Bus Rapid Transit in Northern Virginia

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What is Bus Rapid Transit (BRT)?

- There are many differing opinions on what is BRT.

- The Transit Cooperative Research Program defines it as:
  “A flexible, high performance rapid transit mode that combines a variety of physical, operating and system elements into a permanently integrated system with a quality image and unique identity.”

- Commonly mentioned characteristics include:
  - Dedicated running lanes
  - Substantial transit stations and stops
  - Distinctive easy-to-board vehicles (no steps)
  - Uniquely branded service
  - Traffic signal priority
  - Off-vehicle fare collection
  - Use of Intelligent Transportation System (ITS) technologies
  - Frequent service (14-16 hours/day, 10-min peak, 15-min off-peak)
Existing Conditions

- There are no bus services in Northern Virginia today that have all of the common BRT characteristics; however, services with some BRT characteristics are operating in the following corridors:
  - I-95 Corridor
  - I-395 Corridor
  - I-66 Corridor
  - Route 1 Corridor
  - VA 267 - Dulles Corridor
  - VA 244 - Columbia Pike
## Existing Conditions

<table>
<thead>
<tr>
<th>BRT Characteristic</th>
<th>I-95</th>
<th>I-395</th>
<th>I-66</th>
<th>Rt. 1</th>
<th>Dulles</th>
<th>C. Pike</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated running lanes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
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<tr>
<td>Stations and stops</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Distinctive vehicles</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
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<tr>
<td>Unique branding</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Traffic signal priority</td>
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<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Off-vehicle fare collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Use of ITS</td>
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<td>✓</td>
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<td>✓</td>
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<td>✓</td>
</tr>
<tr>
<td>Frequent service</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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**Note:** HOV lanes and Dulles Airport Access Road are not fully dedicated to buses but offer a distinct advantage over general purpose lanes. Stations and stops are not equipped for off-vehicle fare collection.
Projects That Will Help Advance BRT

- **I-495 Corridor – HOT Lanes Project**
  - Project is under construction and will provide access to new markets for transit such as Tysons Corner

- **I-95/I-395 Corridor – HOT Lanes Project**
  - $195 million proposed Concession Payment for transit and transportation demand management, including Bus Rapid Transit Service

- **Rappahannock-Rapidan Regional Commission**
  - Starting a new demonstration commuter bus service to NOVA/DC
  - Responses to RFP received on October 17, 2008

- **Across the Region - Mega Transportation Management Plan**
  - Transit strategies will be deployed to mitigate construction impacts including ITS technologies and new transit services

Ongoing Studies

- I-95/I-395 Corridor
  - February 2008 – Transit/TDM Study led by a technical advisory committee consisting of local governments and transit operators in the corridor recommended plan for how to use the $195 million. Included BRT concept and recommended further analysis at an operational level.
  - July 2008 – DRPT/VDOT initiated operational analysis of proposed HOT Lanes project to develop recommendations on improving transit service
  - September 2008 – DRPT/VDOT initiated operational analysis of BRT concept recommended in Transit/TDM Study and expanded concept to include BRT in I-495 Corridor
  - September 2008 – DRPT/VDOT released results of a bus-only lane analysis that determined the dedicated lane would not provide a significant benefit over the current HOT Lanes design. VDOT continues to conduct environmental work on the project.
Ongoing Studies

- I-495 Corridor
  - February 2008 – Transit/TDM Study examined bus routes that would take advantage of I-495/I-95/I-395 HOV/HOT Lanes. Routes were included in recommendation as some of the best performers.
  - September 2008 – DRPT/VDOT advancing implementation of routes as part of Mega Transportation Management Plan
  - September 2008 – corridor included in BRT operational analysis for I-95/I-395 Corridor
Ongoing Studies

- I-66 Corridor (inside and outside I-495)
  - June 2008 – DRPT produced draft data collection report documenting previous transit studies in the corridor and identified data gaps
  - July 2008 - DRPT initiated Transit/TDM study. Study is focused on short term bus improvements and Bus Rapid Transit
  - Information from the study will feed into the upcoming multi-modal Environmental Impact Statement for I-66 (outside of I-495)
Ongoing Studies

- Route 1 Corridor
  - Prince William County is conducting a Bus Rapid Transit study in the corridor using funds from the Commonwealth’s Multi-Modal Office.
Other Studies

- National Capital Transportation Planning Board
  - Scenario Study that is looking at value priced lanes and a regional Bus Rapid Transit Network

- George Mason University
  - Bus Rapid Transit study in Route 50 Corridor
Regional BRT Network

- Regional BRT Network could include the following corridors:
  - I-95/I-395 Corridor
  - I-66 Corridor
  - Route 1 Corridor
  - Route 28 Corridor
  - Route 50 Corridor
  - VA 236 Corridor (Little River Turnpike)
  - I-495 Corridor
  - Dulles Corridor
  - Route 7 Corridor
  - Route 29 Corridor
  - Route 7100 Corridor (Fairfax County Pkwy.)
  - VA 244 Corridor (Columbia Pike)
Issues

- **Service Area/Market** – cost and effectiveness of service is driven by market demand

- **Governance/Coordination** – multiple public and private operators in the region (Metro, PRTC, Local Jurisdictions, Quicks, Martz, etc.)

- **Roadway/Operational Improvements** – improve HOV Network (management, capacity, connections), implement priority signal systems, bus lanes, park-and-ride facilities, station/stops, etc.

- **Financial Feasibility** – identify capital and operating costs, funding sources, fare policy, etc.
Opportunities

- Incremental approach can be financially feasible and bring significant improvements in the short term
- Reduce travel time
- Increase ridership
- Better coordinate services
- Provide relief to rail systems
- Encourage public-private partnerships
Next Steps/Recommendations

- Complete analysis in I-66, I-495 and I-95/I-395 Corridors
- Construct I-495 and I-95/I-395 HOT Lanes Projects
- Work with local jurisdictions to concentrate transit oriented development around major stations/stops
- Evaluate potential benefit of public-private partnerships with private operators
- Consider branding partnerships among providers