

Bus Rapid Transit (BRT) Initiatives at the Northern Virginia Transportation Authority

*TPB Technical Committee
February 1, 2019*

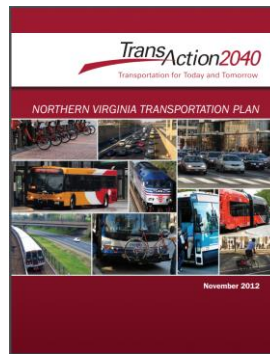
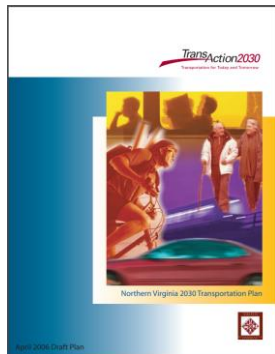


Sree Nampoothiri, Transportation Planner, NVRTA



Two Primary Responsibilities

1. Develop and update the long range, multi-modal Transportation Plan for Northern Virginia → **TransAction Plan** (adopted October 2017)

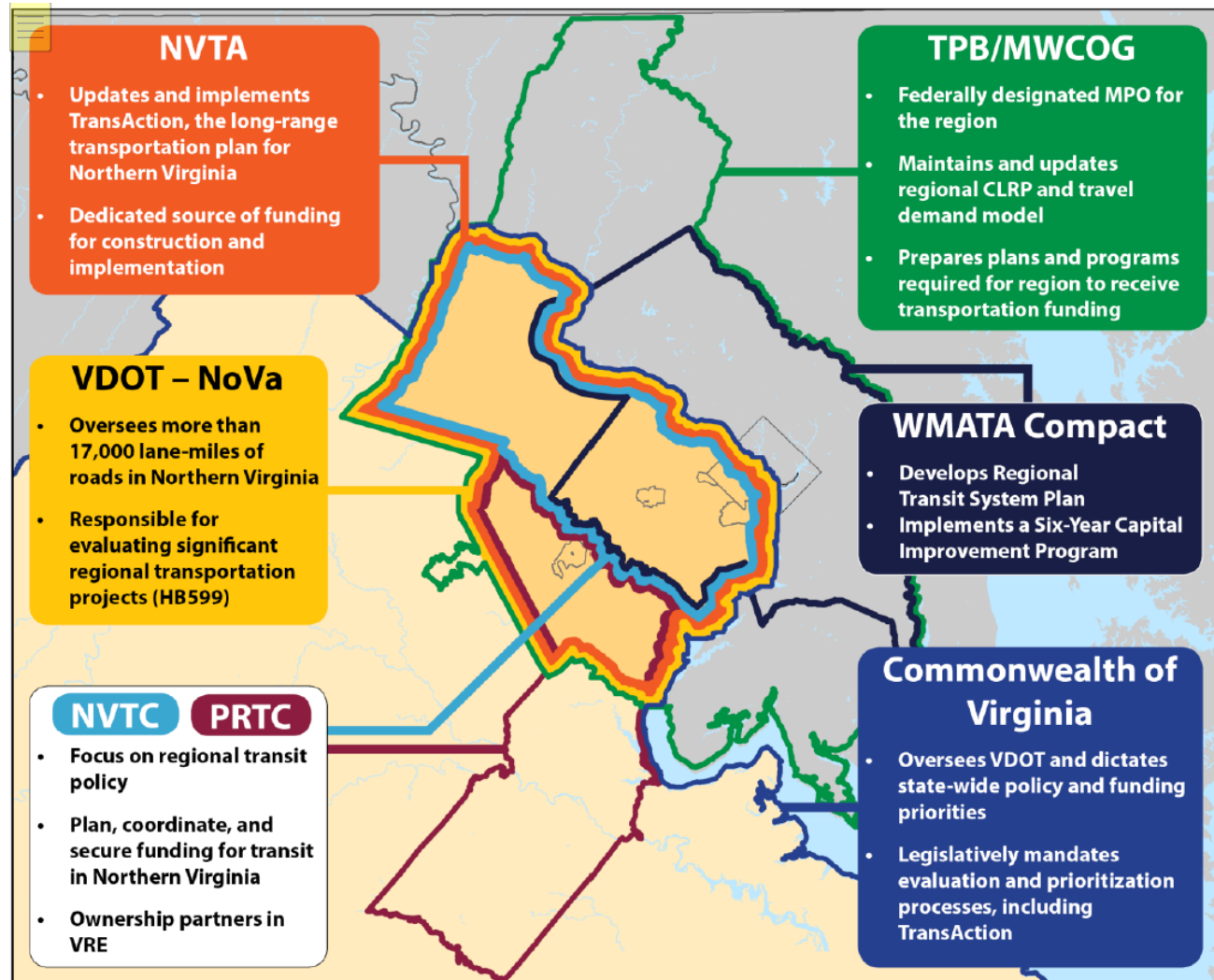


2. Prioritize and fund regional transportation projects → **Six Year Program** (adopted June 2018)





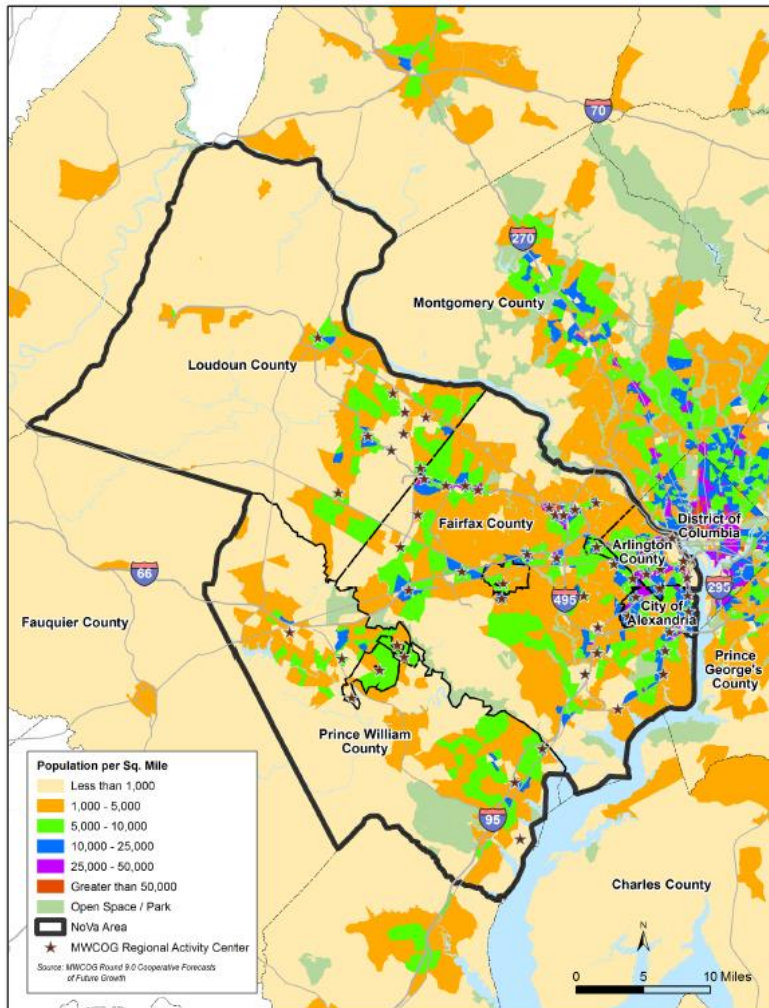
Regional Collaboration



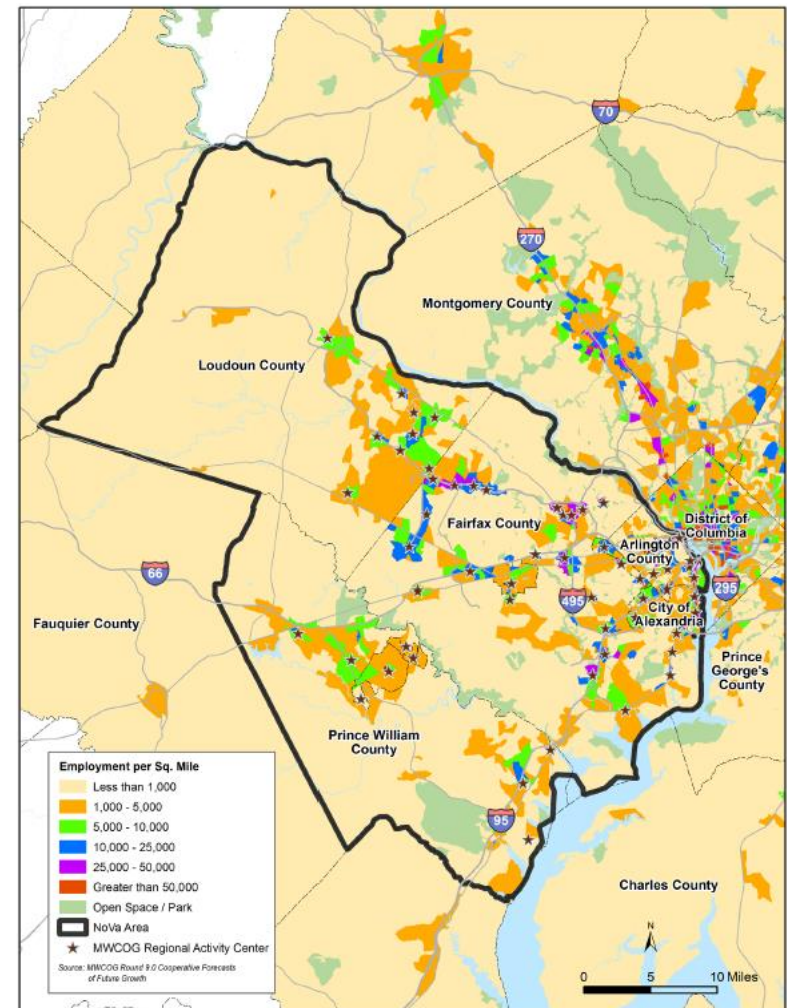


Growth in Population (24%) and Jobs (37%)...

2040 Population

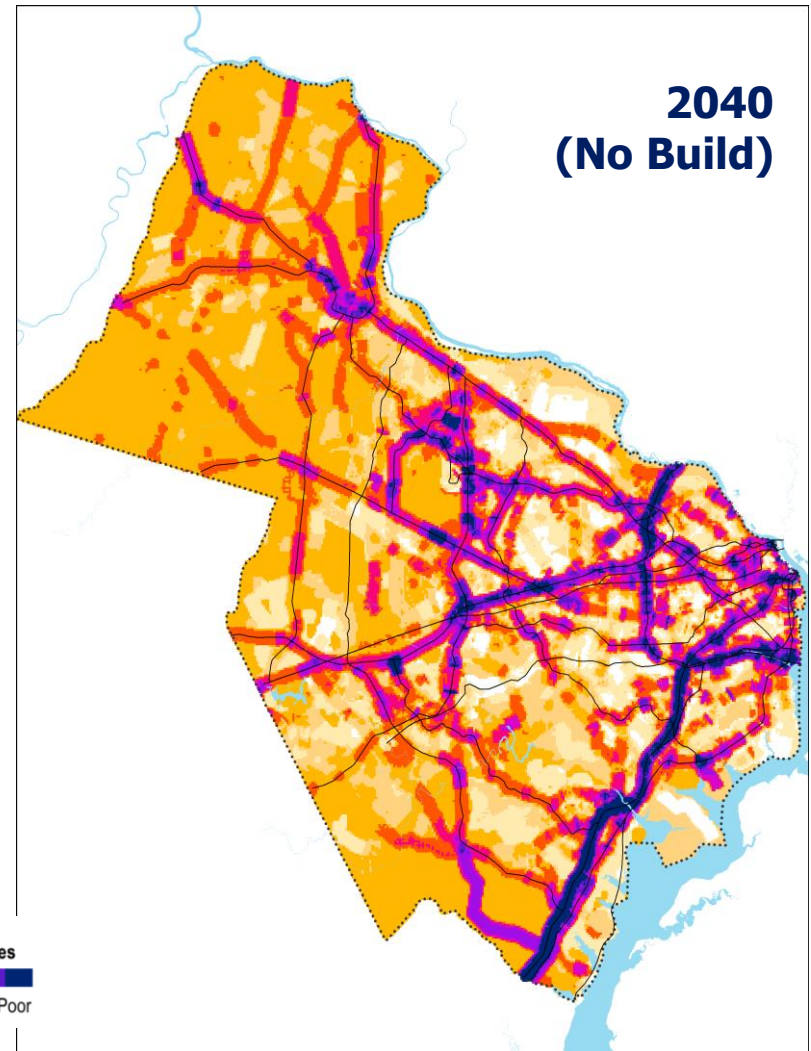
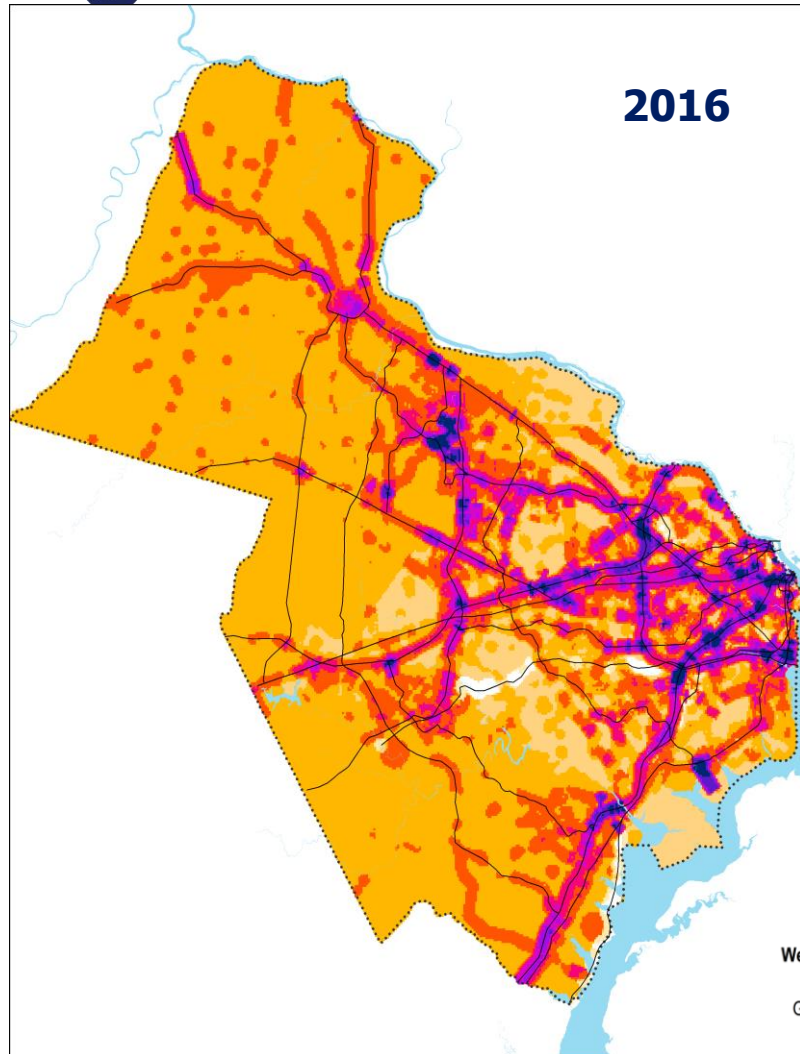


2040 Jobs





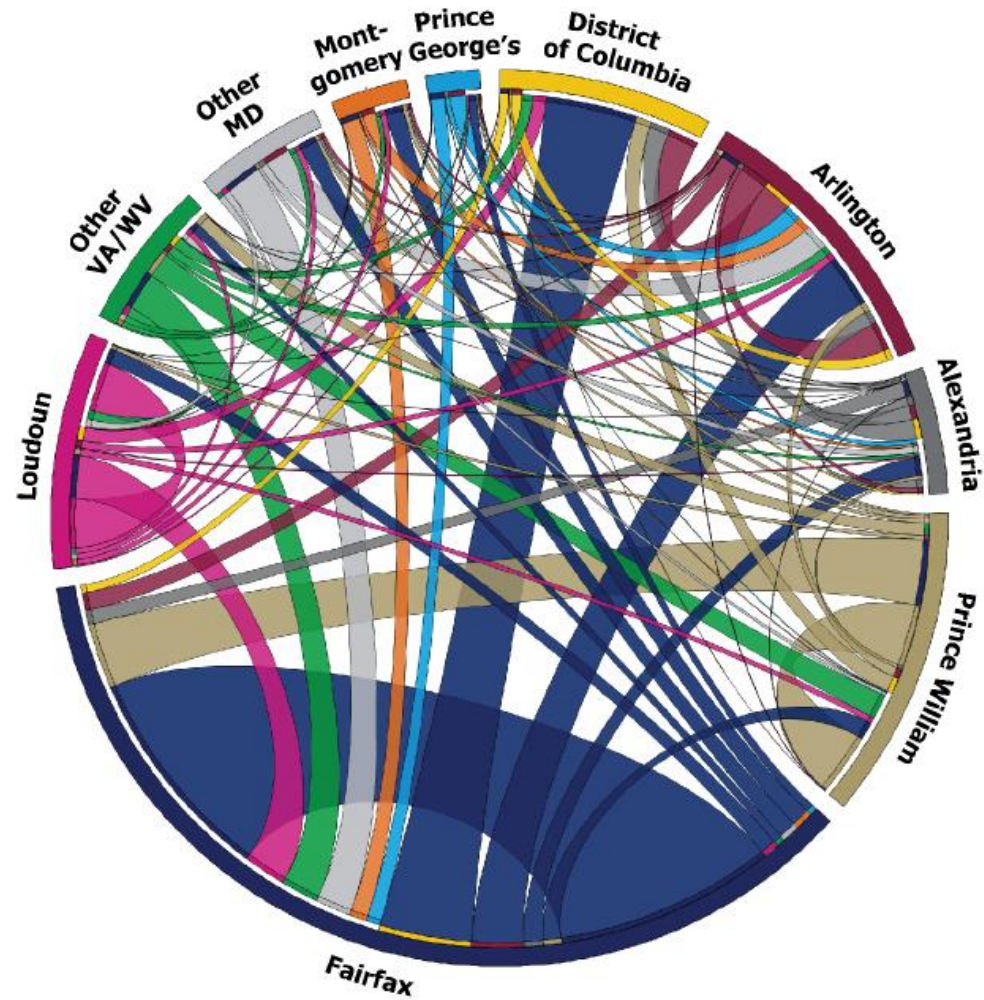
... will lead to worsening travel conditions



Weighted Performance Measures
Good > > > Poor



2040 Vehicular Commute Trip Patterns

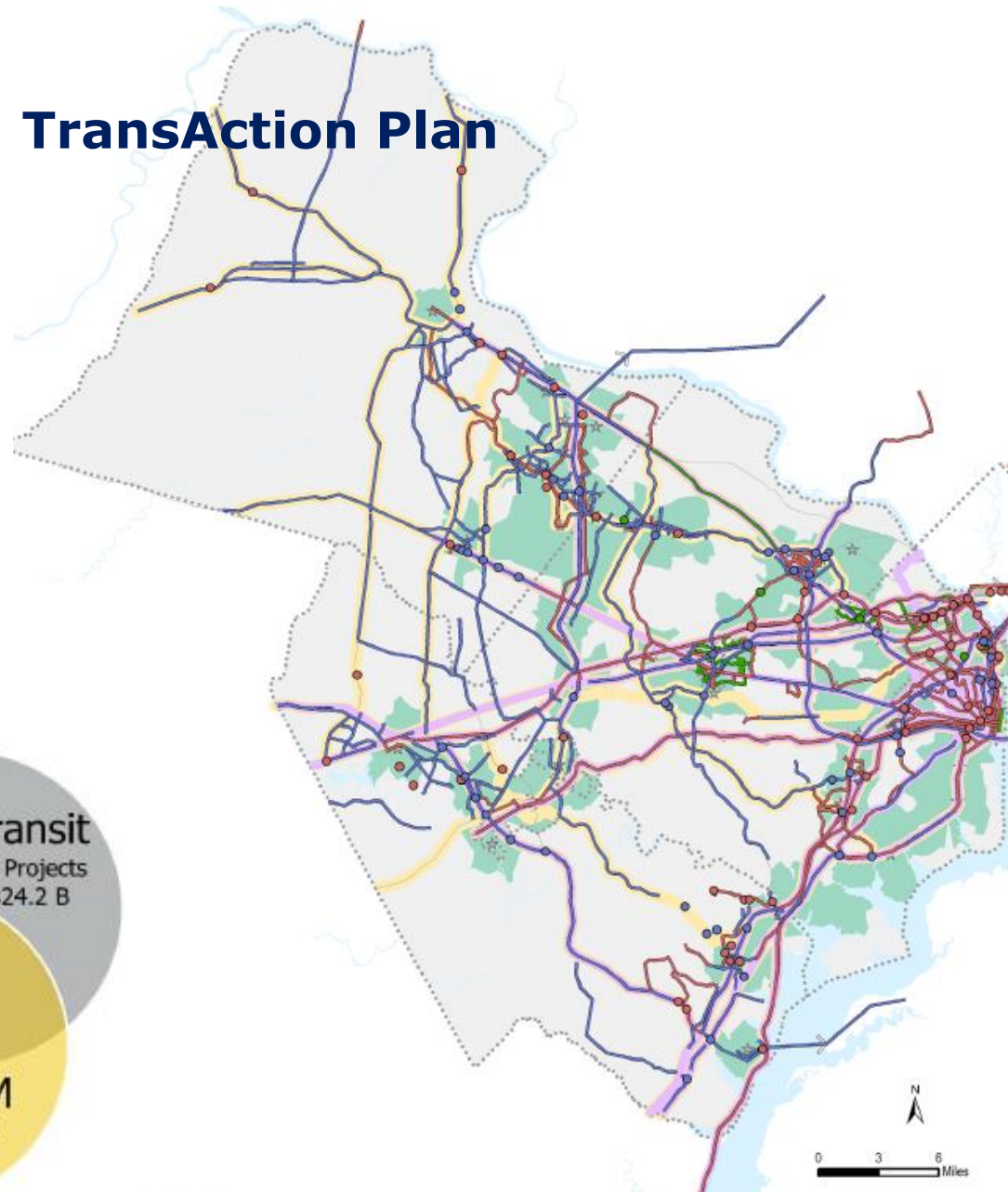
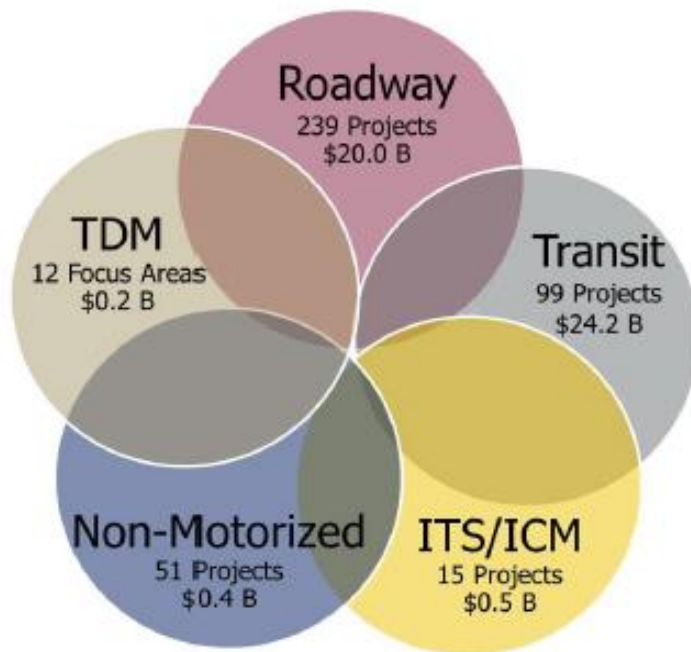




TransAction Plan

TransAction includes:

- 352 projects
- \$44 Billion





TransAction and Visualize 2045

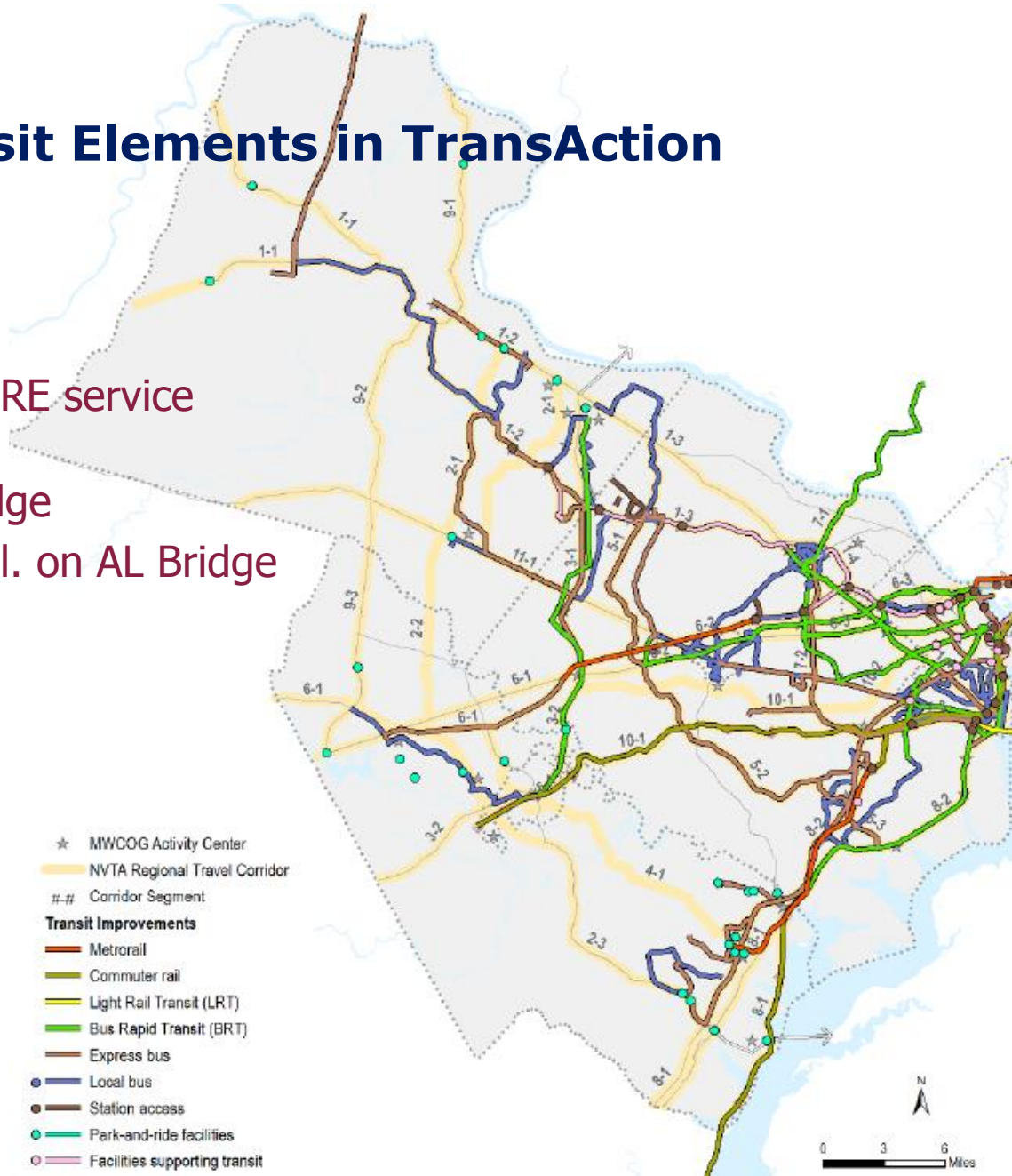
Common ground with aspirational elements

1. Bring jobs and housing closer together (Scenarios)
- 2. Expand bus rapid transit regionwide**
3. Move more people on Metrorail
4. Increase telework and other options for commuting
5. Expand express highway network
6. Improve walk/bike access to transit
7. Complete National Capital Trail



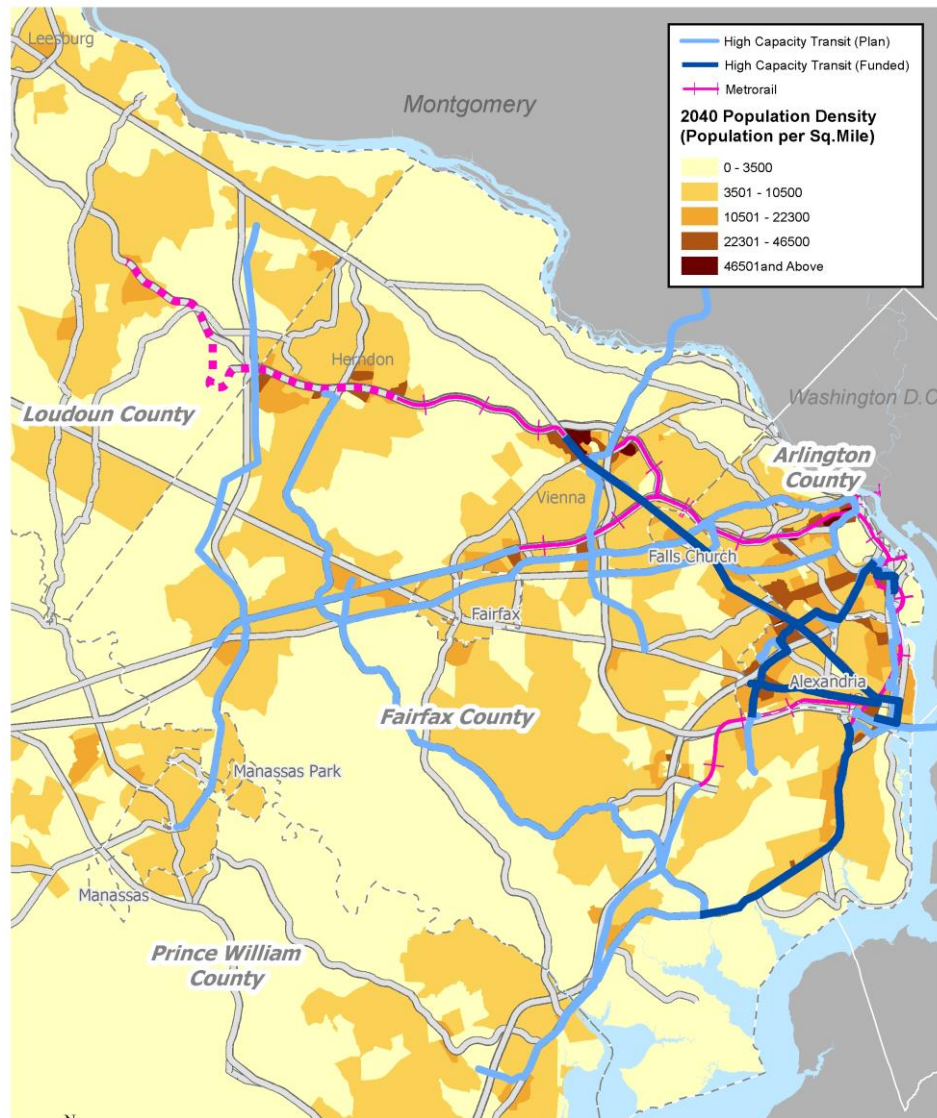
Transit Elements in TransAction

- Metrorail (second tunnel)
- Commuter rail (increased VRE service + cross over)
- Light rail (LRT) on WW Bridge
- Bus Rapid Transit (BRT) incl. on AL Bridge
- Express bus
- Local bus
- Station access
- Park n Ride facilities
- TSP/ITS



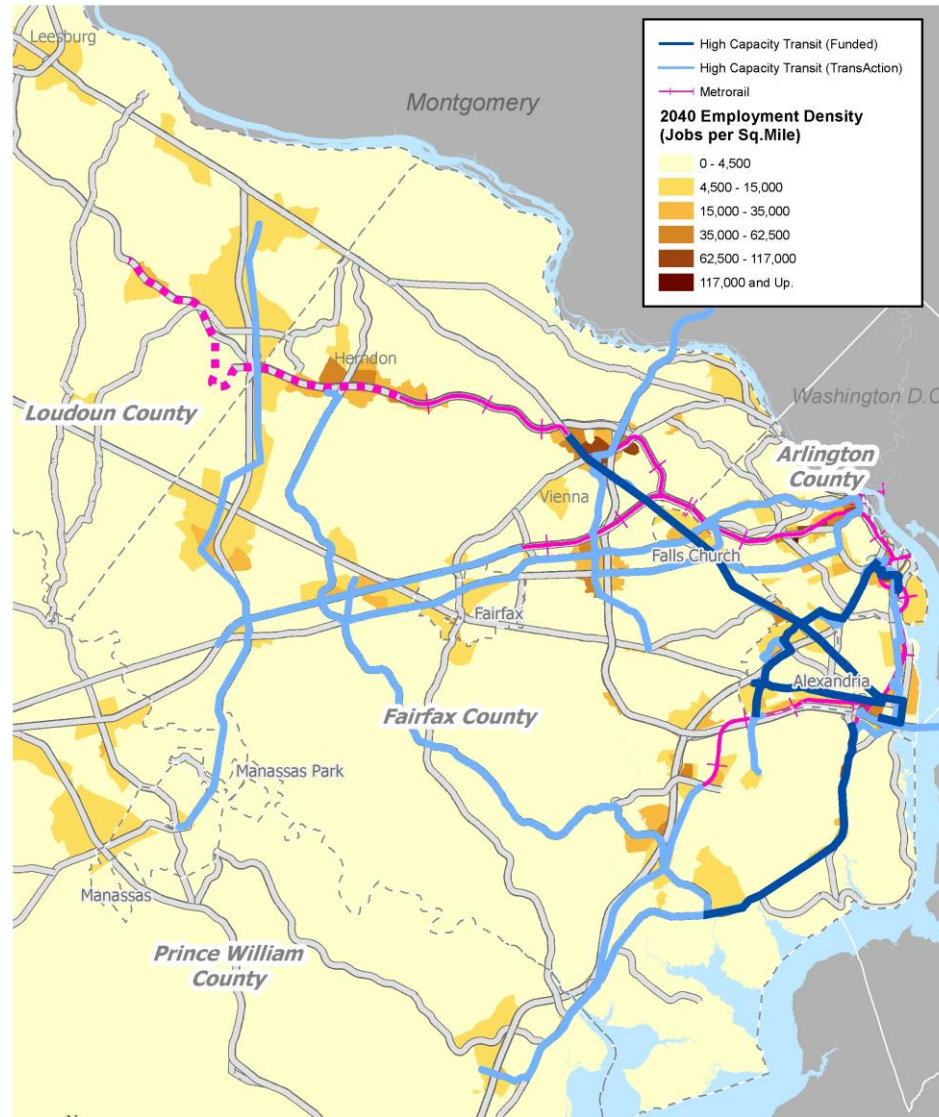


2040 Population Density





2040 Employment Density





Model Assumptions

- Different speed, capacity, and frequency assumptions for
 - Metrorail
 - VRE
 - LRT
 - BRT – dedicated lane (Richmond Highway)
 - BRT – mixed traffic
 - Express bus
 - Local bus

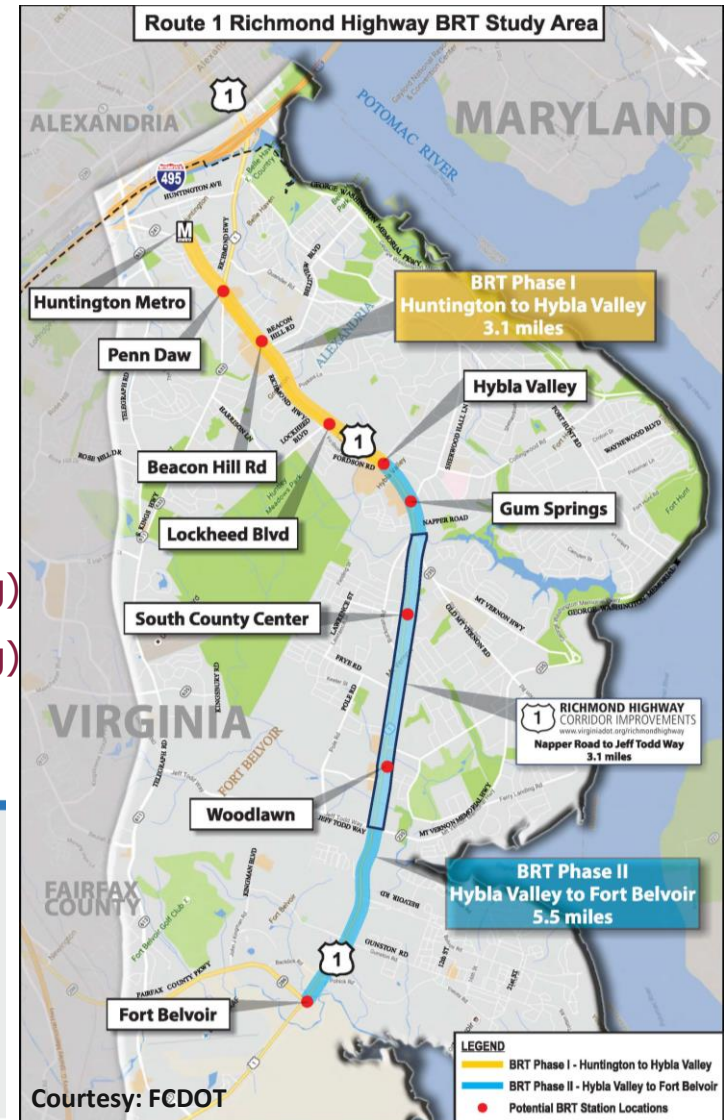
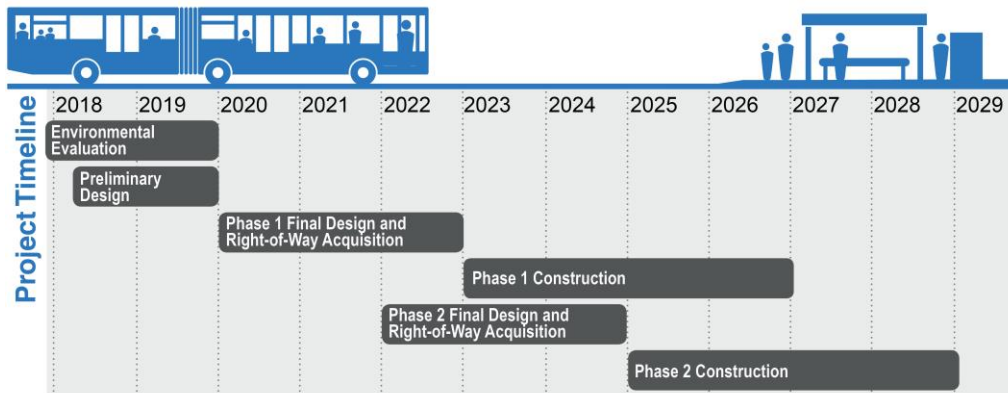


NVTA-funded BRT Projects

Richmond Highway BRT Fairfax County

Type: Median running
Length: 10.4 miles

Total Cost: \$730 million (excludes RT1 Widening)
NVTA Funds: \$250 million (excludes RT1 Widening)





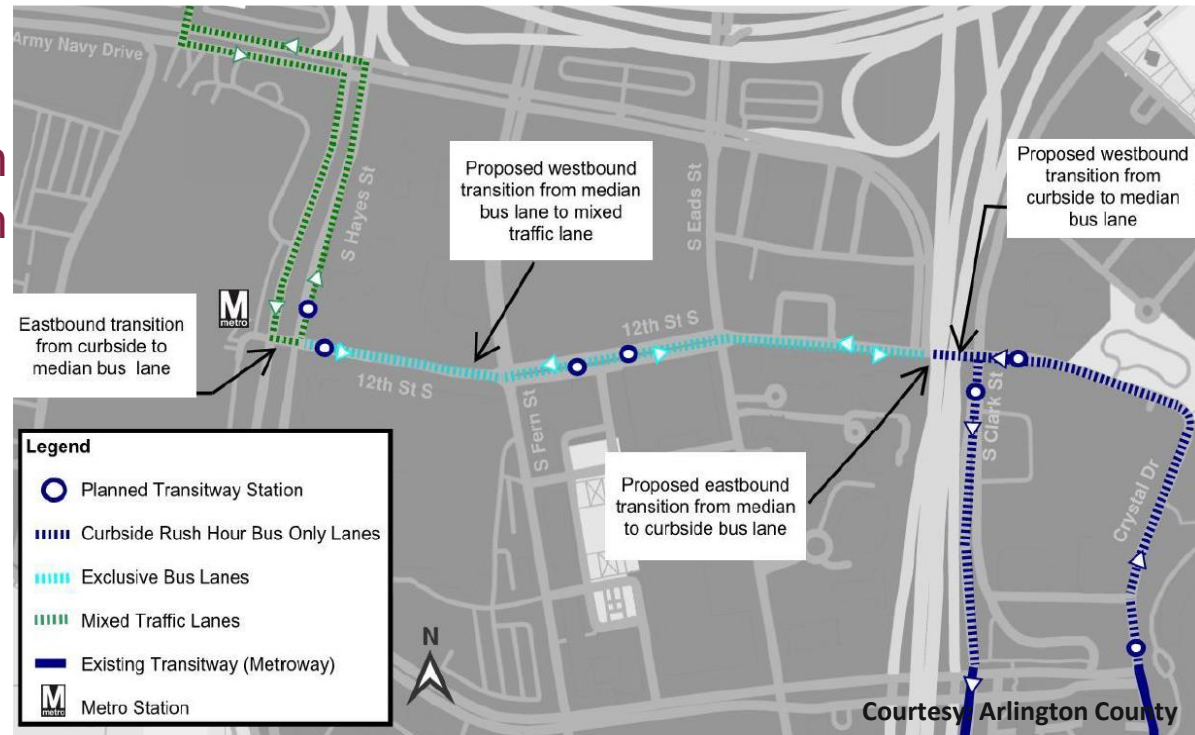
NVTA-funded BRT Projects

Pentagon City Transitway Extension Arlington County

Type: Median/curbside exclusive lanes and mixed traffic
Length: 1.5 mile

Total Cost: \$47 million
NVTA Funds: \$29 million

Design: 2017-2019
Construction: 2019-2021





NVTA-funded BRT Projects

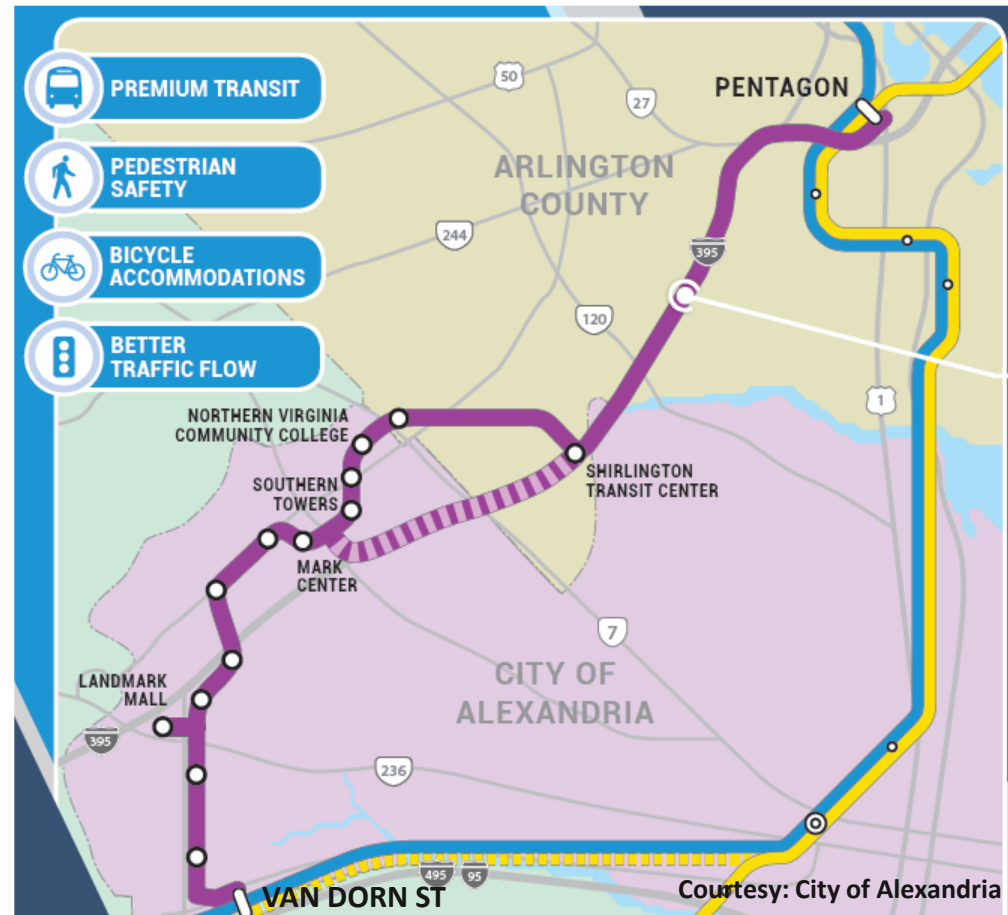
West End Transitway Phase 1 (Landmark Mall to Pentagon)

City of Alexandria

Type: Exclusive lanes/mixed traffic
Length: 5.3 miles

Total Cost: \$128 million
NVTA Funds: \$4.6 million

Design: 2017-2021
Construction: 2020-2023





NVTA-funded BRT Projects

Duke Street Transitway (Diagonal Road to Walker Avenue/Landmark Mall) City of Alexandria

Type: Exclusive curbside lanes

Length: 5 miles

Total Cost: \$115 million

Design: 2020-2023

NVTA Funds: \$12 million

Construction: 2024-2026



Courtesy: City of Alexandria



NVTA-funded BRT Projects

Route 7 BRT (Envision Route 7)

Fairfax Co-Arlington Co-Falls Church-Alexandria

Type: Exclusive lanes/mixed traffic

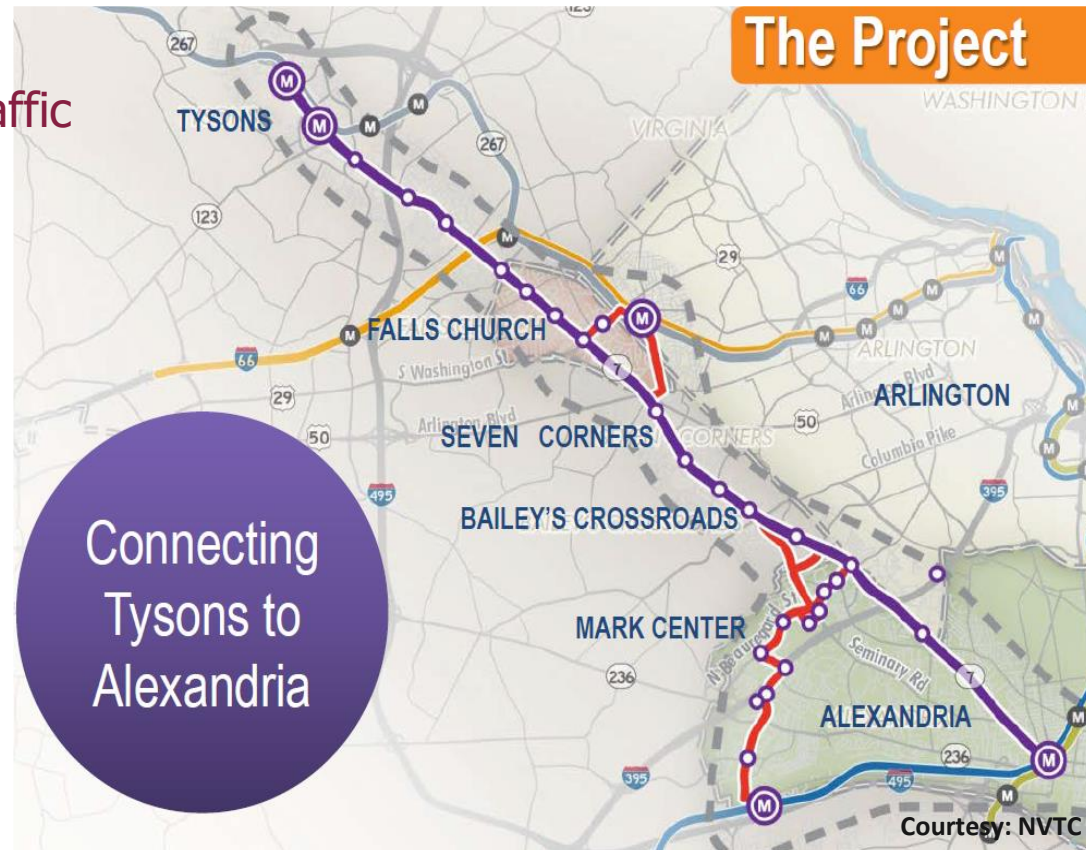
Length: 12 miles

Total Cost: \$300 million

NVTA Funds: \$800,000

Current status:

Conceptual engineering study





Conclusion

NVRTA's TransAction Plan developed a vision for high capacity transit corridors in Northern Virginia including connections to the District of Columbia and Maryland.

NVRTA's SYP is already advancing multiple BRT projects in the region.

Common ground between NVTA's TransAction Plan/SYP projects and Visualize 2045.

NVRTA continue to collaborate with jurisdictions and regional agencies in Moving the Region Forward.



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