



TransAction 2040

NVTA Presentation

May 10, 2012



TransAction 2040 Vision

In the 21st century, Northern Virginia will develop and sustain a multimodal transportation system that supports our economy and quality of life. It will be fiscally sustainable, promote areas of concentrated growth, manage both demand and capacity, and employ the best technology, joining rail, roadway, bus, air, water, pedestrian and bicycle facilities into an interconnected network.

Adopted by the NVTA



TransAction 2040 Goals

Goals

Provide an integrated, multimodal transportation system

Provide responsive transportation service to customers

Respect historical and environmental factors

Maximize community connectivity by addressing transportation and land use together

Incorporate the benefits of technology

Identify funding and legislative initiatives needed to implement the Plan

Enhance Northern Virginia relationships among jurisdictions, agencies, the public and the business community

Adopted by the NVTA

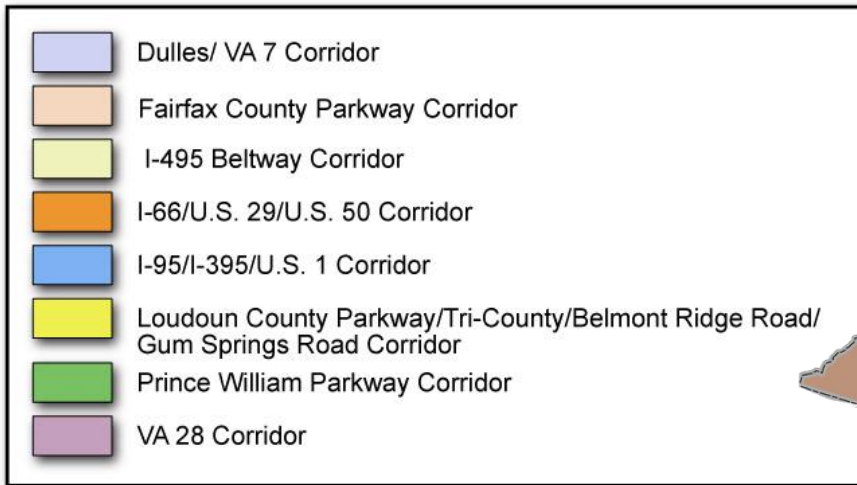


TransAction 2040 Overview

- Planning horizon is Year 2040
- Coverage
 - Counties of Arlington, Fairfax, Loudoun, and Prince William
 - Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park
 - Towns of Dumfries, Herndon, Leesburg, Purcellville, and Vienna
- Projects included address roadway, transit, bicycle, and pedestrian improvements
- Focused on eight regional corridors connecting major origins and destinations



Eight Regional Corridors



Other major improvements outside the eight defined corridors are also identified





Relationship to TransAction 2030

- Extended planning horizon
- Updated and added new projects
- Modified evaluation and prioritization process
 - Introduced a more transparent approach for prioritization
 - Included quantitative evaluation measures
 - Retained many of the same qualitative measures
- Introduced benefit/cost analysis



Major Project Activities

- Identify Initial Project List (Completed)
- Establish Evaluation Framework (Completed)
- Analyze Projects Using TPB Version 2.3 (Release 37) Model (Completed)
- Assign Ratings and Perform Preliminary Project Prioritization (Completed)
- Prepare LOS Maps (Completed)
- Issue Newsletter #1 (Completed)
- Conduct Public Open House (Completed)
- Determine Revised Project List (Now)
- Perform Model Analysis of Revised Build Scenario (May-June)
- Finalize Project Prioritization (June-July)
- Issue Newsletter #2 and Prepare Final Reporting (July-September)



Scenarios Tested Using the Travel Demand Forecasting Model

- 2007 Scenario
 - 2007 Land Use
 - 2007 Network
- 2040 Base Scenario
 - 2040 Round 8.0 land use
 - All projects in the Financially Constrained Long Range Plan (CLRP) in place, including Silver Line and 495 Express Lanes
- 2040 Build Scenario
 - 2040 Round 8.0 land use
 - All projects in the CLRP in place
 - All of the TransAction 2040 projects



Major Projects in the Build Scenario

- Over 100 highway projects adding 785 lane-miles
 - Western Transportation Corridor
 - Eastern Potomac River Crossing
 - Urban street grids at major activity centers (e.g., Tysons Corner, Crystal City, etc.)
 - HOV lanes on the Fairfax County Parkway



Major Projects in the Build Scenario

- More than 50 transit projects
 - Metrorail extensions to Gainesville and Potomac Mills
 - Metrorail connections across the Wilson and Legion Bridges
 - Expand Metrorail fleet to all 8-car trains
 - Light rail on VA 28 and VA 7
 - VRE extensions to Haymarket and Fauquier County
 - Priority Bus services on the Capital Beltway, Fairfax County Parkway, Duke Street, and other corridors
 - Park-and-Ride lot construction in outer counties
- Over 40 projects to improve bicycle/pedestrian conditions
 - Bikesharing
 - Grade-separated crossings
 - Trails



Travel Pattern Changes

- **Round 8.0 Land Use is a Primary Driver**
 - Growth in residential and employment opportunities throughout region
 - Proportionally more jobs than residences added in areas outside the core
 - Arlington County is forecast to continue to have more jobs than workers
 - Fairfax County is forecast to have slightly more jobs than workers
 - Loudoun and Prince William Counties are forecast to continue to have more workers than jobs
- **Transportation Network also Influences Travel Patterns**
 - Model reflects the idea that people have a travel time budget
 - If faster access is available, people travel farther to reach opportunities



Corridor-Level Observations

- All Corridors Have Expanded Multimodal Capacity
 - The 2040 Build Scenario includes increased lane miles (i.e., new or widened roads) and improved transit service in all corridors
 - In most corridors, proportionally less VMT is added than lane miles resulting in lower levels of congestion in the 2040 Build Scenario
 - In some corridors, there is an increase in the ratio of person travel (PMT) to vehicle travel (VMT), indicating more efficient travel in the 2040 Build Scenario, perhaps due to improved transit options



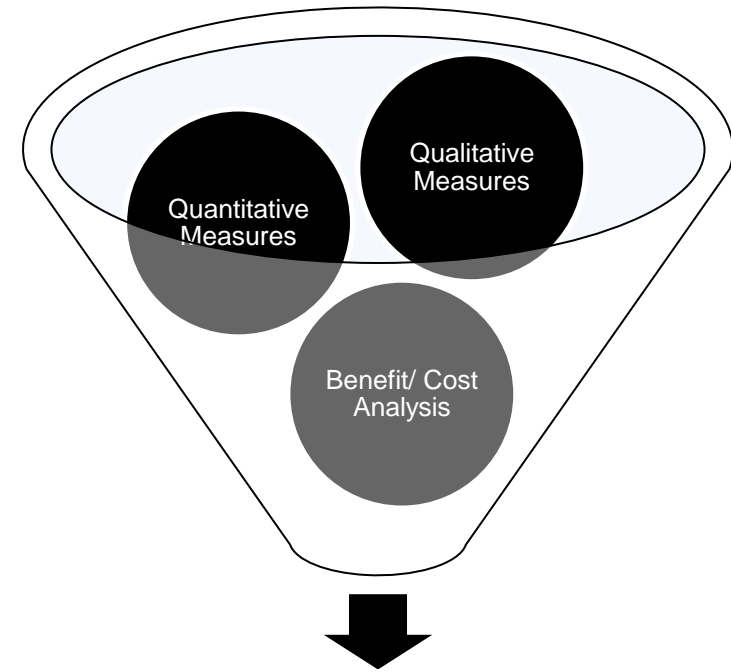
Corridor-Level Observations

- Level of Service Effects
 - Comparing 2007 to 2040 Base, more vehicle travel occurs on congested roadways in nearly all of the corridors
 - Comparing 2040 Base to 2040 Build, more vehicle travel occurs on uncongested roadways in virtually all of the corridors
 - This shows that the Build projects help reduce congestion
 - Despite major improvements, the 2040 Build scenario still has higher levels of congestion than 2007



Preliminary Project Prioritization

- Each project assessed using set of evaluation criteria to facilitate the evaluation of potential benefits
- Project scoring involved qualitative and quantitative performance measures
- Benefit/cost analysis performed for each project
- Prioritization methodology was developed in coordination with project oversight and advisory bodies



Prioritization of the project list



Preliminary Project Prioritization

- Projects are prioritized within corridors and within project type
- Benefit/Cost ratings in tiers (high, medium, low)



Revised Project List-Inclusions

Location	Added/Revised Build Scenario Projects
I-495 at Legion Bridge	1) Extend High Occupancy Toll (HOT) from VA193 to GW Parkway 2) Connect Metrorail Red Line in Maryland with the Orange Line at Dunn Loring with light rail transit (LRT)
I-95 at Wilson Bridge	Connect Metrorail Green Line in Maryland with the Blue/Yellow Line in Virginia with LRT
I-395 at Potomac River	1) Extend bus lanes between Pentagon and D.C. 2) Connect Arlington and D.C. streetcar networks across Long Bridge; add'l track for VRE
Braddock Road	HOV Lanes from I-495 to Burke Lake Road

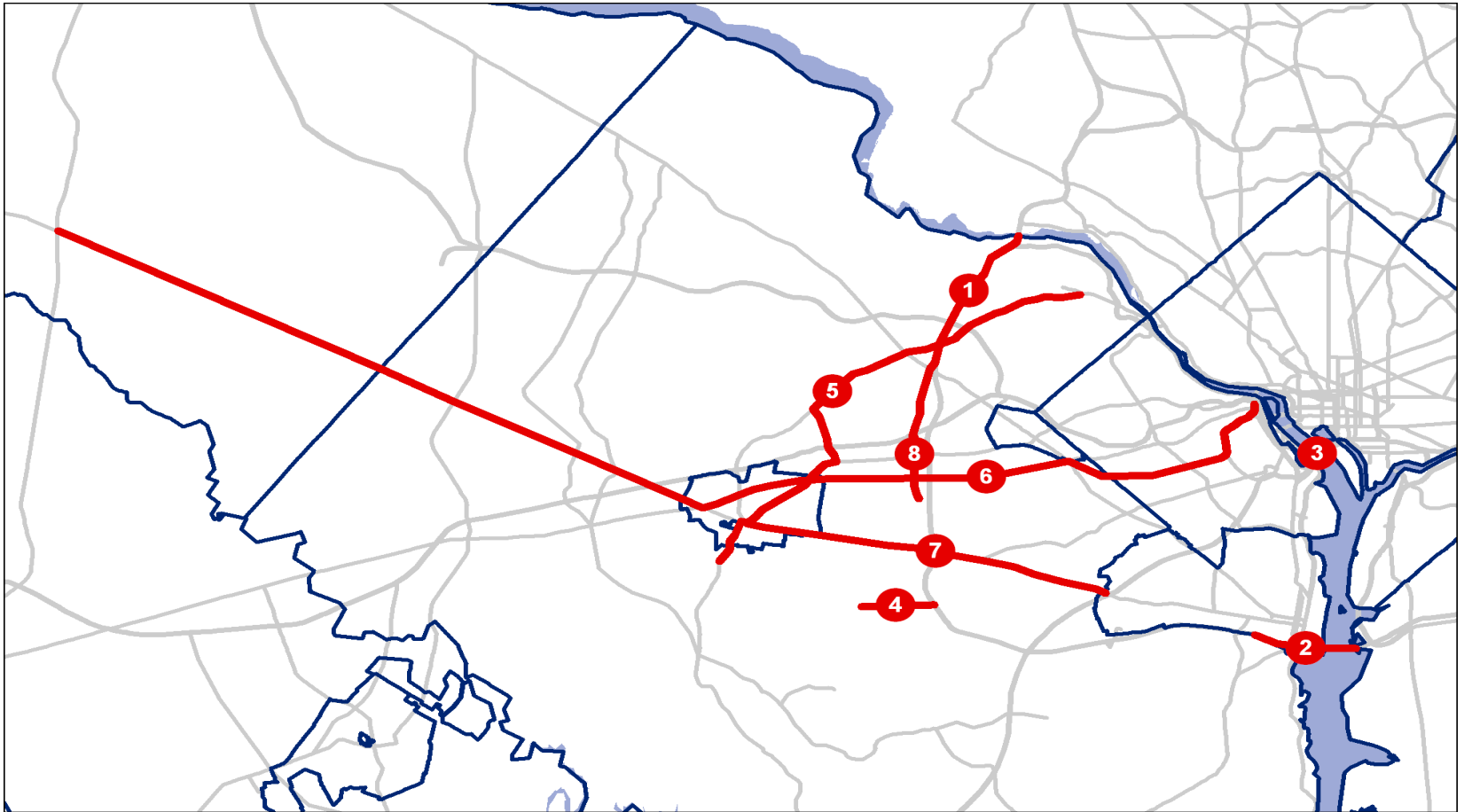


Revised Project List

Location	Added/Revised Build Scenario Projects
VA 123 Braddock Road / GMU to Georgetown Pike	Addition of priority-bus/BRT service and/or bus lanes where practical; may deviate from Rt 123 between Nutley and Main Streets via Vienna Metro station and Old Lee Highway
U.S.50 Rosslyn to U.S. 15	Addition of bus-only/priority-bus lanes where practical
VA 236 Fairfax to Alexandria	Priority-bus/BRT service, Fairfax City to Beauregard ; bus lanes where practical
U.S. 29 & Gallows Road (Merrifield)	Extend LRT from Dunn Loring to Inova Fairfax Hospital



Map of Recommended New Projects





Next Steps

- Modify project list and perform second model run to support finalization of project prioritization
- Anticipated final report Summer 2012
- Anticipated adoption Fall 2012

