

**Fairfax Circle**

**Visioning & Multimodal Intersection Alternatives Development**

City Council Work Session

June 1, 2021

## Agenda

1. Project Overview
2. Public Engagement Findings
3. Vision & Goals
4. Identification of Candidate Alternatives
5. Draft Concept Plans

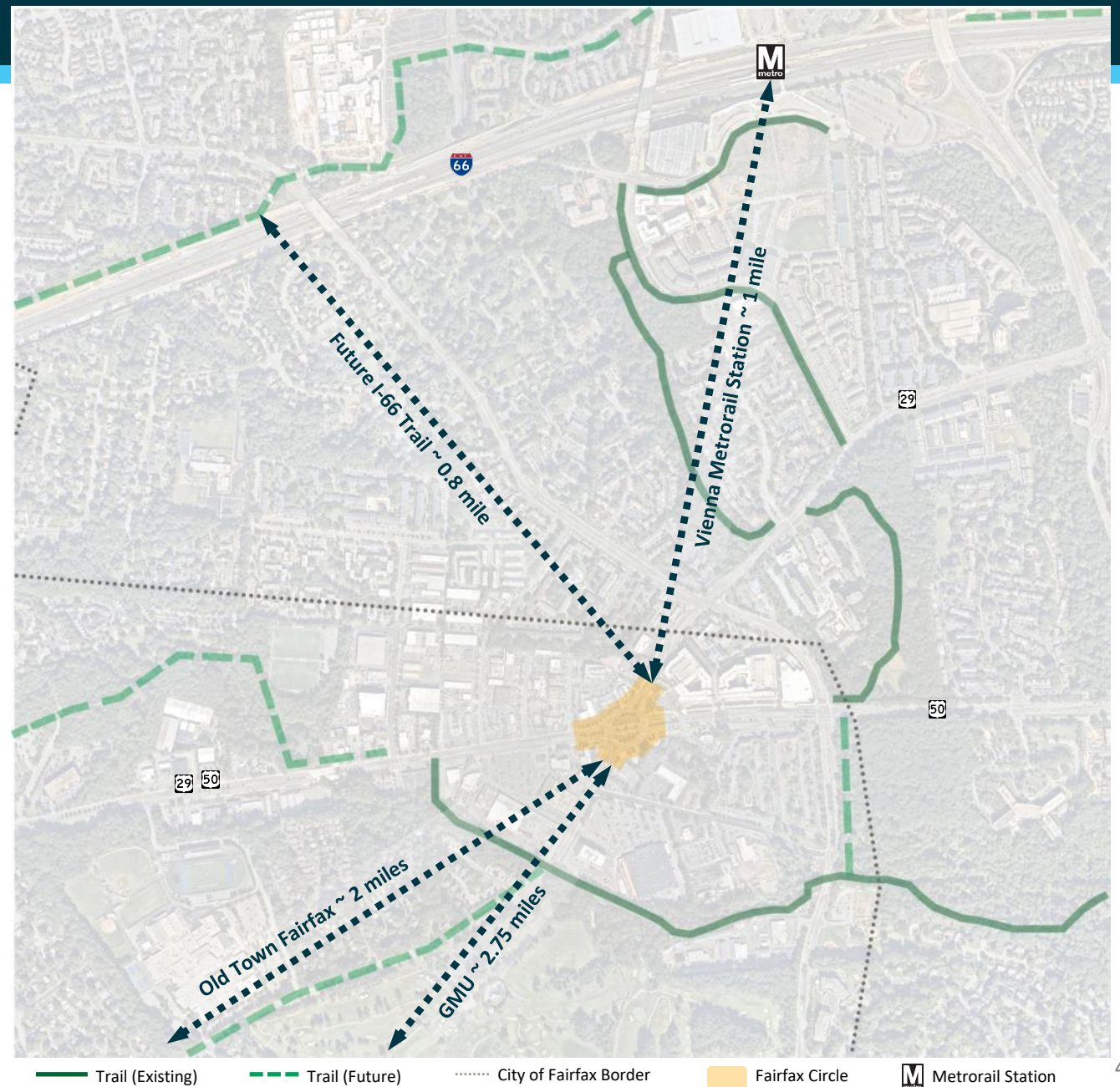
## Fairfax Circle Project Background & Timeline

- 2019: Comprehensive Plan Adopted
- 2019: Fairfax Circle Prioritized in Two-Year Transportation Program
- 2020: TLC Grant Awarded
- February-March 2021: Public Input Survey
- April 6, 2021: City Staff Work Session on Needs, Public Input, Vision and Goals
- **June 1, 2021: City Council Work Session on Alternatives\***
- Next Steps: Fairfax Circle Small Area Plan

*\*No adoption of preferred alternative at this time; vision, goals and alternatives to inform Small Area Plan*

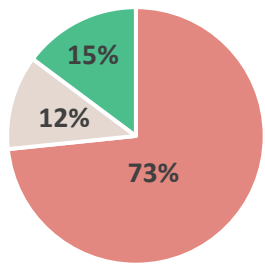
## Project Context

- High volume intersection
  - ~35,000 vpd (Fairfax Blvd, Lee Hwy), ~15,000 vpd (Old Lee Hwy) (pre-pandemic)
  - 49% of peak hour traffic traveling straight through on Fairfax Blvd
- Uncomfortable pedestrian environment
  - Long crossing distances, up to 5x straight line
  - Multiple waits at signalized crossings increase walking time between quadrants
- High crash area
  - Confusing navigation
  - High number of driveways
- Opportunities for multimodal connectivity
  - Regional road and trail networks
  - Metrorail access
  - Nearby activity centers



## Engage Fairfax Survey Findings

- Survey administered through Engage Fairfax
  - More than 1,100 responses received
- Wayfinding, safety, and congestion relief** are clear concerns
  - Wayfinding applies primarily to vehicular wayfinding and is intertwined with safety concerns to some degree
  - Safety encompasses all modes
- Based on word selection, respondents have a resoundingly negative perception of Fairfax Circle today



■ Negative ■ Mixed ■ Positive  
% of Respondents (n=1,116)

NEGATIVE		POSITIVE
Confusing	Outdated	Efficient
Dangerous	Crowded	Fine
Congested	Ugly	Easy
Busy	Difficult	Like
Slow	Frustrating	Unique
Inefficient	Stressful	Functional
Chaotic	Unattractive	Okay
Complicated	Annoying	Landmark
Unsafe	Hazardous	Pretty
Mess	Time-consuming	Historic
Avoid	Unfriendly	Effective

### SURVEY QUESTION 3: THREE WORDS TO DESCRIBE THE FAIRFAX CIRCLE INTERSECTION TODAY



## Vision & Goals

### Vision Statement

The Fairfax Circle Visioning and Multimodal Improvements Project will identify a sustainable mobility solution featuring a roadway configuration and urban form for the Fairfax Circle intersection that is **intuitive** to navigate, maintains adequate **operational capacity**, enhances **connectivity** through human-scale design, improves **safety** and comfort for all users, **welcomes** people to the City of Fairfax, and unlocks **development potential** in the area.

## Preliminary Options (1)



### No Build

Retains existing intersection configuration



### Modified Hamburger

Implements modest improvements to close slip lanes and reduce pedestrian exposure



### Traditional Intersection (with skew)

Replaces circle with traditional four-legged intersection using existing alignment of Lee Hwy and Old Lee Hwy

## Preliminary Options (2)



### **Traditional Intersection (with realignment)**

Replaces circle and splits existing four-legged intersection, but realigns Lee Hwy and Old Lee Hwy to eliminate skew



### **Split Intersection**

Eliminates circle and splits existing intersection into two intersections, substantially realigning the Old Lee Hwy connection to Fairfax Blvd



### **Multilane Roundabout**

Retains circle; removes slip lanes, through lanes, and signals to create a traditional multilane roundabout

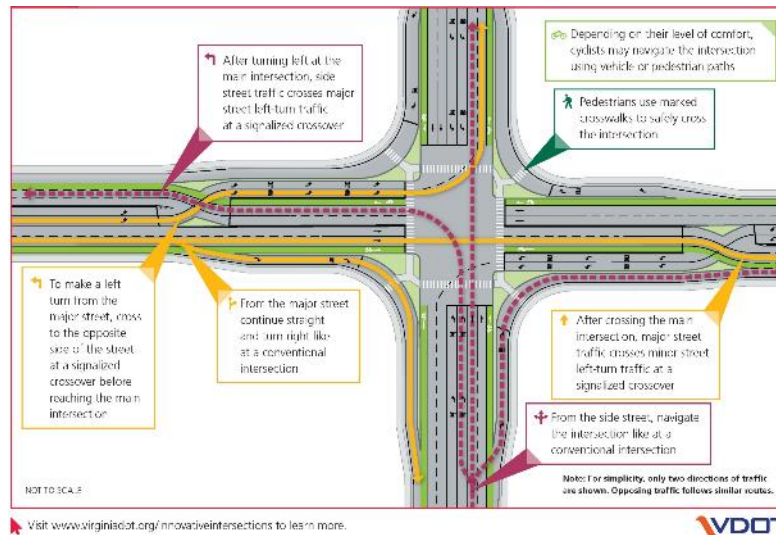


## Preliminary Options (3)



### Roundabout with Grade Separation

Retains circle configuration, removes slip lanes and signals to create roundabout; diverts heaviest volumes (EB & WB throughs) to below-grade lanes



### Displaced Left Turn Intersection

Replaces circle with traditional four-legged intersection, but crosses EB left turns in advance of the intersection



### Quadrant Roadway Intersection

Replaces circle with traditional four-legged intersection; utilizes new roadway through SW quadrant to accommodate left turns, enabling a smaller footprint for the primary intersection

## Screening Criteria

### FIRST TIER SCREENING CRITERIA










[an option must fulfill all first-tier criteria to receive further consideration]

- **Traffic Operations.** To be viable, alternatives must be able to accommodate existing traffic volumes.
- **Intersection Footprint.** To be viable and align with Comp Plan, alternatives should not substantially increase the intersection's footprint.
- **Implementability.** To be viable, alternatives should entail relatively low to moderate levels of complexity to implement.

### SECOND TIER SCREENING CRITERIA

- Intuitive Design
- Connectivity
- Safety
- Sense of Arrival
- Development Potential
- Human-scale Infrastructure
- Construction Costs

## Identification of Candidate Alternatives

Preliminary Option	Screening Result	Description
No Build Scenario		Eliminated <i>low aggregate score</i>
Modified Hamburger		Eliminated <i>low aggregate score</i>
<b>Traditional Intersection (with skew)</b>		<b>Advanced as Candidate Alternative</b>
Traditional Intersection (realigned Old Lee Hwy)		Eliminated <i>Failed first-tier screening – Barriers to Implementation</i>
Split Intersection		Eliminated <i>Failed first-tier screening – Barriers to Implementation</i>
Multilane Roundabout		Eliminated <i>Failed first-tier screening – Traffic Operations</i>
<b>Roundabout with Grade Separation</b>		<b>Advanced as Candidate Alternative</b>
Displaced Left Turn Intersection		Eliminated <i>Failed first-tier screening – Intersection Footprint</i>
<b>Quadrant Roadway Intersection</b>		<b>Advanced as Candidate Alternative</b>

## Candidate Alternative #1: Traditional Intersection (with skew)

- Other grid streets not required for intersection to function
- Assumes same traffic volumes and distribution
- # lanes crossed at intersection: 7 on Fairfax Blvd, 6 on Lee Hwy (no build: 6 on Fairfax Blvd, 5 on Lee Hwy)
- Pedestrian crossing distances: ~60'-80' (no build: ~150'-400')
- Removes right turn slip lanes on three corners; retains slip lane on northwest corner

### Pros:

- Standalone project – grid streets not required
- More intuitive to navigate

### Cons:

- Skewed intersection with large footprint (similar to Kamp Washington)
- Long pedestrian crossings



### LEGEND

- MEDIAN
- RECLAIMED RIGHT-OF-WAY
- SIDEWALK
- BUFFER STRIP



## Candidate Alternative #2: Roundabout with Grade Separation

- Other grid streets not required for intersection to function
- Assumes same traffic volumes and distribution
- East-west through movements travel below grade (underneath circle); north-south and turning movements travel through roundabout
- Similar to Thomas Circle in DC
- # lanes crossed at intersection: 3 on Fairfax Blvd, 3 on Lee Hwy (no build: 6 on Fairfax Blvd, 5 on Lee Hwy)
- Pedestrian crossing distances: ~50'-110' (including sidewalks on overpass) (no build: ~150'-400')

### Pros:

- Removes heaviest traffic volumes from street level
- Shorter crossing distances
- Retains iconic circle configuration

### Cons:

- Most expensive option



### LEGEND

- MEDIAN
- RECLAIMED RIGHT-OF-WAY
- SIDEWALK
- BUFFER STRIP



## Candidate Alternative #3: Quadrant Roadway Intersection

- One new grid street required to function
- Assumes same traffic volumes, but different routing through local network
- All left turns directed away from primary intersection to other streets in the network
- Southwest quadrant road could connect through the Activity Center to Campbell St or traverse the perimeter to Spring St
- # lanes crossed at intersection: 5 on Fairfax Blvd, 5 on Lee Hwy (no build: 6 on Fairfax Blvd, 5 on Lee Hwy)
- Pedestrian crossing distances: ~56'-76' (no build: ~150'-400')
- Removes right turn slip lanes on three corners; retains slip lane on northwest corner

### Pros:

- Smaller footprint of primary intersection
- Shorter crossing distances
- Traffic loads distributed across 3 intersections

### Cons:

- Potentially less intuitive for drivers new to area than other Build alternatives



### LEGEND

- MEDIAN
- RECLAIMED RIGHT-OF-WAY
- SIDEWALK
- BUFFER STRIP

## Next Steps

- Share alternatives on Engage Fairfax
- Finalize TLC project by June 30, 2021
- Continue refining concepts and select preferred alternative as part of future Fairfax Circle Small Area Plan (anticipated in approximately 2 years)
  - Close collaboration with economic development and land use planning is critical
- Seek funding for implementation of preferred alternative (application cycle anticipated in approximately 3 years, with construction 10-12 years out)

# Questions & Discussion