US 29 Mobility and Reliability Study

Virtual Public Workshop
July 22, 2020

-Presentation will begin shortly-

Welcome!

Welcome to this virtual community meeting!

- This is one of our first virtual meetings. We're all learning, so please bear with us.
- We're going to go over some basic controls to help you use the Zoom meeting format before we start the presentation.
- Please note this meeting is being recorded.
  - It is being recorded on video and audio and will be posted on our website.
  - If you do not wish to have your voice or likeness recorded, please turn your video camera off, and refrain from asking questions using the audio option. Instead, you can send your questions via the chat.

Using Zoom

Welcome to the virtual community meeting!

Let's get you oriented to the Zoom meeting.

- Muting
  - Everyone is on mute. You cannot unmute yourself. We can unmute you during the Q&A and comment period.
  - To request to speak, you'll need to use the **raise hand** feature (instructions in just a minute). Once we unmute you, you may still need to click a pop-up menu to unmute yourself.
  - If you have called in by telephone, you can unmute yourself by dialing ***6** once we unmute you.

Using Zoom

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- Video
  - Your video camera is off by default. To reduce the bandwidth of the meeting, we ask that you please do not turn your camera on.

Using Zoom

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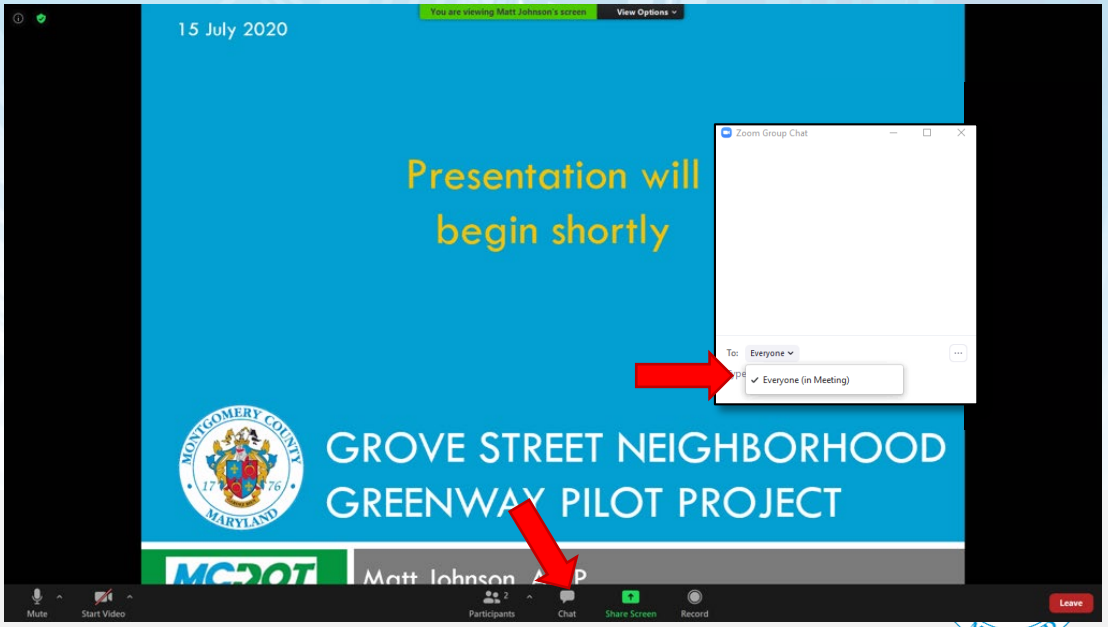
- Ask a question (Text)
  - If you have a question during the presentation, send it via **chat**.

To send a chat:

- Click "chat" in the bottom menu
- A new window will appear. In the "to" field, change the drop down to "Kyle Lukacs"
- Type your question and send it.



Using Zoom

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Let's get you oriented to the Zoom meeting.

- Raise your hand
  - If you'd like to speak to ask a question or make a comment, please **raise your hand**

To raise your hand

- Click "participants" in the bottom menu
- A new window will appear. Click the blue "raise hand button".
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Using Zoom

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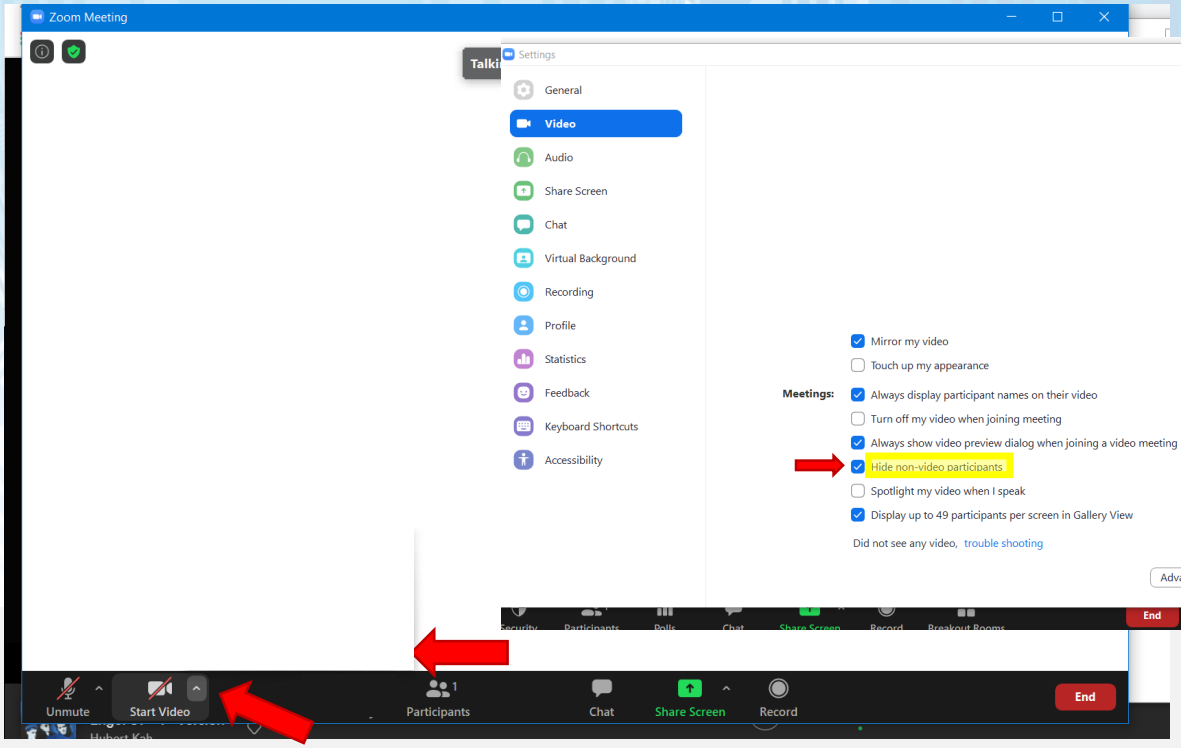
- View

To change your view so that you only see people with cameras on:

- Click the up arrow next to "start video".
- Select "Video settings".
- Make sure "Hide non-video participants" is checked.



Contact

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Project Manager

240.777.7217
Corey.Pitts@MontgomeryCountyMD.Gov
100 Edison Park Drive, Fourth Floor
Gaithersburg, MD 20878

Note: Due to Covid-19, most of our staff is working from home. Email is much preferred for communication, rather than regular mail or our desk phones.

Meeting Agenda

- 6:30: Overview of Zoom features
- 6:40: Introductions
- 6:45: Meeting presentation
- 7:45: Question & Answer
- 8:30: Adjourn

Introductions

We have staff here from MCDOT and our engineering consulting firm Mead & Hunt and STV.

US 29 FLASH Update

- FLASH buses have been received and driver training is occurring
- Bikeshare stations installed and activated
- Construction continues due to delays experienced from COVID-19
- Substantial construction should be completed this summer
- FLASH service to begin Fall 2020

Presentation Agenda

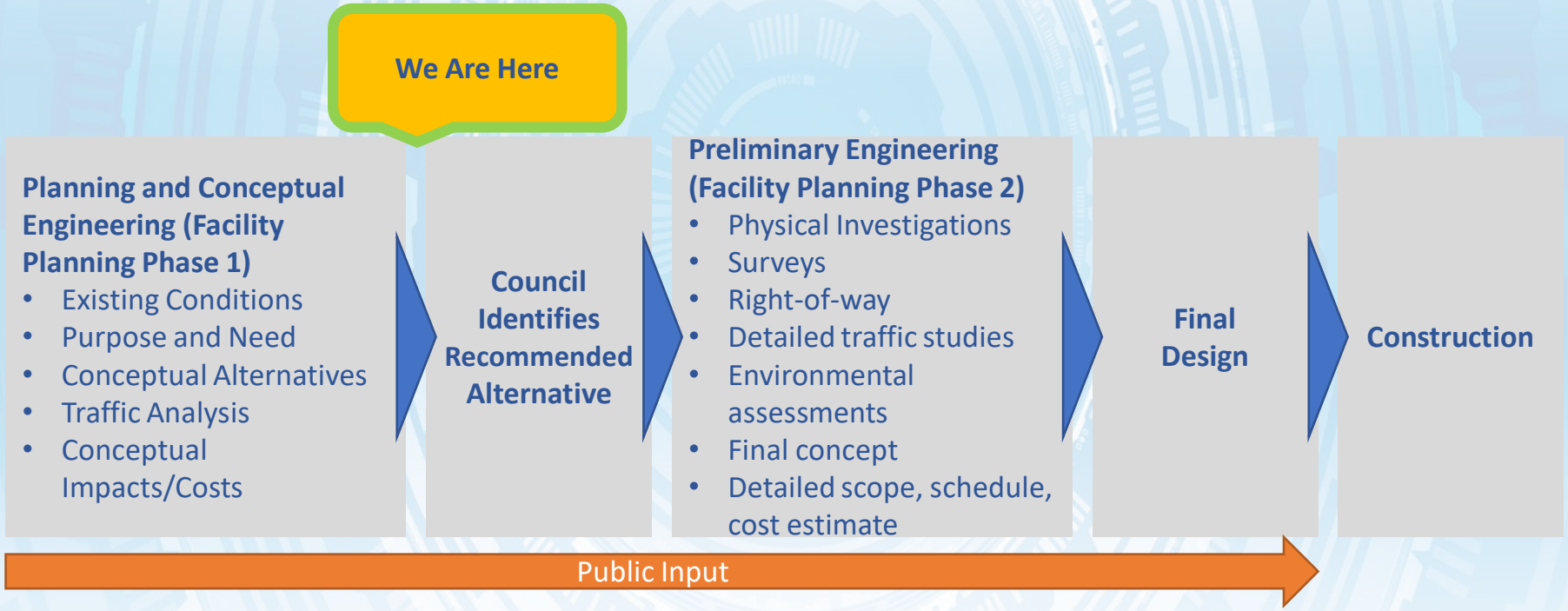
- Study purpose and goals
- Existing conditions
- Alternatives studied
- Study results
- Recommendations
- Next steps

Purpose of the US 29 Mobility and Reliability Study

To identify improvement(s) on US 29 to complement the investment in US 29 FLASH from Tech Road to the Silver Spring Transit Center.

- Improve corridor travel time and reliability
- Increase pedestrian and bicycle access and safety

Project Schedule



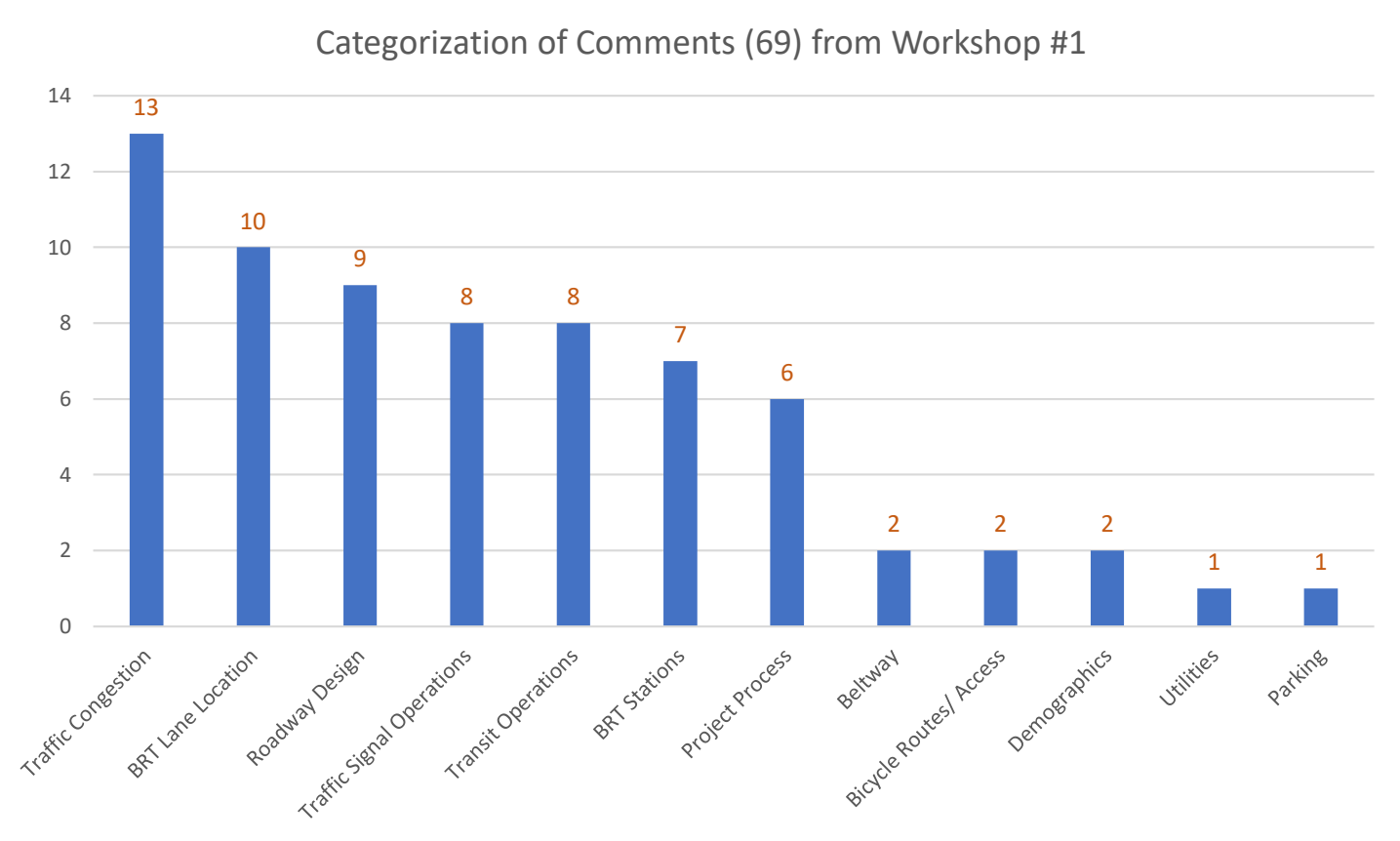
*At this time, no funding is identified for Facility Planning Phase 2, Final Design, or Construction

Stakeholder Participation

- Public Outreach
  - Corridor Advisory Committees
  - Open House - November 2018
  - Virtual Workshop - Summer 2020

- Reviews by Agencies at Key Decision Points
  - M-NCPPC, MDOT SHA, MDOT MTA

What have we heard so far?



Study Corridor Overview
Existing Traffic Volumes



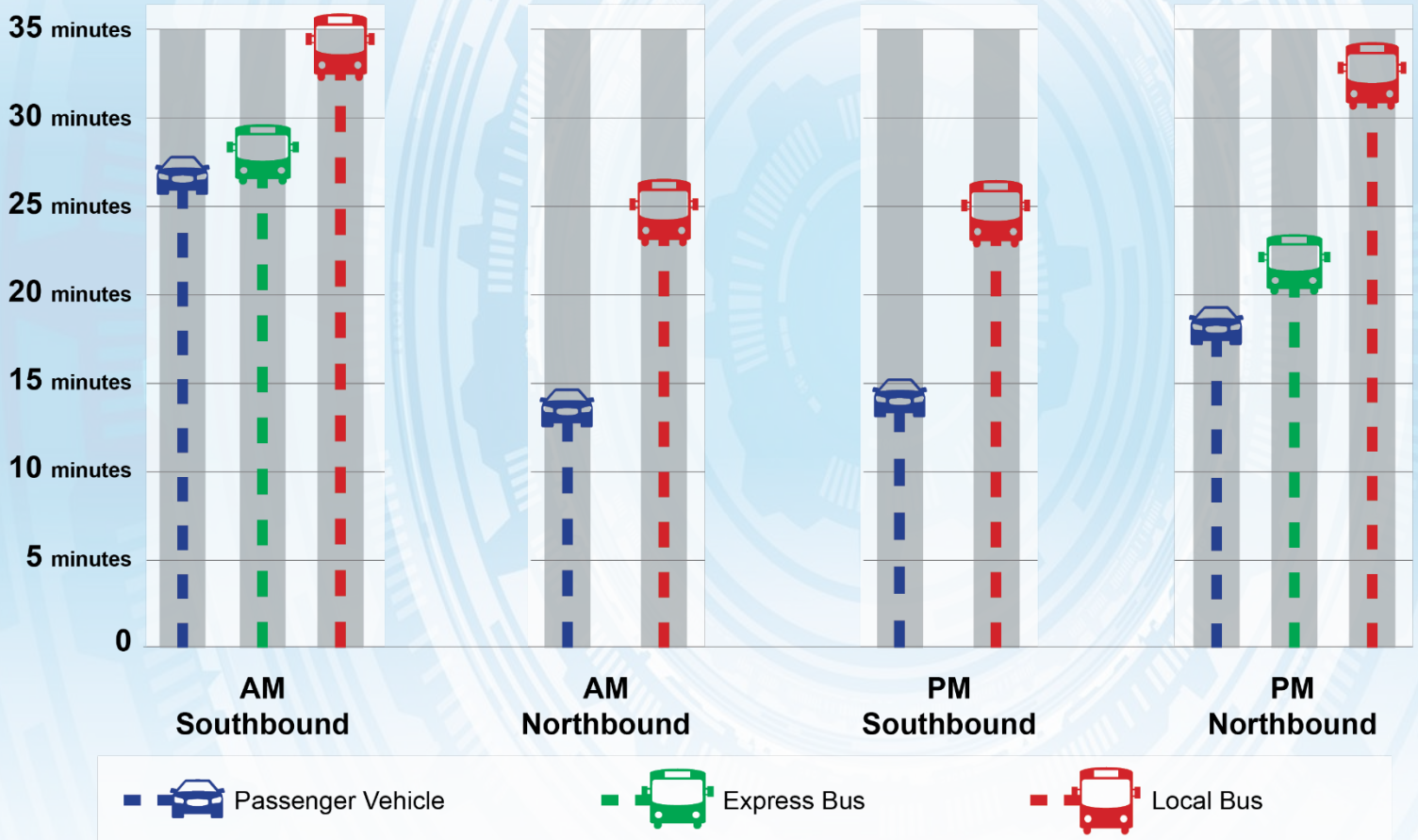



Pedestrians	Bikes	Bus Passengers	Automobiles	Car Poolers	Trucks
Daily					
1,500-2,000	**25-75**	**7,000-8,000**	**65,000-70,000**	**N/A**	**1,000-1,500**
Peak Hour					
100-150	**0-10**	**800-1000**	**5,000-6,000**	**N/A**	**25-125**
Peak Hour (Directional)					
N/A	**N/A**	**700-800**	**3,000-4,000**	**600**	**10-75**

MCDOT

MONTGOMERY COUNTY 17 76 MARYLAND

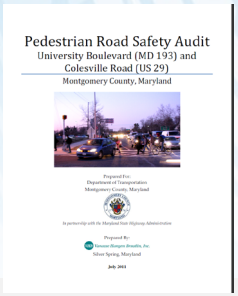
Study Corridor Overview
Existing Travel Time by Mode

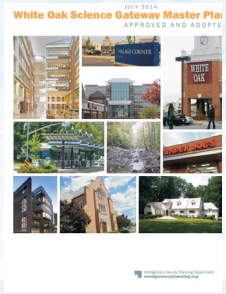


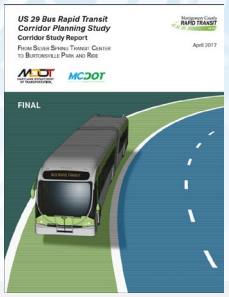
Limits – Tech Road to Georgia Avenue
Sources – INRIX, WMATA and Ride ON AVL and field measured GPS

Review of Previous Studies and Recommendations

- Team Reviewed **36** Previous Studies from the 1990's to 2018:
  - US 29 BRT Studies conducted by MCDOT and MDOT SHA and MDOT MTA
  - US 29 Related Traffic and Transit Studies
  - Related Countywide and Regional Transit Studies
  - Related Functional and Master Plans







Alternatives Evaluated

- **Full-time Dedicated Median Bus Lane**: Tech Road to Sligo Creek Parkway
- **Rush-hour Managed Bus/ HOV Lanes**: Musgrove Road to Spring Street and **Bus on shoulder** north of Musgrove Road
- **Intersection Improvements**: Select congested intersections/ interchanges
- **Transportation System Management / Transportation Demand Management** measures to reduce non-recurring congestion and encourage carpooling
- **Pedestrian and Bicycle** improvements and new connections for station access, increased walk and bike sheds (Silver Spring to Tech Road)

Study Measures of Performance

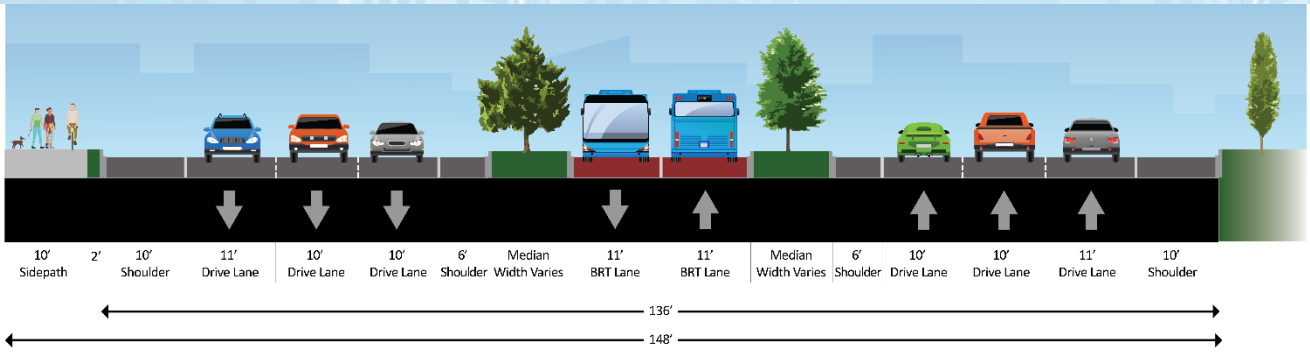
- Person throughput
- Travel time by mode
- Intersection/Segment Level of Service and Delay
- Impact to neighborhoods/ traffic management

Future traffic – No Build

- **15** intersections forecasted to operate at LOS E or F during the AM and/or PM peak
- **21** segments forecasted to experience a failing LOS in at least one peak hour
- Travel times nearly **double** for vehicles in the morning southbound direction
- Transit travel time **increases** by 10 minutes in the peak hour/direction

Median Bus Lane Concept

Tech Road to Stewart Lane



Musgrove Rd

Tech Rd

Stewart Ln

MD 650

Lockwood Dr

University Blvd

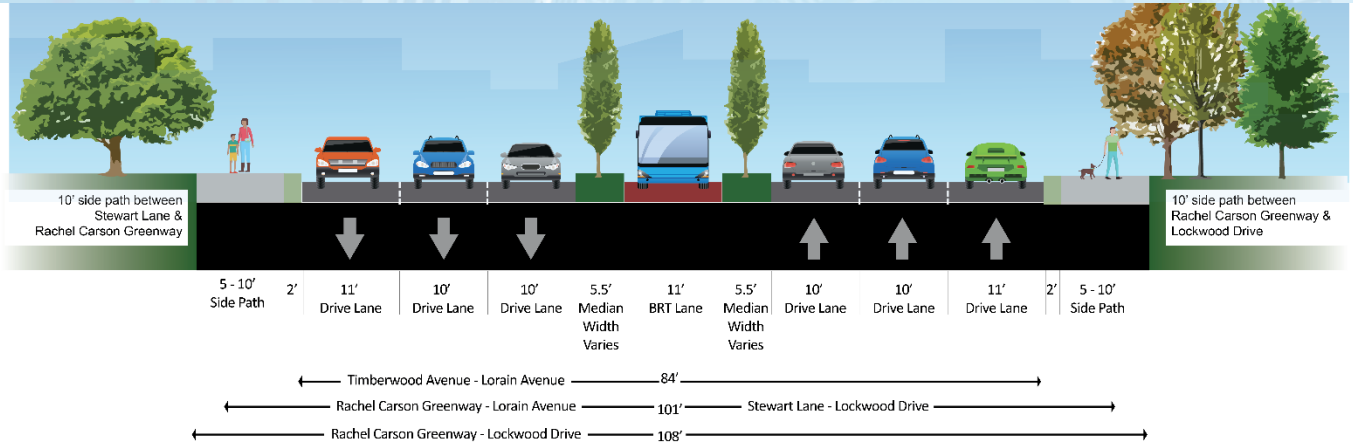
I-495

Sligo Creek Pkwy

Spring St

Median Bus Lane Concept

Stewart Lane to Timberwood Avenue



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Tech Rd

Stewart Ln

MD 650

Lockwood Dr

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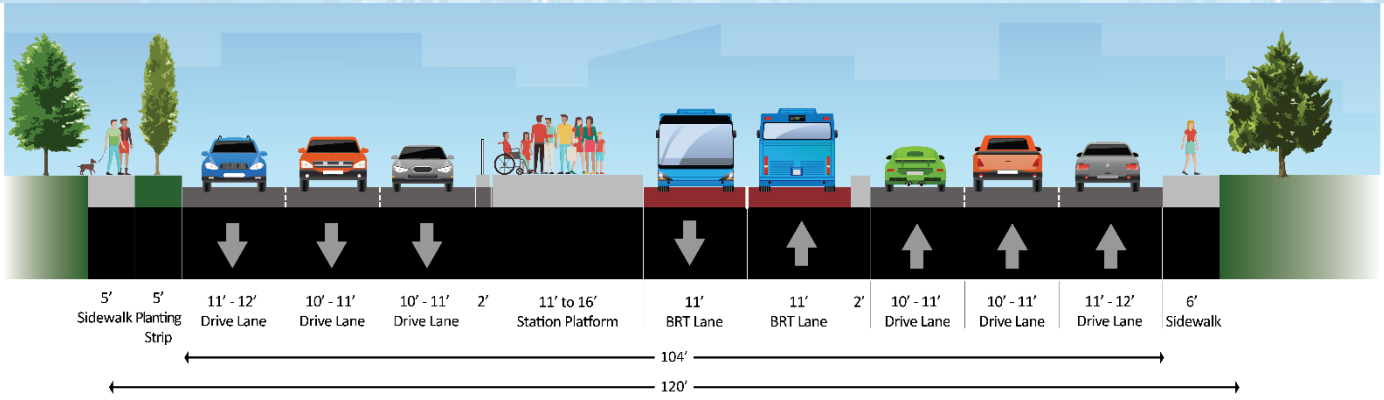
I-495

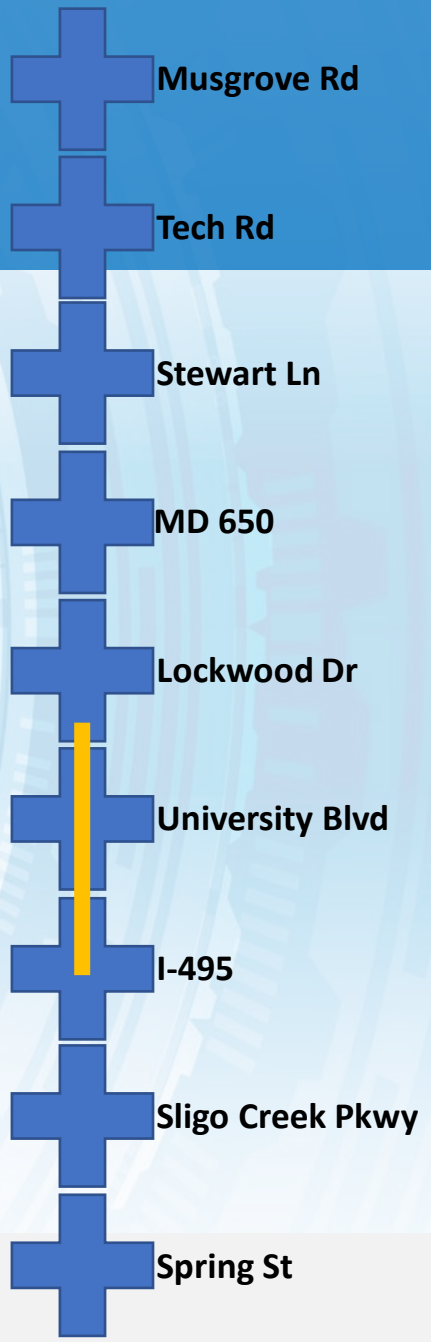
Sligo Creek Pkwy

Spring St

Median Bus Lane Concept

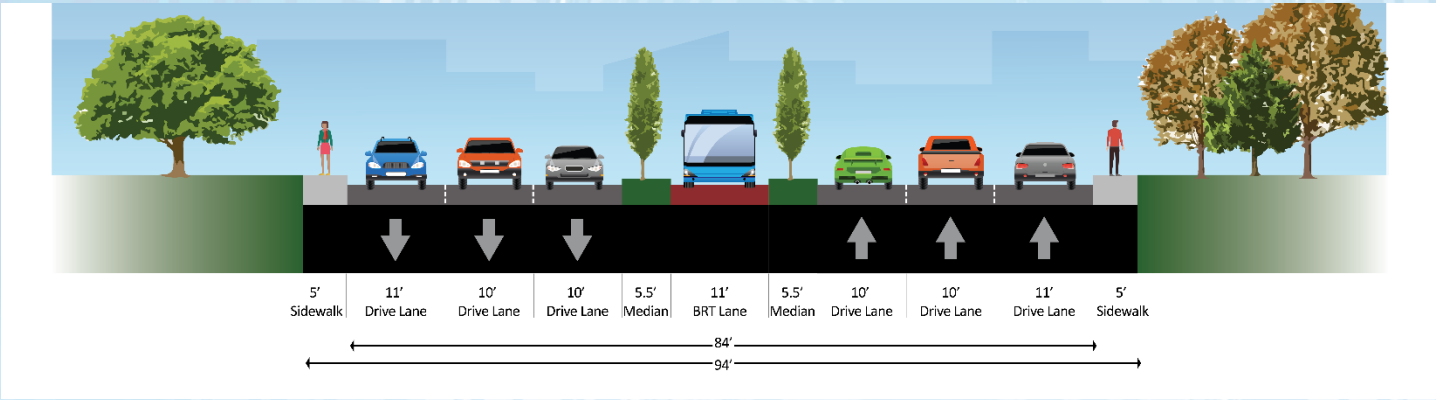
Timberwood Avenue to I-495





Median Bus Lane Concept

I-495 to Sligo Creek Parkway



Musgrove Rd

Tech Rd

Stewart Ln

MD 650

Lockwood Dr

University Blvd

I-495

Sligo Creek Pkwy

Spring St

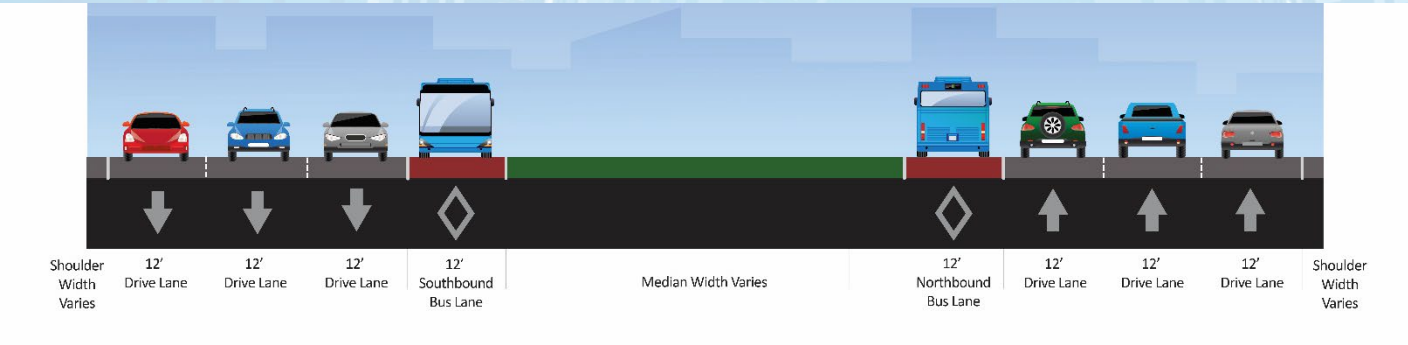
Median Bus Lane Concept

Summary

New signals and turn restrictions	Lane width changes	Changes to cross-section	Permits & Waivers	Traffic Impacts	Travel Time (minutes)	Right-of-way	Cost
✓	✓	8 to 6 lanes through Four Corners	✓	17 LOS E/F Intersections	AM Peak SB Car – 45 BRT – 25 PM Peak NB Car – 40 BRT - 33	9.8 acres	$100-110M

Managed Lane Concept

Blackburn Road to Musgrove Road



Sandy Spring Rd

Musgrove Rd

Tech Rd

Stewart Ln

MD 650

Lockwood Dr

University Blvd

I-495

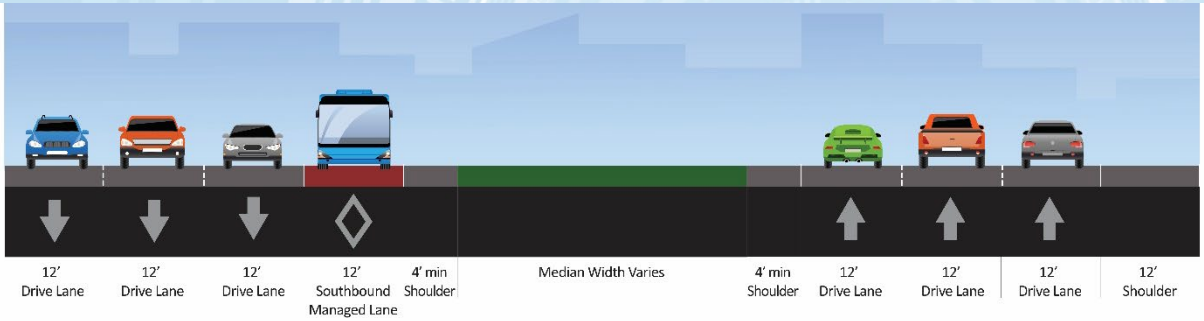
Sligo Creek Pkwy

Spring St

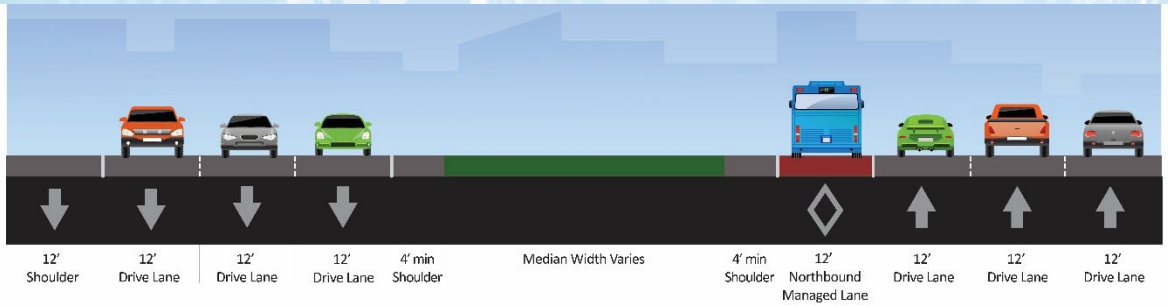
Managed Lane Concept

Musgrove Road to Stewart Lane

AM Peak Period



PM Peak Period



Sandy Spring Rd
Musgrove Rd
Tech Rd
Stewart Ln
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Lockwood Dr
University Blvd
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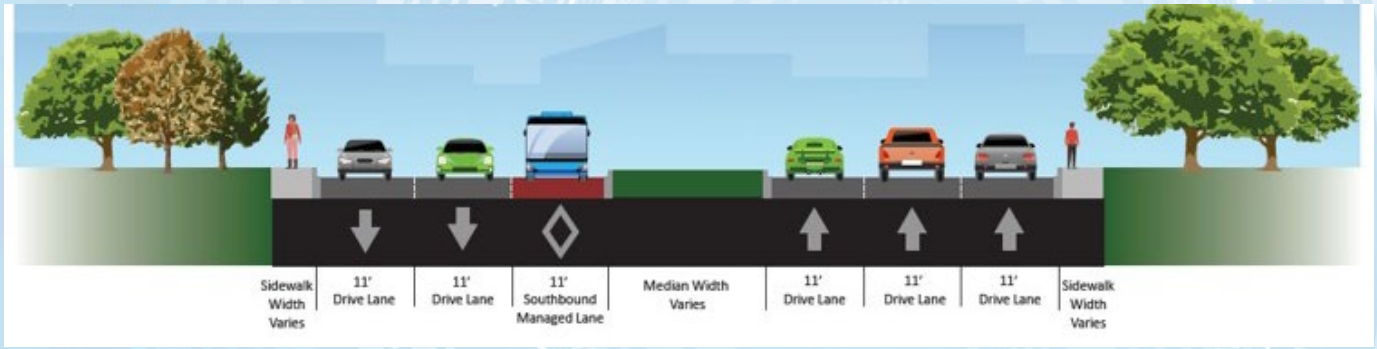
Spring St

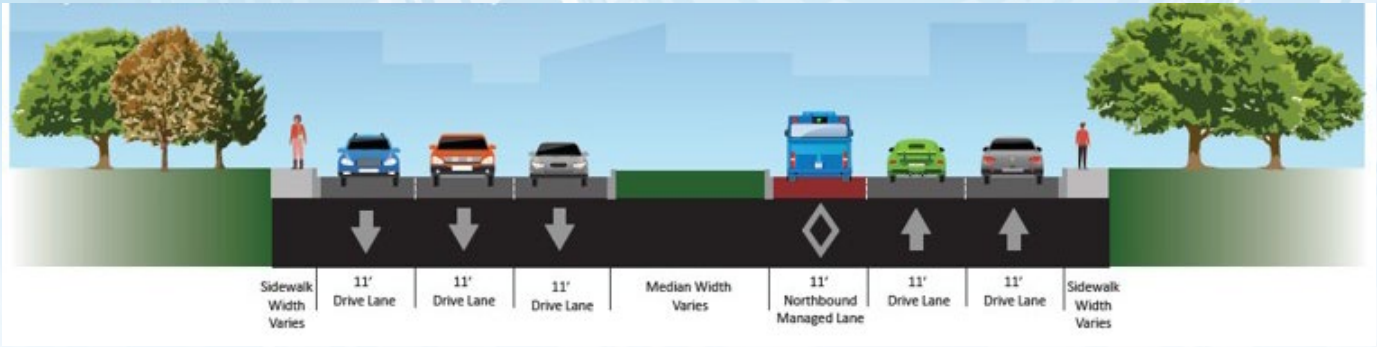
Managed Lane Concept

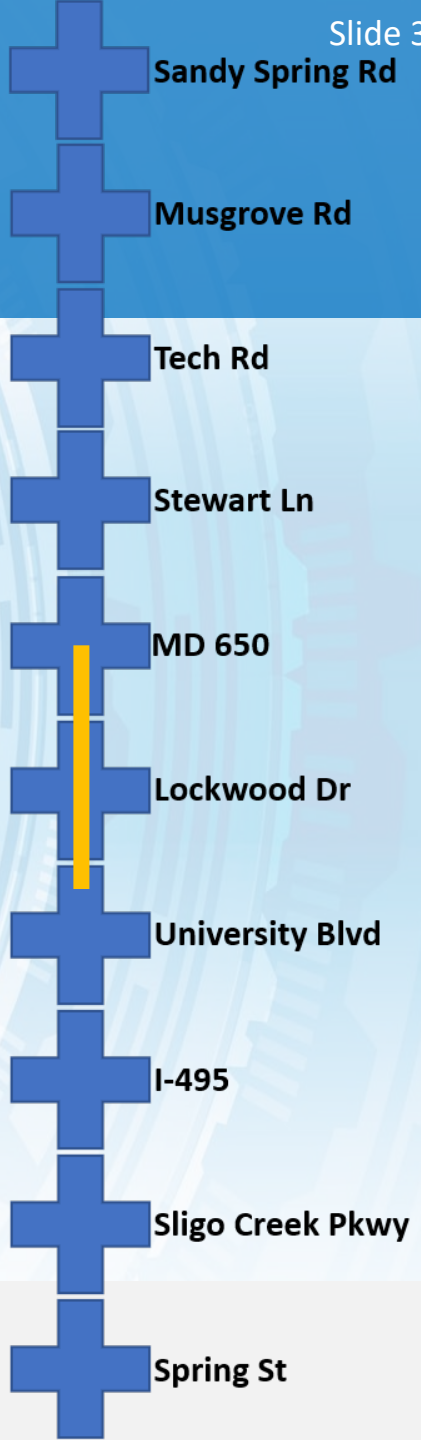
MD 650 to Southwood Avenue /Burnt Mills Avenue

AM Peak Period



PM Peak Period

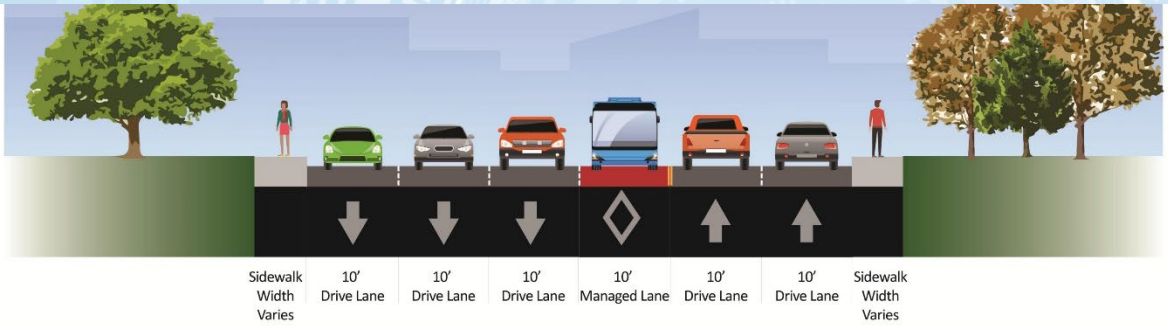




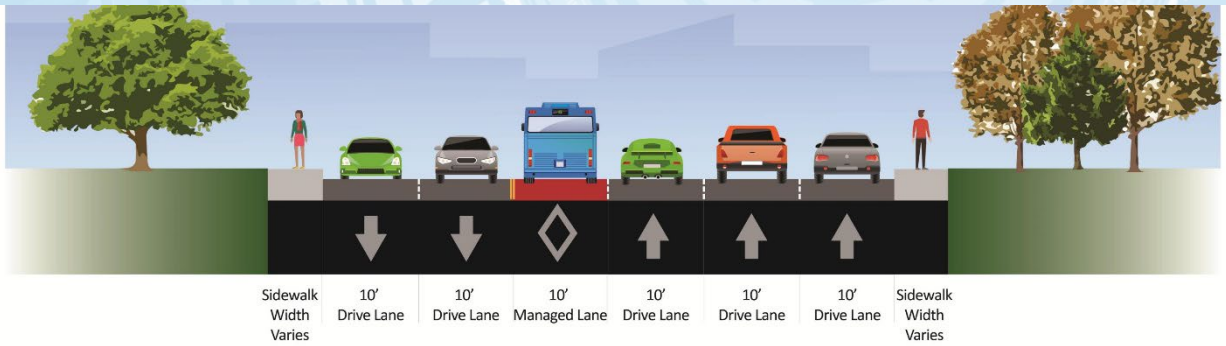
Managed Lane Concept

Dale Drive to Spring Street

AM Peak Period



PM Peak Period



Sandy Spring Rd

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Spring St

Managed Lane Concept

Summary

New signals and turn restrictions	Lane width changes	Changes to cross-section	Permits & Waivers	Traffic Impacts	Travel Time (minutes)	Right-of-way	Cost
							
		Addition of hard running shoulder north of Stewart & Conversion of 1 peak-period lane between MD 650 and Southwood/ Burnt Mills		5 LOS E/F Intersections	AM Peak SB Car – 35 BRT – 23 PM Peak NB Car – 18 BRT – 25	2.2acres*	$40-50M*

* Does not include additional right-of-way or costs associated if two FLASH stations are moved (Burnt Mills & Four Corners)

Transportation Systems / Demand Management

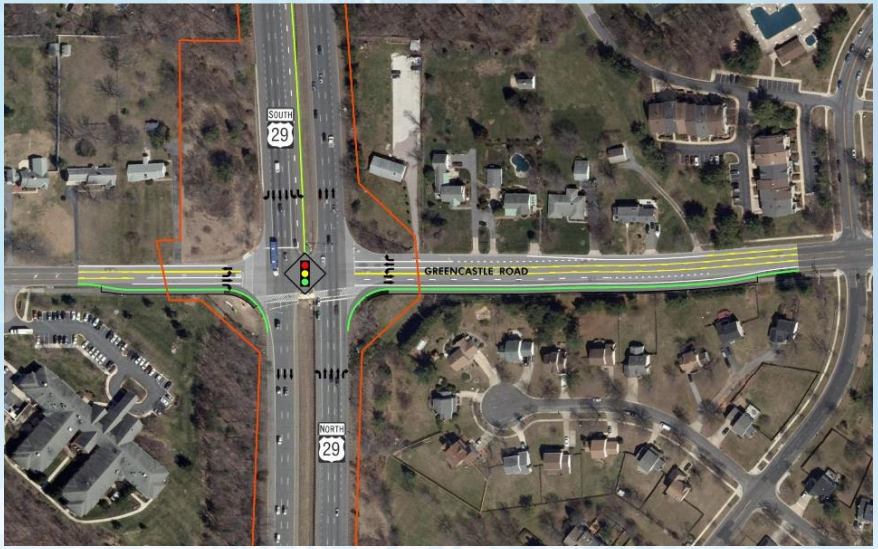
- Cost: $1-5M
- Provide real-time travel time information from the county line to I-495 and Silver Spring
- Travel Demand Management (TDM) incentive programs to encourage carpool, transit, and bicycle use
- Develop Integrated Corridor Management Plans (US 29/I-95/US 1/MD 295)
- Increase incident response patrols
- Implement smart signal technology for demand-responsive timing plans
- Provide real-time commuter park and ride space availability

Priority Intersection Improvements

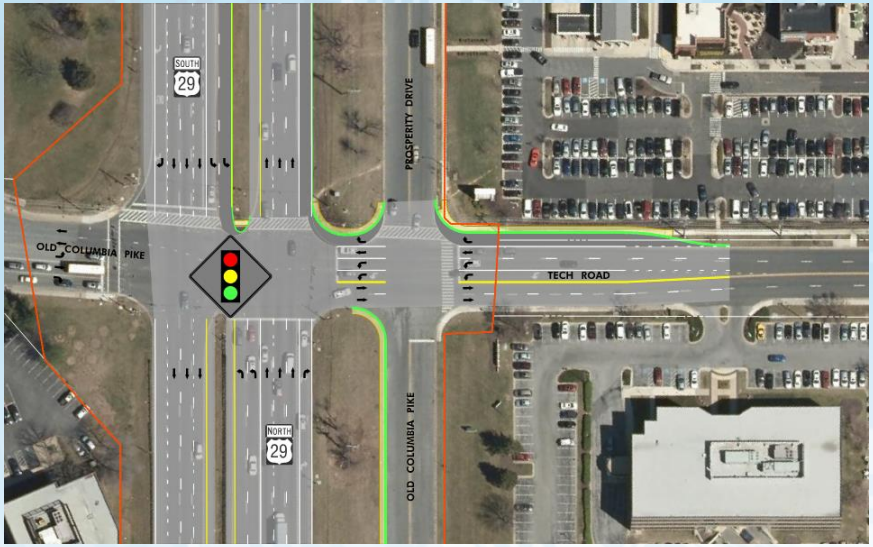
- Greencastle Road Intersection Improvements
- Tech Road Intersection Improvements
- Stewart Lane Intersection Improvements
- MD 650 Interchange Improvements
- US 29 Southbound Exit Ramp to Westbound I-495 Improvements
- Sligo Creek Intersection Improvements

Greencastle Road Intersection Improvements

- Add Eastbound Right-turn Lane
- Add Second Southbound Left-turn Lane and Eastbound Receiving Lane
- $4-5M Construction



Tech Road Intersection Improvements



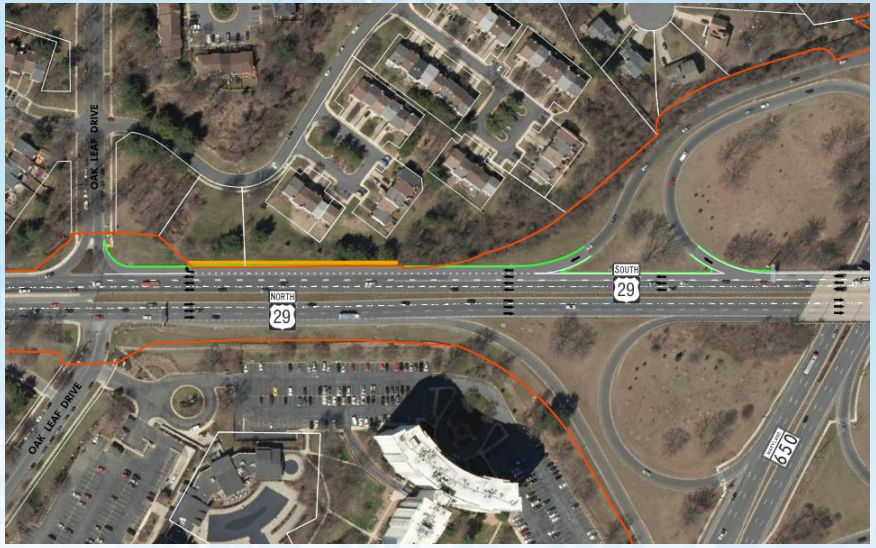
- Additional US 29 turn lanes (2nd SBL) and side street widening for additional westbound right-turn lane at Tech Road
- $2-3M construction

Stewart Lane Intersection Improvements

- Add a 2nd SB left turn lane on US 29 at Stewart Lane
- $2-3M Construction

MD 650 Interchange Improvements

- 3rd Southbound US 29 lane addition through MD 650
- $6-7M Construction
- Potential Additional Intersection / Ramp Configuration Revisions



US 29 Southbound Exit Ramp to Westbound I-495 Improvements

- 2nd exit lane from SB US 29 to WB I-495
- MDOT SHA advises ok as interim prior to Traffic Relief Plan implementation
- $2-3M Construction

Sligo Creek Intersection Improvements

- Sligo Creek Parkway enhancement at US 29 for 2nd westbound through lane
- $3-4M Construction

Pedestrian and Bicycle Improvements

- Existing and Planned Development Patter
  - Character of surrounding land use (housing, office, retail, etc.)
  - Notable major land uses
- Key Connections
  - Identify locations to provide ped/bike connectivity to/from BRT station
    - Pedestrian – half mile
    - Bike – 2 miles
- Existing Bike/Ped Infrastructure
  - Overview of current infrastructure and connectivity
- Barriers to Connectivity
  - Enhance safety

Pedestrian and Bicycle Improvements

Over 200 individual walking and biking recommendations (Cost $15-20M)

- New and widened sidewalks
- ADA compliance updates
- Bike routes/lanes
- US 29 crossing upgrades
- Bike parking/shares

Summary of Results

- Median busway results are mixed
  - Transit benefits only in the southbound direction
  - Autos significantly impacted

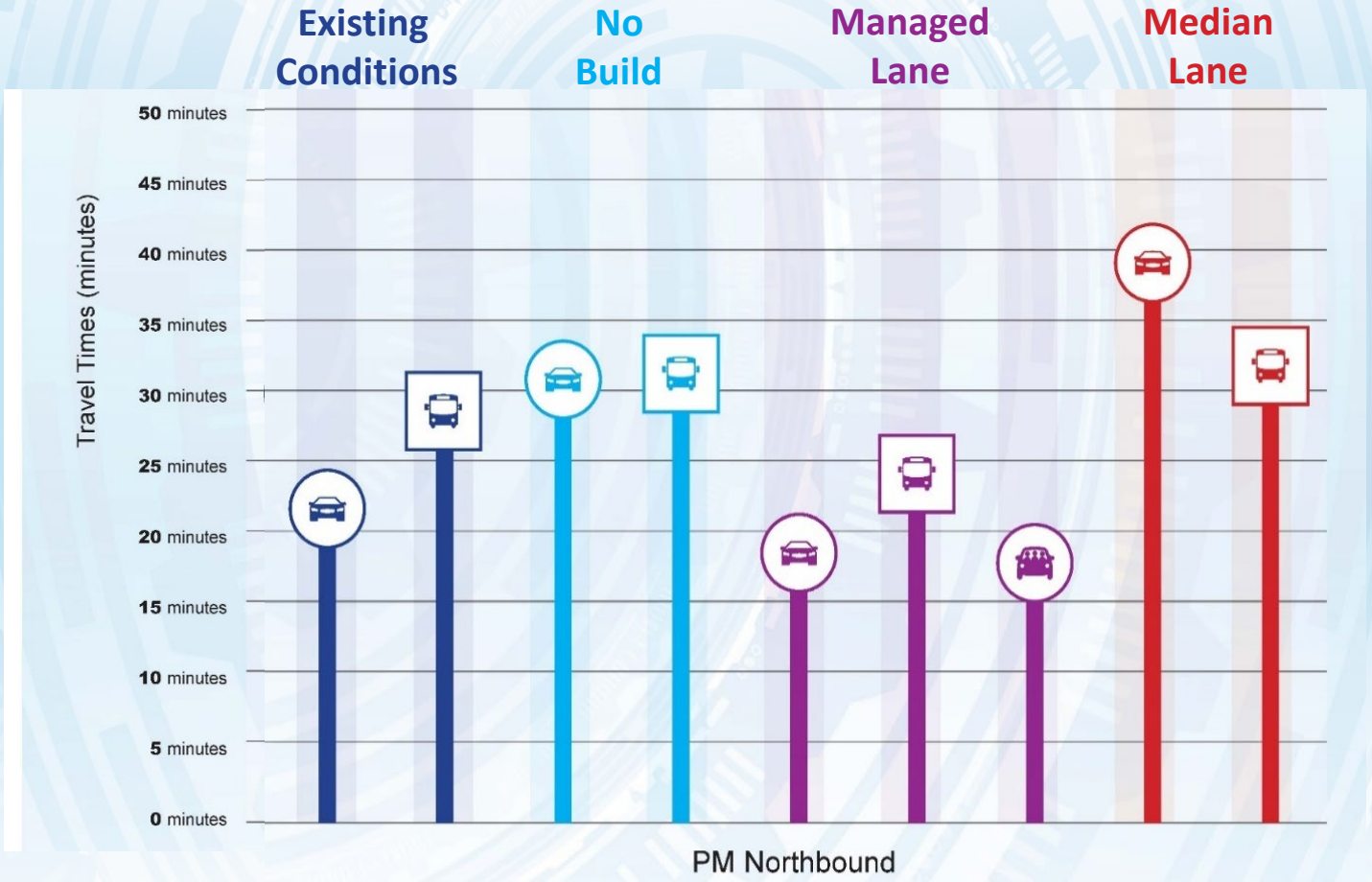
- Managed lane concept provides substantial improvement over the No-Action conditions
  - Transit
  - Carpools
  - Autos (northbound)

Summary of Results

Travel Time – AM SB

Summary of Results

Travel Time – PM NB



Summary of Results

Comparison of Alternatives

	No Build	Median Bus Lane	Managed Lane
Number of Intersections LOS E/F AM(PM)	12(9)	12(13)	7(4)
Number of Segments LOS E/F AM(PM)	19(12)	20(12)	15(8)
Person Throughput AM(PM)	3800(4250)	3800(3950)	4550(4650)
Travel Time Auto in Minutes AM(PM)	46(32)	45(40)	35(19)
Travel Time HOV in Minutes AM(PM)	n/a	n/a	19(18)
Travel Time BRT in Minutes AM(PM)	43(32)	25(33)	23(25)
Right-of-Way	n/a	9.8 acres	2.2 acres
Cost	n/a	$105-110M	$40-50M

Proposed Recommendations

- Advance managed lane concept ($40-50M)
  - Musgrove Road to Stewart Lane – Peak Period/Direction HOV + Bus Managed Lane with Hard Running Shoulder
  - MD 650 to Southwood/Burnt Mills – Peak Period/Direction HOV + Bus Managed Lane
  - Dale Drive to Spring Street – Peak Period/Direction HOV + Bus Managed Lane
- Advance intersection/interchange improvements ($20-25M)
- Advance station access (bike/ped) improvements ($15-20M)

Potential Mobility Package

- Project 1 ($15-20M) Priority pedestrian and bicycle package
- Project 2 ($20-25M) Intersection Improvement Package
  - Greencastle, Tech, Stewart, MD 650, I-495, and Sligo
- Project 3 ($40-50M)
  - HOV/ Part-time shoulder use
  - HOV/ Managed Lane

Next Steps

- Collect public feedback
- Finalize study report
- Present results and feedback to Planning Board and County Council
- County Council selected preferred alternative(s)
- Advance design for selected alternative(s) pending additional funding

Feedback

Thank you for attending tonight's meeting. We want to hear your feedback! There are several ways to share your thoughts with us:

- Visit the project webpage for more info:
  https://www.montgomerycountymd.gov/dot-dte/projects/US29Study/index.html
- Take our survey: https://www.surveymonkey.com/r/29Mobility
- Email comments: Corey.Pitts@montgomerycountymd.gov
- Mail comments to:
  Corey Pitts
  MCDOT Transportation Engineering
  100 Edison Park Drive
  4th Floor, SE
  Gaithersburg, MD 20878

Raising your hand

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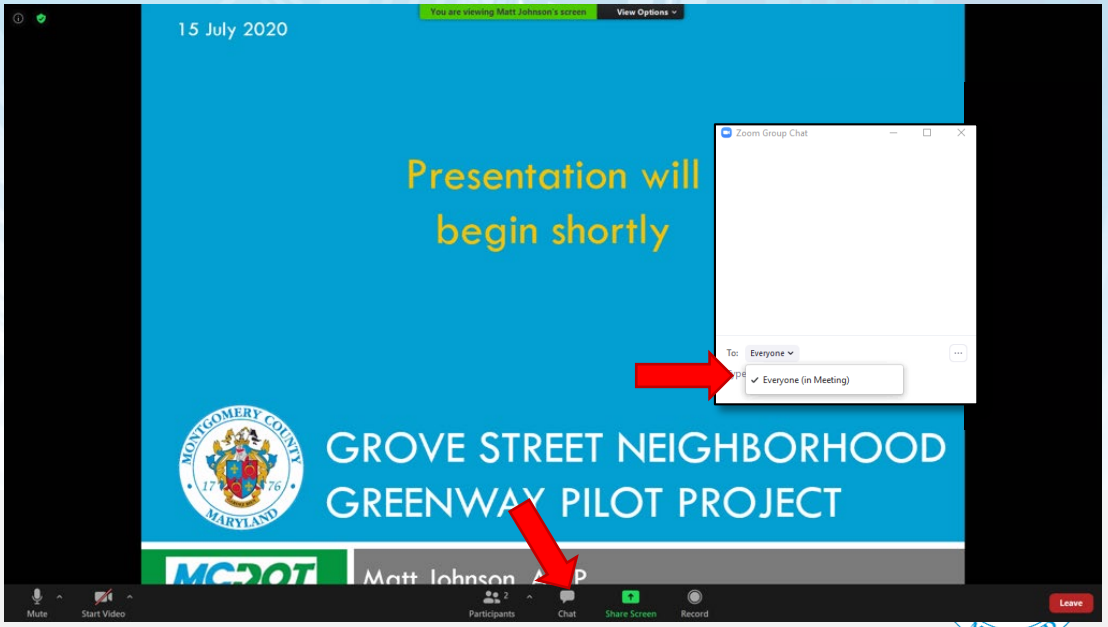

Questions

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