

## Segment 3: Center Running

Roth Street to King Street Metro Station



AlexandriaVA.gov/  
DukeInMotion



### EXISTING CORRIDOR

- » Three travel lanes in each direction
- » Median with trees
- » Sidewalk on both sides of the street (northern sidewalk along elevated service road)
- » Some areas with service roads
- » Bicycle sharrows on service road

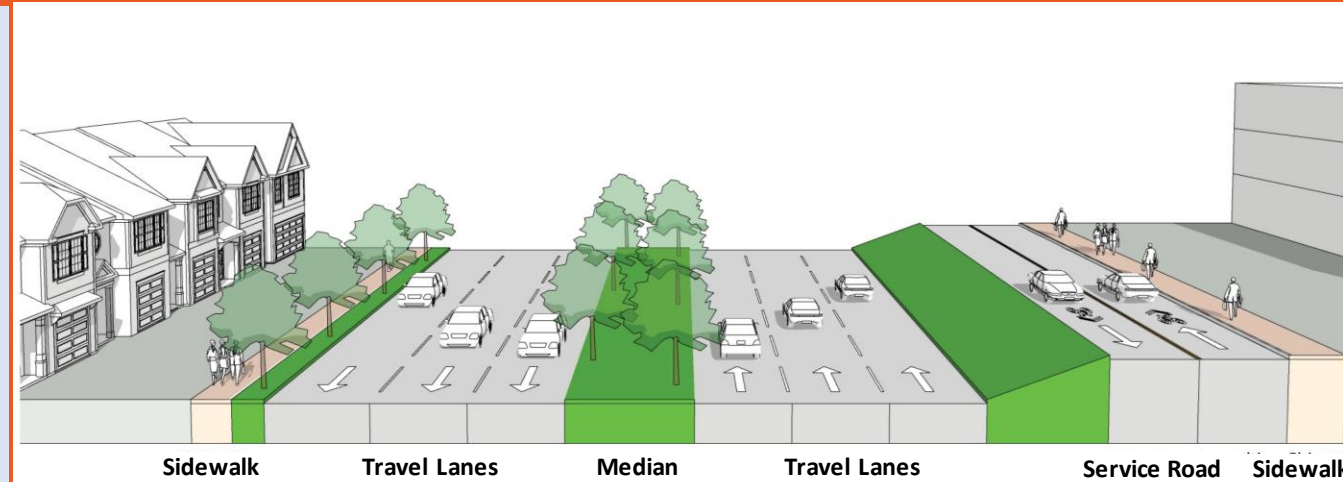
### CONCEPT

- » Two travel lanes in westbound (WB) direction
- » Three travel lanes in eastbound (EB) direction
- » A dedicated bus lane in each direction
- » Median buffer with space for landscaping and stormwater features

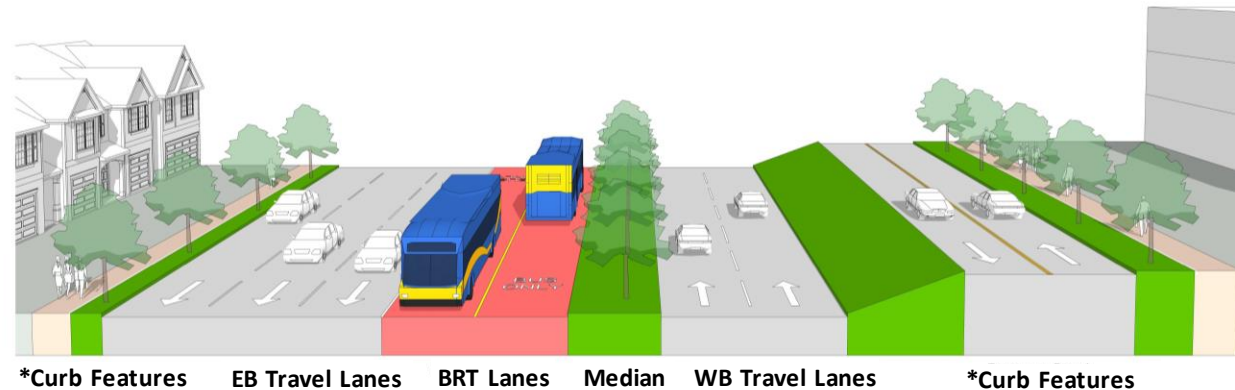
### KEY TRADE OFFS

- » Potential increase in vehicle travel time

### EXISTING TYPICAL SECTION



### CENTER RUNNING CONCEPT



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

### BENEFITS



#### Convenient

- » Provides maximum **transit reliability** and bus rider experience improvements



#### Efficient

- » Provides maximum **travel time savings** for bus riders



#### Safe

- » Improved **pedestrian access and safety** with shorter crossings
- » Improved **vehicle safety** from separating car and bus traffic and reducing conflict areas



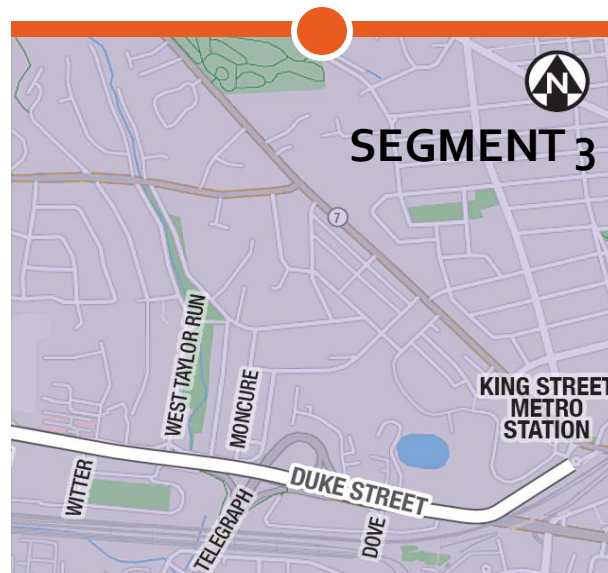
#### Vibrant and Sustainable

- » Increased area for **trees, street-scaping, stormwater management**



#### Equitable

- » Enhanced stations located near **high ridership/high need communities**



#### LEGEND

	BRT Station
	Bus-only Lanes
	Landscaping/Buffer
	Curb Features*

## Segment 3: Curb Running

Roth Street to King Street Metro Station



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### EXISTING CORRIDOR

- » Three travel lanes in each direction
- » Median with trees
- » Sidewalk on both sides of the street (northern sidewalk along elevated service road)
- » Some areas with service roads
- » Bicycle sharrows on service road

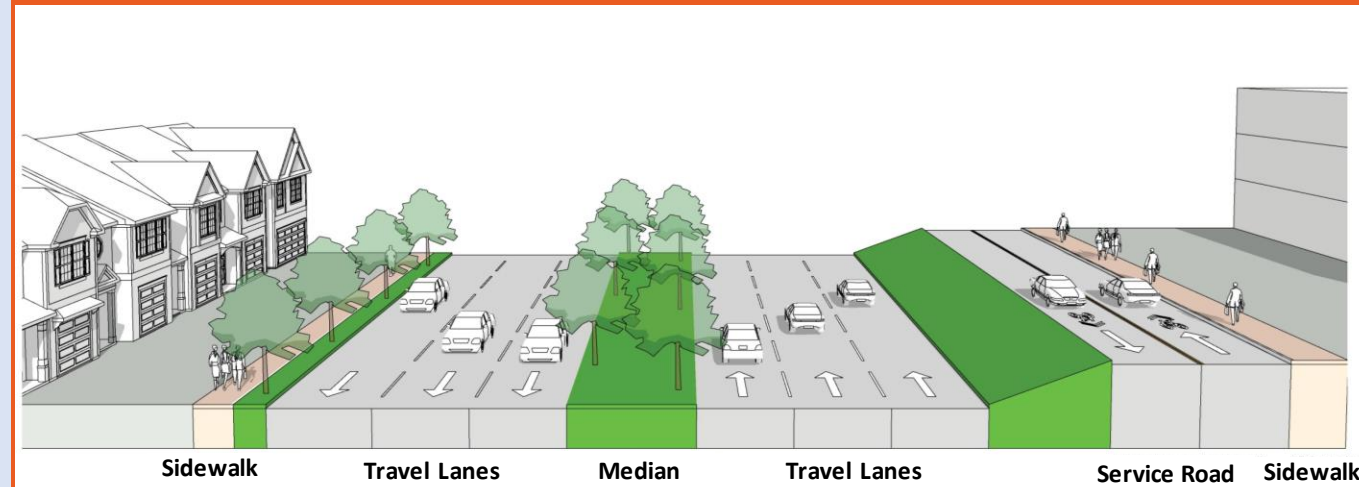
### CONCEPT

- » Two travel lanes in westbound (WB) direction
- » Three travel lanes in eastbound (EB) direction
- » Dedicated bus lane in WB direction
- » No change to median

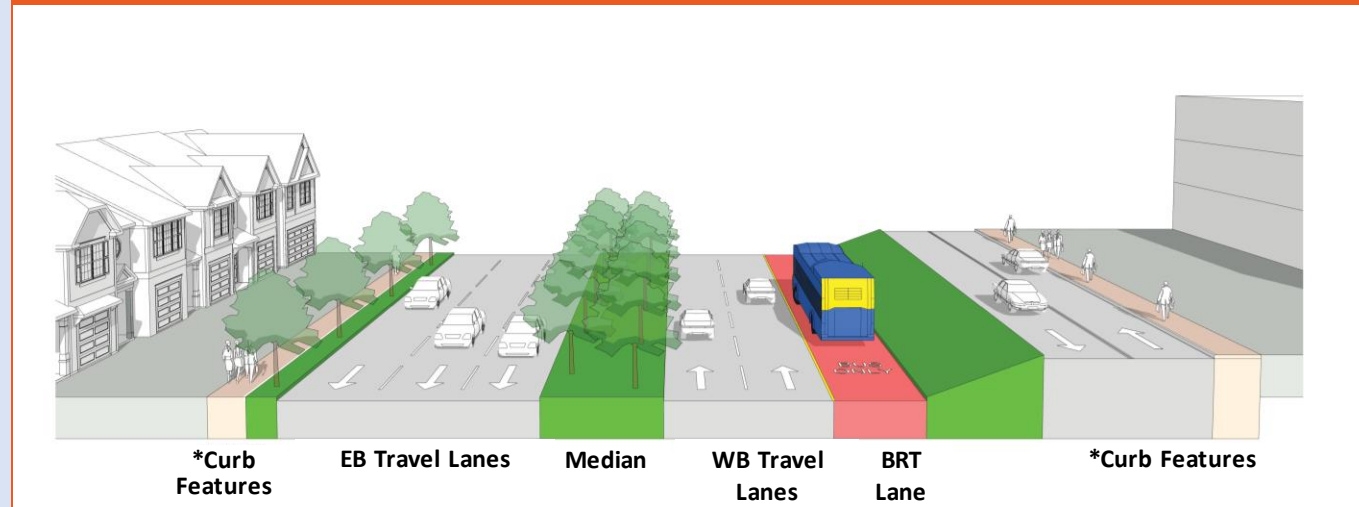
### KEY TRADE OFFS

- » Potential increase in vehicle travel time (WB)

### EXISTING TYPICAL SECTION



### CURB RUNNING CONCEPT



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

### BENEFITS



#### Convenient

- » Dedicated bus lane improves **transit reliability** and bus rider experience



#### Efficient

- » Dedicated curbside transit lane provides **travel time savings** for bus riders in the westbound direction



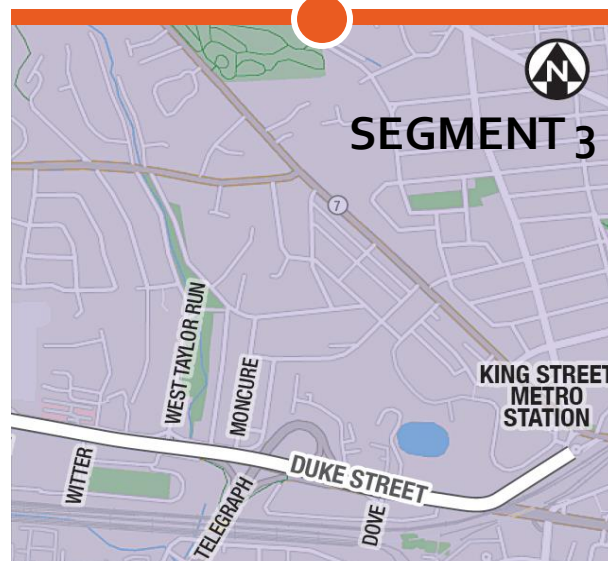
#### Safe

- » Improved **vehicle safety** from separating car and transit traffic and reducing conflict areas



#### Equitable

- » Enhanced stations located near **high ridership/high need communities**



#### LEGEND

- BRT Station
- Bus and Turn Lane
- Landscaping/Buffer
- Curb Features\*



## Segment 3: Mixed Traffic

Roth Street to King Street Metro Station



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### EXISTING CORRIDOR

- » Three travel lanes in each direction
- » Median with trees
- » Sidewalk on both sides of the street (northern sidewalk along elevated service road)
- » Some areas with service roads
- » Existing bicycle sharrows on frontage road

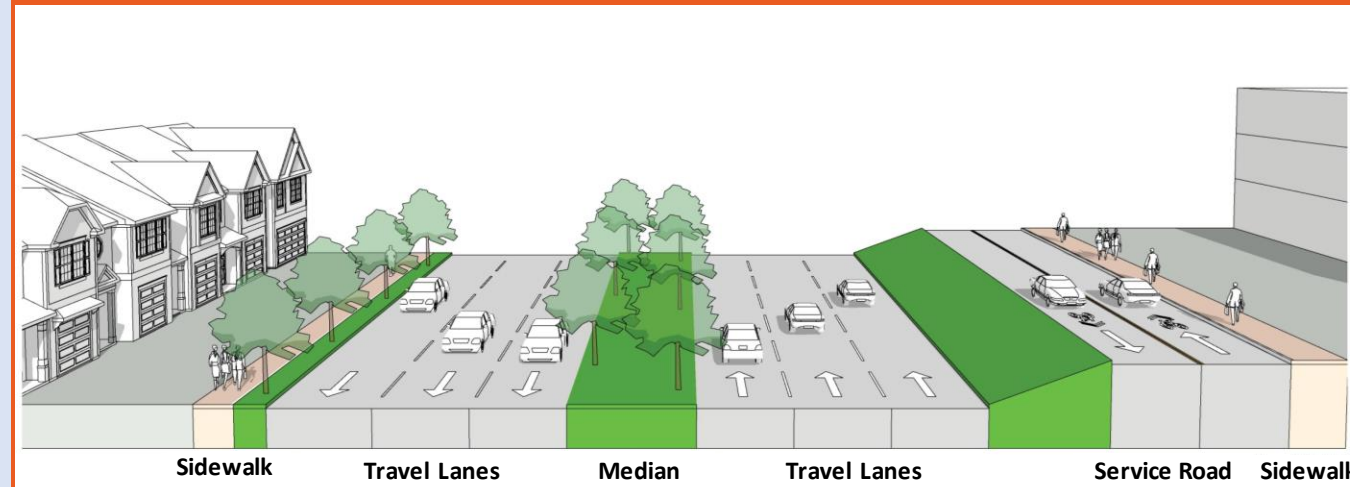
### CONCEPT

- » Three travel lanes in each direction
- » No dedicated bus lane in either direction
- » No change to median
- » Queue jump areas at spot locations along the corridor

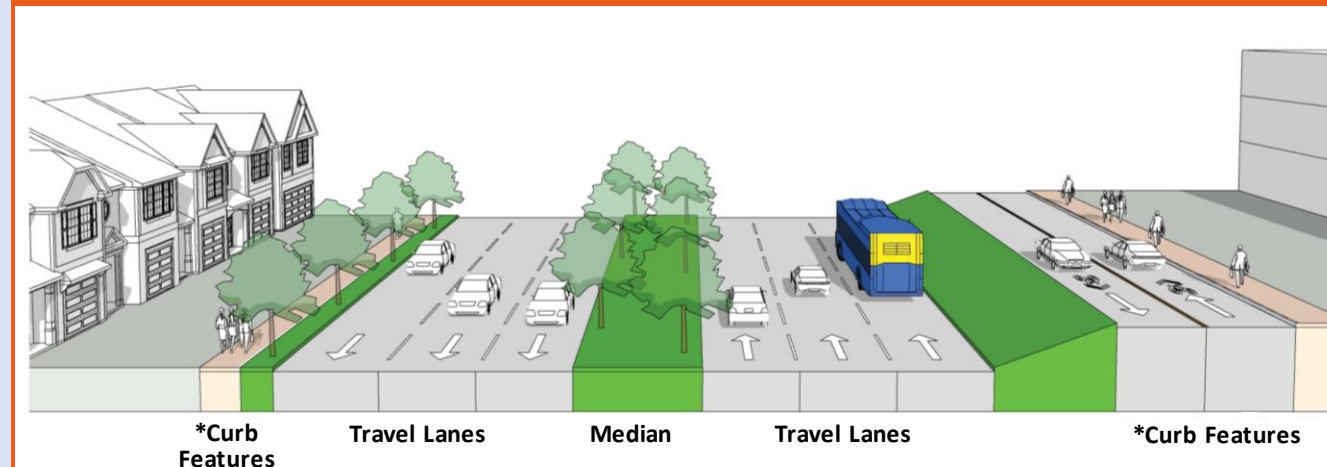
### KEY TRADE OFFS

- » Limited/reduced improvement to bus operation and reliability
- » Limited improvements to vehicle safety in the corridor

### EXISTING TYPICAL SECTION



### MIXED TRAFFIC CONCEPT



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

### BENEFITS



#### Convenient

- » Transit signal priority and queue jump at intersections improve **transit reliability** and bus rider experience



#### Safe

- » Spot improvement to **vehicle safety** by separating car and bus traffic at queue jumps



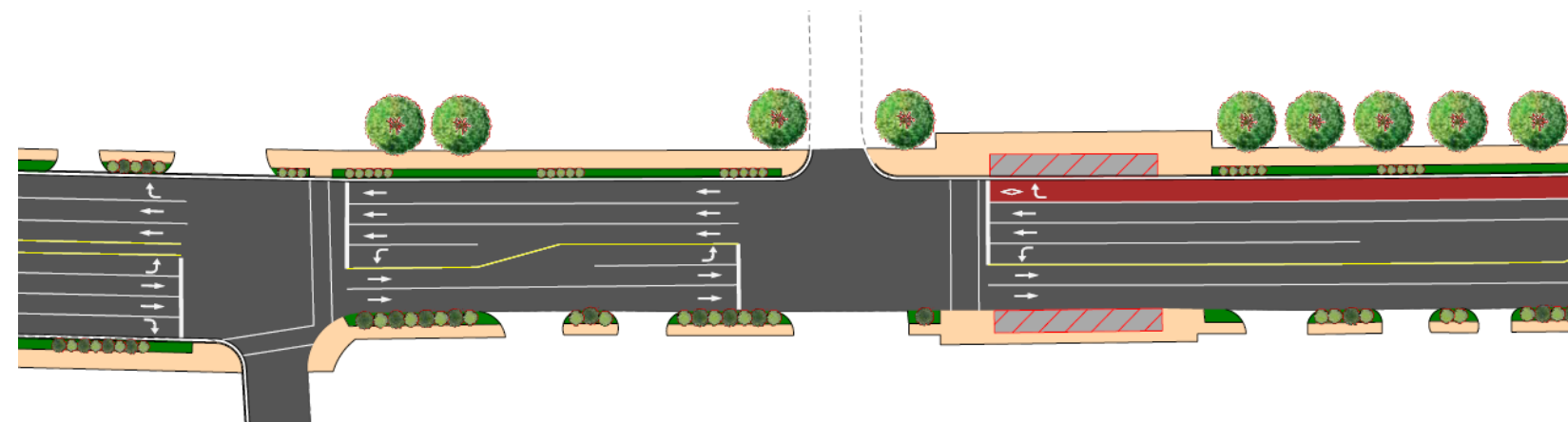
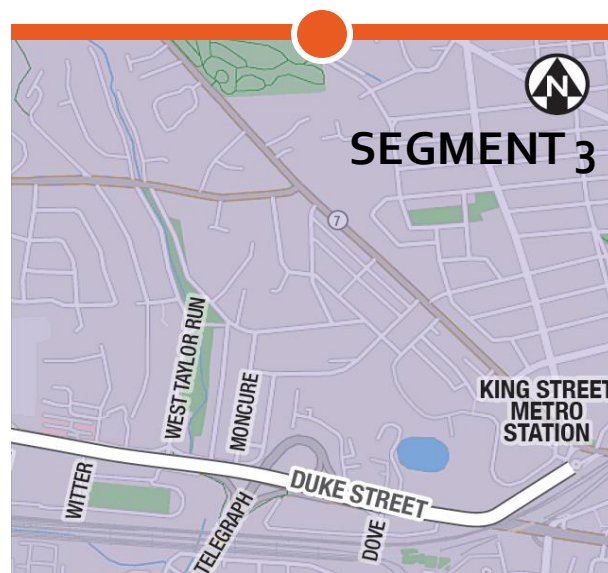
#### Vibrant and Sustainable

- » Center median and **tree canopy** remain



#### Equitable

- » **Enhanced stations** located near **high ridership/high need communities**



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

Key		<div> <div>No Benefit</div> <div>Minor Benefit</div> <div>Moderate Benefit</div> <div>Large Benefit</div> </div> <div> <div>No Impact</div> <div>Minor Impact</div> <div>Moderate Impact</div> <div>Large Impact</div> </div>			<p>Center Running</p>	<p>Curb Running</p>	<p>Mixed Traffic</p>
Benefits	<b>Convenient</b>	Bus schedule reliability and user experience			●●●	●	●
	<b>Safe</b>	Corridor and intersection safety features			●●●	●	●
	<b>Efficient</b>	Bus travel time*			●●●	●	●
Impacts		Non-transit vehicle travel time*			●●	●	●
		Property impacts			●	●	●
	<b>Vibrant</b>	Business and residential access			●	●	●
		Parking			●	●	●

\*High level estimated relative benefit/impact based on bus running way configuration, signal delay.  
More detailed corridor end-to-end travel time will be provided once the corridor alternative(s) are determined.