Welcome!

Duke Street *in Motion* overview

Why Bus Rapid Transit (BRT)

Current Conditions in Segment 3

Busway Design Concepts: Focus on Segment 3

Next Steps

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
What is Bus Rapid Transit (BRT)?

Buses that run more like trains

- Boarding improvements
- Upgraded bus stops
- More green lights
- Queue jump lanes

Station amenities
- Bus lanes
- Fully separated bus lanes
What do you see in Duke Street’s future?

How do you want to get around?

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
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

**Convenient**
Make bus travel more predictable, frequent, and comfortable

**Efficient**
Improve mobility for all Duke Street travelers

**Equitable**
Use enhanced bus transit to support equitable access for a diversity of people and places

**Safe**
Ensure safety and accessibility for those connecting to and riding the bus, as well as other travelers

**Vibrant**
Create and enhance thriving and future corridor destinations that improve resident quality of life and boost the local economy

**Sustainable**
Contribute positively to the environment, now and in the future
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
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

Half the time!
Placemaking and Livability
Segment 3 Overview
Corridor Segments
Segment 3: Roth Street to King Street Metro

Duke Street between W. Taylor Run and Witter Drive
(looking west)
Segment 3: Roth Street to King Street Metro

SEGMENT 3 - Roth to King St Metro Station
Segment 3 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
Bus Improvements Can Take Different Forms

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 3: Center Running

*Curb Features  EB Travel Lanes  BRT Lanes  Median  WB Travel Lanes  *Curb Features

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

Trade Offs
- Potential increase in vehicle travel time

*Curb features to be determined at a later stage in the project.
Segment 3: Center Running

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

LEGEND
- BRT Station
- Bus-only Lanes
- Landscaping/Buffer
- Curb Features*
Segment 3: Curb Running

Benefits

• Improved bus reliability, speed, and rider experience
• Separates bus from most westbound vehicle traffic

Trade Offs

• Potential increase in vehicle travel time (westbound)

*Curb features to be determined at a later stage in the project.
Segment 3: Curb Running

*Curb features to be determined at a later stage in the project.
### Segment 3: Mixed Traffic

**Benefits**

- Some improved bus reliability and bus rider experience due to transit signal priority and queue jumps
- Spot improvements to vehicle safety

**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 3: Mixed Traffic

**LEGEND**
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- Bus-only Lanes (Queue Jump)
- Landscaping/Buffer
- Curb Features*

*Curb features to be determined at a later stage in the project.
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Thank you!

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

alexandriava.gov/DukeInMotion