

# Metrobus Service Guidelines

Riders Advisory Council  
October 7, 2020

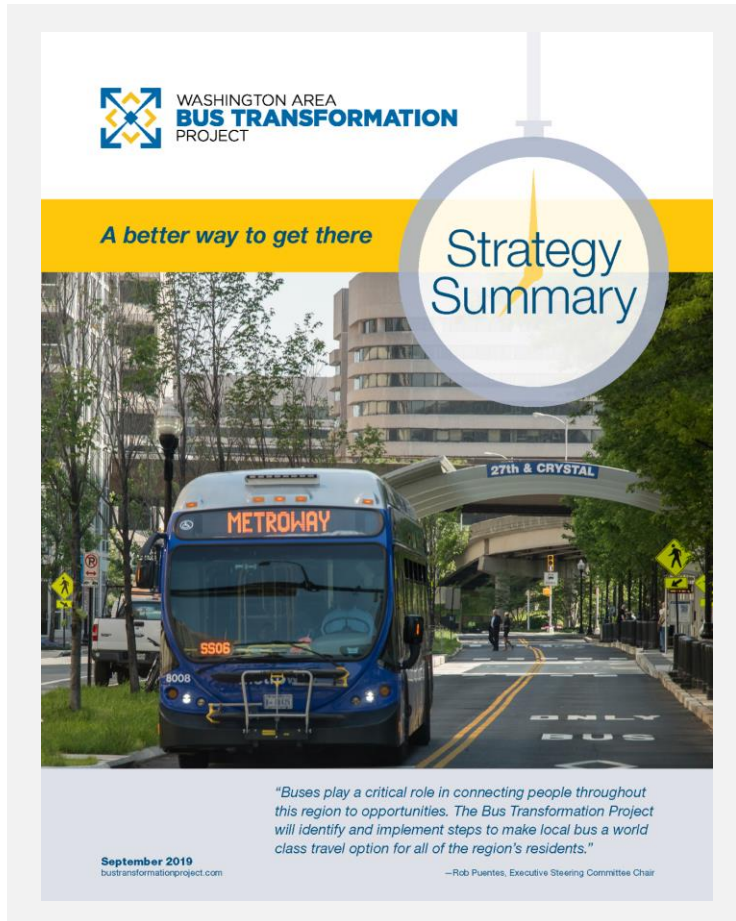


# Purpose

- **Briefing on updated Metrobus service guidelines**
  - Update 20-year old standards as first recommendation from Bus Transformation Project
  - Create clear and formalized approach to bus service changes
  - Utilize new data source and analysis capabilities
  - Help ensure equitable service across the region
  - Align with peer and local best practice



# Bus Transformation Project | Summary



**Purpose:** Transform bus into a fast, frequent, reliable, affordable system that feels unified

**Developed By:** Executive Steering Committee

**Engagement:**

- 8,800 public survey responses
- 3 open houses
- 45 project briefings
- 61 stakeholder meetings, including local jurisdictions\*

**Endorsed By:** WMATA Board, NVTC, local jurisdictions

\*All project committee members, including from funding partners and bus providers can be found on the [last page of the Strategy Summary](#) and the last page of [the Action Plan Summary](#) at [www.bustransformationproject.com](http://www.bustransformationproject.com).

# Bus Transformation Project | Strategies



1

## **Frequent and Convenient Bus Service**

Provide frequent and convenient bus service that connects communities and promotes housing affordability, regional equity, and economic growth



2

## **Bus Priority on Roadways**

Give buses priority on roadways to move people quickly and reliably



3

## **Customer Experience**

Create an excellent customer experience to retain and increase ridership



4

## **Task Force to Implement the Strategy**

Empower a publicly appointed Task Force to transform bus and lead the implementation of a truly integrated regional system



# Metrobus Service Guidelines | Purpose

- Create **clear and formalized approach** to routing, service, and budget decisions
- Develop **apples to apples comparison** for similar service
- Help ensure **equitable service** across the region
- Expand current guidelines to evaluate the **customer experience**
- **Align Metro's service guidelines (last updated in 2000) with the industry** – both local partners and national systems

Peer Comparison of Service Guidelines

	Metrobus Current	Peers
Availability		X
Route Design		X
Reliability		X
Comfort	X	X
Productivity	X	X
Cost Effectiveness	X	X

# Current Service Guidelines | Adopted by Board in 2000

## Current Service Classifications

### Radial

Operates over major arterials and corridors; Oriented towards major urban centers

### Crosstown

Provides service across corridors and generally does not serve urban centers

### Express

Operates over major travel corridors and includes significant non-stop segments oriented toward major centers

## Current Service Guidelines



### Comfort

- Load Factor



### Productivity

- Daily Weekday Passenger Boardings
- Passengers per Revenue Trip
- Passengers per Revenue Mile



### Cost Effectiveness

- Cost Recovery
- Average Subsidy per Passenger

# Service Classifications | Proposed

**1 Bus Rapid Transit** high frequency routes that have dedicated right-of-way or other traffic control measures



**2 Framework Routes** are the backbone of bus service, serving various purposes for riders



**3 Coverage Routes** often connect riders to more frequent service



**4 Commuter Routes** provide peak period only trips during periods when commuters would use the services



**1 Service Classifications** group routes by the **purpose** they serve

**2 Service Tiers** group routes by the **density** in which they operate in

**A | densely populated** corridors such as 16<sup>th</sup> Street in the District

**B | moderate density** areas such as Little River Turnpike in Fairfax County

**C | lower density** residential areas such as Bowie or Forestville

# Service Guidelines | Proposed

## Customer Experience

how accessible, available, reliable and comfortable, is our service to customers?



### Availability

- Span of Service
- Service Headway
- Stop Frequency
- Service Accessibility



### Route Design

- Deviations – travel time
- Patterns – boardings
- Parallel Corridors - distance
- Circuity – distance



### Reliability

- On-Time Performance
- Customer Trip Time



### Comfort

- Crowding
- Vehicle Load Factor\*

## Productivity and Cost Effectiveness

how effectively and responsibly are we delivering the guidelines?



### Productivity

- Passengers per Revenue Hour/Trip\*
- Passengers per Revenue Mile\*
- Unique Segment Ridership



### Cost Effectiveness

- Operating Cost per Passenger Trip
- Cost Recovery\*

**Safety & Security | Quality Service | Financial Responsibility**



# Guidelines | Examples

## Span of Service

Zone	BRT	Framework	Coverage	Commuter
Weekday				
Tier A	6:00 a.m.– 12:00 a.m.	6:00 a.m.–12:00 a.m.	6:00 a.m.–9:00 p.m.	Minimum of one trip that arrives by 7:00 a.m., and one trip that leaves on or after 6:30 p.m.
Tier B	5:30 a.m.– 10:00 p.m.	6:00 a.m.–10:00 p.m.	6:00 a.m.–8:00 p.m.	
Tier C	5:30 a.m.– 10:00 p.m.	6:00 a.m.–10:00 p.m.	6:00 a.m.–8:00 p.m.	
Saturday				
Tier A	6:00 a.m.– 12:00 a.m.	7:00 a.m.–12:00 a.m.	7:00 a.m.–9:00 p.m.	-
Tier B	6:00 a.m.– 9:00 p.m.	8:00 a.m.–9:00 p.m.	8:00 a.m.–8:00 p.m.	
Tier C	6:00 a.m.– 9:00 p.m.	8:00 a.m.–9:00 p.m.	8:00 a.m.–8:00 p.m.	
Sunday				
Tier A	6:00 a.m.– 10:00 p.m.	7:00 a.m.–12:00 a.m.	7:00 a.m.–9:00 p.m.	-
Tier B	6:30 a.m.– 9:00 p.m.	8:00 a.m.–9:00 p.m.	8:00 a.m.–8:00 p.m.	
Tier C	6:30 a.m.– 9:00 p.m.	8:00 a.m.–9:00 p.m.	8:00 a.m.–8:00 p.m.	

## Service Headway (Min)

Zone	BRT		Framework			Coverage		Commuter
	Peak	Off-peak	Peak	Off-Peak	Rapid	Peak	Off-peak	
Weekday								
Tier A	10	15	20	30	12	30	60	Varies based upon demand.
Tier B	15	30	30	30	20	30	60	
Tier C	30	30	60	60	30	60	60	
Saturday								
Tier A	20	20	30	30	12	60	60	-
Tier B	30	30	30	60	20	60	60	
Tier C	30	30	60	60	30	60	60	
Sunday								
Tier A	20	20	30	30	12	60	60	-
Tier B	30	30	60	60	20	60	60	
Tier C	30	30	60	60	30	60	60	

# Route Value | Proposed

Not all routes serve the same purpose, even within the same classification  
Develop route benefit score by comparing each route to **three key characteristics**

## Ridership

Average weekday ridership, measuring demand for route

## Population Served

**General Population** | BRT + Framework  
% of the population within a half mile of a bus stop

### Transit Dependent | Coverage

% of the transit dependent population within a quarter mile of a bus stop with transit dependent defined as low-income or zero-car households

**Commuters** | Commuter  
% of the labor force within a quarter mile of a bus stop on the origin end of a route or within one mile from a Park and Ride served by the route

## Network Value

**Transfers**  
# of transfers (bus/bus and bus/rail) from that route to the rest of the network

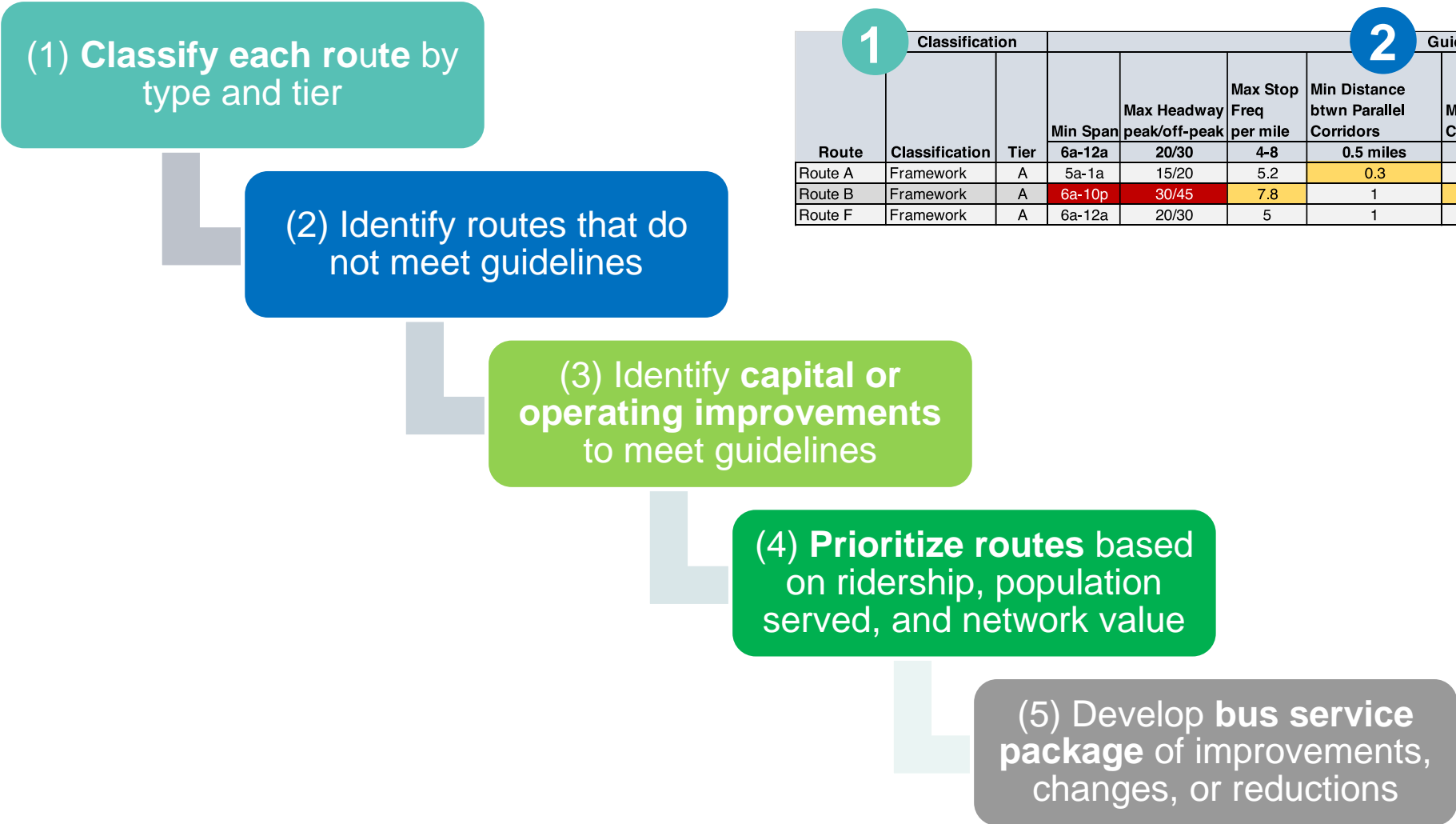
### Unique Access for People

% of ridership that occurs on unique segments of a route that are not served by other routes

### Access to Destinations

# of jobs and other destinations the route serves, estimated from the Longitudinal Employer-Household Dynamics (LEHD) data

# Service Guidelines | Application



1 Classification			2 Guidelines							
Route	Classification	Tier	Min Span	Max Headway peak/off-peak	Max Stop Freq per mile	Min Distance btwn Parallel Corridors	Max Circuity	Min Pax/Rev Hr	Max Capacity/Load Peak/Off-Peak	Operating Cost/Pax Trip
Route A	Framework	A	6a-12a	20/30	5.2	0.5 miles	1.75	30	1.2/1.0	\$5.00
Route B	Framework	A	5a-1a	15/20	7.8	0.3	1.3	45	1.3/1.1	\$4.35
Route F	Framework	A	6a-10p	30/45	5	1	1.7	25	0.8/0.7	\$4.95
			6a-12a	20/30		1	1.5	32	1.0/0.9	\$4.50

# Outcome | Results Oriented Bus Service Planning

- Numerous challenges confronting bus service today
- Detailed service analysis
  - Trade-offs on where to strengthen or adjust service
  - Equity in Metrobus's service offering across the region
- Applicable to COVID recovery and resilience planning, future budgets, SOGO, and network redesign





# Next Steps

- **Gather comments from RAC**
- **Engage jurisdictions and local bus providers** on proposed Metrobus service guidelines
- **Return to Board for adoption** of Metrobus Service Guidelines

# Appendix

# Service Guidelines | Local Bus Providers + Peers

	Year	Span of Service	Service Headway	Stop Frequency	Coverage	Route Design	Reliability	Comfort	Productivity	Effectiveness
<b>Metrobus</b>	2000							X	X	X
<a href="#">DC Circulator</a> Washington, DC	2014		X	X			X		X	X
<a href="#">ART</a> Arlington County	2016	X	X	X	X		X	X	X	X
<a href="#">CUE</a> City of Fairfax	2017	X			X		X		X	X
<a href="#">DASH</a> City of Alexandria	2019				X		X			X
<a href="#">Fairfax Connector</a> Fairfax County	2016	X	X	X			X	X	X	X
<a href="#">Loudoun County Transit</a> Loudoun County	2019	X	X	X			X	X	X	X
<a href="#">Ride On</a> Montgomery County	2017		X		X		X	X		
<a href="#">TheBus</a> Prince George's County	2017	X	X			X			X	
<a href="#">MTA</a> Baltimore, MD	2017		X		X		X	X		X
<a href="#">SEPTA</a> Philadelphia, PA	2020	X	X	X	X	X	X	X	X	X

# Service Guidelines | Peer Comparison

	Year	Span of Service	Service Headway	Stop Frequency	Coverage	Route Design	Reliability	Comfort	Productivity	Effectiveness
<b>Metrobus Current</b>	2000							X	X	X
<a href="#">MBTA</a> Boston, MA	2017	X	X		X		X	X		
<a href="#">MTA</a> Baltimore, MD	2017		X		X		X	X		X
<a href="#">NYCT</a> New York, NY	1986		X	X	X		X	X	X	X
<a href="#">SEPTA</a> Philadelphia, PA	2020	X	X	X	X	X	X	X	X	X
<a href="#">LA Metro</a> Los Angeles, CA	2019	X	X	X		X	X	X		
<a href="#">MARTA</a> Atlanta, GA	2018	X	X	X	X		X	X	X	X
<a href="#">CTA</a> Chicago, IL	2014		X	X	X		X	X		
<a href="#">MDT</a> Miami, FL	2009	X	X	X	X	X	X	X	X	X