Community Outreach Presentation

Public Meeting
October 17, 2022

alexandriava.gov/DukeInMotion

This project is funded with Northern Virginia Transportation Authority (NVTA) regional revenues.
Welcome!

- Duke Street *in Motion* overview
- Why Bus Rapid Transit (BRT)
- Current Conditions in Segment 2
- Busway Design Concepts: Focus on Segment 2 (2A & 2B)
- Next Steps
- Questions followed by open house
Project Overview
What is “Duke Street In Motion”? 

Duke Street IN MOTION is a project focused on ensuring that transit improvements in the Duke Street corridor, from Landmark Mall to the King Street Metro Station, provide efficient transportation options that align with all users’ needs, wants, and expectations.
Duke Street in Motion Process

Vision and Guiding Principles

Completed Summer 2021

Concept Development

March 2022: Advisory Group created
October 2022: public engagement to introduce range of concepts
Late 2022: AG to consider concepts for further refinement

Preferred Alternative

Public engagement planned for Spring 2023

Advisory Group Recommendation to Council

Summer 2023
Project Purpose & Background

- Pursue high-capacity transit to achieve City sustainability and equity goals
- Reconsider concept plans in context of 2021 community visioning

2008
Transportation Master Plan identifies Duke Street as one of three high capacity corridors in Alexandria.

2012
Transit Corridors Feasibility Study evaluated transit alternatives for the three high capacity corridors identified in 2008.

2016
Northern Virginia Transportation Authority (NVTA) awards $12 million for environmental work and design for FY20-22.

2020
Duke Street In Motion kicks off with Community Visioning

2021
Duke Street In Motion kicks off with Community Visioning

2022-23
Development of Alternatives and final Concept Plan

NVTA grants $75 million in the 2020-2025 Six Year Program to help construct the first phase of improvements identified through the Duke Street In Motion process.

2020 Alexandria Transit Vision Plan adopted by the DASH board, with Duke Street identified as a key all-day, frequent service transit corridor.
What is Bus Rapid Transit (BRT)?

Buses that run more like trains

- Boarding improvements
- Frequent service
- Transit Signal Priority
- Queue jump lanes
- Station amenities
- Bus lanes
- Fully separated bus lanes

Examples:
- The Vine (Steve Morgan, Wikipedia)
- Metroway (BeyondDC, Flickr)
- GRTC Pulse (BeyondDC, Flickr)
- I Street bus lane (BeyondDC, Flickr)
- SFMTA (NACTO)
Phase 1 Community Engagement (June 21-July 31, 2021)

- 1,785 feedback form responses
- 3,587 project handouts
- 6,393 received eNews blast
- 95,889 reached on social media
- 22 community pop-up events (2,552 people reached)
- 92 webinar attendees

What do you see in Duke Street’s future?

How do you want to get around?
Community Input in Phase 1

- 88% Want to see reduced traffic
- 47% Would ride or would consider riding the bus more often with improvements
- 55% Want to see improved safety

A full summary is available at alexandriava.gov/DukeInMotion
Project Vision

This project will provide an efficient and desirable bus rapid transit (BRT) option along Duke Street by improving the transit experience for current and potential riders.

With multimodal enhancements to the corridor, Duke Street will become a safe, efficient, and desirable community connector for people riding the bus, walking, biking, and driving.
## Project Guiding Principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Convenient</strong></td>
<td>Make bus travel more predictable, frequent, and comfortable</td>
</tr>
<tr>
<td><strong>Efficient</strong></td>
<td>Improve mobility for all Duke Street travelers</td>
</tr>
<tr>
<td><strong>Equitable</strong></td>
<td>Use enhanced bus transit to support equitable access for a diversity of people and places</td>
</tr>
<tr>
<td><strong>Safe</strong></td>
<td>Ensure safety and accessibility for those connecting to and riding the bus, as well as other travelers</td>
</tr>
<tr>
<td><strong>Vibrant</strong></td>
<td>Create and enhance thriving and future corridor destinations that improve resident quality of life and boost the local economy</td>
</tr>
<tr>
<td><strong>Sustainable</strong></td>
<td>Contribute positively to the environment, now and in the future</td>
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Duke Street Projects

WEST TAYLOR RUN INTERSECTION IMPROVEMENT

ADAPTIVE TRAFFIC SIGNAL CONTROL

DUKE STREET TRAFFIC MITIGATION PILOT

To learn more about all the ways the City is working to make Duke Street work better, please visit alexandriava.gov/transportation-planning/duke-street-projects.
Why Bus Rapid Transit on Duke Street?
Why BRT on Duke Street?

- Greenhouse gas emissions
- Air quality
- Equity
- Choices
- Congestion management
Connectivity

High frequency transit connections to major activity centers

- West End
- Mark Center
- Shirlington
- Van Dorn Metro
- King St. Metro
- Old Town
Bus Travel Time vs. Vehicle Travel Time
West End Alexandria to King Street Metro Station

23-24 minutes in the peak

12-13 minutes in the peak
Placemaking and Livability
Segment 2 Overview
Corridor Segments
Segment 2: Jordan Street to Roth Street

SEGMENT 2A – Jordan to Wheeler

SEGMENT 2B
Wheeler to Roth

Segment 2A

Segment 2B
Segment 2A: Jordan Street to Wheeler Avenue
Segment 2B: Wheeler Avenue to Roth Street
Segment 2 Concepts
Street Design Concepts

Busway and Curb Features

Step 1: Busway

Step 2: Curb features
- Sidewalks Widened
- Shared-use path
- Cycle track
- Service Roads
- Streetscaping
A BRT can mix different treatments to make bus service faster and more reliable.
Concept Summary

Segment 1
- Center running
- Curb running
- Mixed traffic

Segment 2A
- Center running
- Hybrid
- Mixed traffic

Segment 2B
- Center running
- Bidirectional
- Mixed traffic

Segment 3
- Center running
- Curb running
- Mixed traffic
## Segment 2A: Center Running

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Trade Offs</th>
</tr>
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<tbody>
<tr>
<td>Best bus reliability, speed, and rider experience</td>
<td></td>
</tr>
<tr>
<td>Separates bus and general traffic</td>
<td></td>
</tr>
<tr>
<td>Shorter crossings to bus</td>
<td>Widening impacts service roads and related access/parking</td>
</tr>
<tr>
<td></td>
<td>Potential for partial acquisitions of property</td>
</tr>
<tr>
<td></td>
<td>Left turns only allowed at traffic signals</td>
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</tbody>
</table>

*Curb features to be determined at a later stage in the project.*
Segment 2A: Center Running

*Curb features to be determined at a later stage in the project.
Segment 2A: Center Running Service Roads

- Proposed Commercial Entrance
- Existing parking removed
- Some existing parking maintained
- Existing parking maintained
Segment 2A: Hybrid

- **Center Running** (Jordan to Gordon)
- **Mixed Traffic** (Gordon to Fort Williams)
- **Bidirectional** (Fort Williams to Wheeler)
Segment 2A: Hybrid (showing bidirectional concept)

Benefits
- Improved bus reliability, speed, and rider experience
- Separates bus and general traffic
- Shorter crossings to bus

Trade Offs
- Widening impacts commercial service roads
- Some left turn impacts
- Reduced bus efficiency

*Curb features to be determined at a later stage in the project.
Bidirectional Transit Lanes

Rouen, France

Eugene, Oregon

Source: ITDP
Bi-Directional Transit Lanes

Features
• Single transit lane
• Center stations
• Hold points

Benefits
• Corridor safety
• Transit travel time and reliability
• Less space

Tradeoffs
• Requires space
• Operational challenges
Segment 2A: Hybrid

*Curb features to be determined at a later stage in the project.
Segment 2A: Hybrid Service Roads

- Maintained
- Impacted

Proposed Commercial Entrance
Segment 2A: Mixed Traffic

Benefits
- Some improved bus reliability and bus rider experience due to transit signal priority and queue jumps

Trade Offs
- Limited/reduced improvement to bus operation and reliability
- Limited improvements to corridor safety

*Curb features to be determined at a later stage in the project.
Segment 2A: Mixed Traffic

*Curb features to be determined at a later stage in the project.
Segment 2A: Mixed Traffic Service Roads
Segment 2B: Center Running

**Benefits**
- Best bus reliability, speed, and rider experience
- Separates bus and general traffic
- Shorter crossings to bus
- Increased area for trees, streetscaping, stormwater management

**Trade Offs**
- Widening required
- Potential for partial acquisitions of property
- Left turns only allowed at traffic signals and some are eliminated

*Curb features to be determined at a later stage in the project.*
Segment 2B: Center Running

*Curb features to be determined at a later stage in the project.
**Segment 2B: Bidirectional**

*Curb Features*  |  *Travel Lanes*  |  *Median*  |  *BRT Lane*  |  *Travel Lanes*  |  *Curb Features*
--- | --- | --- | --- | --- | ---

**Benefits**
- Improved bus reliability, speed, and rider experience
- Separates bus and general traffic
- Shorter crossings to bus
- Increased area for trees, streetscaping, stormwater management

**Trade Offs**
- Widening required
- Potential for partial acquisitions of property
- Left turns only allowed at traffic signals and some are eliminated
- Reduced bus efficiency

*Curb features to be determined at a later stage in the project.*
LEGEND
- BRT Station
- Bus-only Lanes and Holding Area
- Landscaping/Buffer
- Curb Features*

Segment 2B: Bidirectional
# Segment 2B: Mixed Traffic

**Benefits**

- Some improved bus reliability and bus rider experience due to transit signal priority and queue jumps
- Spot improvements to vehicle safety
- No impacts to service roads with potential safety implications to address in redesign

**Trade Offs**

- Limited/reduced improvement to bus operation and reliability
- Limited improvements to vehicle safety

*Curb features to be determined at a later stage in the project.
Segment 2B: Mixed Traffic

*Curb features to be determined at a later stage in the project.
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Street Design Concepts

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- Streetscaping
Next Steps
Upcoming Events

Webinar
- Oct 1
- Project website

Pop-up Events
- Throughout October
- 7-10 events

Focus Groups
- 4+ events to target underrepresented groups
  - Renters
  - Transit riders
  - Youth
  - Spanish speakers
  - Businesses

In-Person Meetings
- Throughout October
- 4 in-person events
- Segment focused
- Open house for entire corridor
- Build your own Duke Street

In-Person Meeting Dates/Locations

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>October 12</td>
<td>Segment 3 Meeting</td>
<td>Bishop Ireton School</td>
<td>6:30-8:30 PM</td>
</tr>
<tr>
<td>October 17</td>
<td>Segment 2 Meeting</td>
<td>Bishop Ireton School</td>
<td>6:30-8:30 PM</td>
</tr>
<tr>
<td>October 20</td>
<td>Segment 1 Meeting</td>
<td>Patrick Henry Rec Center</td>
<td>6:30-8:30 PM</td>
</tr>
<tr>
<td>October 26</td>
<td>Open House</td>
<td>Patrick Henry Rec Center</td>
<td>5:30-8:30 PM</td>
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Summer 2023
Thank you!

→ Visit boards
→ Speak with Project Team
→ Complete feedback form

alexandriava.gov/DukeInMotion
Q&A

• One question per attendee
• The project team will be available afterwards for additional questions
• FAQs will be posted on the website
• Please provide comments using the feedback form