burned and 45,324 fewer metric tons of CO² were released into the atmosphere.²⁹

“The best-performing station on the [Lynchburg-New York] route is Charlottesville, with more boarding and alighting passengers annually than any other station on the entire route, including Washington, DC, and New York.”

“Over a third of Amtrak’s entire ridership gains nationwide from 2011 to 2015 were due to increased ridership in Virginia.”

Figure 2: Ridership on Amtrak Virginia Regional Trains 2007 - 2017



Source: Data compiled from Amtrak reports by Virginians for High Speed Rail.

* In 2007, one Newport News train was scheduled to be eliminated, but was saved through the efforts of rail advocates.

Looking Ahead

We've seen how Virginia has been a leader in crafting public policies promoting a vigorous program to develop intercity passenger rail. In Part II, we'll look at the potential for expansion, possible obstructions, and how Virginia can continue to lead the passenger rail renaissance.

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Editors: Bob Gibson, Billie Easton and Michael Scheid

VOL. 94 NO. 1, MAY 2018

The Virginia News Letter (ISSN 0042-0271) is published by the Weldon Cooper Center for Public Service, University of Virginia, P.O. Box 400206, Charlottesville, Virginia 22904-4206

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