

# US 29 Mobility and Reliability Study – Project Findings

Public Meeting  
10.13.22

# Agenda

- Welcome and Introductions
- Study Goals & Objectives
- Study Recap/Outcomes
- Corridor Alternatives
  - Concept Design
  - Costs
  - Traffic Operations
- Next Steps
- Questions & Answers

# Project Goals

Identify improvements on US 29 (Colesville Road / Columbia Pike) that:

- Complement the investment in US 29 Flash bus service
- Improve corridor travel time and reliability for all modes
- Increase pedestrian and bicycle access and safety



# Previous Study Recap/Outcomes

- Project team studied Managed (Bus/HOV) lane and Median bus lane concepts in 2020
- Team also identified pedestrian and bicycle access improvements to Flash stations between Silver Spring and Tech Road
- Findings were presented to the Council Transportation and Environment (T&E) Committee in January 2021
- T&E Committee requested additional study of the median bus lane
- County Council approved funding to advance pedestrian and bicycle improvements as part of the FY23-28 budget
- Other MDOT SHA projects underway (e.g. Oak Leaf traffic signal, Stewart Lane pedestrian improvements)



# Alternatives Evaluated

- **No-Build:** No changes to existing conditions
- **Managed (Bus/ HOV) Lanes:** Musgrove Road to Spring Street and **Bus on shoulder** north of Musgrove Road
- **Dedicated Median Bus Lane:** Tech Road to Sligo Creek Parkway

# Questions for consideration

1. Which corridor alternative do you prefer?
2. Should a Flash station be added at Franklin Avenue?

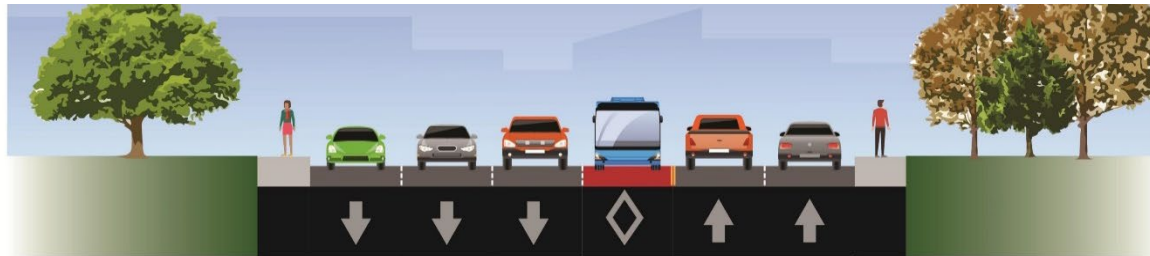
# Managed (Bus/HOV) Lane Alternative

- Managed (Bus/HOV) lane from Musgrove to Stewart, MD 650 to Southwood/Burnt Mills, and Dale Drive to Spring Street
- Includes intersection improvements at Greencastle, Tech, Stewart, MD 650, I-495, and Sligo Creek Pkwy
- May require changes to Burnt Mills and Four Corners Flash stations and traffic signal at Hillwood Drive
- No changes to lane widths

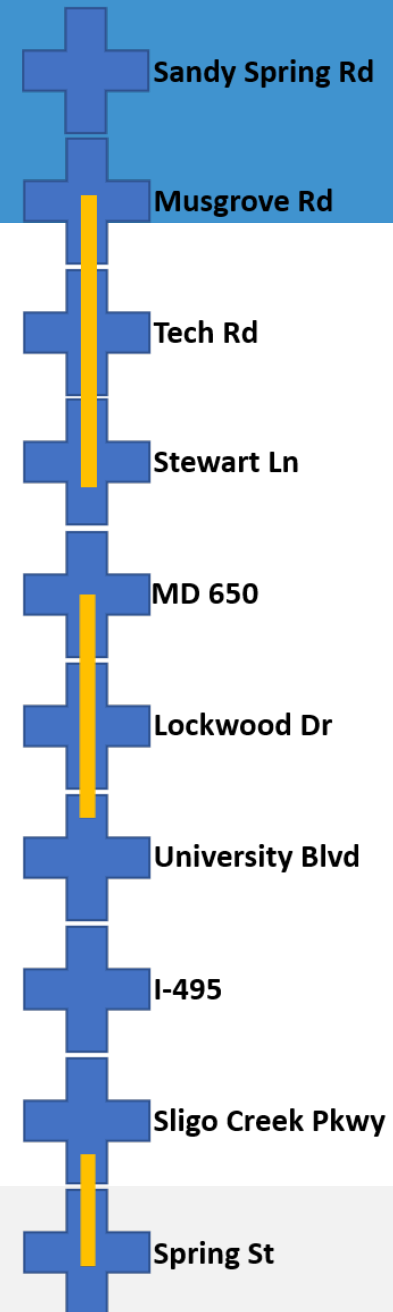


# Managed (Bus/HOV) Lane Alternative

AM Rush Period

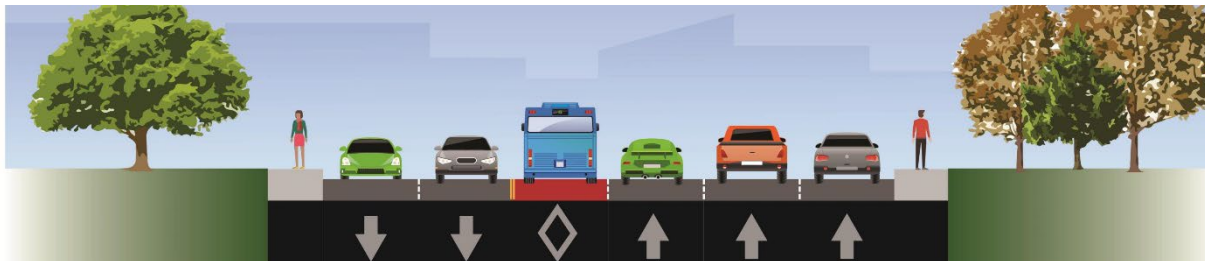
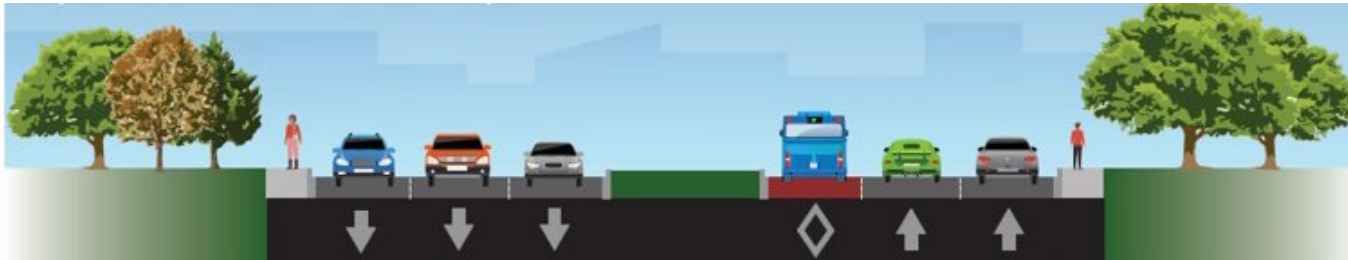


\*Cross-sections are for illustrative purposes only.

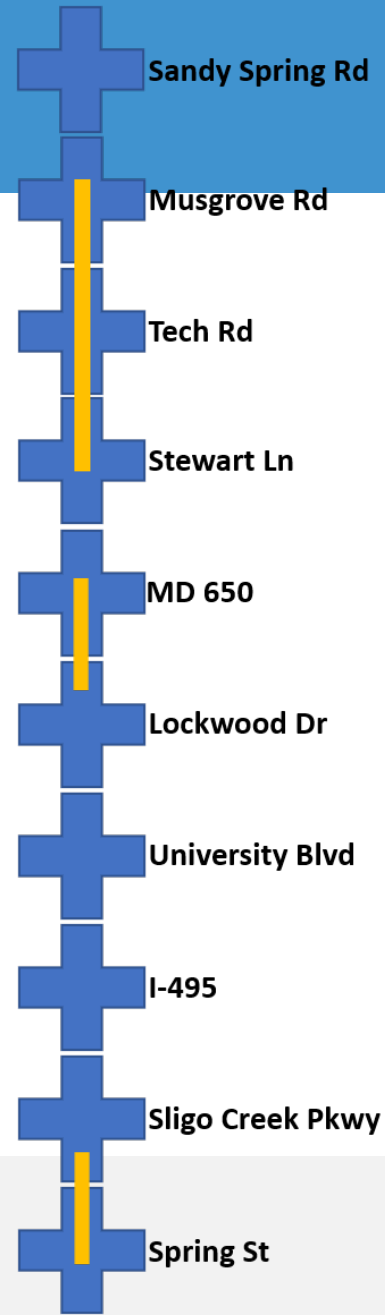


# Managed (Bus/HOV) Lane Alternative

PM Rush Period

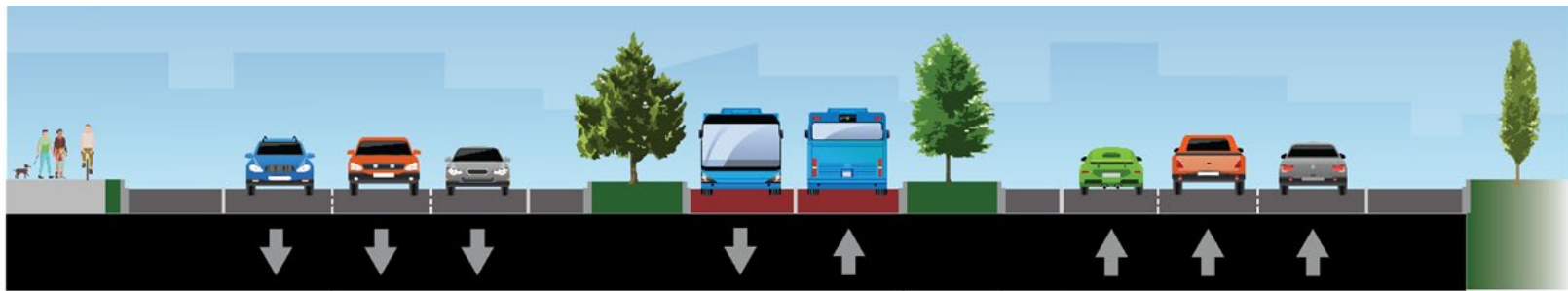


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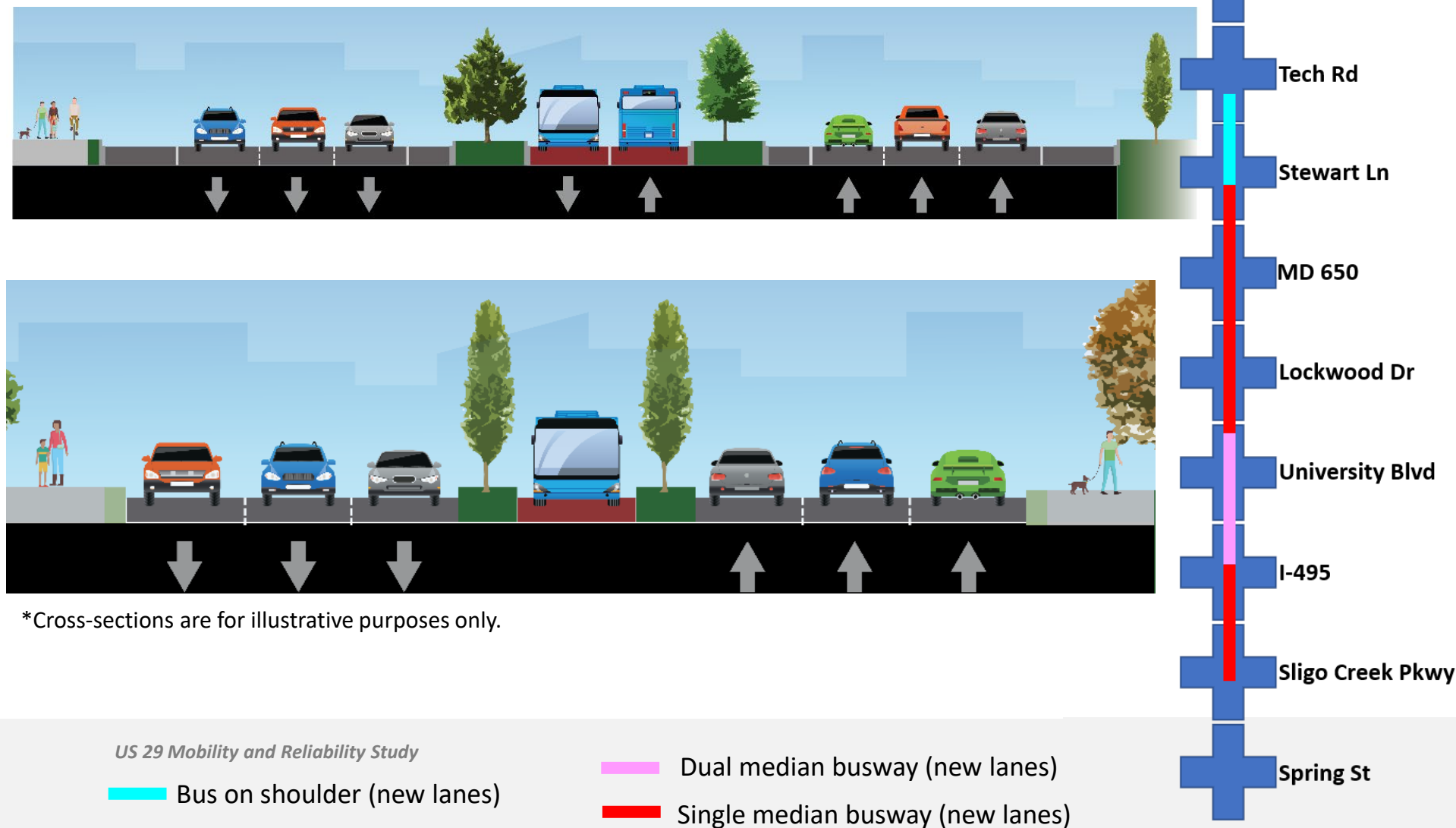


# Median Bus Lane Alternative

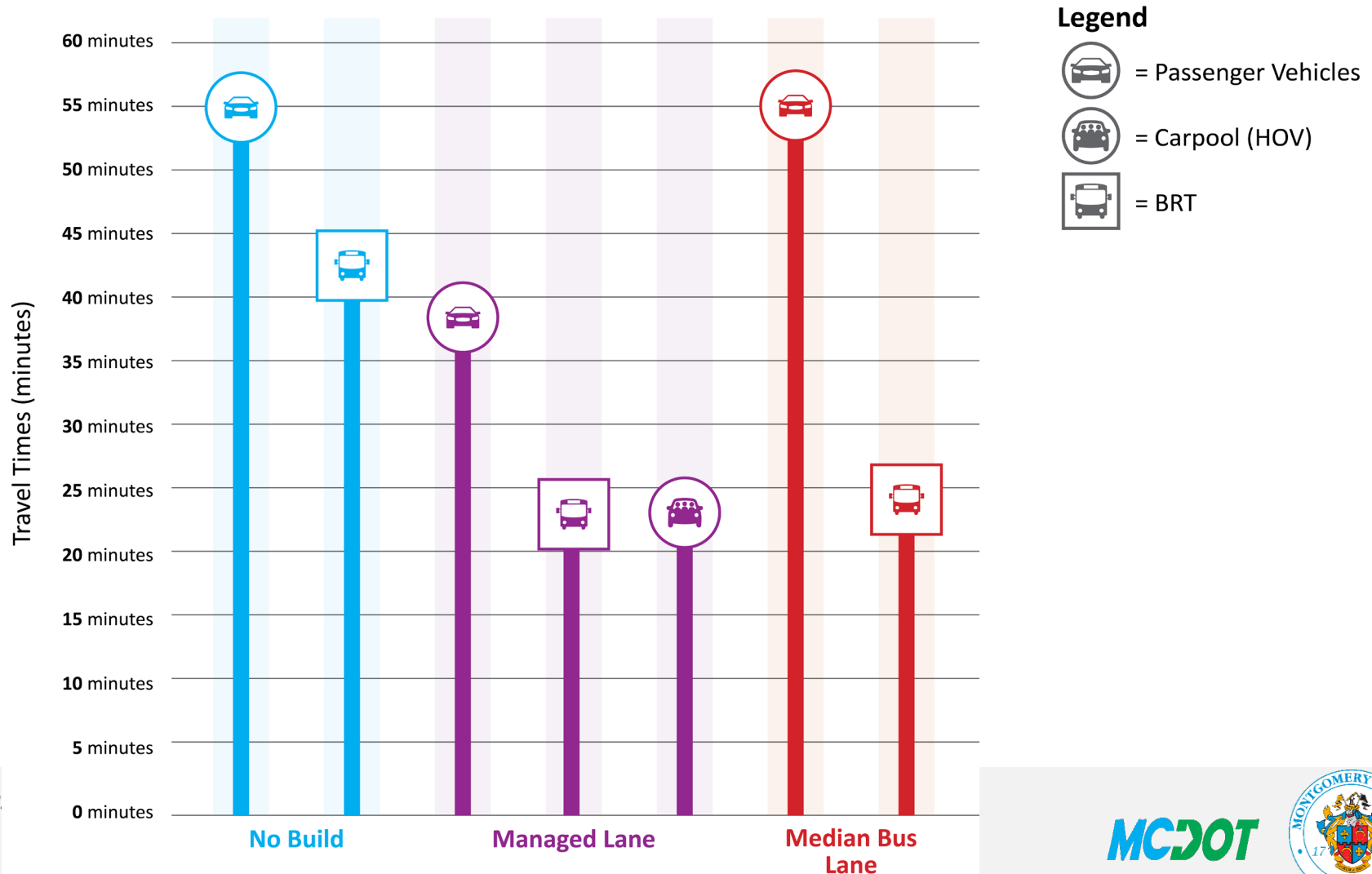
- Dedicated bus lane(s) from Tech Road to Silver Spring Transit Center
- Includes intersection improvements at Greencastle and I-495
- Would require relocation of Flash stations at Burnt Mills and Four Corners
- Includes four (4) new traffic signals and some access restrictions
- Does not change lane widths



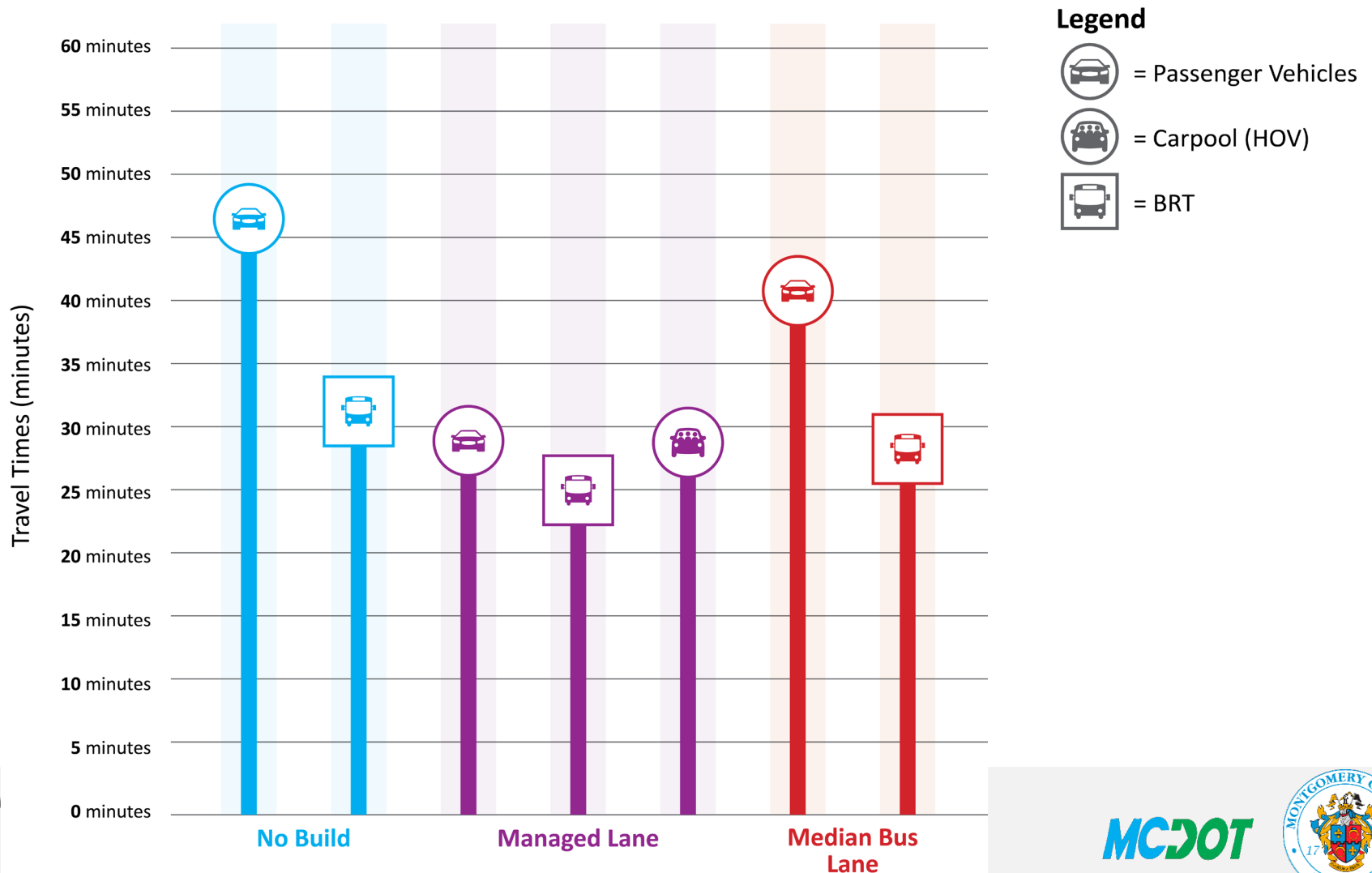
# Median Bus Lane Alternative



# Summary of Results Travel Time - AM Southbound



# Summary of Results Travel Time - PM Northbound



# Median Bus Lane Alternative: Left-turn Prohibitions



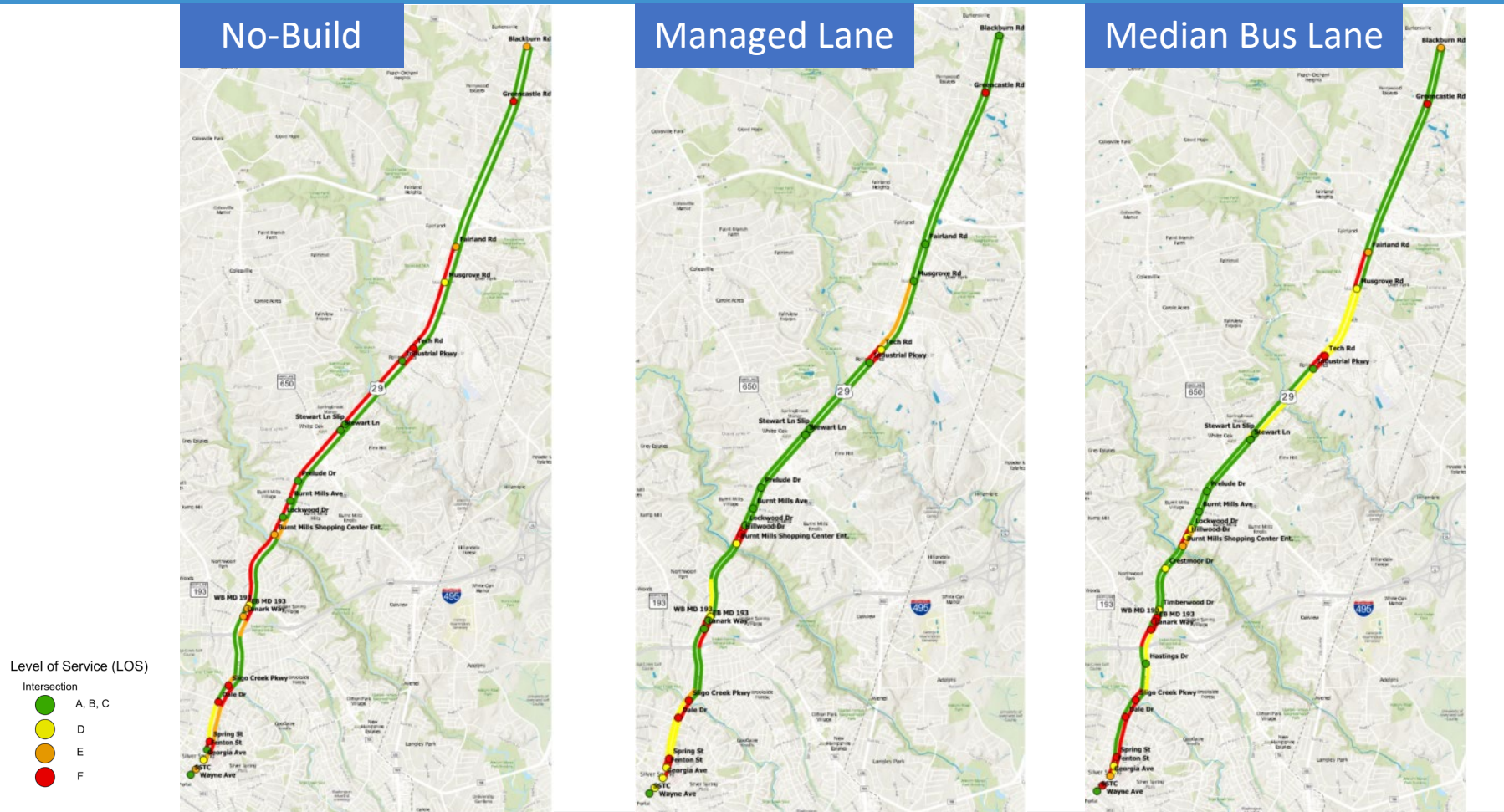
# Comparison of Alternatives

		No Build	Managed (Bus/HOV) Lane Alternative	Median Bus Lane Alternative
Travel Time (minutes)	Passenger Vehicle: AM SB (PM NB)	55 (47)	33 (29)	55 (41)
	BRT: AM SB (PM NB)	43 (32)	23 (25)	24 (27)
Number of Level of Service E/F Signalized Intersections AM (PM)		11 (8)	5 (5)	13 (11)
Person Throughput AM (PM)		3800(4250)	4550(4650)	3850(4250)
Right-of-Way (acres)		-	6.9*	5.5
Cost		-	\$105 million**	\$125 million

\* Includes right-of-way for **optional** Burnt Mills (1.5 acres) and Four Corners (1.2 acres) stations.

\*\* Includes costs of **optional** Burnt Mills (\$16.6M) and Four Corners (\$8.7M) stations.

# Comparison of Alternatives AM Peak Hour



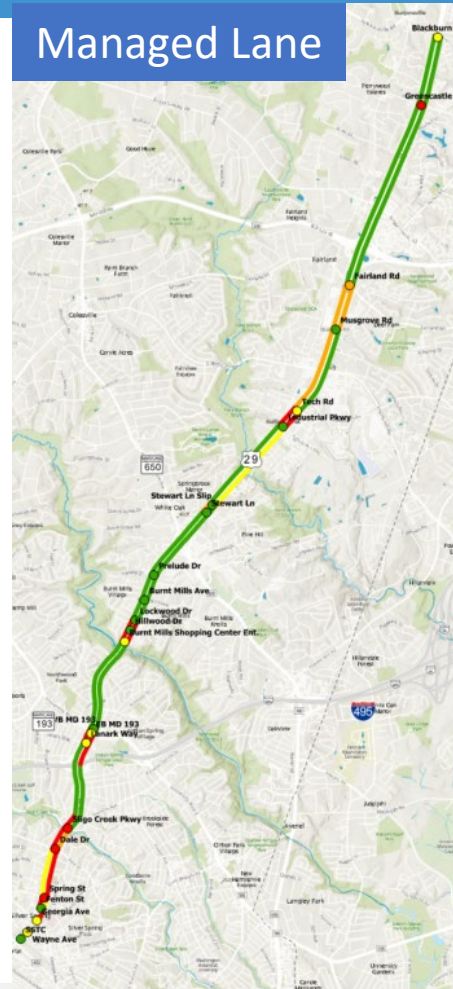
# Comparison of Alternatives

## PM Peak Hour

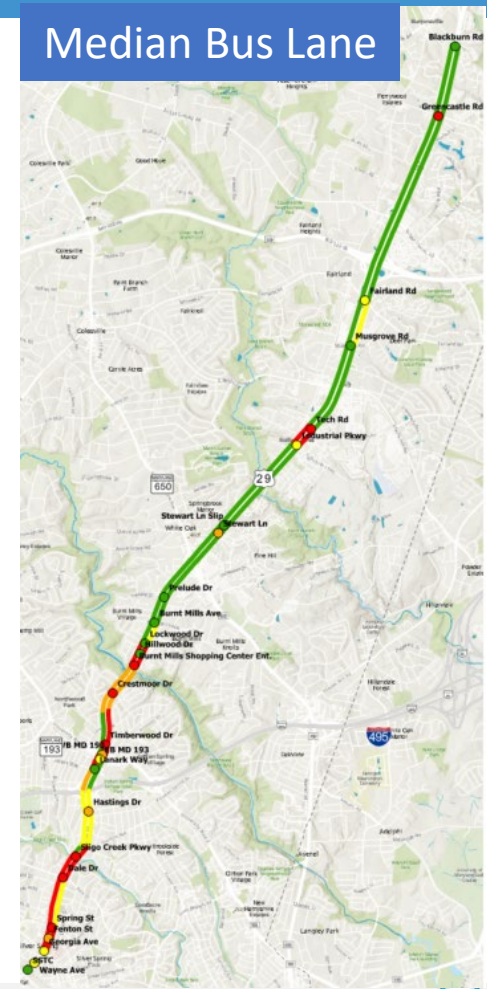
### No-Build



### Managed Lane



### Median Bus Lane



Level of Service (LOS)

Intersection

- A, B, C
- D
- E
- F

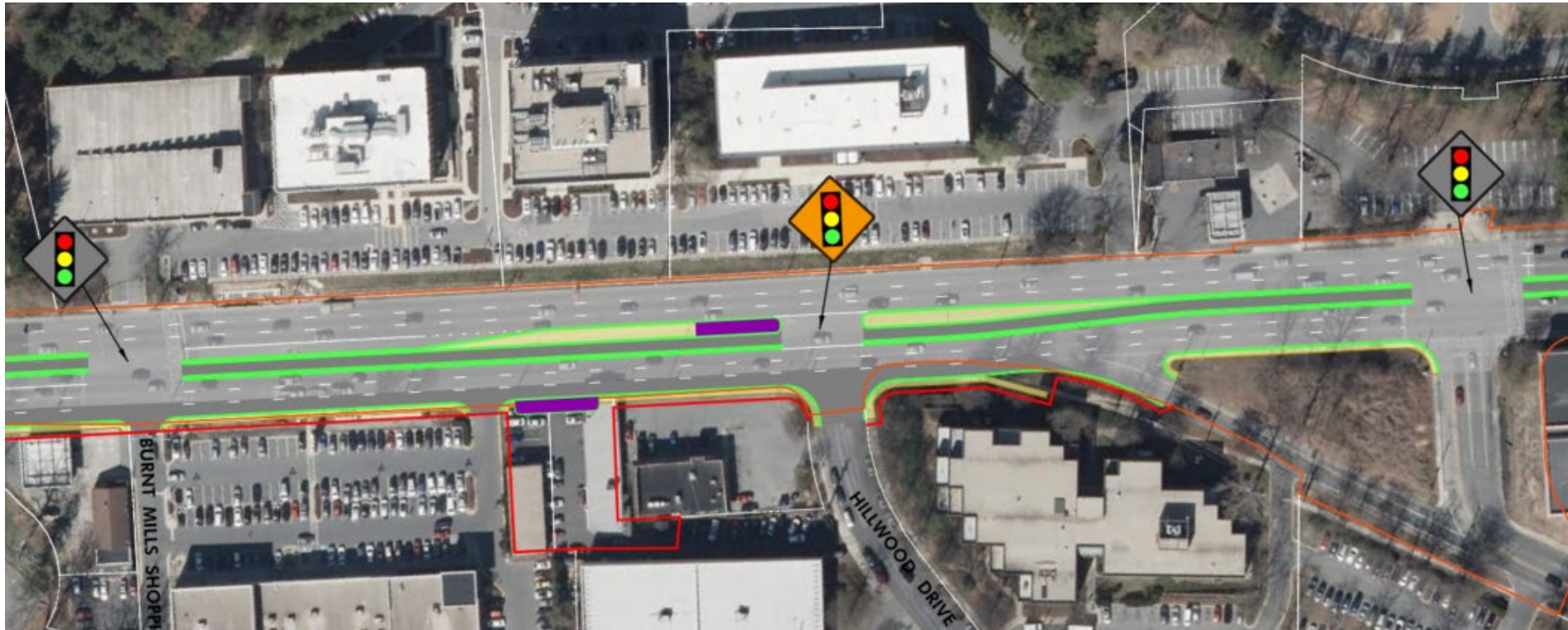
# Burnt Mills Station Location/ Design (Optional)

Managed (Bus/HOV) Lane



# Burnt Mills Station Location/ Design

Median Bus Lane



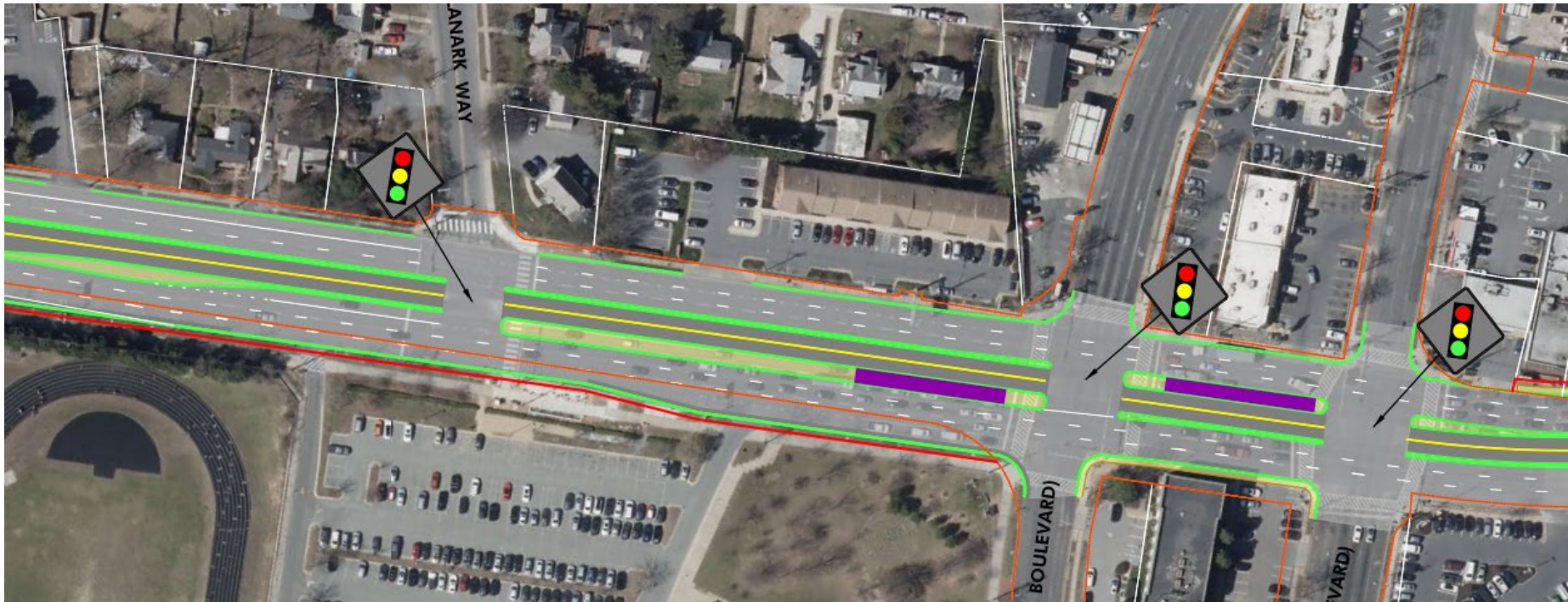
# Four Corners Station Location/ Design (Optional)

Managed (Bus/HOV) Lane



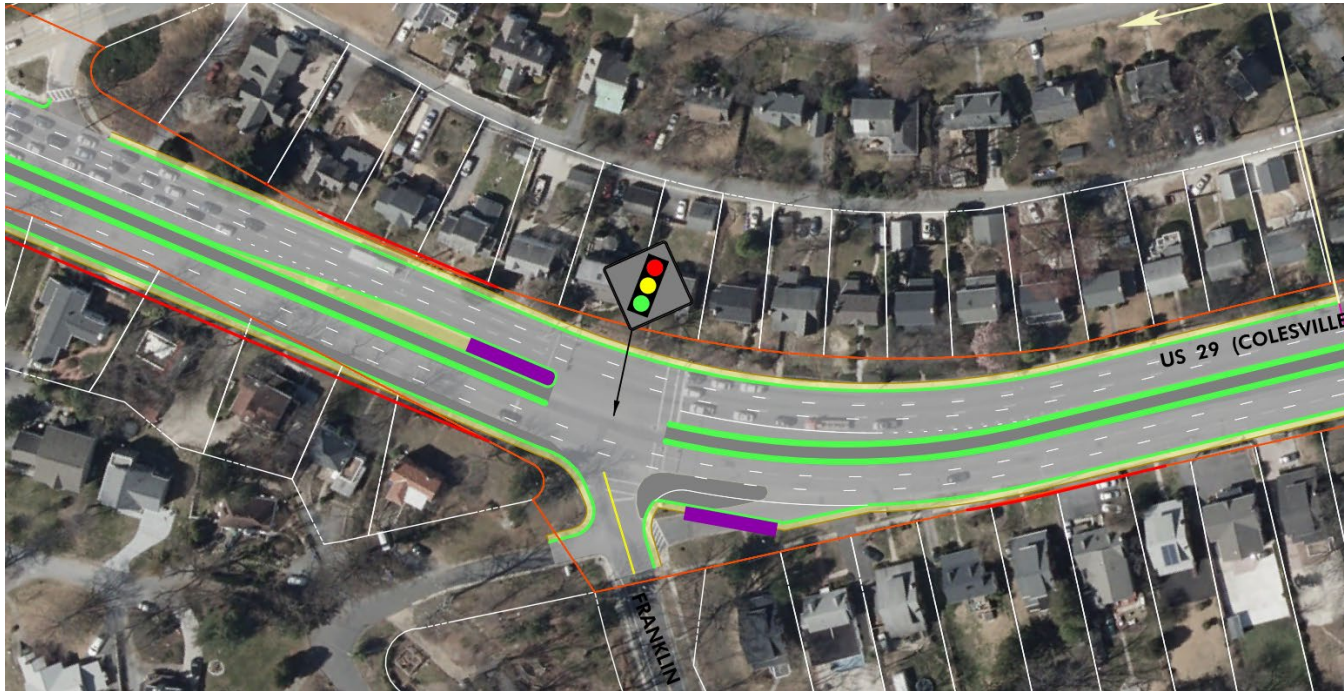
# Four Corners Station Location/ Design

## Median Bus Lane



# Franklin Station Location/ Design (Optional)

Median Bus Lane



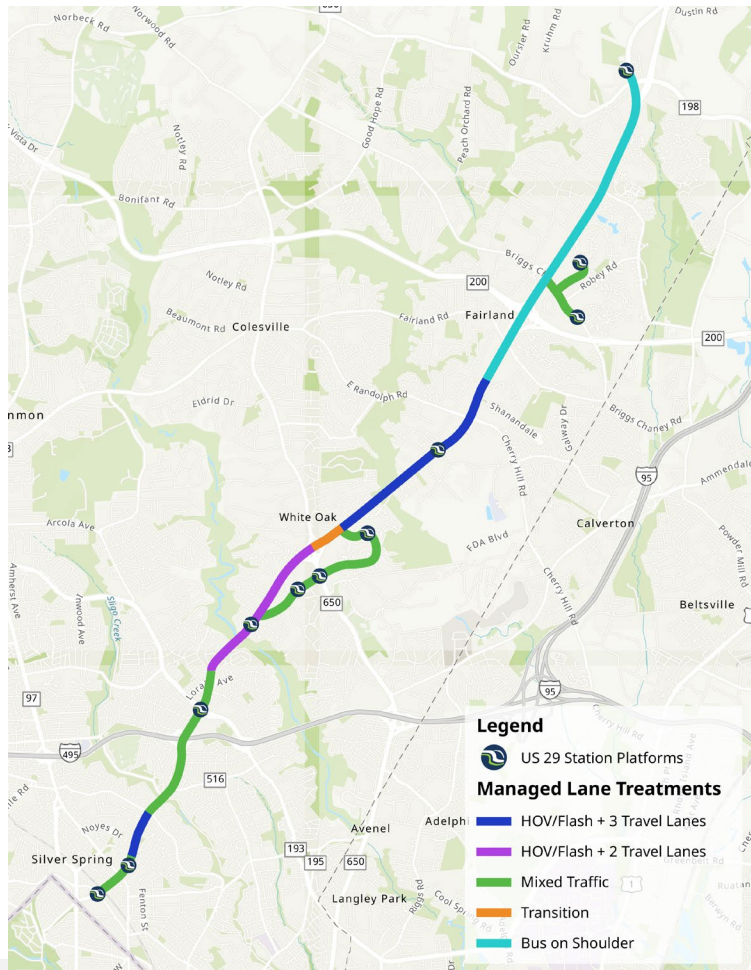
- Requested during previous community outreach
- Permanent station locations (i.e. do not change by time of day)
- Estimated ridership – 200 daily riders
- Estimated station cost – \$4M

# Dedicated Bus Lanes between Sligo Creek Parkway and SSTC

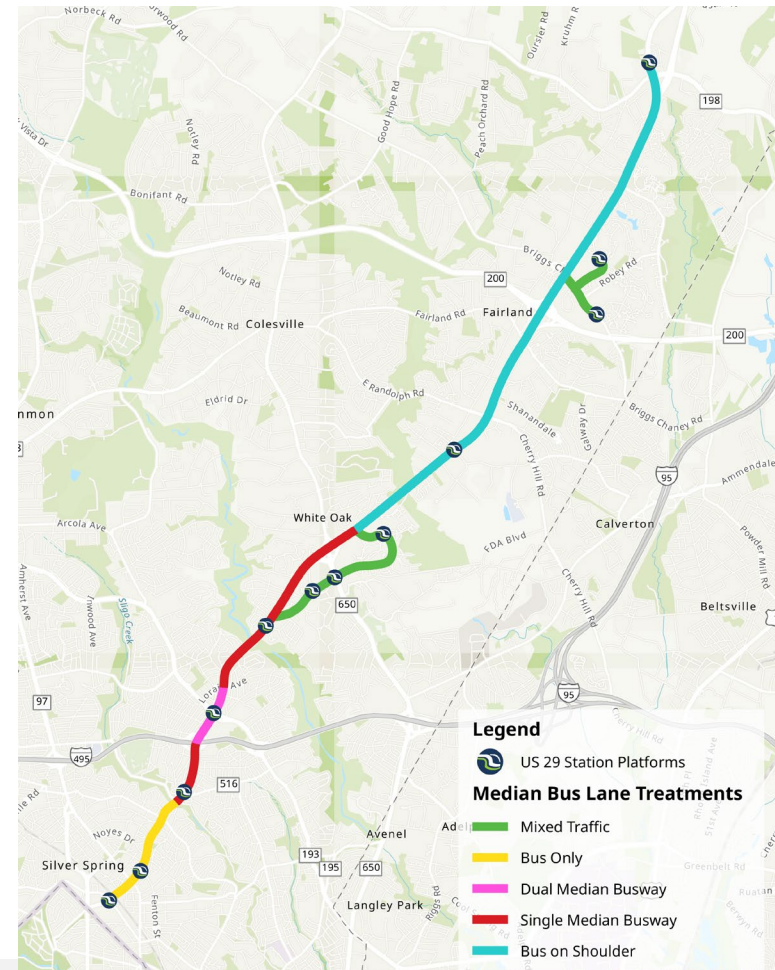
- Multiple dedicated bus lane scenarios were evaluated between Sligo Creek Parkway and Silver Spring Transit Center
  - All showed potential for bus travel time savings
  - There were some questions about the impacts of northbound bus lanes during the PM peak
- The return of traffic following COVID has been inconsistent depending on the area and corridor. The model **does not** capture this.
- The Division of Traffic Engineering and Operations will be leading an effort to better assess priority bus lane concepts through lane repurposing south of Sligo Creek Parkway.

# Alternatives Summary

## Transitway Type and Station Location



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# Other Considerations

- Managed Lanes
  - Could benefit other buses, if curb lane selected\*
  - Requires periodic enforcement and monitoring to ensure optimal operation
  - Improved operations reliant on carpooling. May require marketing, program support, and incentives to reach potential



Managed Lane – San Francisco, CA

# Other Considerations

- Median Lanes
  - Strong protection from unauthorized use of transit lane and from friction between lanes/turning movements
  - High level of reliability for bus service – Less impacted by congestion
  - Transitways give bus a prominent place within the streetscape
  - Consistent with master plan
  - Only benefits Flash and other express buses



Median Bus Lane – Alexandria, VA

# Summary of Options by Segment

- North (MD 198 to Tech Road)
  - Harden shoulder to create Bus/HOV or Bus-only lane
  - Additional \$52 million
  - Limited benefit given current traffic
  - Fairland/Briggs Chaney Master Plan still underway
- Middle (Tech Road to Sligo Creek Parkway)
  - Harden shoulder and repurpose lanes to create Bus/HOV or Bus-only lane
  - Potential to add a station at Franklin Avenue
  - \$105 Million for Managed (Bus/HOV)
  - \$125 Million for Median
- South (Sligo Creek Parkway to SSTC)
  - Repurpose a single lane in the peak-period/direction to create Bus/HOV or Bus-only lane
  - Division of Traffic Engineering beginning study to explore pilot bus lanes south of Sligo Creek Parkway

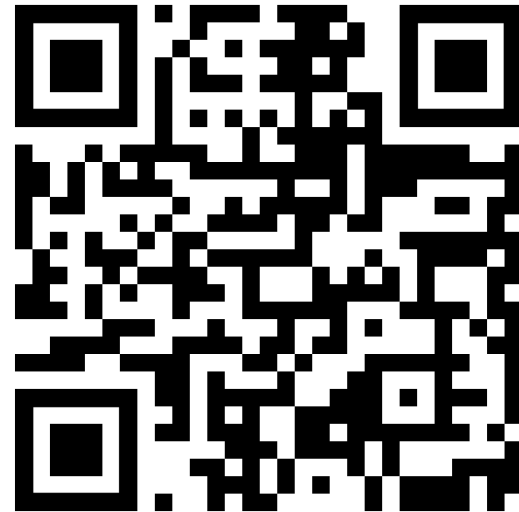
# Schedule and Next Steps

- CAC Meeting – October 6<sup>th</sup>
- Public Meeting – October 13<sup>th</sup>
- Planning Board – November 10<sup>th</sup>
- County Council: Transportation and Environment Committee – November 28<sup>th</sup>
- Pilot Bus-Only Lane Project Sligo Creek Parkway to Spring Street – TBD

# Open Discussion/ Q&A

**Please provide input and fill out the survey:**

<https://forms.office.com/r/WjES5fQgaw>



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