New River Valley
Passenger Rail Project Updates

VPRA Board
May Meeting
Preferred Options:

- North of NRV Mall (NRV-N)
- NRV Mall West (NRV-W)
- “Hybrid” Site
Rail Improvements Necessary for NRV Extension

28 miles of track improvements

VPRA-Owned Track
NS-Owned Track
Tunnels

Merrimac Tunnel
Slate Hill Tunnel

Proposed NRV Station Site
Roanoke Yard

Project Area
Rail Improvements Necessary for NRV Extension

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.
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.
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
  o Will better identify project risks, schedule, and costs.

• Coordinate layover and platform needs with Amtrak
  o 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.