

May 25, 2023

New River Valley Passenger Rail Project Updates

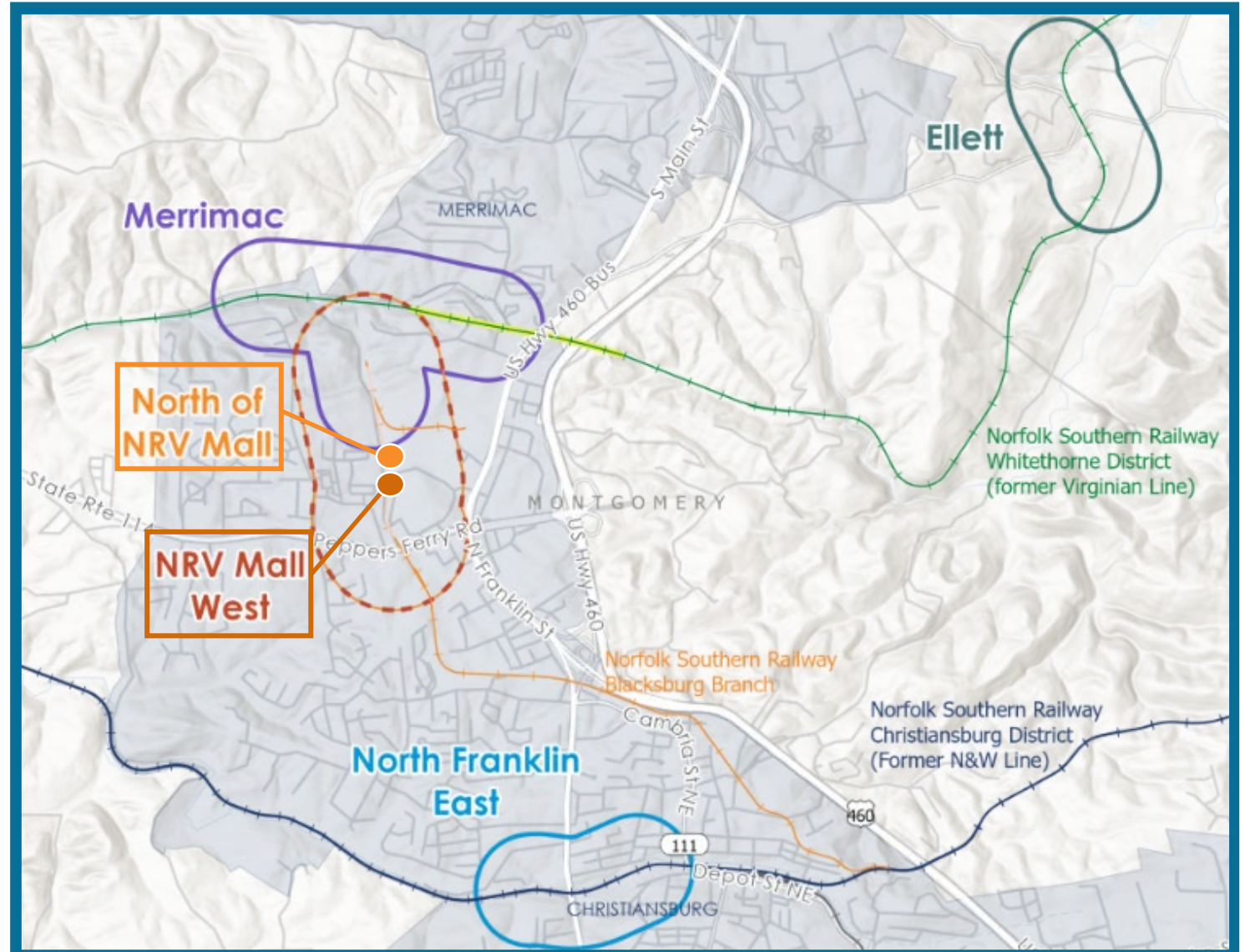
VPRA Board
May Meeting



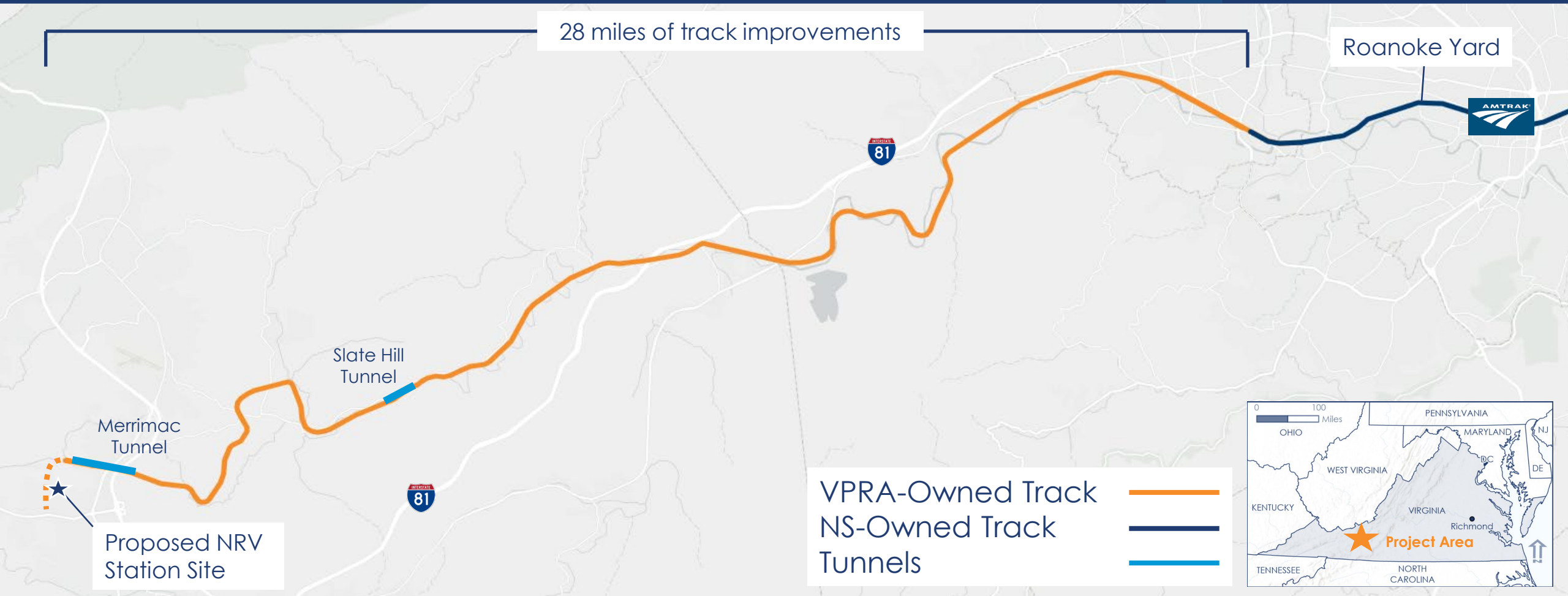
Background: 2022 NRV Passenger Rail Station Feasibility Study

Preferred Options:

- North of NRV Mall (NRV-N)
- NRV Mall West (NRV-W)
- “Hybrid” Site



Rail Improvements Necessary for NRV Extension



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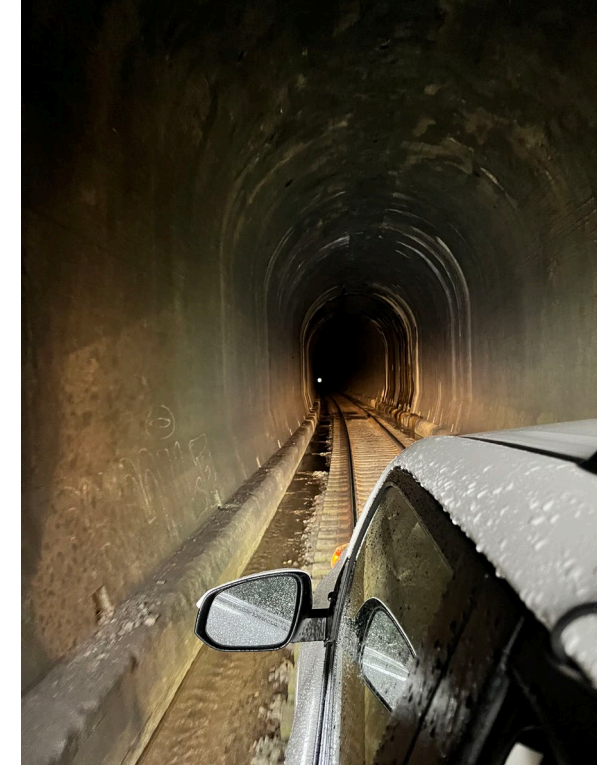
Roanoke Yard

- Approximately six miles of new track construction and signalization – NS led.



Virginian Line (V-line) Safety Improvements

- 28 miles of signalization
- Minor Track Improvements
- Tunnel Improvements:
 - Ventilation
 - Egress
 - Fire & life safety



Note: the 28 miles of the VPRA-owned V-Line includes 32 bridges, 86 culverts, 47 road crossings, and 2 tunnels.

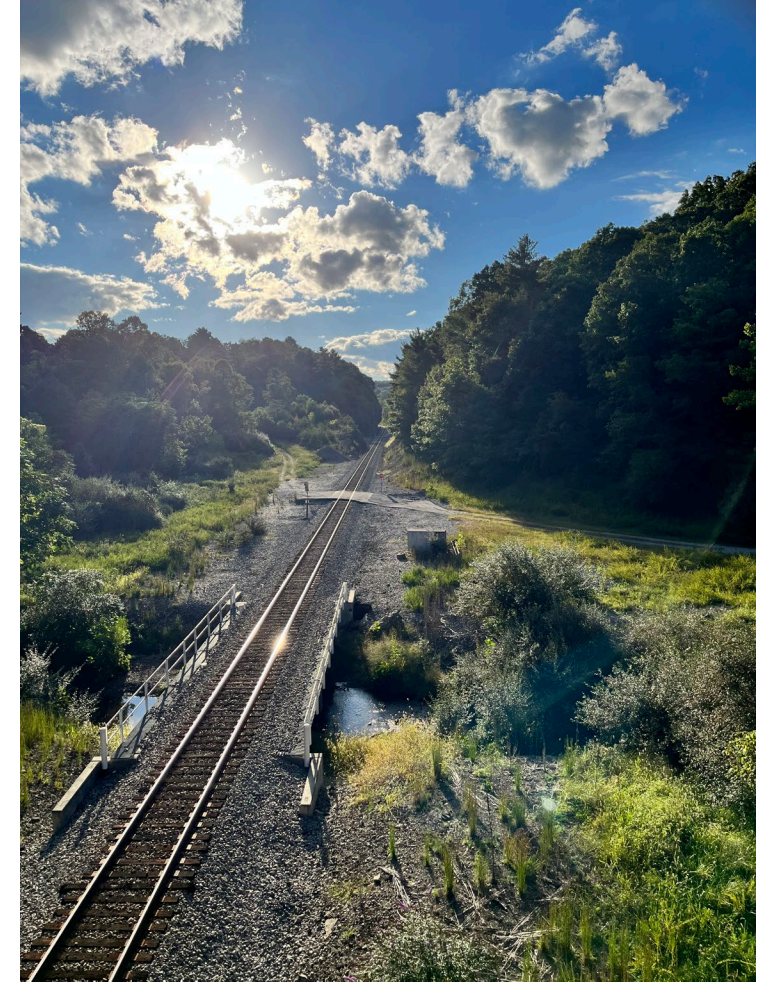
Rail Improvements Necessary for NRV Extension

Connector Track

- Construction of ~one (1) mile of track from the Virginian Line to the Norfolk Southern owned Blacksburg Branch.
- Over 300,000 cubic yards of rock to be cut.
 - Tysons Subway: 100,000 cubic yards of rock
- Approximately 100' of elevation change.



From Huckleberry Trail looking East
Toward Merrimac Tunnel



From Huckleberry Trail looking West

Connector Track Options

Impacts of Proposed SE Quadrant 9°

- Impacts to stream north of V-line.
- May require V-line realignment.
- Temporary Huckleberry Trail impacts.
- 2.74% grade.

Impacts of Proposed SE Quadrant 12°

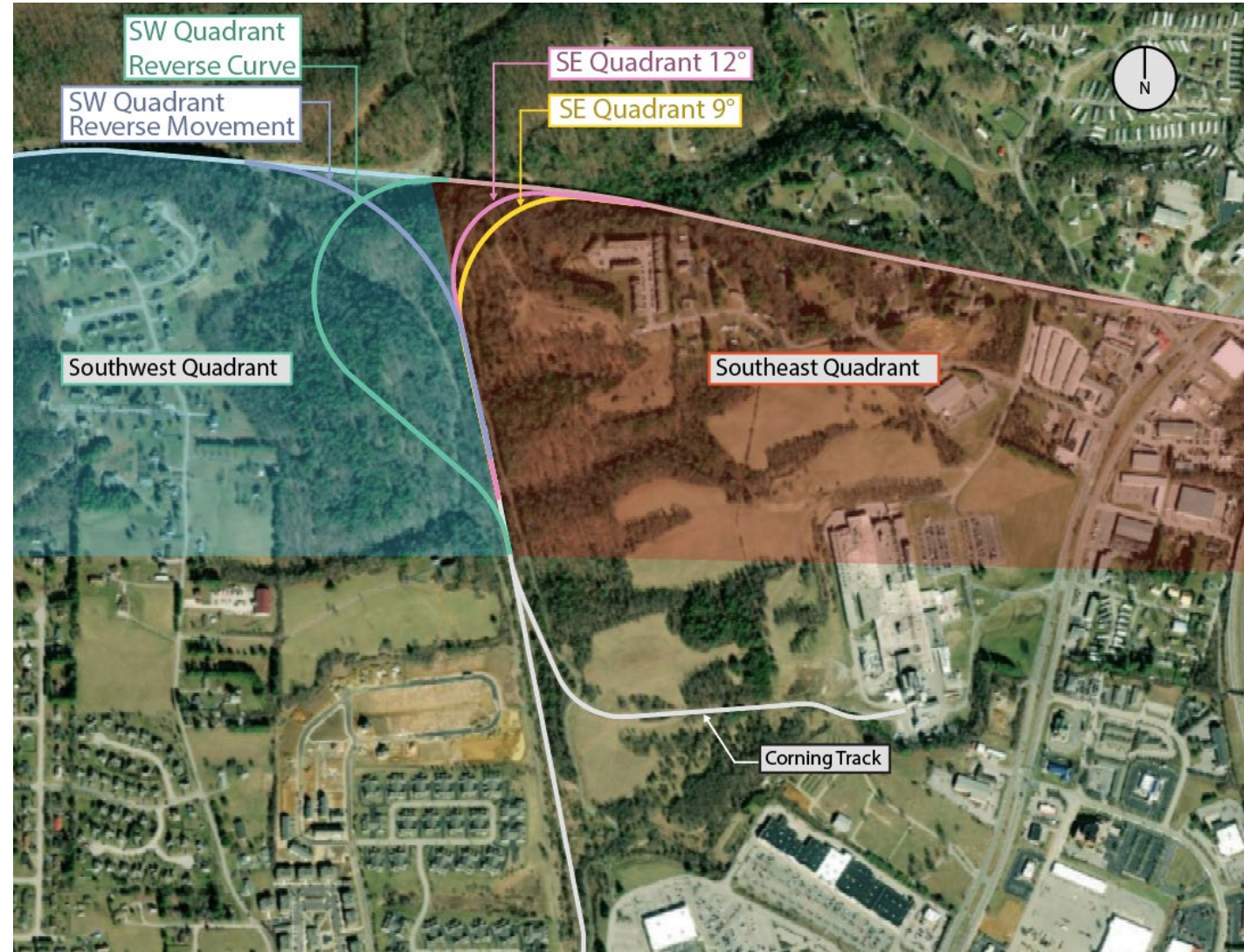
- Impacts to stream north of V-line.
- May require V-line realignment.
- Temporary Huckleberry Trail impacts.
- 2.74% grade.

Impacts of Proposed SW Quadrant Reverse Movement

- Slowest time due to reverse train operations.
- Two stream crossings and 1/8 of alignment in flood plain.
- 2.94% grade.

Impacts of Proposed SW Quadrant Reverse Curve

- 110' of elevation gain.
- 300k cubic yards of rock cut.
- 1.98% grade.



NRV Mall Station Site

Elements Necessary to serve the Mall location:

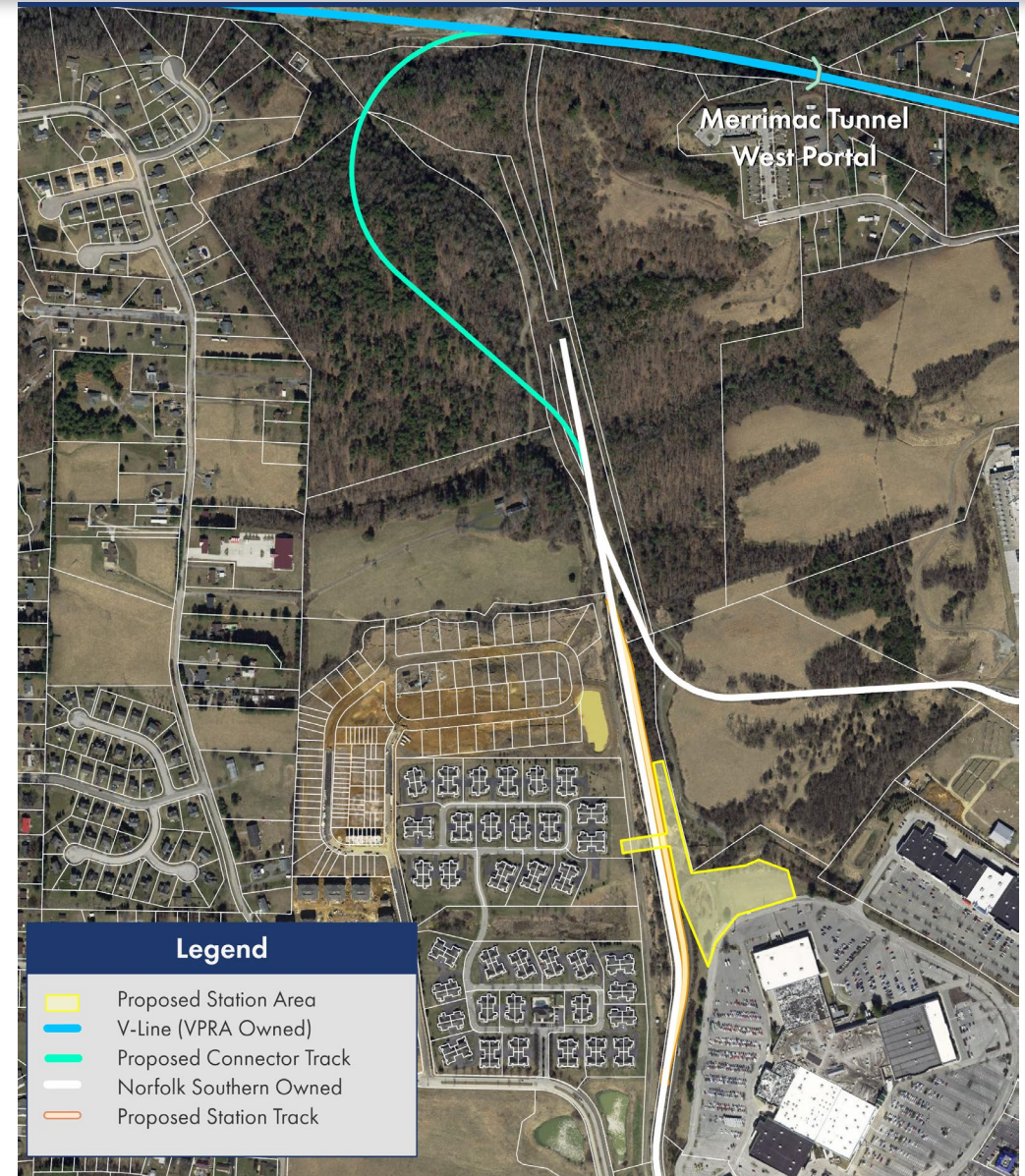
- Merrimac Tunnel Modifications
- Connector Track
- Passenger platform & related infrastructure
- Layover facility

Risks

- Merrimac Tunnel conditions - tunnel is 100+ years old
- Earthwork needed to build connector track
- Environmental clearance and public impact
- Agreements with NS and multiple property owners (possible litigation)

Benefits

- Existing transit, parking, and road access



Layover Site Options Eliminated

Merrimac

- Interferes with proposed connector track
- Currently no access for crews & vehicles

North

- Impacts Huckleberry Trail
- Currently no access for crews & vehicles

Mall

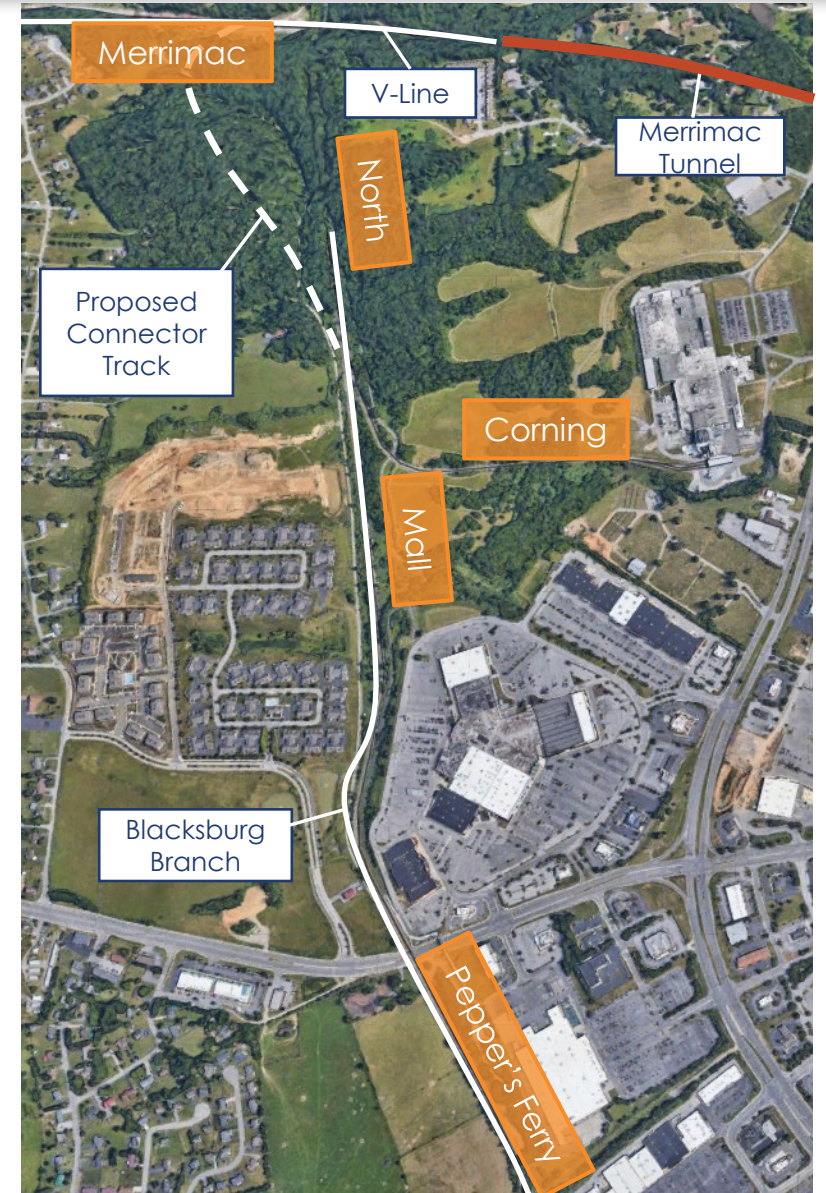
- Cultural & historic resource impacts
- Adjacent to a residential community

Pepper's Ferry

- Space constraints
- Interferes with Huckleberry Trail
- Pepper's Ferry Road impacts
- Steep grade
- Adjacent to a park

Corning

- Interferes with Corning operations
- Currently no access for crews & vehicles



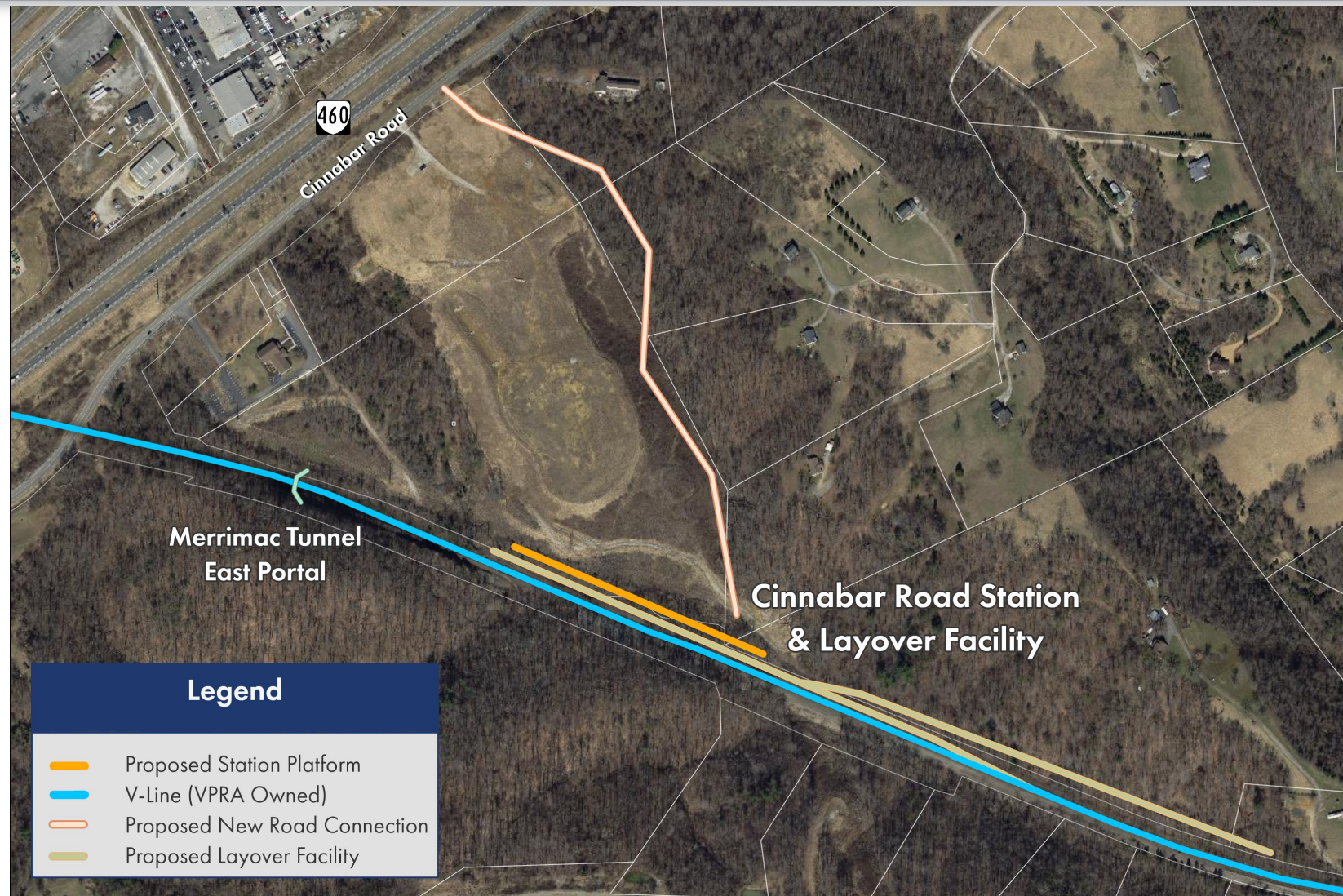
Cinnabar Road Layover Site

Risks

- Environmental clearance
- Right of way acquisition
- Earthwork needed to grade site for level equipment storage
- Need to create suitable access for crews and vehicular traffic

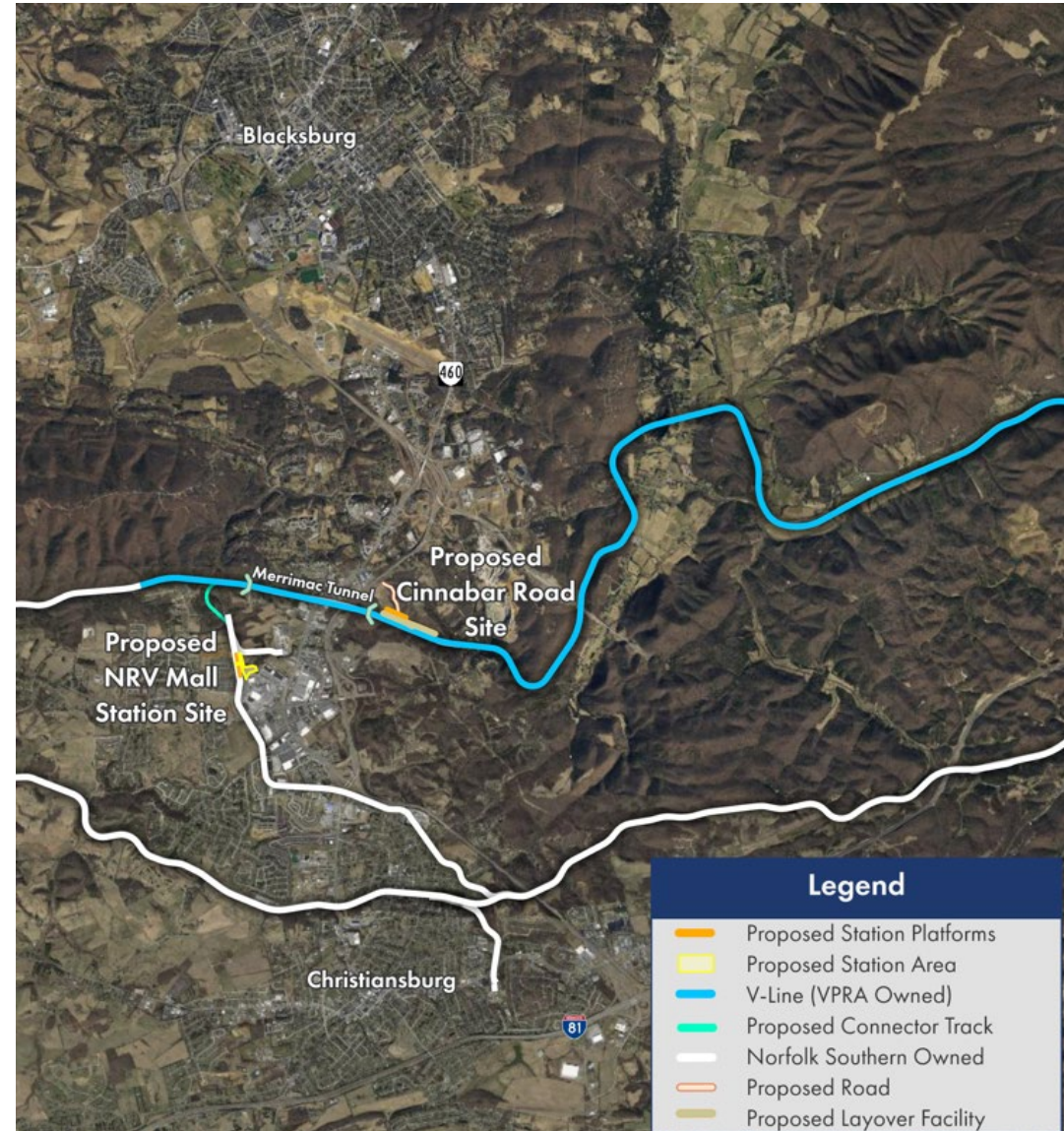
Benefits

- Creation of access road will have little impact on community
- Could serve as a temporary station location as complex tunnel modifications, connector track, and platform are completed



Next Steps

- Continue preliminary engineering for the elements related to the NRV Mall Station Site and the Cinnabar Road Site – expected by end of 2023
 - Will better identify project risks, schedule, and costs.
- Coordinate layover and platform needs with Amtrak
 - Need to design for current equipment and more modern Amtrak trains coming in the 2nd half of the decade.
- Receive final determination of environmental impacts.
- Coordinate with NRV Passenger Rail Station Authority throughout design.



Questions?

