



Virginia Department of Rail and Public Transportation

The logo for the Virginia Statewide Rail Plan. It features the word "VIRGINIA" in a large, bold, blue, sans-serif font. Below it, the words "STATEWIDE RAIL PLAN" are written in a smaller, teal, sans-serif font. A stylized brown silhouette of the state of Virginia is positioned behind the word "VIRGINIA".

# VIRGINIA

STATEWIDE RAIL PLAN

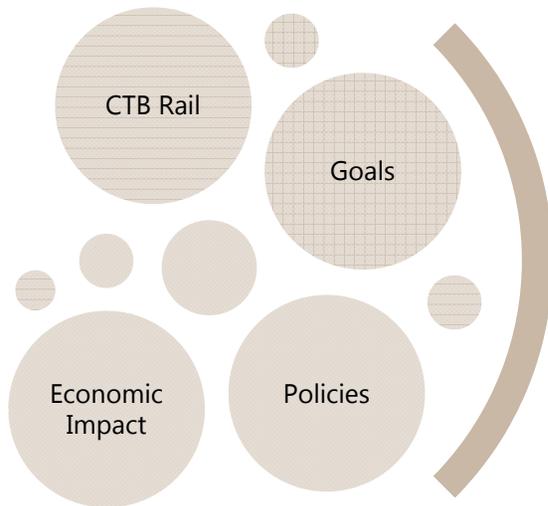
# Virginia Rail Plan

October 23, 2017

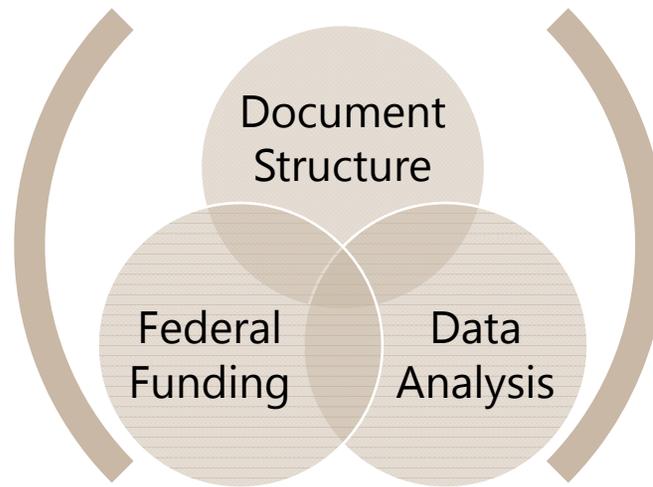
Michael Todd, DRPT

Rail Enhancement & Planning

# Introduction and Purpose

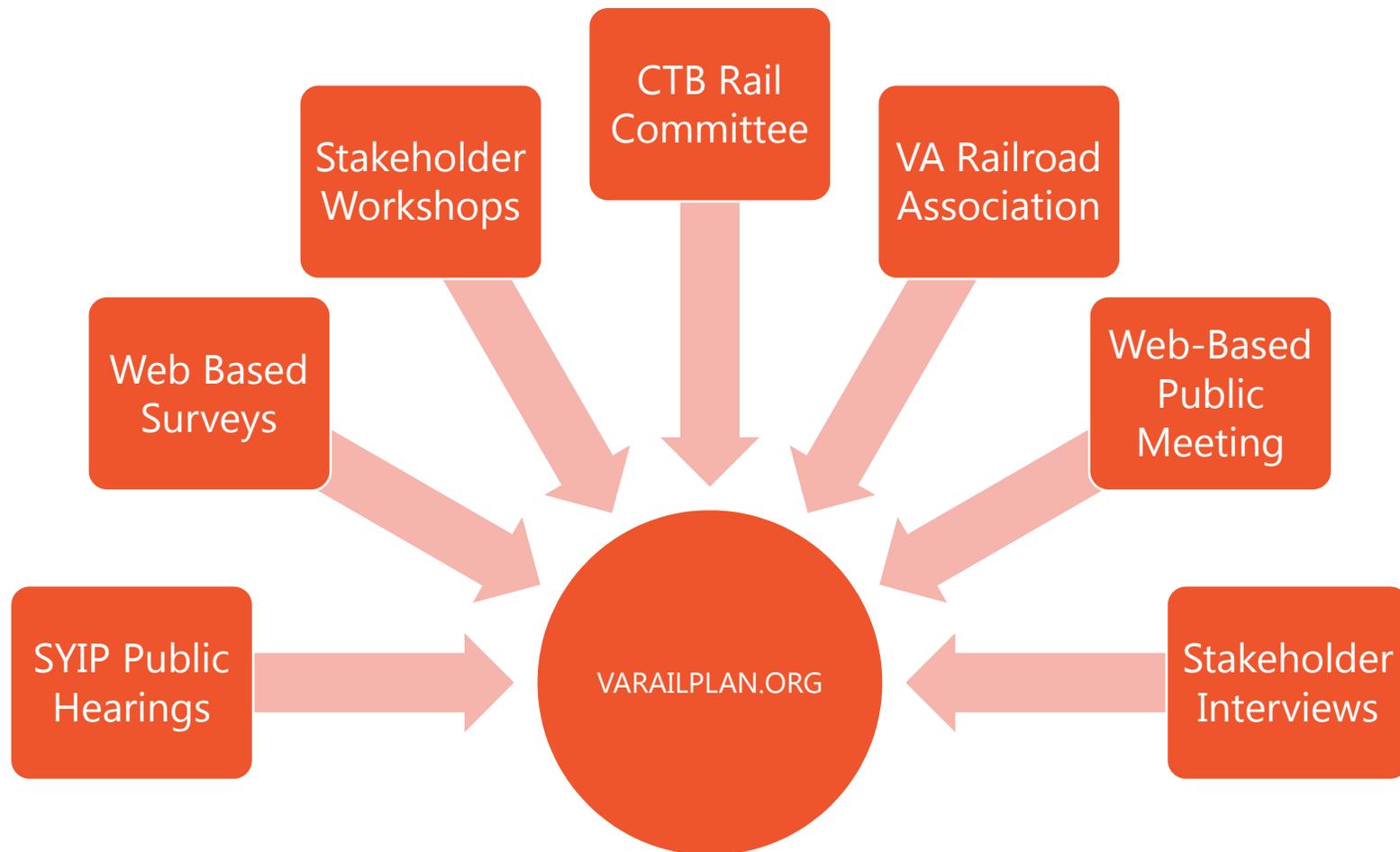


Context in Virginia



FRA Compliance







# Executive Summary



# Benefits of Rail in Virginia

## GROW THE ECONOMY

RAIL SERVICES DRIVE 6% OF VIRGINIA'S TOTAL ECONOMY.  
MORE THAN 6,000 JOBS CREATED DIRECTLY BY RAIL NETWORK



**\$2.2 BILLION**  
in annual benefits

**\$** about 9 cents per ton-mile of rail use



**\$190 MILLION**  
in annual benefits

**\$** about 46 cents per passenger-mile of rail use

*Benefits are largely derived from savings from diverting freight and passengers from highways to rail and includes congestion savings and crash reduction benefits.*

## BREATHE EASIER

3M TONS OF CO<sub>2</sub> EMISSIONS AVOIDED  
(6.4% OF TOTAL IN VIRGINIA PER YEAR)



On average, railroads are **four times** more fuel efficient than trucks



Moving freight by rail instead of truck generates **75% less** greenhouse gas emissions



The total estimated level of rail service in Virginia in 2015 was about **25 billion ton-miles**

## TRAVEL SAFE

18 LIVES SAVED AND 3,000 CRASHES AVOIDED EACH YEAR



Shipping by rail avoids about **1.7 billion miles** of truck travel in Virginia



Passenger travel by rail avoids about **271 million miles** of personal driving in Virginia

## SAVE MONEY

\$123M PAVEMENT MAINTENANCE SAVINGS  
(6% OF ANNUAL VDOT MAINTENANCE BUDGET)



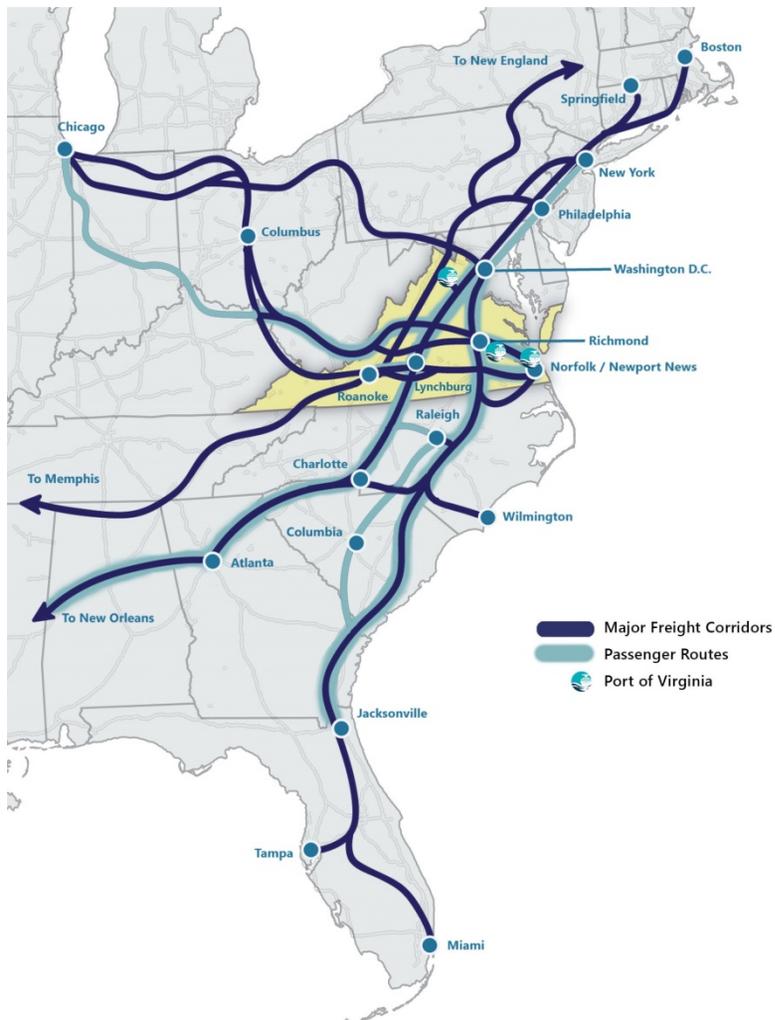
**8 = 240**  
PASSENGER RAILCARS PASSENGER VEHICLES



**100 = 340**  
FREIGHT RAILCARS SEMI-TRAILER TRUCKS



# Benefits Continued



- Connects to National and International Markets
- Moves both people and goods
- Serves Port of Virginia



# Future Trends



## RAIL INDUSTRY DRIVERS



Growth in  
Intermodal  
Traffic



Changes in  
Energy Production:  
Oil, Gas and Coal



Congestion



Environmental



Demographic  
Changes



Aging  
Infrastructure



Changes in  
Rail Governance  
Framework



Amtrak  
Northeast  
Corridor

## FREIGHT



Freight tonnage is expected to grow by 50% in Virginia by 2040

Movement by rail will increase by 14%; additional rail investment can enhance rail's modal share and keep additional freight from congested roadways.



Port of Virginia Shipments

TEUs anticipated to more than triple from 2.1 M in 2012 to 7.2 M in 2040.  
Capacity to move 45% by rail in 2040, up from 35% today.



Expected Evolution of Major Freight Markets

Growth in intermodal traffic will impact operational approach to major freight corridors. Intermodal movement relies on tight timetables and high demand for on-time performance.

## FREIGHT



Freight  
expected to  
increase in Virgi

Movement by  
14%; addition  
can enhance  
and keep add



## PASSENGER



### Population concentrated in the urban crescent

Since 2010, the share of Virginia's total population growth in the urban crescent rose to 93 percent, up from 81 percent between 2000 and 2006.



### Population is growing older – 1 in 8 Virginians is 65 or older,

and the largest concentration of Virginia's aging population lives in the urban crescent.  
[DC2RVA Purpose and Need]



### Increasing demand for public transportation

Urban environments conducive to public transportation and an older demographic create more reliance on multi-modal options.

## FREIGHT



Freight expected to increase in Virginia.

Movement by 14%; additional capacity can enhance and keep additional congestion.

## PASSENGER



### Population concentration in the urban

Since 2010, the share of total population in the urban crescent rose up from 81 percent in 2000 and

## NETWORK SIGNIFICANCE



The Washington, D.C. metropolitan area has the nation's highest rate of congestion.

The Hampton Roads area also experiences high levels of congestion.

*[Measuring Traffic Congestion in Virginia - Virginia Performs, Virginia.Gov]*



Vehicle use per road-mile has been increasing for decades.

Since the mid-1960s Virginia has experienced a decline in relative capacity as both population and state gross domestic product (GDP) have steadily risen.

*[Measuring Traffic Congestion in Virginia - Virginia Performs, Virginia.Gov]*



### Economic Growth

Virginia's rail network is a key link between two mega-regions, the Northeast mega-region and the Piedmont Atlantic mega-region to the south. Most of the nation's population growth and economic expansion is occurring in ten emerging mega-regions.



# Vision, Goals & Future Investments



## Goals



## Objectives

### **VTrans Vision**

*Good for business, good for communities, and good to go.*

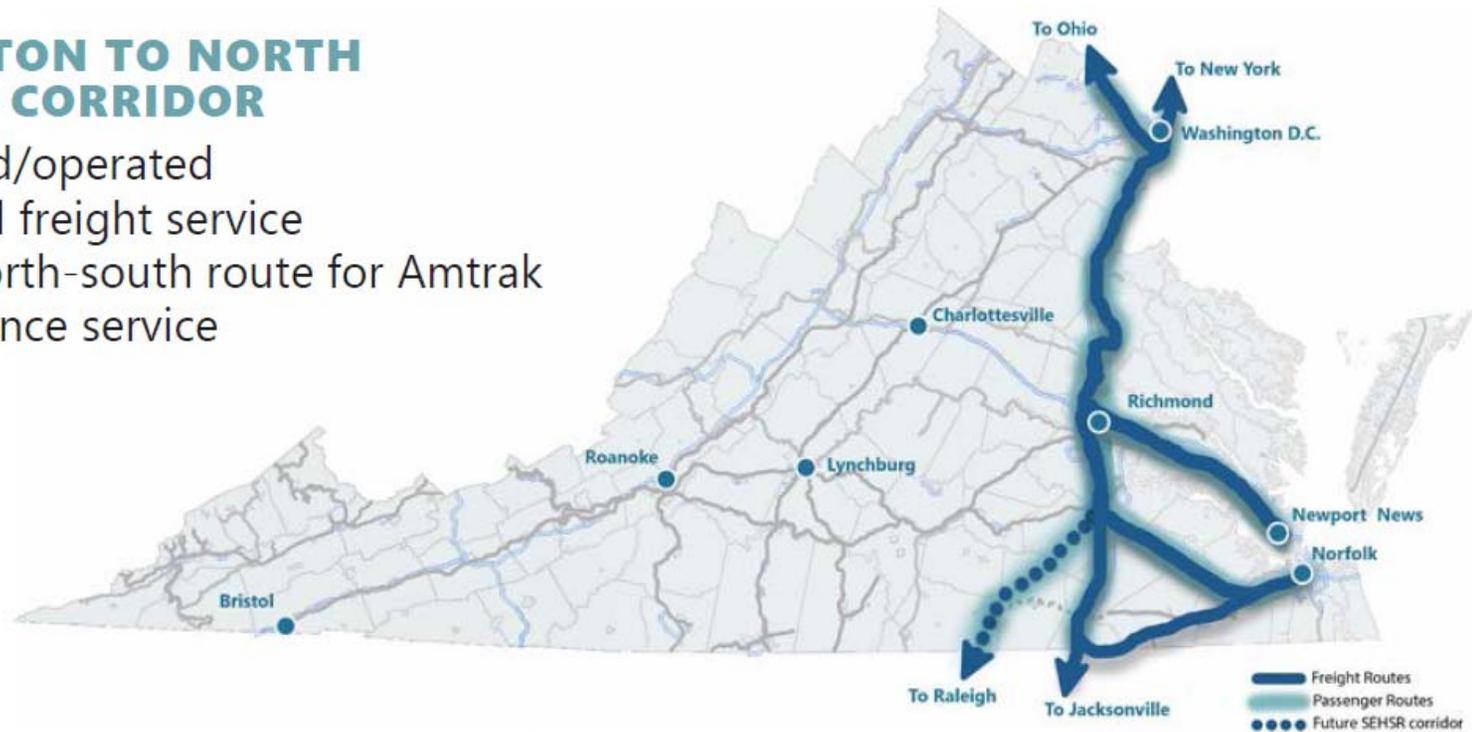
### **State Rail Plan Vision**

*Virginia's rail network is a valuable asset that drives the economy, reduces congestion, improves safety, and saves taxpayer money. Continued investment in rail infrastructure will ensure the mission and vision of the Commonwealth's transportation network is achieved.*

*Goals and objectives link visions to prioritize investments in rail.*

## WASHINGTON TO NORTH CAROLINA CORRIDOR

- CSX owned/operated
- Intermodal freight service
- Primary north-south route for Amtrak long-distance service



### TOP DRIVERS



Growth in Intermodal Traffic



Congestion



Demographic Changes



Amtrak Northeast Corridor

### KEY GOALS

Optimize Return on Investments

Consider Operational Improvements and Demand Management First

Ensure Efficient Intermodal Connections

# Investments

## CRESCENT CORRIDOR

- Norfolk Southern owned/operated
- Intermodal freight service
- Amtrak long distance and regional service



### TOP DRIVERS



Congestion



Demographic Changes



Amtrak Northeast Corridor

### KEY GOALS

Optimize Return on Investments

Improve Coordination between Transportation and Land Use

Support Regional Economic Development

## EAST-WEST CORRIDOR

- CSX and Buckingham Branch owned/operated
- Primary coal route
- Passenger connection to Newport News



### TOP DRIVERS



Changes in Energy Production



Amtrak Northeast Corridor



Aging Infrastructure

### KEY GOALS

Ensure Safety, Security and Resiliency

Improve Coordination between Transportation and Land Use

Ensure Transparency and Accountability, and Promote Performance Management

Support Regional Economic Development

# Investments

## HEARTLAND CORRIDOR

- Norfolk Southern owned/operated
- Intermodal freight service
- Passenger connection to Norfolk



### TOP DRIVERS



Growth in Intermodal Traffic



Changes in Energy Production



Environmental

### KEY GOALS

Ensure Safety, Security and Resiliency

Improve Coordination between Transportation and Land Use

Support Regional Economic Development

Ensure Efficient Intermodal Connections

# Investments

## PORT OF VIRGINIA

- 6 terminals
- 30 miles of on-dock rail
- 55 foot deep channel



### Port of Virginia

- Port of Virginia
- Cities/Towns

- NIT Norfolk International Terminal
- NNMT Newport News Marine Terminal
- PMT Portsmouth Marine Terminal

- RMP Port of Richmond
- VIG Virginia International Gateway
- VIP Virginia Inland Port

### TOP DRIVERS



Growth in Intermodal Traffic



Congestion



Environmental

### KEY GOALS

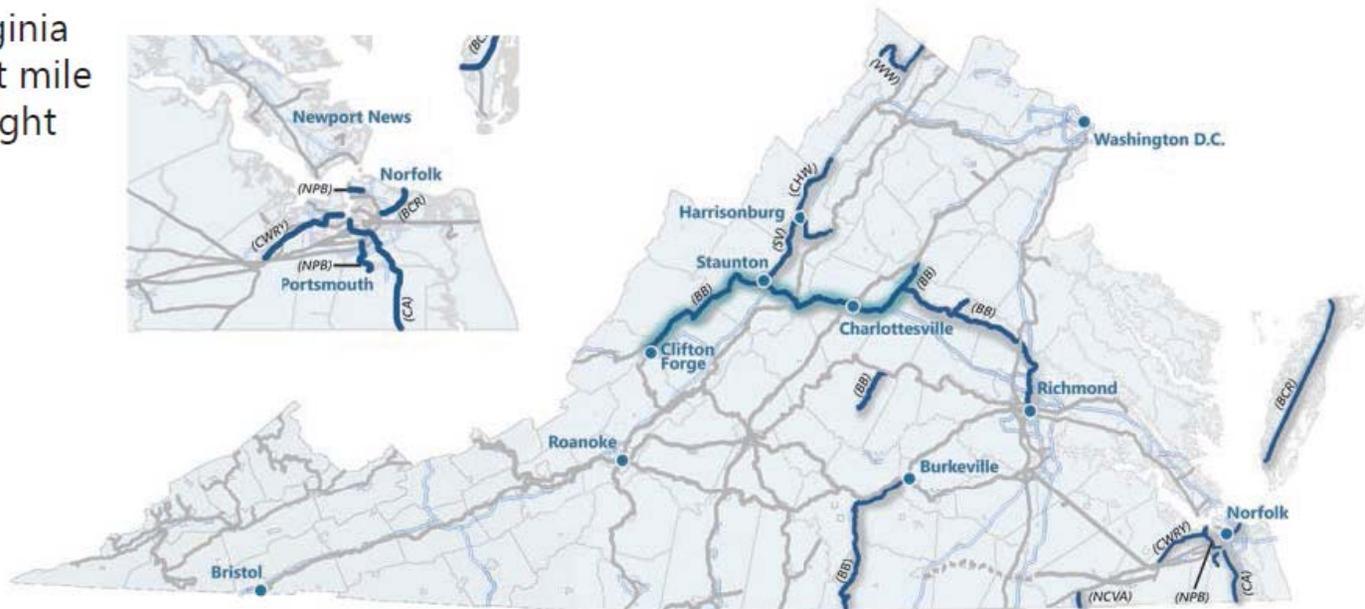
Ensure Transparency and Accountability, and Promote Performance Management

Ensure Efficient Intermodal Connections

Support Regional Economic Development

## SHORTLINE ROUTES IN VIRGINIA

- 9 shortlines in Virginia
- Important first/last mile connection for freight



### Shortline Routes in Virginia

- Freight Routes
- Passenger Routes
- Cities/Towns

- BCR* Bay Coast Railroad
- BB* Buckingham Branch Railroad
- CA* Chesapeake & Albemarle Railroad
- CHW* Chesapeake Western Railway
- CWRY* Commonwealth Railway

- NPB* Norfolk & Portsmouth Belt Line Railroad
- NCVA* North Carolina & Virginia Railroad
- SV* Shenandoah Valley Railroad
- WW* Winchester & Western Railroad

### TOP DRIVERS



Changes in Energy Production



Aging Infrastructure



Changes in Rail Governance Framework

### KEY GOALS



Ensure Safety, Security and Resiliency



Improve Coordination between Transportation and Land Use



Support Regional Economic Development



**Thank You**  
Questions?

