

# Washington, D.C., to Bristol Corridor

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**U.S. Department of Transportation/  
Federal Railroad Administration**

**FY 2022 Corridor Identification and  
Development Program Application**

Project Narrative

MARCH 27, 2023

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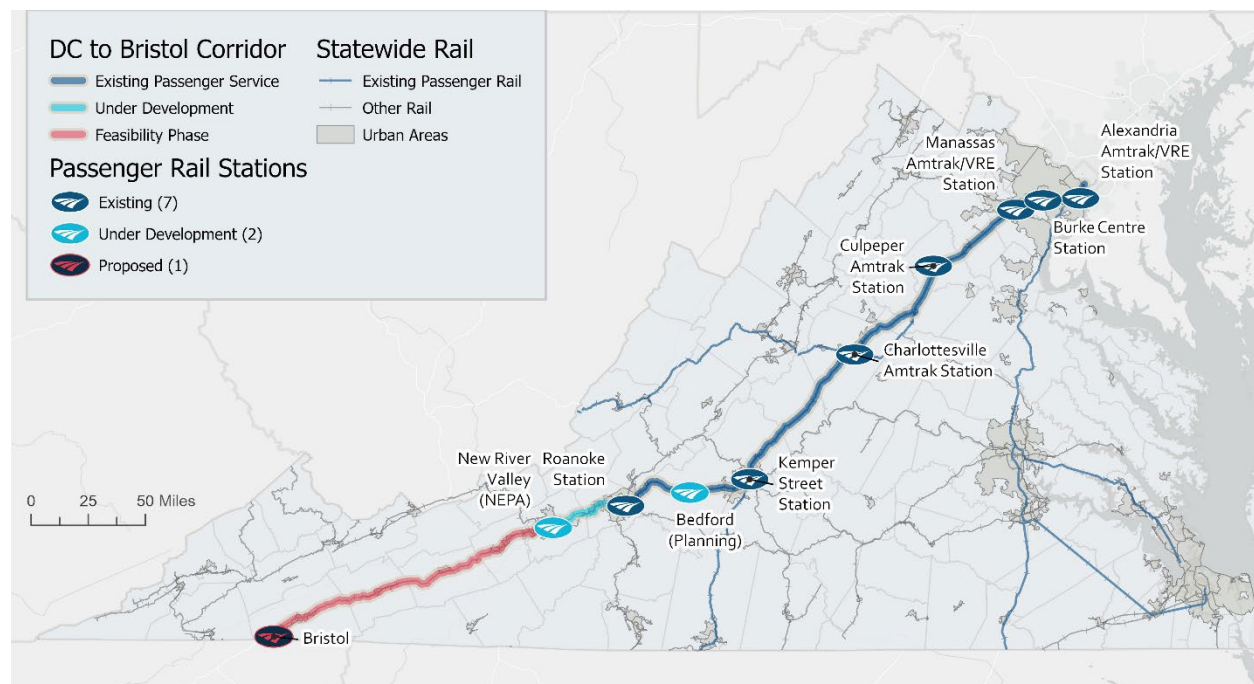
# Cover Page

<b>Corridor Title</b>	Washington, D.C to Bristol
<b>Applicant</b>	Virginia Department of Rail and Public Transportation
<b>Was a Federal Grant Application Previously Submitted for this Corridor?</b>	A Corridor ID Application has not been submitted previously. An expression of interest was submitted in 2022.
<b>Other sources of Funding for the Corridor?</b>	Virginia Passenger Rail Authority FY23 Budget
<b>City(-ies), State(s) Where the Corridor is Located</b>	Washington, D.C., Alexandria, Burke Centre, Manassas, Culpeper, Charlottesville, Lynchburg, Roanoke, New River Valley, Bristol
<b>Congressional District(s) Where the Corridor is Located</b>	VA05, VA06, VA07, VA08, VA09, VA10, VA11
<b>Is the Corridor currently programmed or identified in: State rail plan, or regional or interregional intercity passenger rail systems planning study?</b>	Yes, 2023 Virginia Statewide Rail Plan, 2021 Bristol Extension Capital & Operating Cost Analysis
<b>Is the applicant working with other entities in support of the Corridor?</b>	Yes, Virginia Passenger Rail Authority

## Corridor Summary

The Washington, D.C., to Bristol (DC-Bristol) passenger rail corridor would build upon existing successful Amtrak service between Washington, D.C., and Roanoke, Virginia, along what is known as Virginia’s Western Rail Corridor. The Commonwealth of Virginia is committed to expanding service to Southwest Virginia, as evidenced by plans to extend two round trips to the New River Valley by 2026. Extending service to Bristol would increase transportation equity and geographic diversity of rail service in Virginia by increasing transportation mode choice in previously unserved, predominantly rural areas.

Figure 1: Proposed D.C. to Bristol Passenger Rail Corridor



## Corridor Funding

The Commonwealth of Virginia has developed sustained funding mechanisms to support passenger and freight rail, and in recent years has made monumental investments to increase and improve passenger rail service. Virginia has invested an average of \$170 million per year for rail projects over the past five years. In 2020 the Virginia General Assembly created the Commonwealth Rail Fund (CRF) with dedicated transportation revenues for passenger and freight rail projects. This includes funding for the newly created Virginia Passenger Rail Authority (VPRA) to implement major passenger rail improvement programs such as Transforming Rail in Virginia and the Western Rail Initiative. It also includes funding for freight rail projects and long-range/statewide rail planning through the Virginia Department of Rail and Public Transportation (DRPT). The annual revenue into the Commonwealth Rail Fund is approximately \$300 million per year (set at 7.5 percent of total Commonwealth Transportation Fund).

The Western Rail Initiative includes planned capital improvements of \$273 million over the next six years with the goal of expanding passenger rail service from Washington, D.C., to Southwest Virginia. The program will extend existing passenger service from the current western Virginia terminus of Roanoke, Virginia, to a new passenger rail station in the New River

Valley, the location of which is currently the subject of a NEPA study. The committed investments along this corridor will lay the necessary groundwork for capacity and frequency improvements along the D.C.-Bristol corridor, but currently do not include plans for passenger rail extension beyond New River Valley. Collaboration with the FRA on a service development plan (SDP) is the next step in the process, which enjoys broad support from lawmakers in Virginia and across the Tennessee border. DRPT pledges to work with partners to identify match funding to develop the necessary capital projects.

## Applicant Eligibility

DRPT's mission is to connect and improve the quality of life for all Virginians with innovative transportation solutions. DRPT is the Commonwealth's advocate for promoting transportation options to the general public, businesses, and community decision makers. DRPT's vision is a connected Commonwealth with an integrated multimodal network that serves every person, every business, and every need. As an Executive Branch agency within Virginia's Transportation Secretariat entrusted with public dollars, DRPT seeks the highest possible return on public and private investments to maximize funding and strives to implement best practice management strategies.

DRPT oversees programs and initiatives that support passenger and freight rail investments and delivers data-driven planning recommendations and policies for passenger and freight rail.

Once passenger rail projects associated with the D.C.-Bristol corridor progress through the preliminary engineering phase, it is anticipated that they would be transitioned to VPRRA as the implementing agency to carry projects through to completion. As mentioned above, VPRRA is currently leading the Transforming Rail in Virginia and Western Rail Initiative programs, both of which include multiple projects being conducted in cooperation with FRA using multiple sources of federal grant funding.

## Detailed Corridor Description

The D.C.-Bristol corridor proposes passenger service from Washington, D.C., to Bristol, Virginia, with stops in Alexandria, Burke Centre, Manassas, Culpeper, Charlottesville, Lynchburg, Bedford, Roanoke, the New River Valley, and the potential for five new interim stops between the New River Valley and Bristol. The number and location of additional stops between the New River Valley and Bristol are expected to change with the creation of a service development plan. Based on a single round trip per weekday and a Saturday/Sunday round trip, the forecasted annual one-way net new ridership is between 9,700 and 15,500 with a forecasted annual revenue between \$500,000 and \$715,000. The estimated travel time is approximately 8 hours north and southbound. Operations and maintenance costs for 2030 are forecasted between \$4.5 million and \$4.9 million for the service extension to Bristol. The estimated capital costs range from \$500 million to \$1,500 million, depending on the route chosen.

The Bristol Corridor expands upon existing service from Washington, D.C. to Roanoke, Virginia, with service to the New River Valley beginning in 2026. Virginia currently contracts with Amtrak to operate passenger service between Roanoke and Washington, D.C., along Norfolk Southern Railway's (NSR) mainline and N-line. In 2022, the Commonwealth added a second frequency along this route and is further extending the Amtrak service to the New River Valley through the Transforming Rail in Virginia and Western Rail Initiatives, demonstrating commitment to expanding access to rail in Southwest Virginia.

VPRA has ongoing studies, design, and construction projects between the New River Valley and Washington, D.C. in this corridor. DRPT completed a feasibility study for passenger rail service extension on the Bristol Corridor in 2021.

It is currently assumed that passenger service will be operated by Amtrak on NSR’s shared use (passenger and freight) rail line NSR. Both uses will benefit from corridor improvements. Residents of the areas where the railroad track lies are also beneficiaries from any safety improvements that will be made during the process, such as grade separations and crossing treatments.

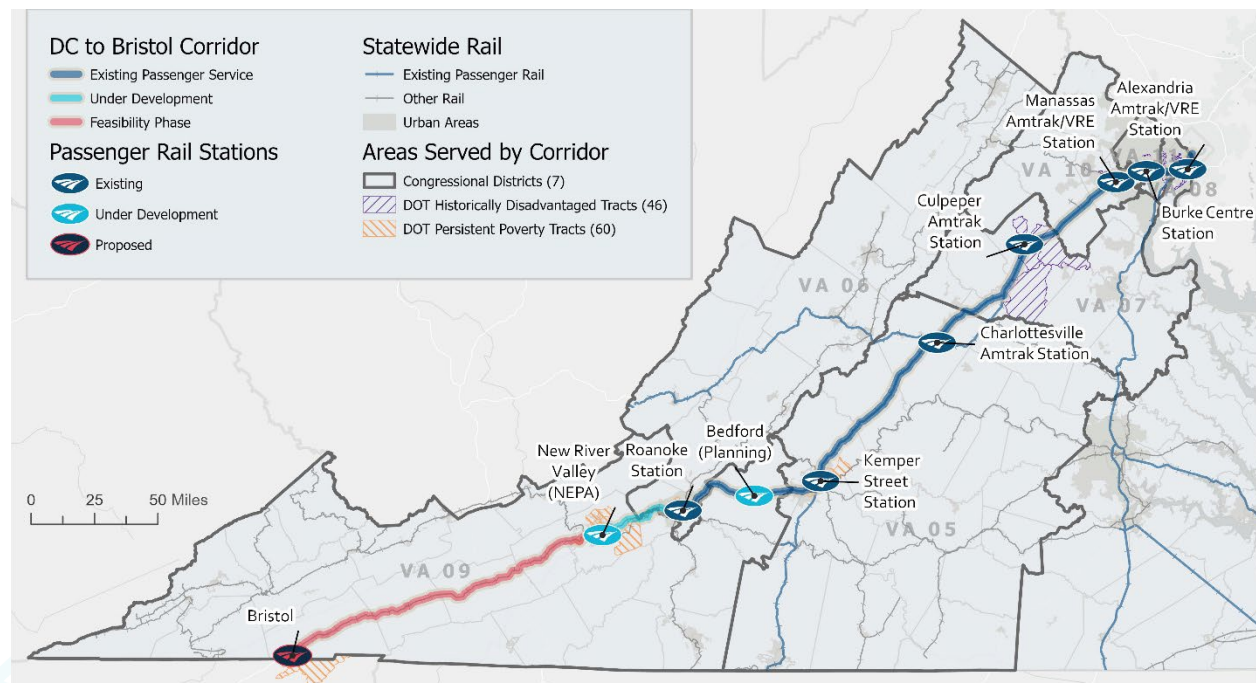
Residents of Southwest Virginia will have expanded access to passenger rail service, better connecting them to Washington, D.C., Amtrak’s Northeast Corridor, and the rest of the Commonwealth. This will provide increased access to economic and educational opportunities. Future phases of the D.C.-Bristol corridor could include connections with Tennessee, through Knoxville and Chattanooga.

DRPT is submitting Corridor Identification and Development Program (CID) applications for both the D.C.-Bristol and the east-west Commonwealth Corridor. Portions of these two corridors overlap — specifically, the Charlottesville to New River Valley segment of the corridors. The D.C.-Bristol corridor will enhance and extend north-south oriented service in the western part of the state, while the Commonwealth Corridor will provide a long-needed east-west service connection.

## Corridor Location

The proposed DC-Bristol Corridor will serve seven Congressional Districts, 46 DOT Historically Disadvantaged Tracts, and 60 DOT Tracts of Persistent Poverty. These numbers do not account for additional stops between the New River Valley and Bristol, a rural segment of the corridor with no access to passenger rail since 1971 and few other forms of public transportation.

Figure 2. Location of the Proposed D.C. to Bristol Corridor



## Evaluation and Selection Criteria

### i. Corridor Benefits

The expansion of passenger rail service along the D.C.-Bristol corridor will have a variety of measurable and large-scale impacts for transportation in Virginia. Southwest Virginia has historically been disconnected from other parts of the state and nation due to limited transportation options. Connecting a significant portion of the population to Virginia's excellent and expanding transportation network is essential to the region's continued growth and prosperity.

#### A. Projected Ridership, Revenues, Capital Investment and Operating Funding Requirements

DRPT developed the proposed Bristol-Roanoke-Washington service scenario in addition to the existing Roanoke-Washington-New York service. Passengers traveling between Roanoke and Washington would have two round trips per weekday (the existing service and the new service originating in Bristol). The annual demand forecasts compare results from ridership modeling based on a spreadsheet diversion model developed using inputs from the Virginia Statewide Transportation Model (VSTM) to ridership modeling from the Amtrak incremental model for a horizon year of 2030. Incremental ridership with at least one end of the trip between Radford and Bristol (i.e., beyond New River Valley) was the focus of this study.

An estimated 145,600 potential annual passengers would board proposed D.C.-Bristol corridor services in 2030. It is important to note that the preliminary ridership estimates developed for this study are intended to be used for high-level planning purposes only and do not reflect the presence of other passenger rail services in Virginia and related network ridership effects. Total annual operating revenue is estimated at between \$500,000-\$750,000 per year in 2030.

#### B. Anticipated Environmental, Congestion Mitigation, and Other Public Benefits

Increasing passenger rail ridership has a variety of benefits, including major reductions in environmental impact and congestion. DRPT used an internal BCA tool to estimate some of the benefits of expanding passenger rail to Bristol along this corridor. Based on the ridership projections, DRPT estimates a reduction in vehicle mile traveled of 54,250,000 miles per year or the equivalent of taking 140,909 vehicles off Virginia's roads per year. These congestion reduction benefits are estimated to be worth \$1.8 billion, primarily on the I-81 corridor. The environmental benefits associated with the reduction in the level of carbon dioxide, volatile organic compounds, nitrogen oxides, and particulate matter due to vehicle traffic moving to rail are estimated to be \$487,000 annually.

#### C. Projected Trip Times and their Competitiveness with Other Transportation Modes

DRPT created a model schedule for the Bristol extension as part of the 2021 Bristol Extension Capital and Operating Cost Analysis study. Times were estimated for the five different new station locations proposed in the study. The number of additional stops and their locations will be studied further in the service development plan. The study also included a variety of suggestions for improving OTP in the corridor to further reduce passenger travel time.

The passenger rail travel times based on current Washington, D.C., to Roanoke service and the modeled extension to Bristol are both highly competitive with driving times. While driving between Washington, D.C., and Roanoke is 30-60 minutes faster than the current passenger rail service depending on route, the proposed passenger route between Roanoke and Bristol

may be up to 24 minutes faster than driving. Expanded availability of passenger rail service and travel time savings could prove to be even more significant for Southwest Virginia.

Figure 3. Draft Schedule Tables for Corridor

**Draft M-F Schedules (100% OTP)**

Monday - Friday			Monday - Friday		
Station	Southbound Schedule		Station	Northbound Schedule	
	Arrival	Departure		Arrival	Departure
Washington, D.C.		8:45 a.m.	Bristol		9:24 a.m.
Roanoke	1:45 p.m.	1:47 p.m.	Station 1	9:39 a.m.	9:41 a.m.
New River Valley	2:34 p.m.	2:39 p.m.	Station 2	10:08 a.m.	10:10 a.m.
Station 5	2:53 p.m.	2:55 p.m.	Station 3	10:37 a.m.	10:39 a.m.
Station 4	3:01 p.m.	3:03 p.m.	Station 4	11:13 a.m.	11:15 a.m.
Station 3	3:37 p.m.	3:39 p.m.	Station 5	11:21 a.m.	11:23 a.m.
Station 2	4:06 p.m.	4:08 p.m.	New River Valley	11:37 a.m.	11:42 a.m.
Station 1	4:35 p.m.	4:37 p.m.	Roanoke	12:29 p.m.	12:31 p.m.
Bristol	4:52 p.m.		Washington, D.C.	5:31 p.m.	

**D. Anticipated Positive Economic and Employment Impacts**

DRPT expects substantial positive economic and employment benefits from the expansion of passenger rail along this corridor. The I-81 corridor is a critical north-south backbone of the East Coast’s freight network, and as such has been identified as one of Virginia’s Corridors of Statewide Significance. Nearly 50 percent of the state’s value of goods are transported along the corridor, which has the highest per capita truck volume in Virginia. Reduction in passenger vehicles along the corridor will increase the efficiency of moving goods and people throughout the Commonwealth. The estimated congestion reduction benefits are estimated to be worth \$1.8 billion based on DRPT’s internal BCA tool. It is expected that increased service will enable improved access to jobs for employees and increased access to workers for employers, resulting in regional economic benefits.

**E. Benefits to Rural Communities**

This service expansion will better connect rural Southwest Virginia to the rest of the Commonwealth and Washington, D.C. The proposed service will build upon the successful Virginia Breeze Valley Flyer and Highlands Rhythm intercity passenger bus routes, which already serve a combined 38,075 annual riders, and will expand options for intercity public transportation, as well as improve existing rail infrastructure to for increased passenger and freight rail traffic. There is currently no passenger rail service south of Roanoke, and this corridor would expand service into Southwest Virginia. These communities would also be better connected to the Northeast Corridor and long-distance Amtrak routes, via Washington, D.C. Residents of Southwest Virginia will likewise be better connected to Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD), providing access to more domestic and international flights. The Tri-Cities airport, the closest airport to Bristol, offers only limited service to five regional hubs.



## **F. Service to Historically Unserved or Underserved and Low-Income Communities or Areas of Persistent Poverty**

The stations along the D.C.-Bristol corridor will serve 46 US Department of Transportation (DOT) Historically Disadvantaged Census Tracts, and 60 DOT Census Tracts of Persistent Poverty. There are varying levels of existing state-supported passenger service along the corridor, but the corridor beyond the New River Valley to Bristol does not currently have passenger rail service. There is the potential for new stations along this section of the corridor and almost every location would increase the number of historically underserved census tracts served by the new stops.

## **G. Benefits or Improvements to Connectivity with Existing or Planned Transportation Service of Other Modes**

Expanding freight and passenger rail helps to mitigate congestion. D.C.-Bristol rail improvements will help to transition trucks and cars off of I-81, which experiences extreme congestion and traffic delays and is identified as a Corridor of Statewide Significance. This also reduces the maintenance needed on these roads, providing further benefits to the state. Residents of Southwest Virginia will likewise be better connected to Ronald Reagan Washington National Airport (DCA) and Washington Dulles International Airport (IAD), providing access to more domestic and international flights.

## **H. Connections between at Least 2 of the 100 Most Populated Metropolitan Areas**

The Corridor will connect Bristol with the Washington-Arlington-Alexandria, DC-VA-MD-WV metropolitan area, which is among the 100 Most Populated Metropolitan Areas. Through connections from existing service and long-distance routes, Virginians will also be better connected to the Northeast Corridor and farther destinations such as Chicago, Illinois, via the Cardinal. Future service expansion could include service from Bristol, Virginia, to Chattanooga or Knoxville, Tennessee. Tennessee is currently conducting a study on passenger rail and most alternatives would likely include a connection to Virginia through Bristol.

## **I. Enhancements to Regional Equity and Geographic Diversity of Intercity Passenger Rail Service**

Currently, there is no passenger rail service south of Roanoke in western Virginia. The Bristol Corridor provides for the Southwest Virginia connections currently missing in Virginia passenger rail service. This will also provide additional service to stations and cities beyond the I-95 corridor. As shown in Figure 2, seven of the proposed new stops are in rural areas, and the majority of the corridor lies outside urbanized areas with the exception of Northern Virginia.

## **J. Integration into the National Rail Passenger Transportation System and Benefits to Other Passenger Rail Routes and Services**

The D.C.-Bristol corridor includes active portions of the National Rail Passenger Transportation System. The Bristol passenger extension will connect to existing and future planned service in the Western Corridor between Washington, D.C., and the New River Valley (service beginning in 2026). These routes also connect to the Northeast Corridor in Washington, D.C., and to the Cardinal in Charlottesville. D.C.-Bristol also connects to the Commonwealth Corridor, DRPT's other CID program candidate corridor. The Commonwealth Corridor would connect two existing passenger rail corridors: Newport News to Richmond, Charlottesville, Roanoke, and eventually the New River Valley. For that reason, and the fact that schedules would need to be synchronized for eastern and western ends of the Commonwealth Corridor, the Commonwealth Corridor is not as far along in its development as the D.C.-Bristol corridor.

## **i. Technical Merit**

### **A. Applicant Readiness**

DRPT has spent 30 years working to expand transportation options within the Commonwealth. Virginia has robust state-supported Amtrak service and currently has multiple ongoing projects expanding passenger rail service throughout the region. In partnership with Amtrak and host freight railroads, the Commonwealth has added 10 new state-supported frequencies in the past 12 years. DRPT facilitates long-range passenger planning efforts such as the Commonwealth Corridor, while the Virginia Passenger Rail Authority oversees implementation, including: advanced engineering, construction, and operations. This evolving partnership allows Virginia to continue looking forward while quickly bringing projects online.

### **B. Technical Qualifications and Experiences of Applicant**

DRPT has a long history and experience administering federal grants programs. It is the Commonwealth's agency responsible for long-range freight and passenger rail planning. Previously, DRPT has developed service plans and completed the design phases of corridor rail projects. The Washington, DC to Richmond (DC2RVA) segment of the Southeast High-Speed Rail (SEHSR). DRPT has been managing a successful rail program since 1993 and created the 1<sup>st</sup> fund for passenger rail in the country in 2004.

### **C. Commitment to Implementation and Operation of Corridor**

DRPT and the Commonwealth of Virginia are committed to expanding passenger and freight rail service and infrastructure across the Commonwealth. This includes an equitable distribution of service in both rural and urban areas. DRPT is committed to the planning, study, and initial design of the Bristol Corridor. Final design, construction, and operation would be carried out by the Virginia Passenger Rail Authority.

Created in 2020, The Virginia Passenger Rail Authority manages all capital expansion projects, infrastructure, and land acquisitions related to its programs expanding passenger rail in Virginia. The Commonwealth of Virginia has demonstrated a firm commitment to expanding passenger rail and extending passenger rail service to Bristol has been identified as a priority for connecting the state.

### **D. Corridor Mention in Planning Studies**

At the request of the Virginia General Assembly in 2020, DRPT completed a feasibility study for expanding passenger rail to Bristol. The study includes a description of the proposed corridor, summary of public outreach efforts, a proposed initial service plan, forecasted range of ridership, needed capital improvements and their estimated costs to provide the service, an estimate of high-level operating and maintenance costs, and recommended next steps. Expanding service to Bristol has been studied multiple times over the past two decades by the Commonwealth, localities, and Amtrak.

### **E. Most Committed or Anticipated Non-Federal Funding**

Virginia has dedicated rail funding from the General Assembly through the Commonwealth Rail Fund. Developing and continuing intercity passenger and freight rail operations and the development of rail infrastructure, rolling stock, and support facilities to support intercity passenger and freight rail service are important elements of a balanced transportation system in the Commonwealth. The retention, maintenance, improvement, and development of intercity passenger and freight rail-related infrastructure improvements and operations are essential to the Commonwealth's continued economic growth, vitality, and competitiveness in national and

world markets. This funding is allocated to VPRA and DRPT to support planning, design, and construction of passenger rail and freight improvements and to provide matching funds for federal grants.

VPRA has \$273 million over the next six years programed for improvements along the Western Rail Corridor. Segments of these improvements will overlap with the expected projects needed for the full DC to Bristol Corridor to be complete.

## **F. Statewide Rail Plan**

Long-range improvements in the Western Corridor to add frequency, reduce conflicts, and reactivate portions of the corridor in Southwest Virginia have been identified in successive versions of Virginia's State Rail Plan.

The **2013 Virginia Statewide Rail Plan** identified additional areas of investment for the Western Corridor following the debut of state-supported Amtrak service to Lynchburg in 2009. This included:

- Rail improvements from Alexandria to Manassas
- Capacity study to re-establish rail service to Roanoke

The **2017 Virginia Statewide Rail Plan** also emphasized the need for continued long-term investment in the Western Corridor. The following long-term initiatives identified include:

- Investments to extend passenger service beyond Roanoke to the New River Valley, Bristol, and potentially further west to Knoxville and Chattanooga, TN.
- Investments to extend passenger service south of Lynchburg to Danville and beyond to Greensboro and Charlotte, NC.
- Additional investments to support additional potential frequencies in the future.

The **2022 Virginia Statewide Rail Plan** confirms Virginia's continued support for implementing the long-term service and infrastructure initiatives detailed in previous state rail plans. The following long-term initiatives identified include:

- Potential investment in a passenger rail station at Bedford between Lynchburg and Roanoke.
- Potential investments to extend passenger service beyond the New River Valley to Bristol and potentially further west to Knoxville and Chattanooga.

## **G. Operator Support**

The Commonwealth of Virginia has a good relationship and long history of working with Amtrak and Norfolk Southern in this corridor. On May 5, 2021, the Commonwealth reached an agreement with Norfolk Southern Railway to expand passenger rail to southwest Virginia. In partnership with Norfolk Southern Railway, the Commonwealth acquired 28.5 miles of the Norfolk Southern-owned right-of-way from the Salem Crossovers to Christiansburg. The acquisition of railroad right-of-way and tracks, along with infrastructure improvements and improved operations, will allow for the expansion of high-quality passenger rail services. Moving forward, all freight and passenger operators will be involved in the Service Development Plan process. Amtrak is currently the operator for state-supported and long-distance service in segments of the corridor and across the Commonwealth.

## DOT Strategic Goals

### A. Safety

The Bristol Corridor will prioritize railroad crossing improvements, such as four quad gates and grade separation where possible, improving safety for both train and vehicular traffic. DPRT has performed extensive analysis on priority railroad crossings across Virginia. These studies will be used to inform future design and construction projects within the corridor. The expansion of rail service in the corridor will also remove cars from Virginia's roads, including Interstate I-81, a route that faces significant safety challenges. Providing a safer travel alternative will enhance the safety of travelers in and through Virginia. Safety will likewise be improved for freight rail traffic through the planned rail infrastructure improvements in the corridor.

### B. Economic Strength and Global Competitiveness

Improving both passenger and freight rail infrastructure will not only increase network fluidity and reliability but also provide new transportation options for rural communities. In addition to the economic benefits associated with the improved freight movement, extending passenger rail service to Bristol would provide an important connection to other modes of transportation, including airports. This connection could be particularly beneficial for rural communities, which may have limited access to other transportation options.

By connecting the most rural parts of the state to the rest of the world, the extended rail service could open up new opportunities for economic growth and job creation, particularly in the Appalachian region. This could help address some of the challenges faced by these communities, including limited access to good-paying jobs and essential services. Additionally, the improved access to transportation could help support the resiliency of global supply chains, which is becoming increasingly important in the current economic climate.

### C. Equity

The DC-Bristol corridor will increase passenger rail service and connectivity, particularly in a section of Virginia that has had limited transportation options while the rest of the state has become increasingly connected. Currently, there is no passenger rail service south of Roanoke, and this corridor would expand service into Southwest Virginia. These communities would also be better connected to the Northeast Corridor and long-distance Amtrak routes.

### D. Climate and Sustainability

Improving rail infrastructure, for both passenger and freight usage, is a proven method for expanding environmentally efficient modes of transportation. Improving the Bristol corridor's ability to transport freight and expanding to include passenger service will decrease car trips and divert freight trucks off the highways. Continually improving ridership numbers along existing Virginia state-supported rail routes show public interest in mass transit, which is a sustainable transportation option. Capacity and safety improvements along the line may also improve freight rail environmental safety. The entire project will contribute to necessary infrastructure requirements to mitigate the impact of climate change.

### E. Transformation

The DC-Bristol corridor includes strategic assets purchased by the Commonwealth for its value both as a future expanded passenger rail corridor and as an existing freight rail link in national and global supply chains served by Virginia companies. Improvement and maintenance of these assets are critical to maintaining supply chain resilience, expanding passenger rail service,

maintaining freight rail traffic, and fulfilling the Commonwealth's vision for its multimodal network on a rail line that has been identified as a Virginia Corridor of Statewide Significance.