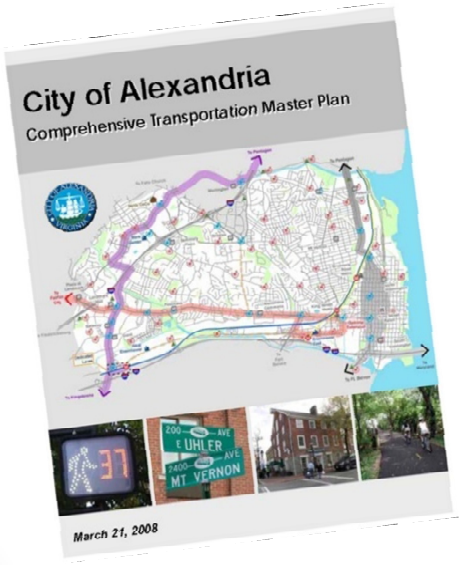
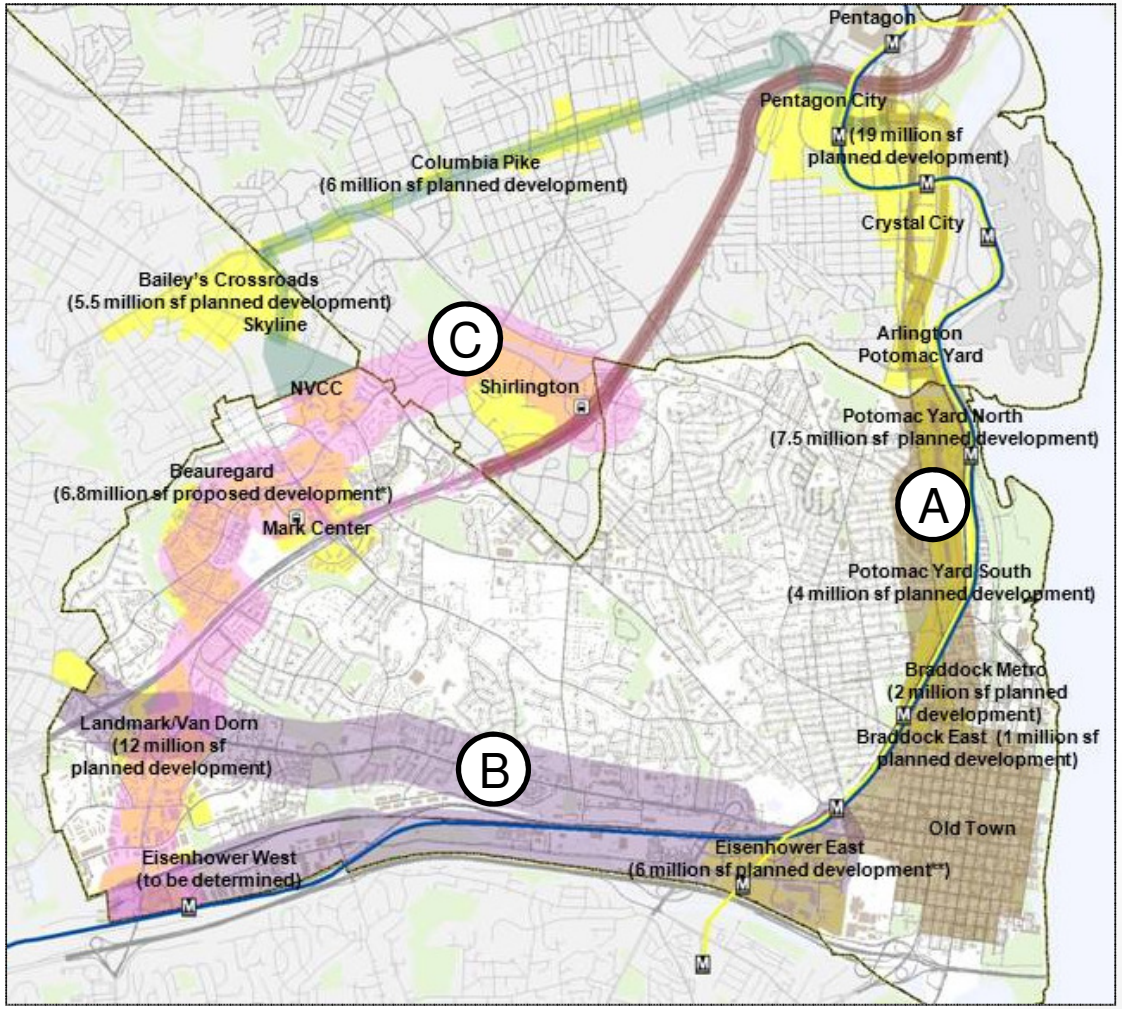
Transitway Corridors A and B Public Hearing

Planning Commission - June 5, 2012

City Transit Initiative





High Capacity Transit Corridor Work Group

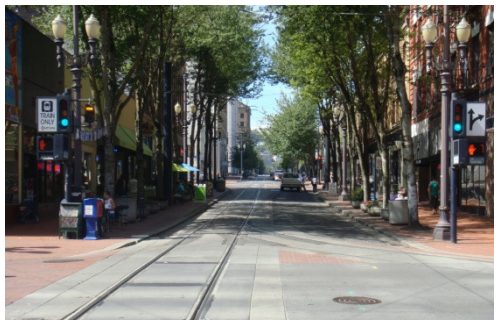
To provide citizen inputs to such issues as include **route alignments, cross-sections, methods of operation, types of vehicles** which should be used in these corridors at specific times, **land use considerations, ridership, and financial implications**.

- City Council – 2 representatives
- Planning Commission
- Transportation Commission
- Budget & Fiscal Affairs Advisory Committee
- Chamber of Commerce
- Federation of Civic Associations – 2 representatives
- Resident with Transit Planning Expertise

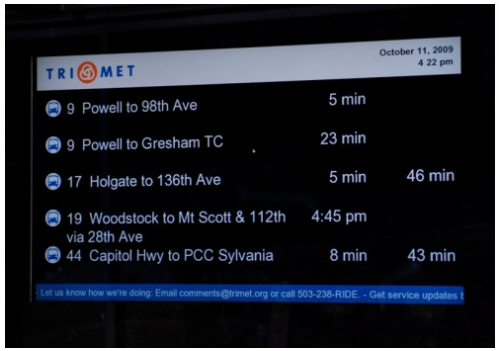
High Capacity Transit Characteristics

Bus Rapid Transit

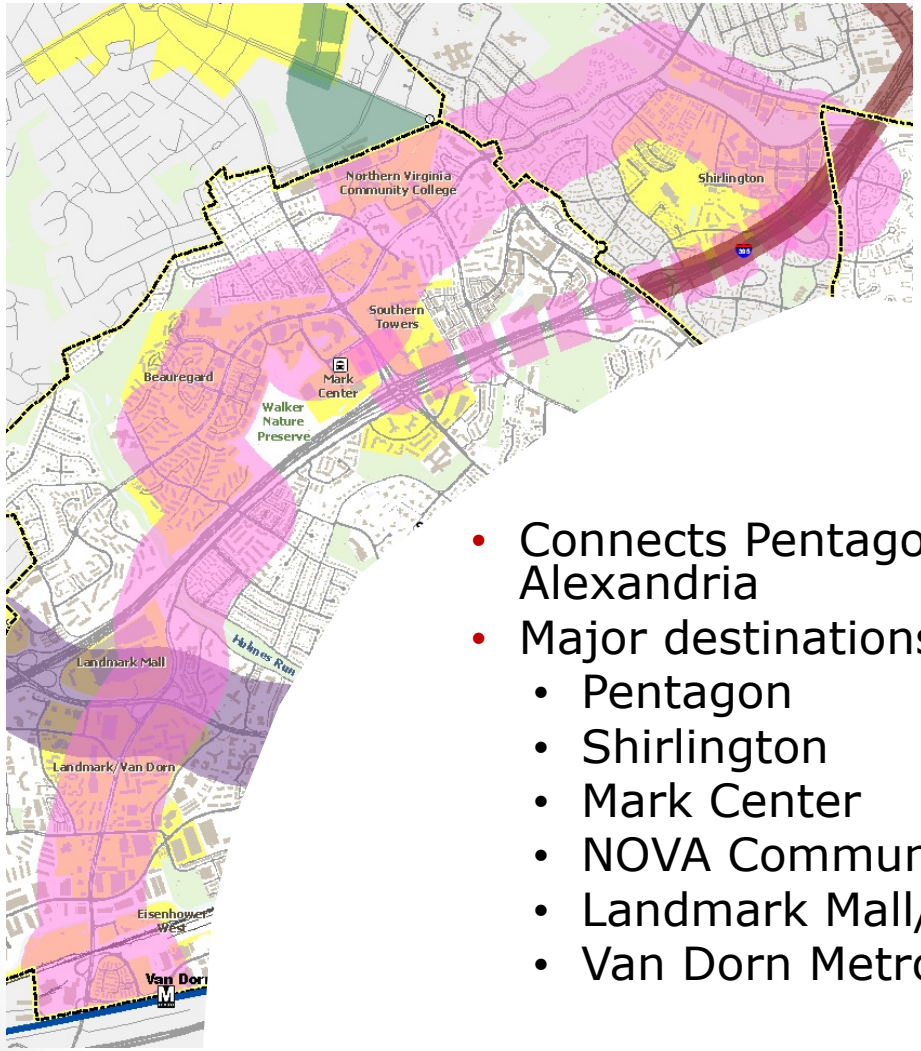
Streetcar

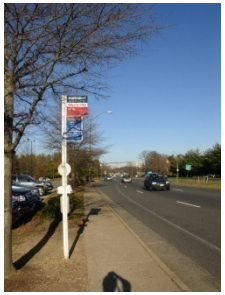


Stations



Corridor C
Van Dorn/Beauregard





- Connects Pentagon/Columbia Pike to western Alexandria
- Major destinations
  - Pentagon
  - Shirlington
  - Mark Center
  - NOVA Community College
  - Landmark Mall/Van Dorn
  - Van Dorn Metro

Corridor C
Approved Concept

Alternative D

Bus Rapid Transit in Dedicated Lanes from Van Dorn Metro to Pentagon

Planning-Level Cost Estimate

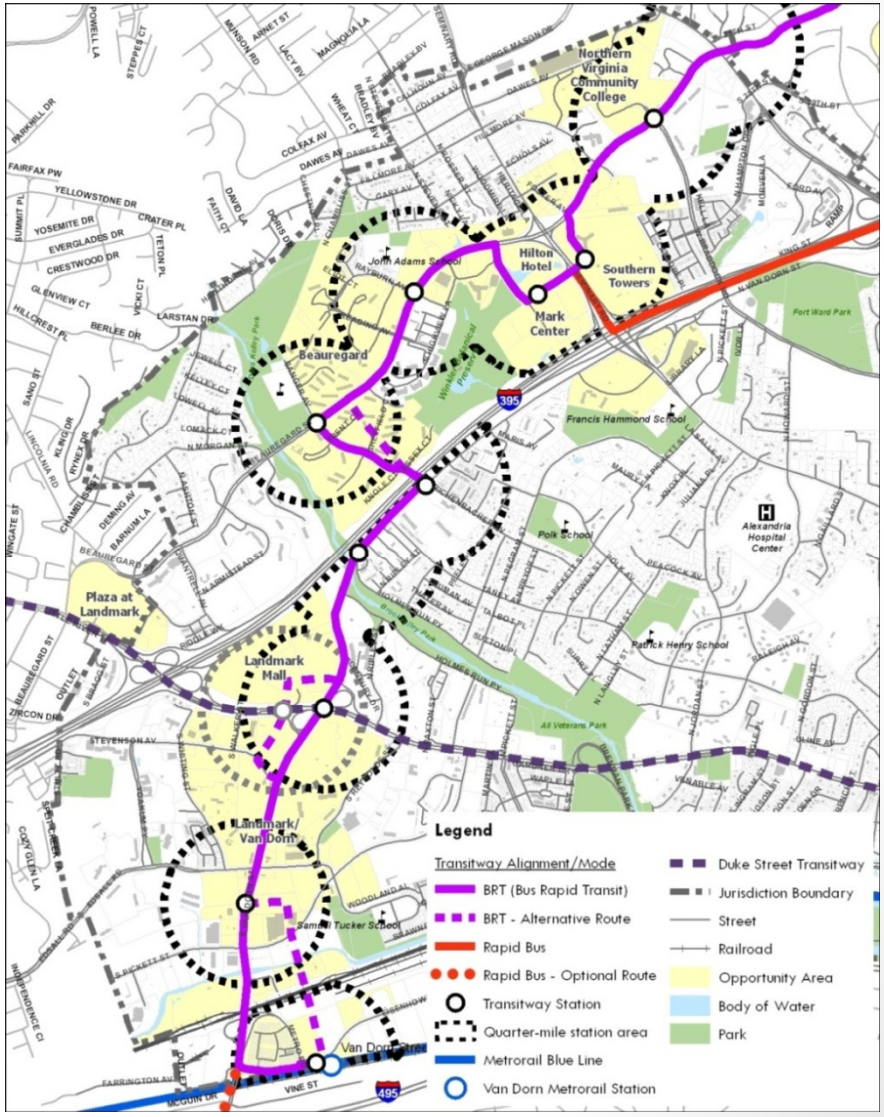
- Capital: $48 million
- Fleet (25-year): $20 million
- ROW: $33 million
- Operating (25-year): $60 million

Physical Characteristics

- Low-floor BRT vehicles
- Dedicated lanes (~80% to 90% of corridor)
- Off-board fare collection
- Service specific branding and identity
- Substantial transit stations

Operational Characteristics

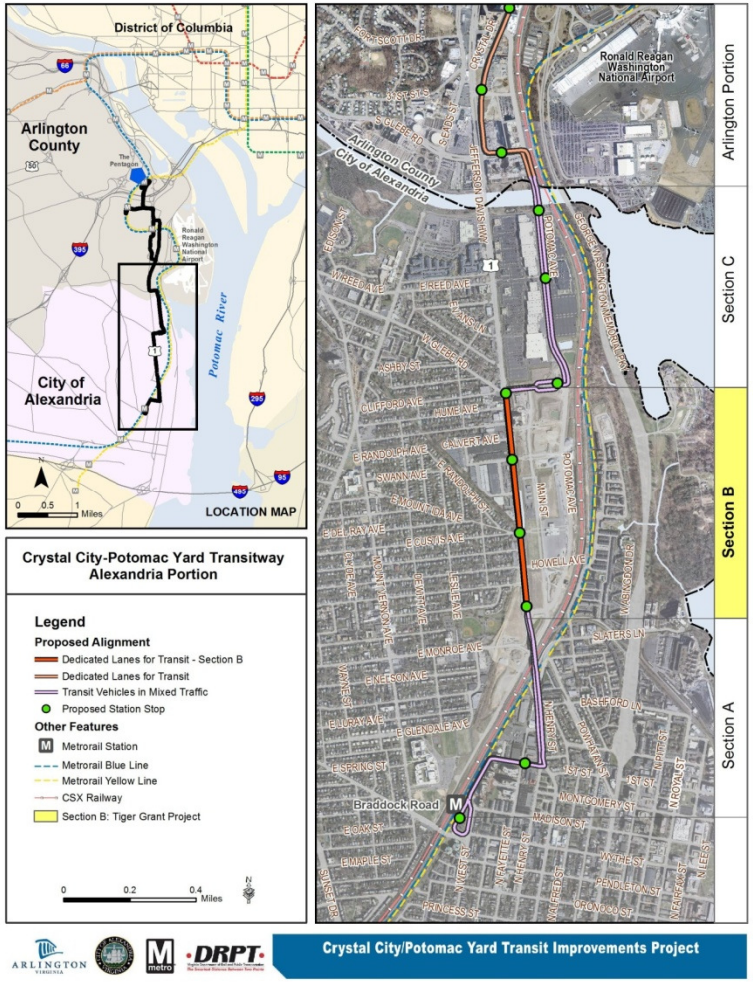
- Transit signal priority at intersections
- Real-time service information
- 7.5-minute peak period headways
- 15-minute off-peak headways
- 18 hours of service (Monday through Saturday)
- 12 hours of service on Sunday
- 2035 Weekday Ridership estimate of 12,500 to 17,500 riders per day



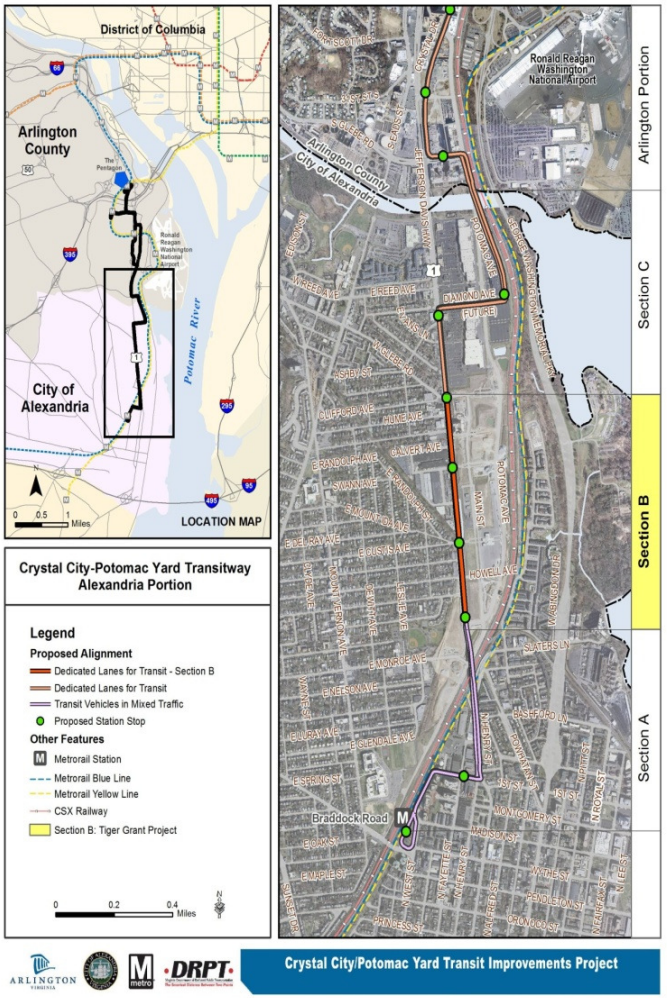
Corridor A
Route 1 / North-South

- Connects to Arlington and Fairfax County
- Major destinations
  - Old Town
  - Potomac Yard
  - Pentagon
  - Crystal City
  - King Street and Braddock Road Metro

Corridor A
North of Braddock Metro



Current CCPY Alignment



Ultimate CCPY Alignment

Corridor A
North of Braddock Metro

- Funding has been assembled to build the CCPY
  - Sources
    - FTA Section 5309 Funds
    - FTA Exempt New Start Funds
    - Federal DOT TIGER Funds
    - CMAQ Funds
    - RSTP Funds
    - City of Alexandria Funds
    - Private Funding
- Implementation
  - The City is using a design-build method to build the transitway itself- This contract was signed in November, 2011.
  - The City will use a conventional design-bid-build process to build the transitway stations- This will begin in early 2012.
  - Service in Alexandria is scheduled to start by the end of 2013.

Summary of Corridor A Challenges

- Significant travel demand (local and regional) in the north-south direction in east Alexandria
- Significant peak period congestion on US 1 (Patrick and Henry Streets) and Washington Street
- Narrow rights-of-way compared to functional needs of streets
- Narrow travel lanes
- Narrow sidewalks
- Streetscapes
- Noise, vibration and Air quality impacts
- Compatibility with Land Use and Historic Character
- On-street parking
- Limited enforcement of HOV lanes
- Location of Metrorail stations

Corridor A Concepts

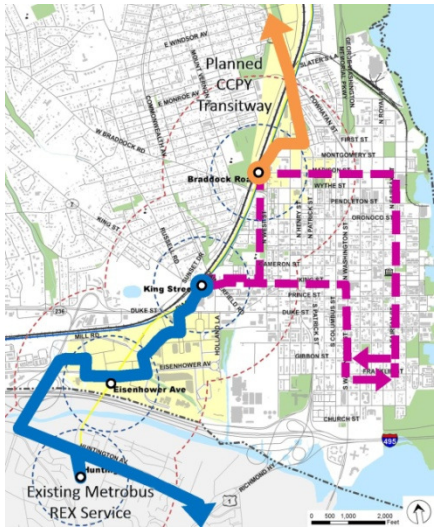
No Build

West Street

Patrick/Henry Streets

Washington Street

Circulator



Corridor A – Recommended Strategy

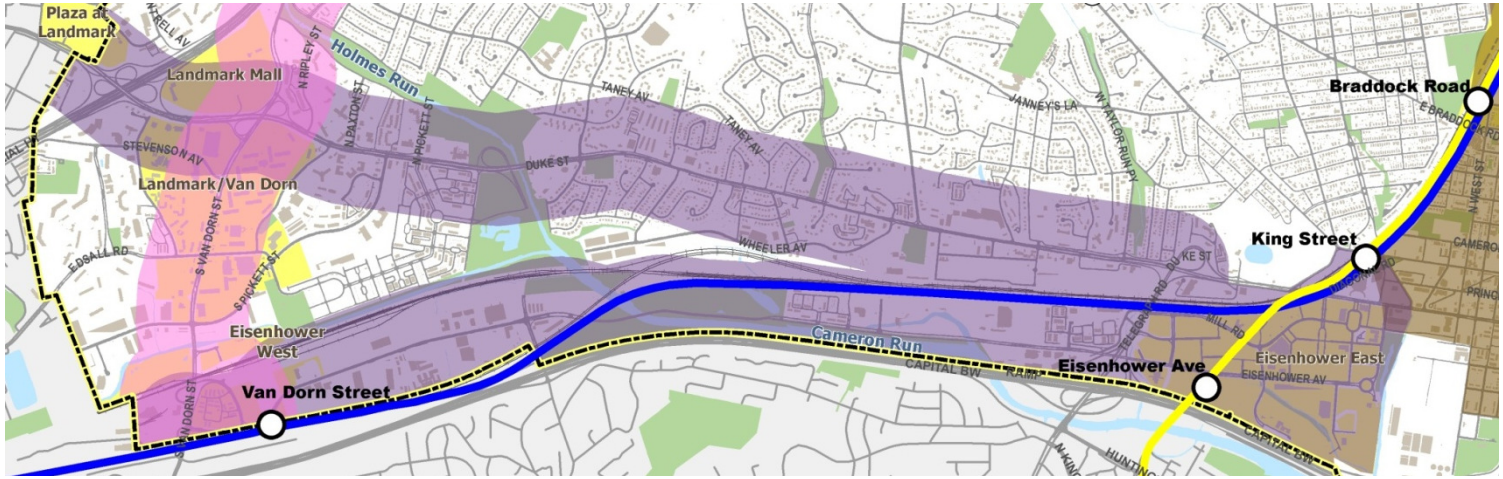
- Complete the adopted CCPY transitway project from Braddock Road Metrorail station to Arlington County
- Extend hours of operation and coverage of the King Street Trolley
- Use DASH Comprehensive Operations Analysis (COA) to develop a circulator concept for Corridor A in conjunction with the comprehensive review of all transit services within Old Town

Corridor A – CWG Recommendation 12/15/2011

The following motion was passed by the High Capacity Transit Corridor Work Group at its December 15, 2011 meeting, regarding transit in Corridor A:

"Whereas the Alexandria Comprehensive Transportation Master Plan conceptually envisioned the eventual location of high capacity transit in dedicated lanes in the portion of Corridor A south of Braddock METRO Station; and
Whereas the High Capacity Transit Corridor Work Group was appointed to recommend methods for implementing the Alexandria Comprehensive Transportation Master Plan to City Council;
Be it hereby resolved that the High Capacity Transit Corridor Work Group recommends that ***there be no dedicated-lane high capacity transit on the portion of Corridor A south of Braddock METRO Station****. Instead, the High Capacity Transit Corridor Work Group recommends that* ***resources be used to explore the possibility of putting circulator buses/trolleys*** *or other forms of conventional and scale appropriate transit in this portion of the City."*

Corridor B
Duke St. / Eisenhower Ave.



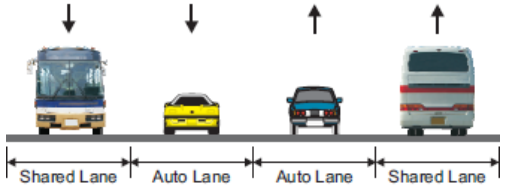
- Major destinations
  - Eisenhower East
  - Landmark Mall Area
  - Cameron Station
  - Fox Chase
  - Alexandria Commons
  - Old Town
  - Van Dorn Metro
  - King Street Metro
  - Eisenhower Avenue Metro

Summary of Corridor B Challenges

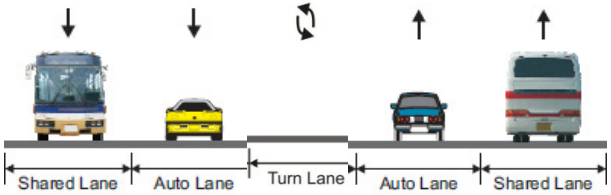
- Transit needed to support future growth
- Coordinate with future development including Landmark Mall
- Congestion in the area between Quaker Lane and Telegraph Road, and need to maintain capacity
- Constrained areas with only 4 lanes (Jordan to Roth Street)
- Service roads – valued by the community
- Streetscape Impacts along Duke Street
- Pedestrian safety, especially across Duke Street, such as at Taylor Run Parkway
- Lack of east-west bicycle facilities along or near Duke Street
- Improved multi-modal connectivity to Eisenhower Avenue
- Need for a multi-phased approach to implementing the transitway
- Need dedicated lanes for system effectiveness

Corridor B
Existing Conditions

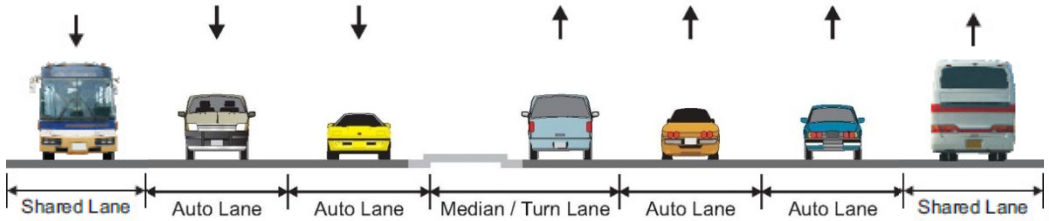
Jordan Street to Wheeler Avenue



Wheeler Avenue to Roth Street



Landmark Mall to Jordan Street &
Roth Street to King Street Metro



Description

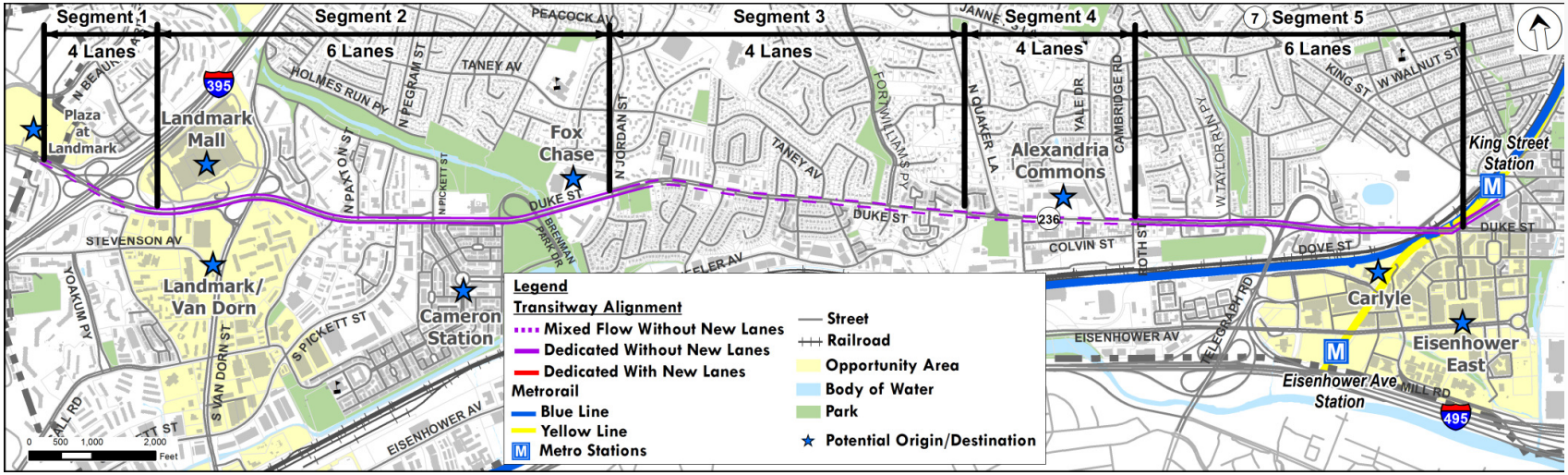
- 4.5 miles total: 4-lane segments [2 miles]; 6-lane segments [2.5 miles]
- DASH and WMATA bus service running along curb
- Right-of-way width varies greatly and is not centered around mainline
- Service roads between Jordan Street and Wheeler Avenue provide residential driveway access

Corridor B Concepts

- Alternative 1 – Uses Existing Lanes for Transit (Shared Outside lanes)
- Alternative 2 – Uses Service Road Right of Way to add dedicated transit lanes (outside lanes)
- Alternative 3 – Widens 4 lane sections to 5 lanes with Reversible lane; Transit in dedicated outside lanes
- Alternative 4 – Widens Duke to add median runningway for transit

Corridor B Concepts

Alternative 1: Curb Running in Mixed Flow and Dedicated Lanes

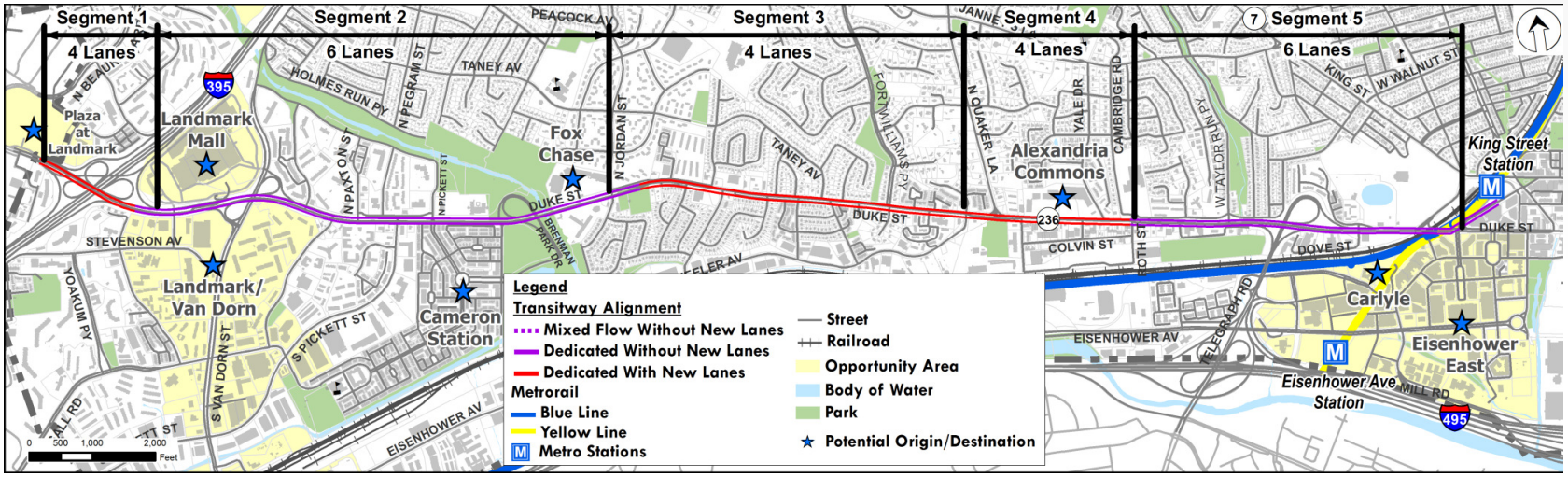


Description

- Alternative 1a – Without Bike Lanes
- Alternative 1b – With Bike Lanes
- Transit in mixed flow on 4-lane segments (2 miles total) and in dedicated lanes on 6-lane segments (2.5 miles total) to reduce property impacts
- Transit running along curb
- Uses queue jumps where there are not dedicated lanes and TSP
- Some impacts to property and frontage roads to accommodate queue jumps

Corridor B Concepts

Alternative 3: Curb Running in Dedicated Lanes with Reversible Lane



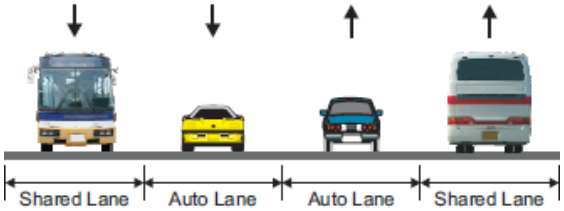
Description

- Alternative 3a – Without Bike Lanes
- Alternative 3b – With Bike Lanes
- Transit running along curb
- Transit in dedicated lanes for segments with 6 lanes
- Reversible lane (Jordan to Wheeler) for general purpose traffic (Peak flow)
- Transit in dedicated lanes in other areas based on peak flow
- Requires widening in 4-lane segments (2 miles total)
- Impacts to property and frontage roads

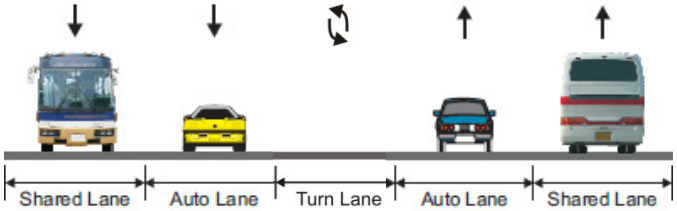
Corridor B Recommendation

Alternative 1a

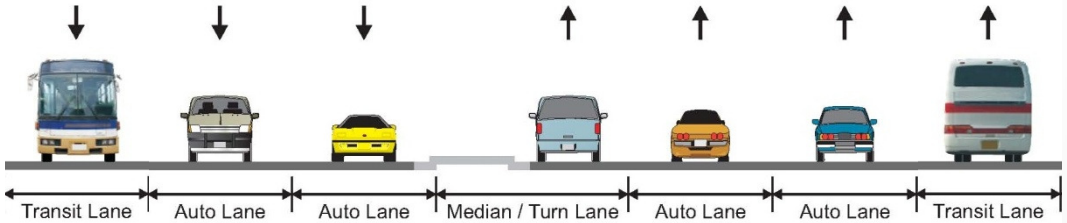
Gordon Street to Wheeler Avenue



S. Quaker Lane to Roth Street



Landmark Mall to Jordan Street,
Roth Street to Taylor Run Parkway, &
Callahan Drive to King Street Metro



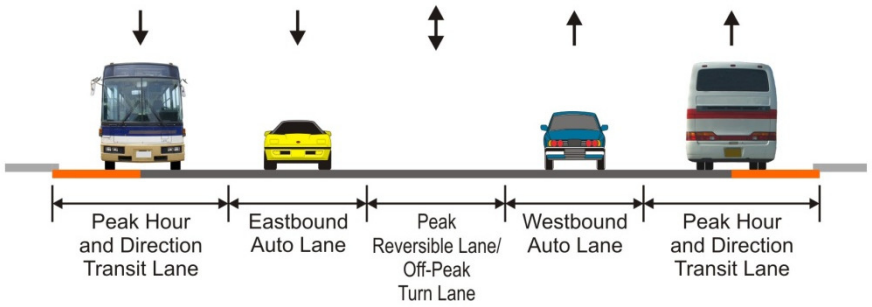
Description

- Transit in mixed flow on existing 4-lane segments and in dedicated lanes on existing 6-lane segments
- Transitway uses queue jumps to avoid congestion and reduce disruption to Duke Street traffic
- Adds a WB lane between Jordan Street and Gordon Street, converting service road from two-way to one-way
- Adds a WB lane between Wheeler Ave and S. Quaker Lane
- Realigns EB on-ramp at Telegraph Road and access to adjacent property
- Off-corridor bicycle accommodation
- Pedestrian improvements at station locations

Corridor B Recommendation

Alternative 3c

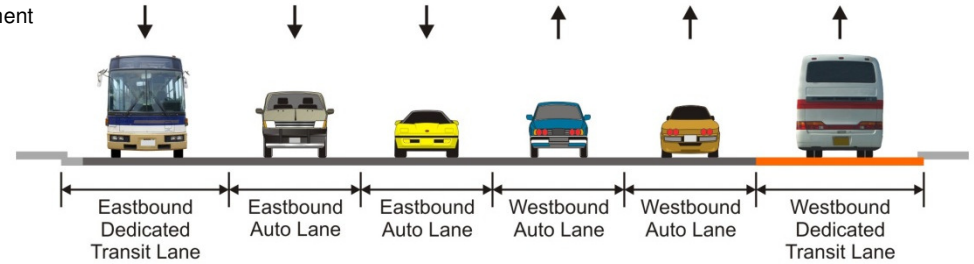
Jordan Street to Wheeler Avenue



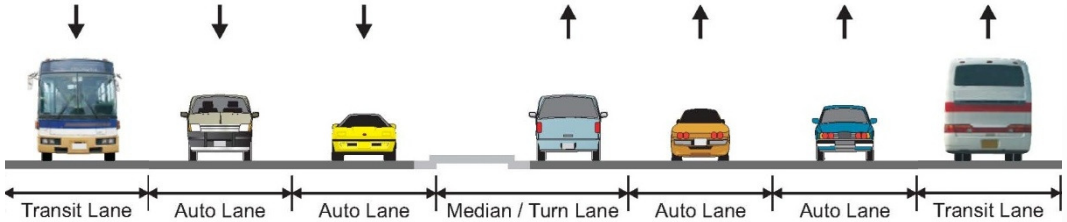
Legend

Additional Pavement

S. Quaker Lane to Roth Street (Alexandria Commons Area)



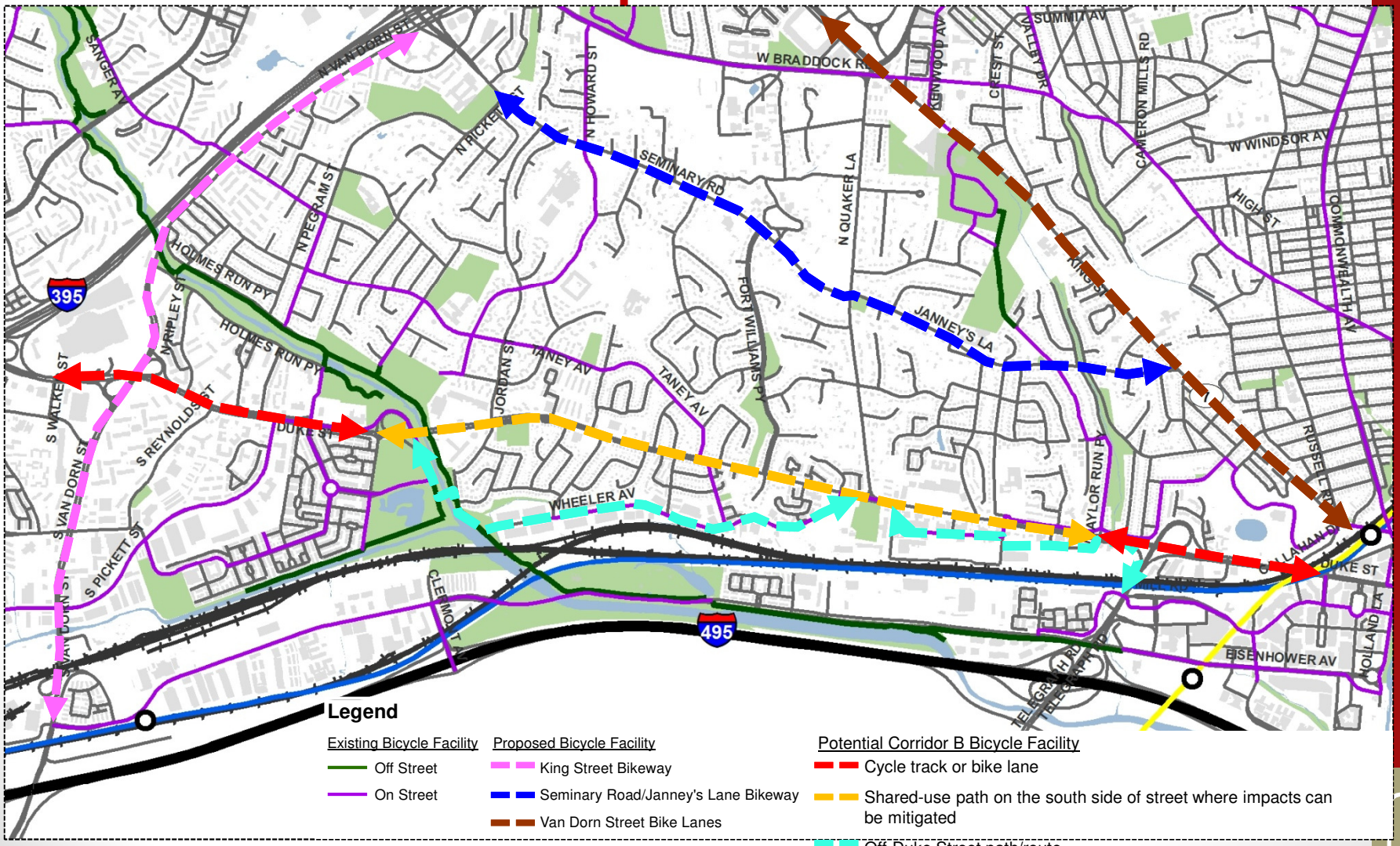
Landmark Mall to Jordan Street, Wheeler Avenue to S. Quaker Lane & Roth Street to King Street Metro



Description

- Travelway identical to Alternative 1A between Landmark Mall and Jordan Street, Roth Street and Taylor Run Parkway, Callahan Drive and King Street Metro
- Travelway widened to approximately 61 feet between Jordan Street and Wheeler Avenue (same width as existing section between Wheeler Avenue and Roth Street)
- Travelway widened to 72 feet between S. Quaker Lane and Roth Street (adds lane to accommodate heavy traffic flow from Quaker Lane to Telegraph Road)
- No left-turn lane during peak periods between Jordan Street and Wheeler Avenue
- Off- and on-corridor bicycle accommodation
- Pedestrian improvements corridor-wide

Potential Bicycle Connectivity Options



Alt. 3c Planning Level Costs and Impacts

Potential Impacts	
Park Impact (Total) Ewald Ben Brenman Schuyler Hamilton Jones	0.20 acres .095 .05 .02
Property Impact	2.0 acres 89 parcels
Commercial Parking Impact	75 spaces
Residential Parking Impact	6 spaces

Property Impact Note: All properties and parking spaces impacted were quantified regardless of whether a large of small area was affected.

Planning-Level Cost Estimates	
Capital Cost Estimate[1] (exclusive of vehicles, based on cost per-mile within the City)	$39 M
25-year Fleet Cost Estimate[2]	$16 M
Right-of-Way Cost Estimate	$4 M
25-year Operating Cost	$60 M
Planning-Level Cost Estimate[1]	**$119 M**

Cost Estimate Note: Planning level cost estimates are shown in year 2012 dollars and do not include additional contingency or escalation to a future year mid-point of construction. Totals listed do not include costs for major utility relocations/new service, or the capital costs for roadway/streetscape improvements that may be implemented concurrently, but are not required for the transit project.

Corridor B – CWG Recommendation 3/15/2012

The following motion was passed by the High Capacity Transit Corridor Work Group at its March 15, 2012 meeting, regarding transit in Corridor A:

*"The **combination of Duke Street Alternatives 1a and 3c, are the preferred approach** for phased implementation of a dedicated transitway in Corridor B. **Alternative 1a would be the first phase** of transitway implementation on Duke Street. It would create dedicated transit lanes in existing six-lane sections of Duke Street between Landmark Mall and Jordan Street and between Roth Street and Diagonal Road. In the remaining section of Duke Street between Jordan Street and Roth Street, transit would operate in mixed flow. **A parallel off-corridor bicycle facility should be examined to accommodate bicyclists along Duke Street and improved pedestrian facilities would be provided at intersections and near transit stations**. Preliminary implementation should prioritize enhanced pedestrian safety and improvements at Taylor Run Parkway."*

Corridor B – CWG Recommendation 3/15/2012 (Cont.)

*"**Alternative 3c would be the subsequent phase of transitway** implementation on Duke Street. It would build on Alternative 1a by widening Duke Street to provide a reversible lane between Jordan Street and Roth Street. The reversible lane would be configured to allow Duke Street to accommodate a dedicated transit lane in the peak hour and peak direction of traffic flow during the a.m. and p.m. peak periods along Duke Street. Alternative 3c **should continue to examine a bicycle facility along Duke Street along with corridor-wide pedestrian improvements**. However, the Work Group believes that **bicycles should be accommodated in this corridor if studies demonstrate that the streetscape can still be enhanced**"*

Thank You

Questions?