

# APPENDIX J: VIRGINIA RAIL NETWORK BOTTLENECKS



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**Table J-1** below presents seven Virginia rail network bottlenecks, as identified by VDOT’s Office of Intermodal Planning and Investment, in 2015, through its VTrans Multimodal Transportation Plan (VMTP) 2025 Needs Assessment. The bottlenecks that were identified by Virginia’s railroads during outreach conducted for the Virginia State Rail Plan are identified and described in **Table J-2** below.

**Table J-1: Virginia Rail Network Bottlenecks Inventory, 2015**

Corridor/Region	Railroad	Location	Freight Mobility Issues
<b>Crescent</b>	CSX/NS	Radford, VA	Rail capacity (single track) at intersection of NS Heartland and Crescent corridors will be insufficient to accommodate future demand.
<b>East-West</b>	BB/CSX	Staunton, VA	No capacity for double stacking.
<b>Northern Virginia</b>	NS	Front Royal, VA	Limited rail access to the Inland Port.
<b>Washington to North Carolina</b>	CSX	Richmond, VA	Triple bridge in Richmond bottlenecks rail traffic, impacting passenger and freight travel.
<b>Richmond</b>	CSX	Richmond, VA to Washington D.C.	The CSX line from Richmond to D.C. is identified as a key chokepoint in the freight and passenger rail system in the Virginia Statewide Multimodal Freight Study due to the heavy train traffic and limited capacity.
<b>Tri-Cities</b>	CSX	Virginia	The North-South CSX lines in Virginia are identified as a key chokepoint in the freight and passenger rail system in the Virginia Statewide Multimodal Freight Study due to the heavy train traffic and limited capacity.
<b>Tri-Cities</b>	NS	Virginia	The NS Heartland Corridor in Virginia is identified as a key chokepoint in the freight rail system in the Virginia Statewide Multimodal Freight Study due to the heavy train traffic and limited capacity.

Source: VDOT – Office of Intermodal Planning and Investment, VMTP 2025 Needs Assessment, Results from Corridors and Regions Reports

**Table J-2: Virginia Rail Network Bottlenecks Inventory Identified by Railroad Outreach, 2016**

Corridor	Railroad	Location	Freight Mobility Issues
Washington to NC Corridor	CSX	Richmond, Washington, D.C., and Fredericksburg	There are significant capacity constraints in the Virginia CSX network particularly on the approach and crossing of the Potomac River into Washington D.C., and on the RF&P Subdivision from Washington South to Richmond. Constraints are greatest north of Fredericksburg, where the commuter train territory to Washington begins, and in the railroad subdivisions near to the Richmond area.
Washington to NC Corridor	CSX	Long Bridge	The Long Bridge is the largest bottleneck between Washington, D.C. and Richmond, Virginia. The Long Bridge has the highest volume of trains per day in this corridor and across the CSX network. There are three tracks approaching the bridge, in each direction, but the bridge was built to carry only two main tracks. This design results in bottlenecks on either side of the bridge as trains wait to cross. If the number of trains crossing the bridge continues to rise, congestions and delays will increased, and the crossing will remain a problematic chokepoint for both freight and passenger rail operations.
Washington to NC Corridor	CSX	Richmond, Washington, D.C., and Ashland	The RF&P Subdivision has an ongoing capacity issue, particularly between Fredericksburg and Washington, D.C., where passenger and commuter trains together outnumber freight train volumes. The additions of intercity and passenger service has outpaced the construction of the third main line between Fredericksburg and Washington, D.C., creating lack of a capacity and bottlenecks in this area. In Ashland, a walkable Main Street environment parallels the two main tracks. There are also numerous at-grade road and pedestrian crossings present, along with an Amtrak station in the middle of town. These factors constrain capacity for additional future intercity passenger service.
Washington to NC Corridor and East-West Corridor	CSX	Richmond-South	Capacity constraints are present in the Richmond area. Specifically being able to make a progressive eastbound move from the Rivanna Subdivision to the North End Subdivision. At present, significant planning is required for trains making this move. Additionally, commuter windows at Staples Mill and Main Street Stations force trains to hold out at Acca yard, which dilutes main line and yard capacity.

Corridor	Railroad	Location	Freight Mobility Issues
Southside Corridor	CSX	Norfolk	<p>The Portsmouth Subdivision provides the CSX link to the Port of Virginia and will need capacity issues addressed, if traffic growth continues to grow at its current pace. The Branchville Siding extension is the start of capacity improvements, which is currently under construction. No other projects have been planned by CSX after this project is completed.</p>

Source: Virginia's Class I and shortline Railroads

