

# Columbia Rd NW Bus Priority

Presentation to ANC 1C Planning, Zoning, and Transportation Committee

March 16, 2022





# Today's Meeting

- DDOT goals and Bus Priority Program
- Project goals
- Corridor Overview
- Bus Priority Toolbox
- Solicit Feedback and Ideas





# DDOT Goals -



The District has committed to eliminating transportation-related serious injuries and deaths among all users of the street.

This project will include safety features and roadway design changes that will improve safety for all roadway users. This is in line with the District's Vision Zero goal.





# DDOT Goals - movedc

"The District will achieve 75% of all commute trips by non-auto modes by 2032"

BUS



"DDOT is committed to improving **bus speeds and** reliability"

WALK



"DDOT is committed improving economic equity and accessibility through safe, efficient, **integrated transit** options" & BIKE



"DDOT is committed to integrating and expanding the **bicycle and pedestrian network**"



# **Bus Priority Program**

- Corridors identified in moveDC (the District's long-range transportation plan), based on bus ridership.
- The Bus Priority Program works to improve bus speed and reliability in these corridors, while often providing safety benefits as well.
- Bus priority network spans approximately 70 miles across the District
  - Over 60% of District residents live within <sup>1</sup>/<sub>4</sub> mile of a bus priority corridor





# Value of Bus Priority

1. I spend more time at home with loved ones.



3. I can travel farther and reach more destinations.







4. Emergency vehicles can respond to emergencies without delay.







# Value of Bus Priority

126 people move through this roadway during each light cycle. 80 in transit.

In transit		In cars
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235 people on a road with transit-only lanes move through this roadway during each light cycle. 204 in transit.

In transit . . .

ln cars . .



# Project goals

moveDC (the District's Long Range Statewide Transportation Plan) assigns Columbia Rd multiple priorities— Freight, Transit, and Bicycle

- Make Columbia Rd a safer corridor for all roadway users
  - Focus on vulnerable users people walking and biking
- Improve bus travel time and reliability





# Project timeline

- Needs Assessment (NOW) complete in April
- Identify solutions May through August
  - Present concept(s) this summer
- Refine Concept September through January
  - Inform public of recommended concept
  - Issue NOI
- Construction 2023





# Columbia Rd NW Existing Conditions



# **Roadway Configuration**

- 0.9 miles in length
- 16 intersections;
  - Six are signal controlled
  - Two are stop controlled
- Bus Service along entire length
- Gaps exist in bike lane near 18<sup>th</sup> St
- Residential parking zones:
  - south of Mintwood and Belmont
  - East of Ontario on north side





# **Roadway Configuration**







# Parking - Commercial

- PUDO (pickup/dropoff) and freight loading activity are difficult to relocate
- Existing demand exceeds block length on two blocks:
  - Champlain to Ontario (near Safeway)
  - 18<sup>th</sup> St to Biltmore (near Starbucks)





# **Traffic Operations**

- Roadway provides diagonal connection through irregular street grid
- Transitions from two-way street to one-way pairs at 16<sup>th</sup> St and at CT Ave
- Moderate peak hour traffic volume
  - East of 18<sup>th</sup>: ~800
  - West of 18<sup>th</sup>: ~600





# **Bus Operations**

- Routes served: L2, 42, 43, Circulator, [H1 out of service]
- Average Daily Bus Passenger: ~6,000 (2019)
- Daily bus stop ridership: 300-1,200 (2019)
- Peak Headway: 5 Minutes
- Average Bus Speed: <6 mph (2019; 2<sup>nd</sup> slowest roadway segment in District)





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# **Bus Operations**



AM Rush Hour Bus Speed



PM Rush Hour Bus Speed 4

# **Bicycle Circulation**

- Bicycle use is heavier east of 18<sup>th</sup> St
- Bicycle use is heavier going downhill
- New protected bike lane on CT Ave (begin construction in 2023) may change dynamics





# Crashes

- 112 Crashes (MPD crash reports, 2018 to 2020)
- All involved bicyclists and pedestrians were injured
- 11 pedestrians
  - 8 were in crosswalk
  - 1 was unloading a truck
- 17 bicyclists
  - Door: 3
  - Parking: 3
  - Rear-end: 7
  - Left Turning: 4
- 17 drivers injured; crash type:
  - Turning: 4
  - Rear End: 10
  - Parking: 3





## Project Toolbox



# Project Toolbox – Safety Improvements

- "Vision Zero accepts that humans are fallible and will, at times, make poor choices that result in crashes."
- "Designers must take necessary steps to ensure that the resulting crashes do not result in people being killed or seriously injured."



### **Curb Extension**

- Tightens curb radius to reduce turn speed
- Shortens crossing distance for pedestrians
- Increases visibility at crosswalks



### Median Refuge

- Shortens crossing distance for pedestrians
- Requires alertness from drivers
- Simplifies pedestrian's decision to cross at each lane of traffic



### Lane Shift

• Requires alertness and speed reduction from drivers



1 - Vision Zero Network. "MOVING FROM VISION TO ACTION: Fundamental Principles, Policies & Practices to Advance Vision Zero in the U.S." February 2017

# Project Toolbox – Bus Lanes

Bus lanes reduce delay resulting from congestion.



### Curbside Bus lanes

- Eliminates parking during operations
- Allow part-time operations
- Illegal parking may cause bus delays

![](_page_21_Picture_7.jpeg)

### Offset Bus lanes

- Accommodates curbside access
- Reduces parking-based delay

![](_page_21_Picture_11.jpeg)

### Separated Bike-Bus lanes

- Provides increased accommodation of bikes and scooters in bus lanes
- Does not allow parking

![](_page_21_Picture_15.jpeg)

# Project Toolbox – Bus Stop Design

- Bus stop treatments improve safety and reduce delay at bus stops
- Designs vary and have been refined from previous installations

![](_page_22_Picture_3.jpeg)

### **Bus Stop Islands**

 Bicyclists ride between bus boarding area and sidewalk

![](_page_22_Picture_6.jpeg)

### Shared Bike-Bus Stops

- Bicyclists ride through boarding area
- Passengers wait on the sidewalk
- Bicyclists must yield during bus boarding

![](_page_22_Picture_11.jpeg)

### Bus Bulb-outs

• Effectively widens the sidewalk

![](_page_22_Picture_14.jpeg)

# Project Toolbox – Bus Stop Location

![](_page_23_Figure_1.jpeg)

![](_page_23_Picture_2.jpeg)

# Project Toolbox – Bike lanes

- Different types of bicycle facilities are warranted in different contexts.
- Protected bike lanes increase safety for all roadway users.

![](_page_24_Figure_3.jpeg)

### Protected bike lane (PBL)

- Provides increased safety and reduced stress on busy roadways
- Provides buffer from car doors and protection from motor vehicle intrusion

![](_page_24_Figure_7.jpeg)

- 2-way protected bike lane
- Offers smaller footprint than 1-way bike lane
- Challenging if there are complex and frequent intersections

![](_page_24_Picture_11.jpeg)

### Separated Bus-Bike Lane

• Subjectively: Offers greater comfort than dedicated bike lane, but less than PBL

![](_page_24_Picture_14.jpeg)

# Project Toolbox – Tradeoffs

- Roadway width is 50'
- Options to add functions:
  - Remove parking?
  - Daytime parking restriction?
  - 1-way conversion?
  - Block-by-block design?
- Constraints:
  - Accommodate commercial loading and access
  - Achieve project goals (enhanced safety and bus operations)

![](_page_25_Figure_10.jpeg)

"Everything" Roadway = 82'

![](_page_25_Picture_12.jpeg)

# Provide comments:

For example:

- What is working well that shouldn't change?
- What feels unsafe or inconvenient?
- What would you like to be able to do differently in the future?

![](_page_26_Picture_5.jpeg)

Kevin.Harrison@dc.gov

What do we need to know that can inform our plans?

![](_page_26_Picture_8.jpeg)

### ddot.dc.gov/page/bus-priority

ddot.dc.gov/page/columbia-road-nwbus-priority

202.671.2376 (leave a voicemail or request a call back)

![](_page_26_Picture_11.jpeg)

# District Department of Transportation

![](_page_27_Picture_1.jpeg)