

# Springfield to Quantico Enhanced Public Transportation Feasibility Study

Commonwealth Transportation Board Workshop  
October 19, 2021

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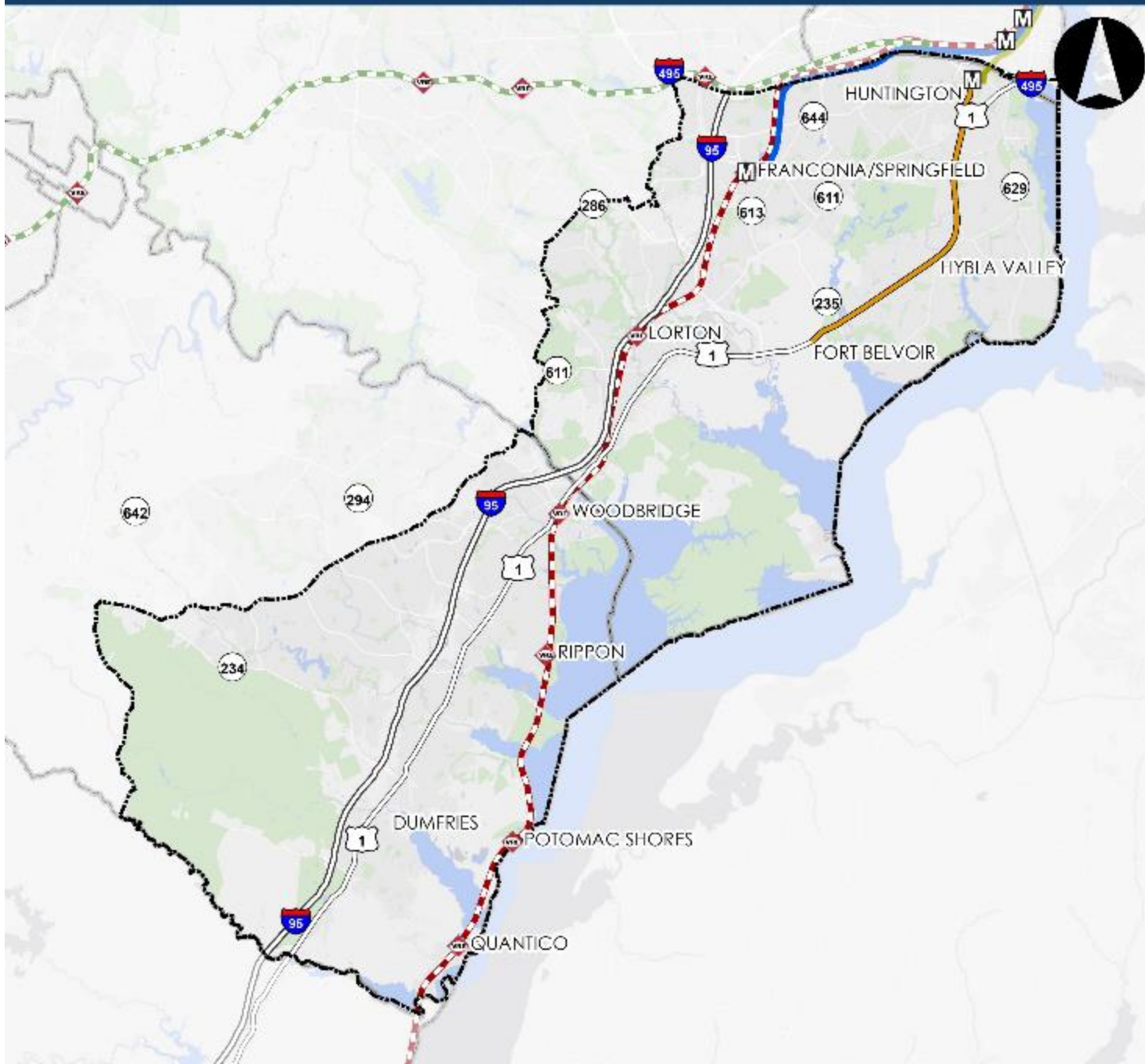


# Study Background and Objectives

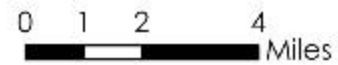
- Virginia General Assembly approved a 2020 budget amendment directing DRPT to conduct a feasibility study to be completed by December 1, 2021
- Study Objectives:
  - *Comprehensive, objective evaluation of a range of potential future enhanced transit alternatives that compares the cost, benefits, and impacts of each option to inform recommendations about future investment in the corridor.*



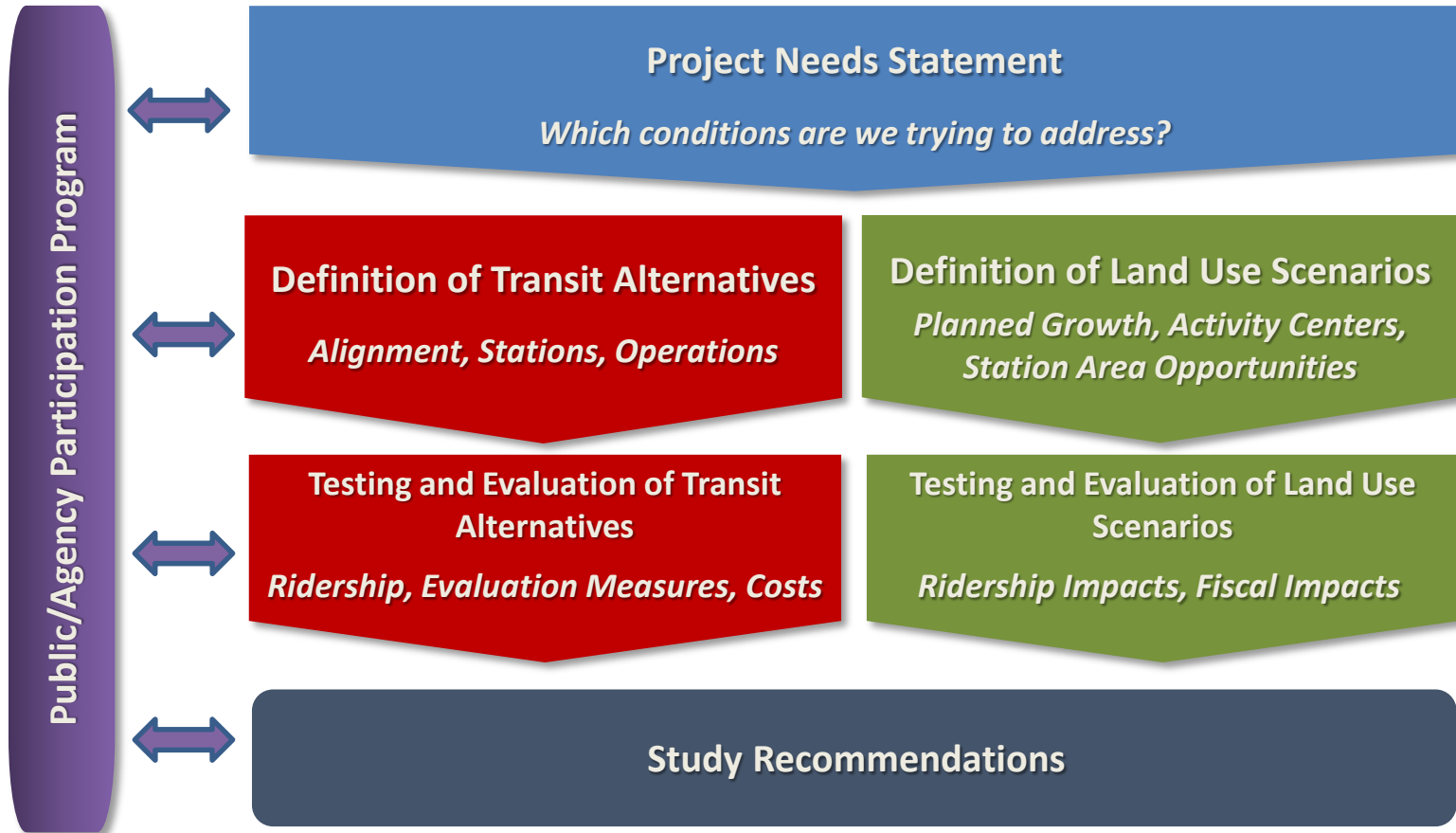
# STUDY AREA



- Metrorail Stations
- Virginia Railway Express (VRE) Stations
- Study Area
- County Boundary
- I-95
- US Route 1
- Richmond Highway BRT
- Metrorail Routes**
  - Blue
  - Yellow
- VRE Routes**
  - Fredericksburg
  - Manassas



# Study Technical Approach



# Public and Stakeholder Outreach

- Completed Activities:
  - Technical Advisory Committee
  - Elected officials briefings
  - DRPT website page
  - Project factsheet
  - On-Line survey
  - Pop-up events
  - Public Meeting #1 (May)
  - Public Meeting #2 (July)
  - Public Meeting #3 (Sept)



<http://www.drpt.virginia.gov/transit/springfield-to-quantico/>

# Enhanced Public Transit is Needed Because...

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Existing transit does not **serve all trips well**

Transit services may need enhancements to support **future development**







Transit can improve **equity** by connecting low-income and minority populations to opportunities

Transit connections to key regional **activity centers**, such as Fort Belvoir and Quantico bases, are limited




**Traffic congestion** is severe and continuing to get worse

**Access to Transit Services** is reliant on park & ride or long walks to the bus

# How are we evaluating feasibility?

<b>Goals for Enhanced Transit</b>		
<p><b>Ridership Potential</b></p>  <p>Increase transit usage in the study corridor</p>	<p><b>Congestion Mitigation</b></p>  <p>Reduce the amount of traffic congestion in the study corridor</p>	<p><b>Equity</b></p>  <p>Provide a fair distribution of costs and benefits across different population groups</p>
<p><b>Regional Accessibility/Connectivity</b></p>  <p>Increase access to regional activity centers and meet identified service gaps</p>	<p><b>Cost-effectiveness</b></p>  <p>Ensure that resources are used efficiently</p>	<p><b>Development Potential</b></p>  <p>Create opportunities for development around stations or stops</p>

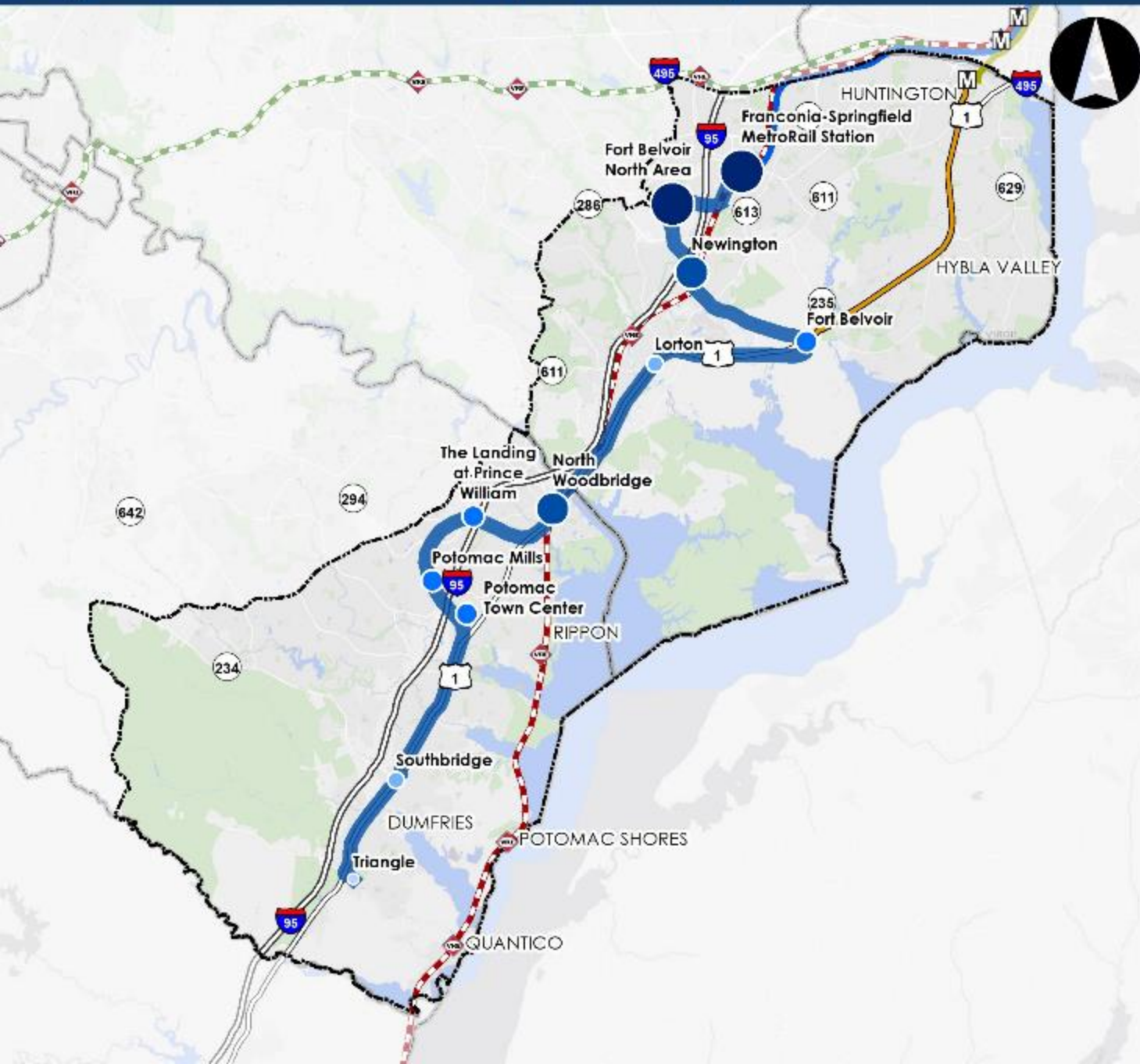
# Transit Alternatives Evaluated in the Study

	Metrorail – Blue Line Extension
	Metrorail – Yellow Line Extension
	Bus Rapid Transit
	VRE Service Improvements
	Express Bus Routes

\* Additional Service Above Transforming Rail in Virginia Improvements Included in Baseline



# Projected Blue Line Daily Boardings



- MetroRail Stations
- Virginia Railway Express (VRE) Stations
- County Boundary

### MetroRail Routes

- Blue
- Yellow

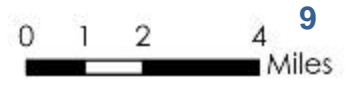
### VRE Routes

- Fredericksburg
- Manassas
- Richmond Highway BRT

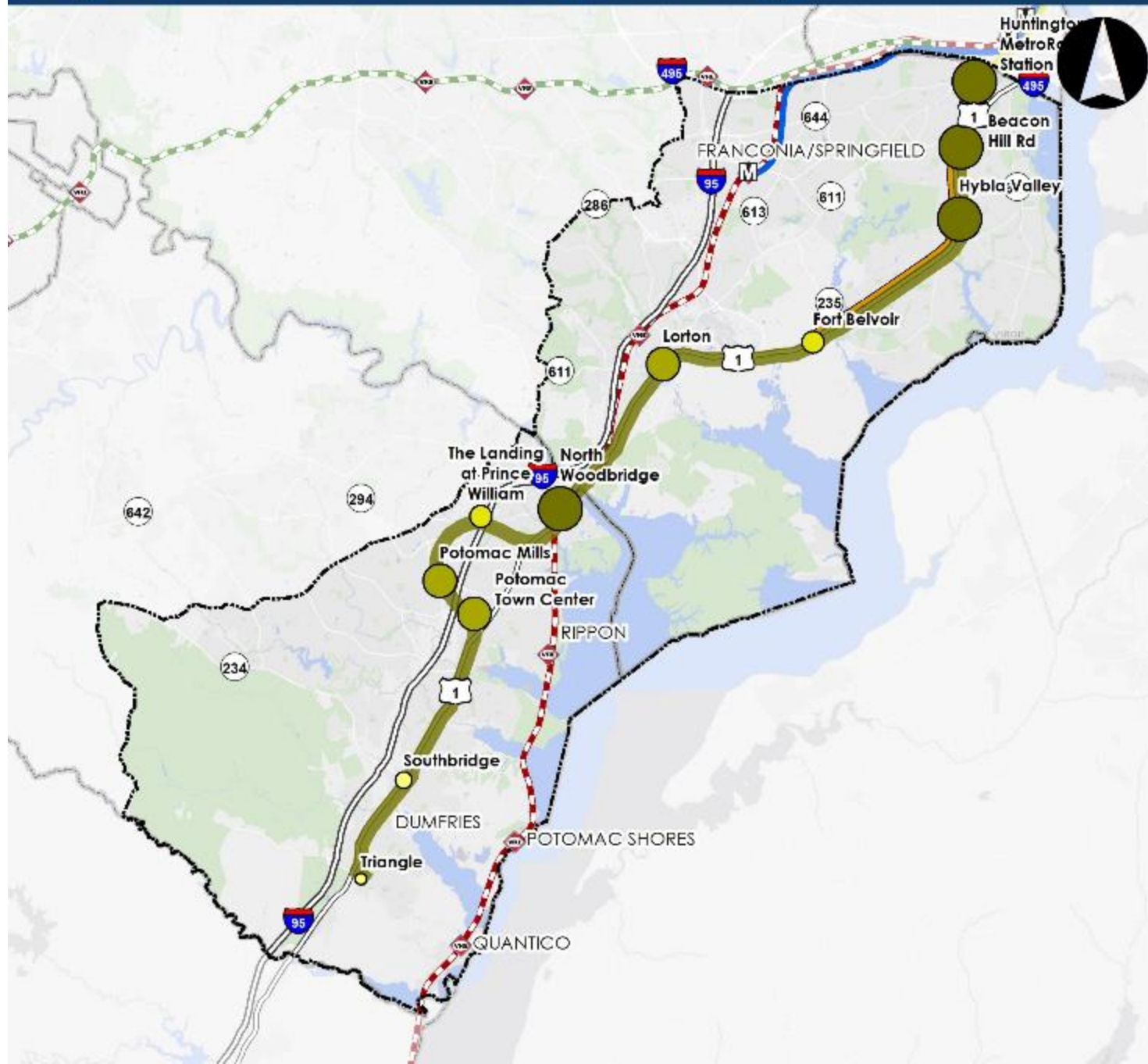
### Blue Line Alignment

### Projected Blue Line Daily Boardings

- < 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- 2,000 - 2,500
- > 2,500



# Projected Yellow Line Daily Boardings



Metrorail Stations

Virginia Railway Express (VRE) Stations

County Boundary

Richmond Highway BRT

### Metrorail Routes

Blue  
 Yellow

### VRE Routes

Fredericksburg  
 Manassas

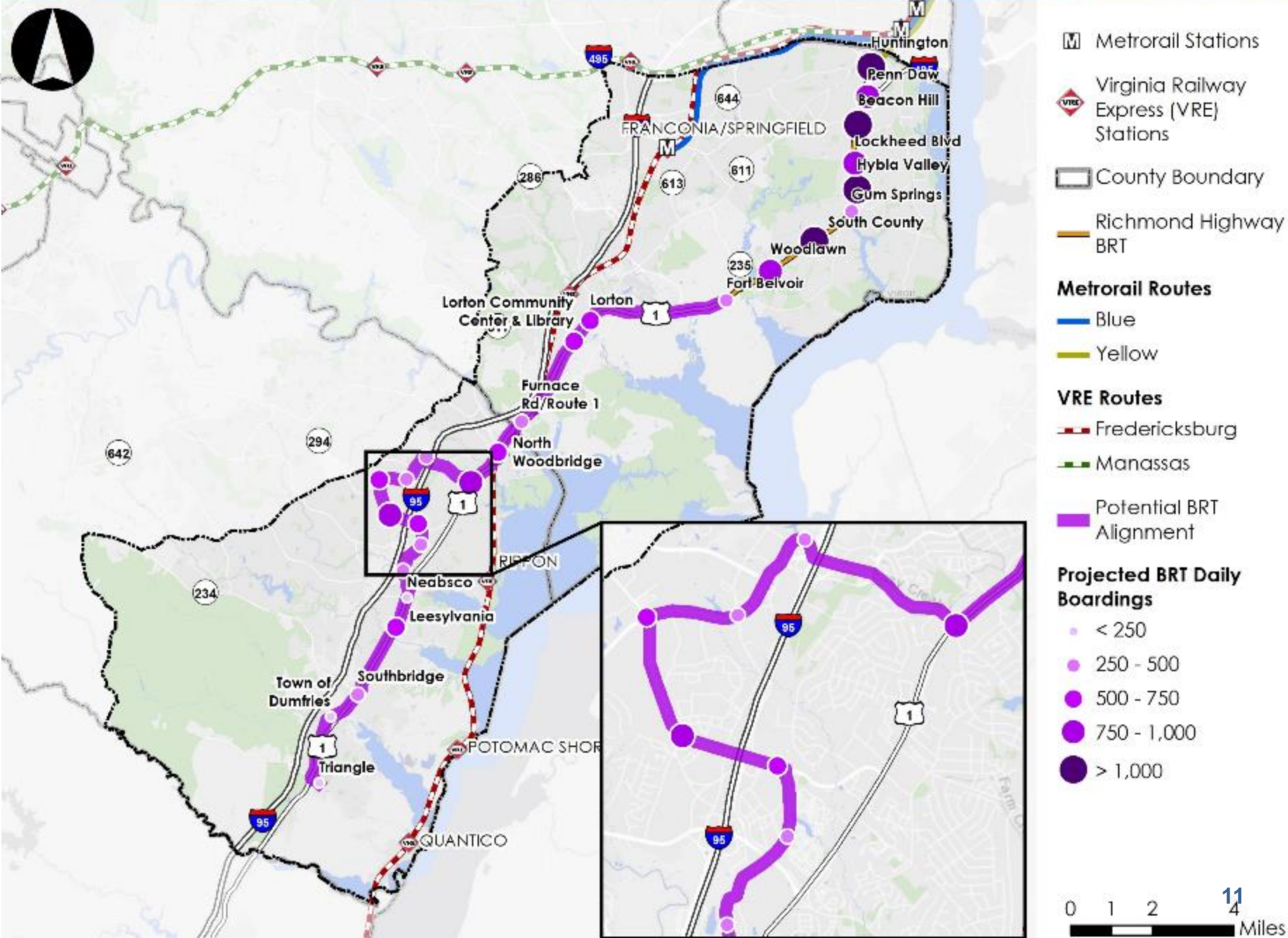
Potential Yellow Line Alignment

### Projected Yellow Line Daily Boardings

< 1,000  
 1,000 - 1,500  
 1,500 - 2,000  
 2,000 - 2,500  
 > 2,500



# Projected BRT Daily Boardings

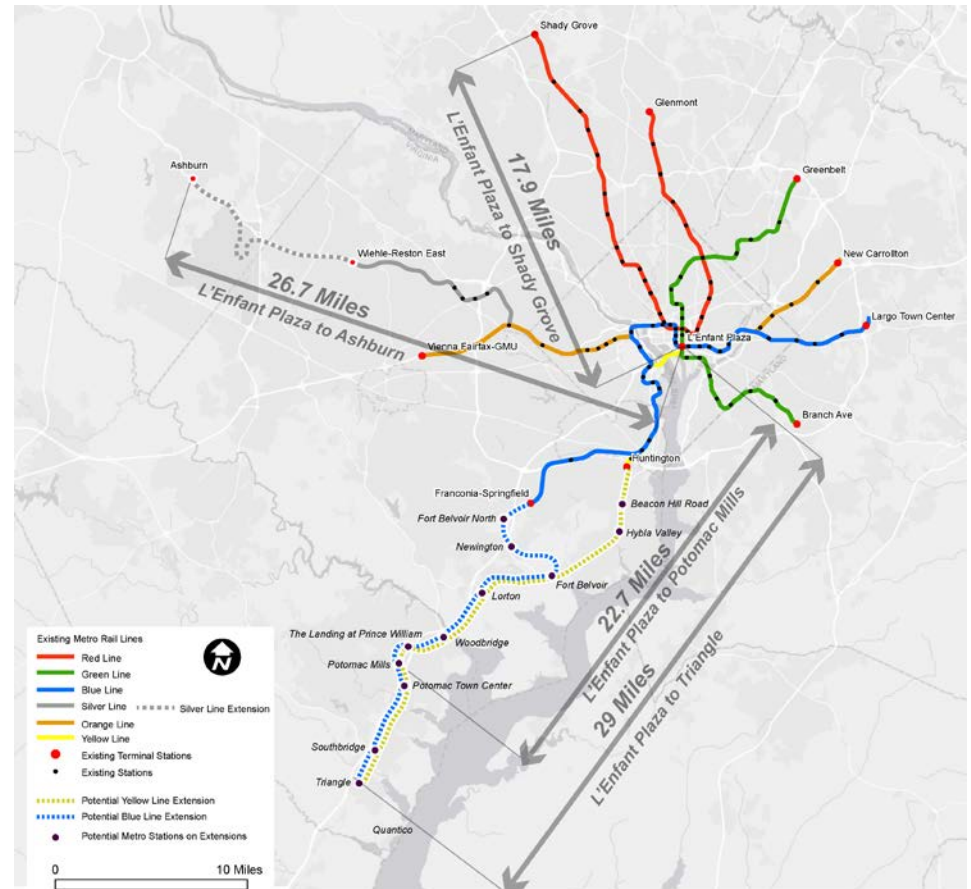


# Summary of Evaluation Results

	Additional Express Bus	BRT Extension	Additional VRE Service*	Metrorail Blue	Metrorail Yellow
Ridership Potential	★★	★★★★	★★	★★★★	★★★★
Congestion Mitigation	★	★★	★	★★★★	★★★★
Regional Accessibility	★★	★★★★	★★	★★★★	★★★★
Equity	★	★★	★★	★★★★	★★★★
Cost-Effectiveness	★★★★	★★	★	★	★

# Other Considerations for Metrorail Extensions

- Metrorail extension would be a significant addition to the Metro system
- Core capacity needs must be addressed first
- Legal / governance implications of adding Prince William County to the WMATA compact jurisdictions
- Annual capital and operating budget subsidy contributions for Prince William County (and an increase for Fairfax County)



***L'Enfant Plaza to Triangle  
Track Length = 46 Miles (Blue)  
Track Length = 37 Miles (Yellow)***

# Sensitivity Tests

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- Can we make the alternatives more cost efficient by shortening the alignment?
- Uncertainty in long-range planning - What might happen to ridership forecasts if people keep teleworking?
- How would significant changes in land use change ridership forecasts?

# Estimated Costs of Alternatives (\$2030)

*Additional Costs Beyond What is Included in the Future Baseline*

	Add'l Express Bus	Add'l VRE	BRT Ext	Shorter BRT Ext	Metrorail Blue	Shorter Metrorail Blue	Metrorail Yellow	Short Metrorail Yellow
<b>Total Capital Cost Range</b>	\$37 M - \$54 M	\$116 M - \$174 M	\$2.4 B- \$3.6 B	\$1.6 B- \$2.4 B	\$18.1 B- \$27.2 B	\$13.6 B- \$20.5 B	\$18.3 B- \$27.5 B	\$13.8 B - \$20.8 B
<b>Annual O&amp;M Cost</b>	\$7 M	\$80 M	\$19 M	\$15 M	\$168 M	\$135 M	\$168 M	\$135 M
<b>Annual Net Cost: Cap + O&amp;M - Fare Revenue</b>	\$8 M	\$46 M	\$133 M	\$90 M	\$764 M	\$579 M	\$771 M	\$587 M

# Next Steps

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- Draft report – posted for public comment
- Final report submitted to General Assembly by December 1, 2021



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