

# Characteristics of Bus Rapid Transit (BRT)

BRT is a high-performance bus transit system that provides fast, reliable, and comfortable urban mobility. Limited stop service and new transit technologies help make BRT more "rapid" than conventional bus service, while the greater passenger comfort and improved reliability of BRT enhance the overall quality of the transit trip. Cities such as Boston, Los Angeles, Pittsburgh, are now on board with BRT and many more are looking at this technology as an option. Characteristics of BRT systems vary, but they typically incorporate several of the following:

## Exclusive Right-of-Way ▶

BRT vehicles move more quickly when they can travel in their own dedicated lanes, avoiding conflicts with motor vehicles.



The future exclusive running way at One Potomac Yard

## ◀ State-of-the-Art Buses

BRT vehicles look and operate differently than most conventional buses. They often feature low-floors and wide doors and aisles for easy boarding and exiting. New technologies offer a quieter, more comfortable ride, and clean fuels offer better air quality.



Though not a BRT system, the new D.C. Circulator vehicles feature many state-of-the-art bus transit elements.



An artist's rendering of the Columbia Pike "Super Stop" design, which incorporates many stop enhancements.

## Enhanced Bus Stops ▶

Many BRT systems feature large, high-quality stops that fit in well with the surrounding neighborhood. Stops often have safe, comfortable shelters with maps, signage, and lighting, and improvements to the streetscape such as landscaping, bicycle racks, well-designed crosswalks, pedestrian signals, and other amenities for passenger safety and comfort.

## ◀ Real-Time Information

One of the amenities that transit riders find most valuable is information about when the next vehicle will arrive. BRT and other bus systems often present this information in real time on electronic message boards.



A next-bus sign lets riders at the Vienna/Fairfax/GMU Metro station know when the next Green Line CUE buses will be connecting.

## Signal Priority ▶

A common attribute of BRT is signal priority, which allows buses to communicate with traffic signals, enabling BRT vehicles to spend less time waiting at red lights and improving speed and reliability. Giving priority to transit can potentially increase the person through-put of an intersection, because transit vehicles can hold many more people.



Richmond Highway Express (REX) buses use signal priority to speed up travel times along Route 1 in Fairfax County.

# Crystal City / Potomac Yard Transit Improvements

AUTUMN 2006

## Rapid Bus Service Coming to Corridor Environmental Review Moving Forward

The Crystal City/Potomac Yard Corridor Transit Improvements Project is jointly sponsored by Arlington County and the City of Alexandria in cooperation with the Washington Metropolitan Area Transit Authority (Metro) and the Virginia Department of Rail and Public Transportation (DRPT).

The purpose of the project is to provide high-capacity, high-quality bus transit service in the five-mile corridor between the Pentagon and Pentagon City in Arlington County and the Braddock Road Metrorail Station in the City of Alexandria.

The effort came about as a response to rapid development and redevelopment occurring in the corridor. New commercial and residential buildings are going up in Crystal City and Pentagon City with further growth planned for the immediate and long-term future. Build-out of Potomac Yard over the next 10 years will result in a substantial increase in new retail, office, hotel, and residential space. The new transit system will

add transportation capacity along the corridor and provide better connections to Metrorail and other activity centers in the area. Transit improvements are being phased in to accommodate new growth being planned in both the City of Alexandria and Arlington County; the rate of implementation will vary with each jurisdiction's development plans.

The project is currently advancing into the environmental review process. This process meets the requirements of the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act (for the protection of parklands), and other federal and state requirements.

This brochure is your guide to understanding the ongoing environmental review of the planned transit improvements. For more information about the project environmental review, please visit [www.ccpytransit.com](http://www.ccpytransit.com).

### Features of New Bus Service:

- Dedicated rights-of-way in some segments
- Increased transit capacity in the corridor
- More frequent service
- Improved link between new development and Metrorail

### In This Brochure:

- Description of Transit Service Improvements
- System Map and Concepts
- Characteristics of Bus Rapid Transit Systems

### Project Contacts:

Arlington County Department of Environmental Services, Division of Transportation: 703.228.3681

City of Alexandria Department of Transportation and Environmental Services: 703.838.3800

Virginia Department of Rail and Public Transportation: 703.934.4636

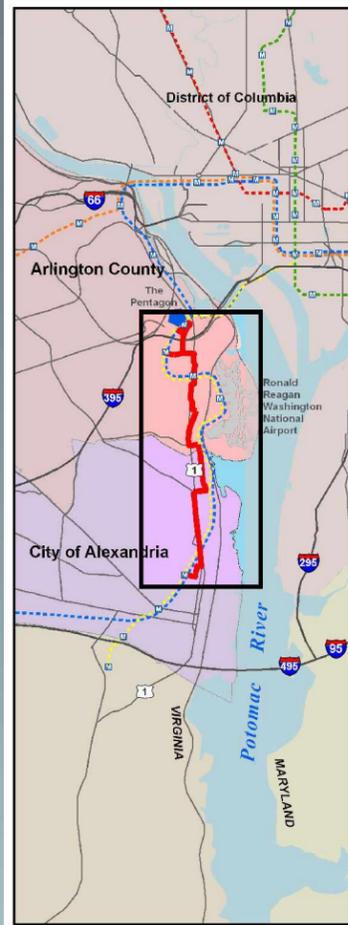
Washington Metropolitan Area Transit Authority: 202.962.6474



# Study Area and Alignment

## Phased Transit Improvements

# Crystal City / Potomac Yard Concepts



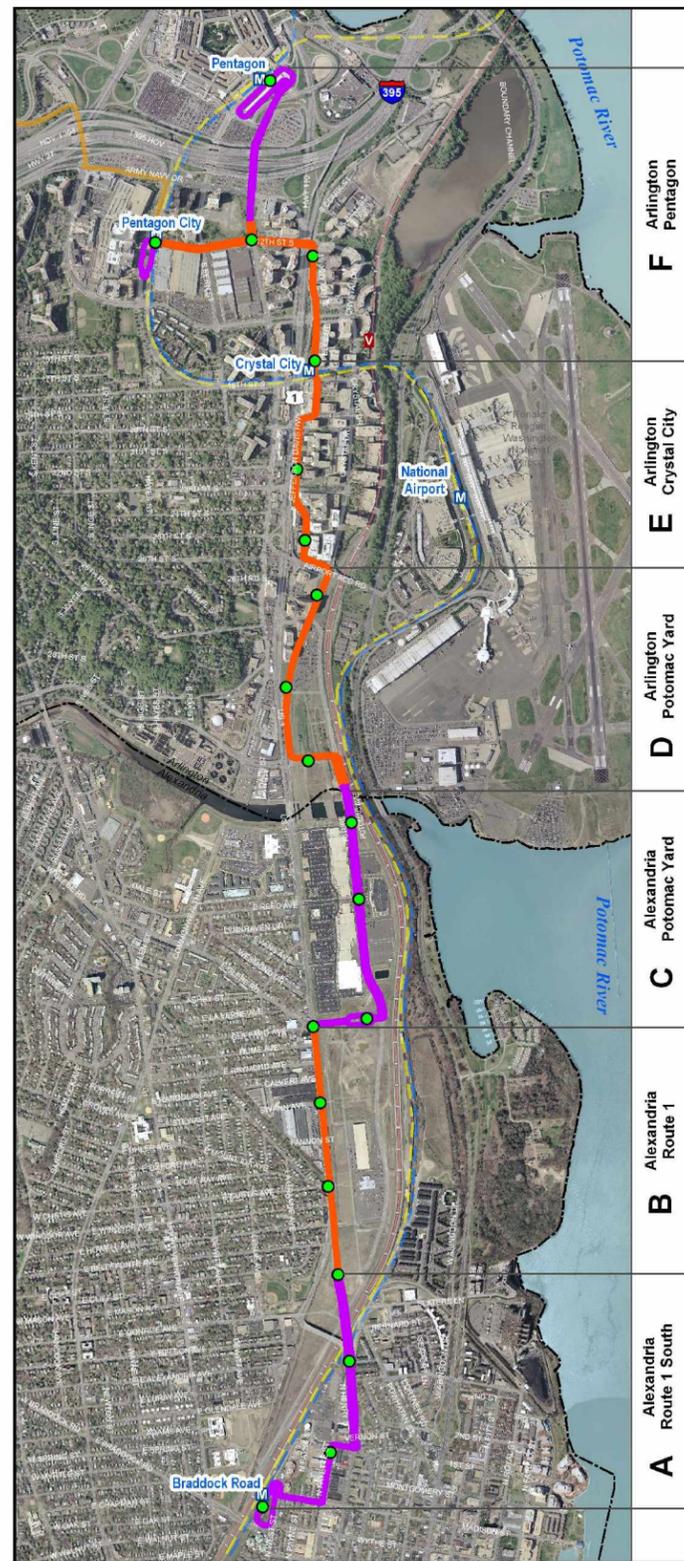
**Legend**

- VRE Station
- Metro Station
- Blue Metro Line
- Yellow Metro Line
- VRE Railroad
- Columbia Pike Transit (Proposed)
- Proposed Station Stop

**Planned Alignment**

- Mixed Traffic ROW
- Dedicated ROW

0 0.3 0.6 Miles



Transit improvements are already underway in the corridor, including the recently implemented Metrobus 9S route, which offers six-minute peak service to the U.S. Environmental Protection Agency's new offices at One Potomac Yard and provides connections to Metrorail and the Virginia Railway Express (VRE). More changes will take place in the coming years:

- Short-term, 2 to 3 years:**
- First segment of busway to open between the Arlington/Alexandria border at Four Mile Run and 26th Street South; service every 6 minutes during weekday peak periods and every 12 minutes off-peak and on weekends.

- Mid-term, 4 to 7 years:**
- Additional busway to be built in Crystal City north of 26th Street and in Alexandria along Route 1 between East Glebe Road and the Monroe Avenue Bridge

- Service to be integrated into a single high-capacity, high-amenity, branded service running from one end of the corridor to the other along the new busway between 5 a.m. and 12 a.m. on weekdays and 7 a.m. and 12 a.m. on weekends.

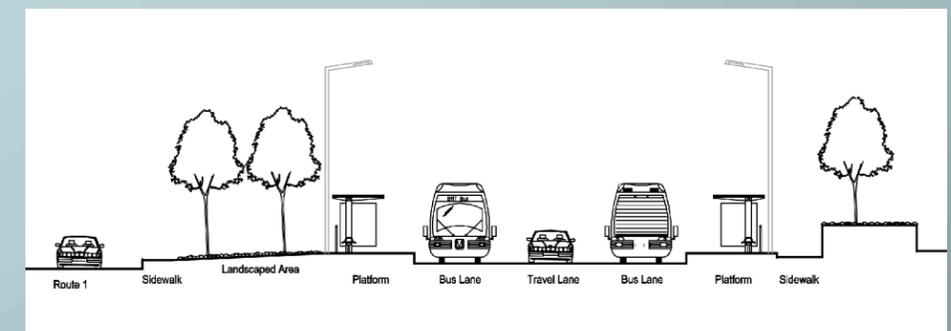
In the **long term**, a Bus Rapid Transit or light rail service in the corridor could utilize the busway and stops constructed as part of the initial service.



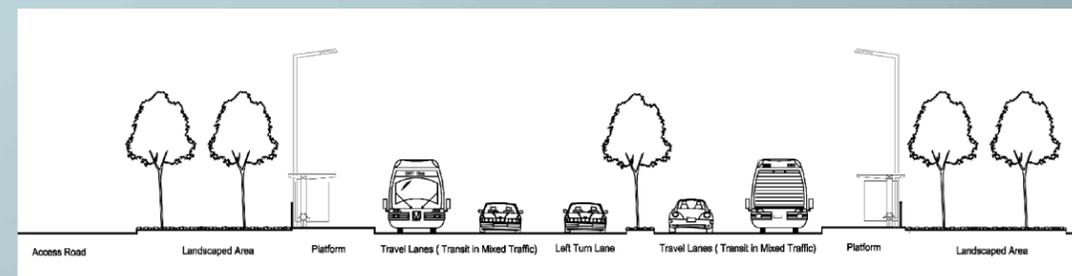
**Exclusive Bus Lanes (Curbside and Median)** – The renderings above show two types of dedicated running ways for Segment B of the corridor (Route 1 in Alexandria). The drawing above/left shows what the roadway configuration might look like if the transit vehicles operate in exclusive rights-of-way along the curb in each direction. The drawing above/right shows what the configuration might look like if the vehicles run in separate lanes in the median. Below: Cross-section views of curbside running ways (left) and median running ways (right). In both cases, transit vehicles would operate separately from motor vehicle traffic.



**Enhanced Stops** – Scale model of stop design at One Potomac Yard, in Segment D. Note canopy over exclusive right-of-way.



Cross-section of Segment E—exclusive busway through Crystal City. Segments B, D, E, and part of F will feature dedicated rights-of-way for transit vehicles.



In segments A, C, and part of F, transit vehicles will operate in mixed traffic. Left: Cross-section of Segment C, near Potomac Yard Shopping Center. Right: Photo of existing conditions along Segment A at Patrick and First Streets in Alexandria.

