

Mount Pleasant (42, 43) and Connecticut Avenue (L1, L2) Lines Service Evaluation Study

Open House



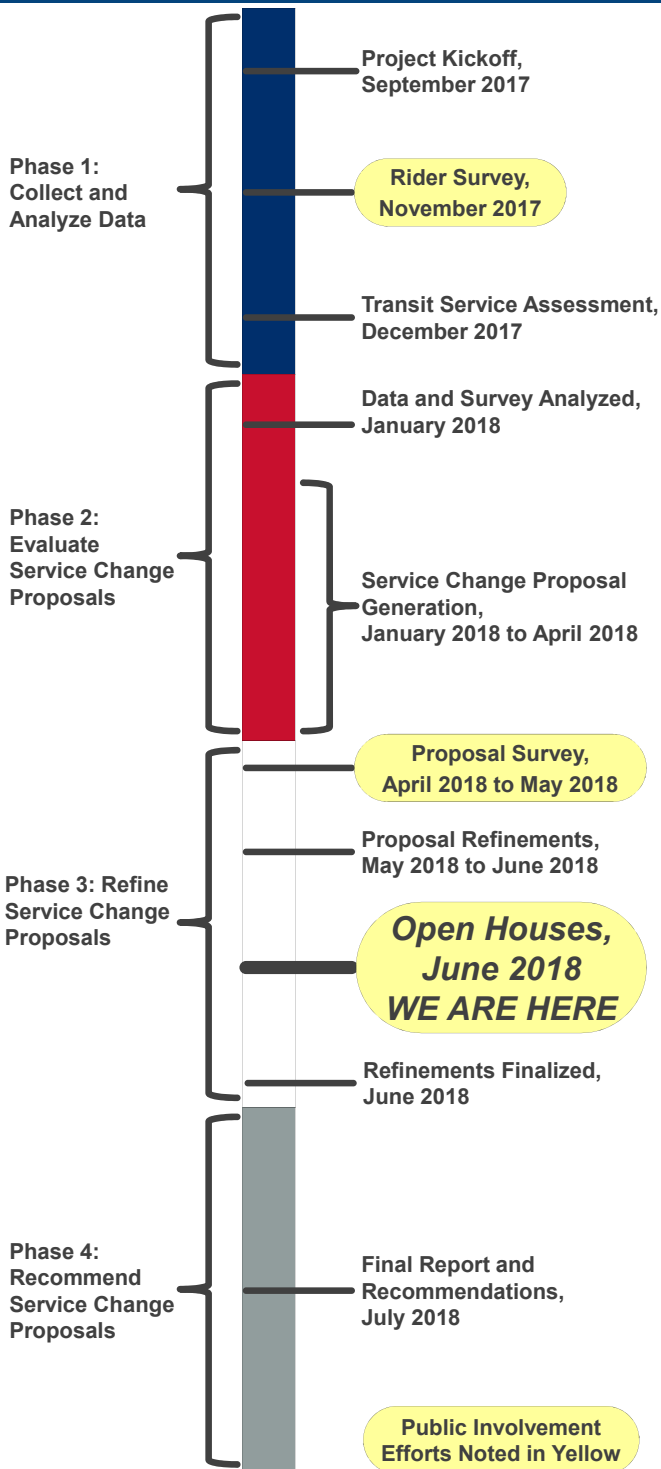
Welcome!



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Study Overview and Timeline



Study Purpose and Process

- Part of an ongoing effort by the Washington Metropolitan Area Transit Authority (WMATA) and partner agencies to improve bus service for riders
- Public input actively shapes service change proposals and guides service change recommendations going forward
- Implementation occurs over time based on financial source availability

Key Study Stakeholders

- Washington Metropolitan Area Transit Authority (WMATA)
- District Department of Transportation (DDOT)
- Local Advisory Neighborhood Commissions (ANCs)
- Local Community-Based Organizations (CBOs)
- You! Riders of Routes 42, 43, L1 and L2

Next Steps after the Final Report

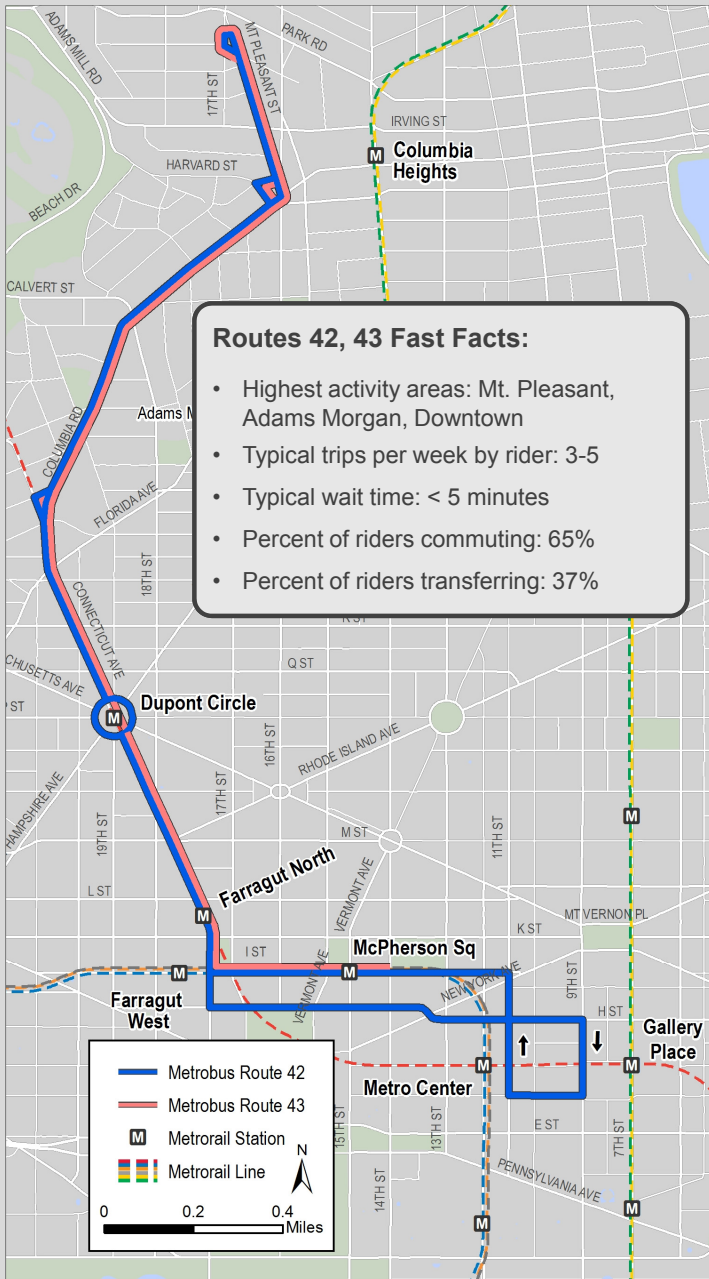
Metrobus
State of Good
Operations
(SOGO)

Metro Board
Consideration
and Approval

Bus Service
Changes:
December and
June

Mount Pleasant Line Today

Existing Service (Routes 42, 43)



Line Profile

Ridership

Route	Day Type	Average Daily Ridership
42	Weekday	4,507
	Saturday	3,015
	Sunday	2,464
43	Weekday Peak	1,490

Span of Service by Day Type and Direction

Route	Day Type	First Trip Departure (SB)	First Trip Departure (NB)	Last Trip Departure (SB)	Last Trip Departure (NB)
42	Weekday	4:20 AM	4:44 AM	2:55 AM	3:20 AM
	Saturday	4:30 AM	4:55 AM	2:50 AM	3:20 AM
	Sunday	4:30 AM	4:55 AM	1:35 AM	2:00 AM
43	Weekday AM	7:00 AM	--	9:53 AM	--
	Weekday PM	--	3:47 PM	--	6:54 PM

Number of Trips by Time Period and Direction

Route	Time Period	Weekday		Saturday		Sunday	
		NB	SB	NB	SB	NB	SB
42	AM (6:00 AM–8:59 AM)	12	16	11	12	9	10
	Midday (9:00 AM–2:59 PM)	31	29	29	30	24	24
	PM (3:00 PM–6:59 PM)	25	23	23	21	15	16
43	AM Peak (6:00 AM–10:00 AM)	-	29	-	-	-	-
	PM Peak (3:00 PM–6:59 PM)	21	-	-	-	-	-

Key Destinations

Mt. Pleasant/Columbia Heights	Dupont Circle
Adams Morgan	Farragut Square
Metro Center	Gallery Place

Line Demographic Profile

Line Area Population (within ¼ mi of line)	46,900
Average Population Density (per sq mi)	23,200
Minority Population (Rider Survey, 2015)	26,200 (56%)
Low-income Population (Rider Survey, 2015)	12,700 (27%)



Mount Pleasant Line

WMATA Service Guideline Goals

Service Guidelines	Service Guideline Definition	Route		Current Service Snapshot
		42	43	
Span of Service	Weekdays: 6:00AM to 10:30PM Saturdays: 6:30AM to 10:00PM Sundays: 7:00AM to 10:00PM	✓	NA	<ul style="list-style-type: none"> Route 42 span exceeds this Service Guideline. Route 43 operates mostly during peak periods.
Service Frequency	Weekday Peak: 20 minutes Weekday Off-Peak: 30 minutes Weekend: 60 minutes	✓	✓	<ul style="list-style-type: none"> Route 42 frequency exceeds this Service Guideline. Route 43 meets this peak period Service Guideline.
Route Directness	Deviation from direct route should not exceed 25% end-to-end travel time or 3 minutes per passenger on the route	✓	✓	Neither Routes 42 nor 43 have deviations that exceed 25% end-to-end travel time or 3 minutes per passenger on the route.
Fare Recovery	Buses should recover 25% of operating expenses from fares	✓	✓	<ul style="list-style-type: none"> Route 42 recovers 25.5% on weekdays, 23.7% on Saturdays, and 25.6% on Sundays. The aggregate exceeds 25%. Route 43 recovers 68.7% of its operating expenses.
Boardings Per Trip	At least 25 riders should board a bus per trip	X	✓	<ul style="list-style-type: none"> Route 42 falls short of this Service Guideline with 20.4 boardings per trip, but still makes the necessary fare recovery. Route 43 has 32.2 boardings per trip.
Boardings Per Revenue Mile	At least 3 passengers should board per operating mile	✓	✓	<ul style="list-style-type: none"> Route 42 has 5.9 boardings per revenue mile. Route 43 has 11.27 boardings per revenue mile.
On-Time Performance	79% of buses should arrive within a window of 2 minutes early to 7 minutes late	X	✓*	<ul style="list-style-type: none"> Route 42 regularly does not meet this Service Guideline during peak periods, resulting in reliability issues. Route 43 meets this Service Guideline during AM peak but not during PM peak, resulting in reliability issues.
Headway Separation	Departure intervals should not be greater than (or less than) 5% of a scheduled time point	X	X	Both Routes 42 and 43 regularly do not meet this Service Guideline during peak periods, resulting in "bus bunching".
Load Per Trip Ratio	Bus capacity should not exceed 120% during peak periods or 100% during off-peak periods.	✓	✓	Both Routes 42 and 43 meet this Service Guideline ratio.
Bus Stop Spacing	Distances between stops should be at least 0.2 miles (1,056 feet) apart	X	X	Average spacing between Routes 42 and 43 bus stops is 0.16 miles (849 feet) with a majority of the distances being less than 0.2 miles.

WMATA classifies the Mount Pleasant Line as Framework bus service, meaning it serves a key arterial corridor in the Washington metropolitan area. Service Guidelines are based on this classification.

✓ Guideline Met
 ✓* Guideline Partially Met
 X Guideline Not Met
 NA Not Applicable



Mount Pleasant Line Service Analysis

Service Guideline Analysis

On-Time Performance

- A bus is considered "on-time" if it arrives within the window of 2 minutes before or 7 minutes after the scheduled time
- WMATA's Service Guideline specifies a route's on-time performance should not fall below 79% of all daily trips
- Red text shows Service Guideline not met**

Route		Weekday			Saturday			Sunday		
		Early	On-Time	Late	Early	On-Time	Late	Early	On-Time	Late
42	North	5.3%	73.6%	21.1%	4.9%	81.4%	13.7%	4.1%	80.4%	15.4%
	South	4.6%	76.6%	18.9%	9.4%	81.4%	9.2%	3.8%	83.7%	12.5%
43	North	1.0%	47.5%	51.5%	-	-	-	-	-	-
	South	3.2%	83.1%	13.8%	-	-	-	-	-	-

Headway Separation

- This measures how much buses bunch together instead of following their scheduled intervals
- A route meets this Service Guideline if buses maintain their scheduled interval +/- 5%
- Most bus bunching observed at Connecticut Ave and S St NW; Columbia Rd and 19th St NW; Lamont St and Mount Pleasant Ave NW; and H St and 9th St NW

Route	Time Period	Percent of Buses NOT Meeting Guideline	
		NB	SB
42	AM Peak (6:00 AM–8:59 AM)	54%	95%
	Midday (9:00 AM–2:59 PM)	40%	28%
	PM Peak (3:00 PM–6:59 PM)	82%	71%
43	AM Peak (6:00 AM–8:59 AM)	-	81%
	PM Peak (3:00 PM–6:59 PM)	100%	-

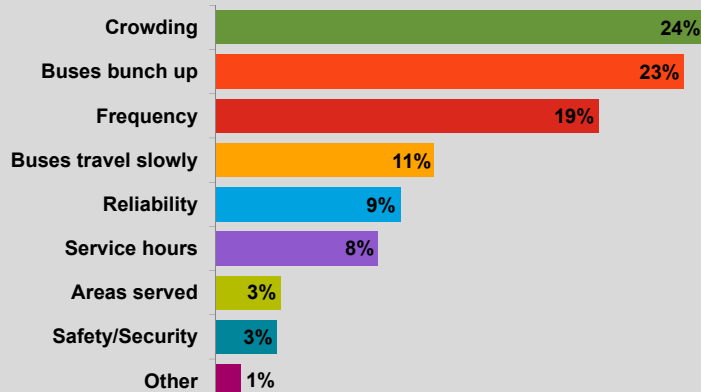
Bus Stops

- Route 42 and 43 bus stops have high utilization and require no elimination

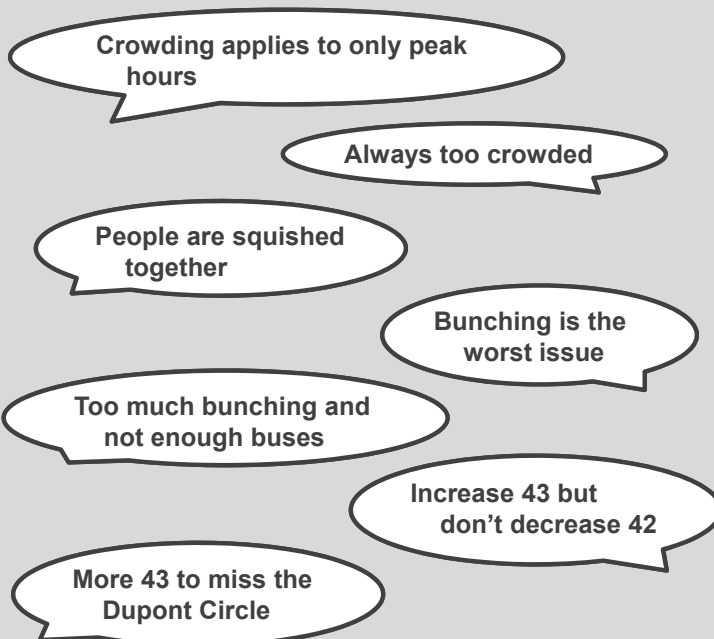
Source: WMATA On-time Performance Report, March 2017

Rider Concerns

Rider Survey Results (340 Total Respondents)



Rider Survey Comments Callout

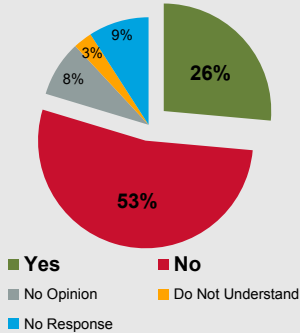
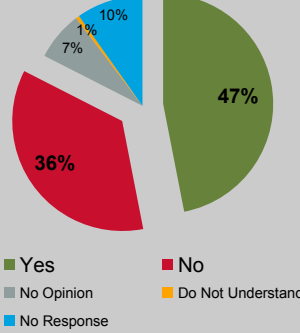
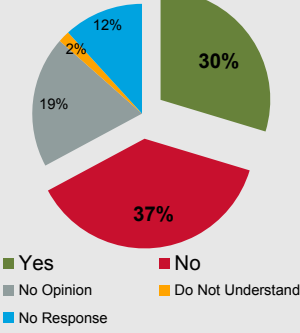


Source: Rider Survey, November 2017

Mount Pleasant Line

Initial Proposal Survey Results

After analyzing results from the Transit Service Assessment and Rider Survey, WMATA devised three proposed service changes. To gain rider input, WMATA surveyed riders in April/May 2018 to ask if they were in favor of each proposal. The survey generated 1,726 responses.

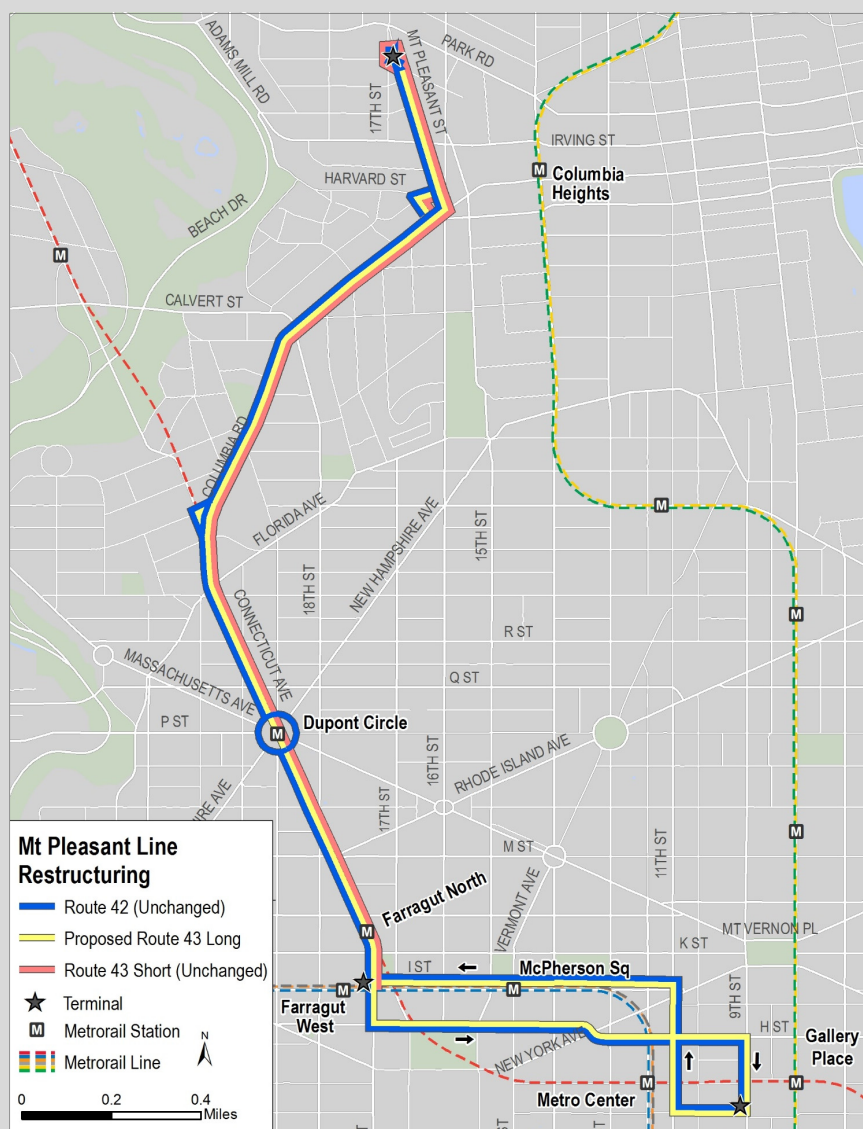
Proposal	Proposal Survey Results	Key Takeaways
<p>Proposal A</p> <p>Route 42 terminates at Dupont Circle</p> <p>- AND -</p> <p>Route 43 runs between Mt Pleasant and Gallery Place</p>	 <ul style="list-style-type: none"> • About half of respondents (53%) oppose this proposal. • Low-income (46%) and minority respondents (37%) were more likely to support the proposal. 	<ul style="list-style-type: none"> • A plurality of respondents do not want Route 42 buses to terminate at Dupont Circle. • These respondents prefer the current route's downtown access. <p>WMATA Response: The proposal will not continue.</p>
<p>Proposal B</p> <p>All Route 42 and 43 buses run under Dupont Circle</p>	 <ul style="list-style-type: none"> • About half of respondents support the proposal (47%), compared to 36% of riders who oppose it. • Respondents with household incomes greater than \$30,000 were more likely (55%) to support the proposal than those with household incomes less than \$30,000 (46%). 	<ul style="list-style-type: none"> • A plurality of respondents support this proposal. • Respondents prioritize faster connection to stops south of Dupont Circle. <p>WMATA Response: The proposal will be refined.</p>
<p>Proposal C</p> <p>Convert some Route 42 buses to Route H1 buses. Operate Route H1 all day.</p>	 <ul style="list-style-type: none"> • This proposal saw mild opposition with 37% of respondents opposed compared to 30% in support. • Low-income (45%) and racial minority (40%) respondents were more likely to support the proposal. 	<ul style="list-style-type: none"> • Most respondents either oppose or have no opinion of this proposal. • Respondents do not feel strongly about access to Foggy Bottom via the H1. <p>WMATA Response: This proposal may be revisited in a future study.</p>

Mount Pleasant Line

Proposal Refinement

After analyzing results from the April/May Proposal Survey, WMATA devised this proposal package. The new proposal increases Downtown DC bus service, while making changes that address on-time performance and headway separation.

Routes 42 and 43 Refined Proposal



Proposed Service Change

- New Route 43 Long would operate between Mount Pleasant and Gallery place via Connecticut Avenue Underpass
- New Route 43 Short would operate between Mount Pleasant and Farragut Square via Connecticut Avenue Underpass
- Service time periods would not change in refined proposal

Justification

- Enhances access to Downtown DC by increasing bus frequency under Dupont Circle
- Addresses headway separation and on-time issues with more service avoiding Dupont Circle congestion

Consideration

- Some Route 42 buses will be reallocated to Route 43 Short and Long
- Increased service through the Connecticut Avenue Underpass
- Decreased service around Dupont Circle

Mount Pleasant Line

Feedback

Your feedback regarding the proposal refinement is critical to the decision-making process. Please mark your opinion by placing a sticker in the appropriate box next to the refined proposal here.

Proposal Refinement	I love this proposal! Move it forward!	I like this proposal but it needs certain adjustments.	I do not like this proposal. No need to consider!	I have no opinion or am not affected.
Refined Proposal Keep Route 43 Short trips from Mount Pleasant to Farragut Square - AND - Introduce Route 43 Long to travel from Mount Pleasant to Gallery Place Both proposed routes travel via the Connecticut Avenue Underpass and only run during peak periods Reallocate some peak period Route 42 buses to accommodate new Route 43 trips				

Did we miss anything?

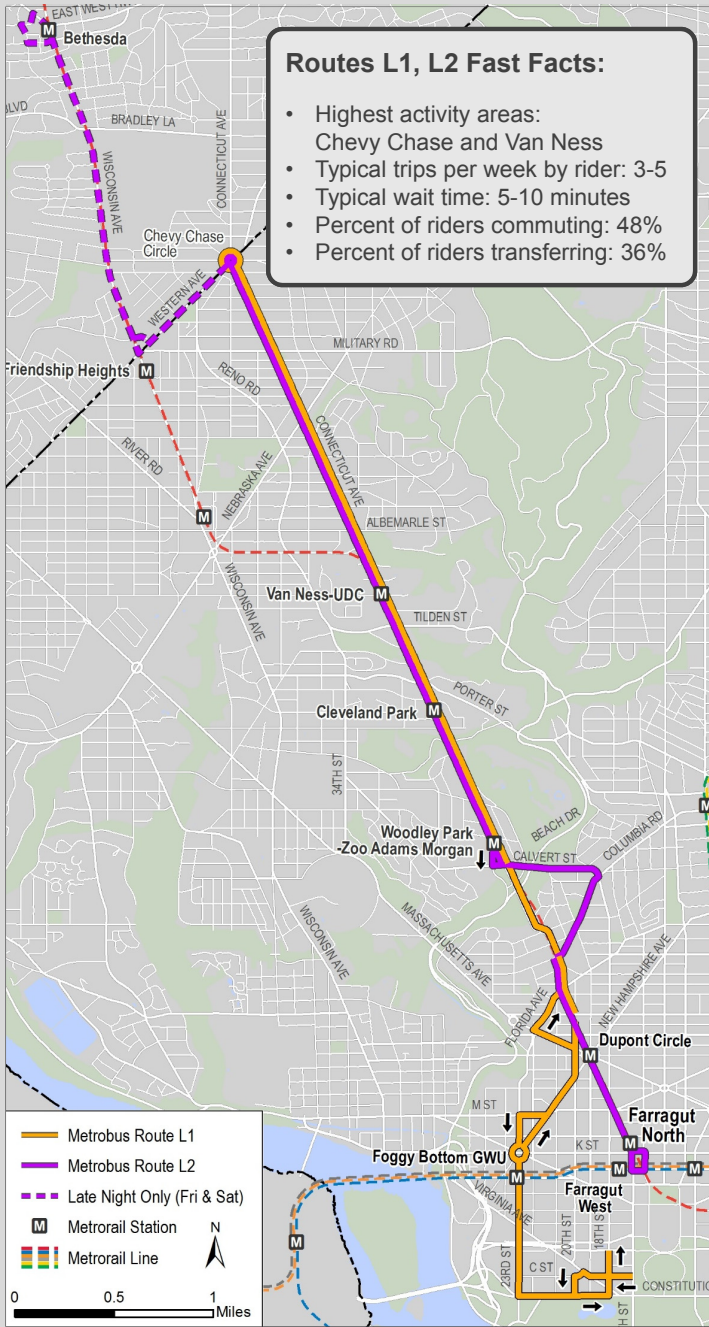
Rider surveys, service analysis, and operator interviews shaped the initial proposals and their refinements. If there is another option that you would like us to consider, let us know! Tell a project team member, note it on your *Feedback Form*, or write it on the flip charts placed around the room.

Connecticut Avenue Line Today

Existing Service (Routes L1, L2)

Routes L1, L2 Fast Facts:

- Highest activity areas: Chevy Chase and Van Ness
- Typical trips per week by rider: 3-5
- Typical wait time: 5-10 minutes
- Percent of riders commuting: 48%
- Percent of riders transferring: 36%



Line Profile

Ridership

Route	Day Type	Average Daily Ridership
L1	Weekday Peak	723
	Weekday	3,409
L2	Saturday	2,230
	Sunday	1,610

Span of Service by Day Type and Direction

Route	Day Type	First Trip Departure (SB)	First Trip Departure (NB)	Last Trip Departure (SB)	Last Trip Departure (NB)
L1	Weekday AM	6:40 AM	--	8:46 AM	--
	Weekday PM	--	3:50 PM	--	6:34 PM
L2	Weekday	5:05 AM	5:45 AM	1:15 AM	2:00 AM
	Saturday	5:42 AM	6:14 AM	1:42 AM	2:00 AM
	Sunday	6:00 AM	6:15 AM	11:45 AM	12:30 AM

Number of Trips by Time Period and Direction

Route	Time Period	Weekday		Saturday		Sunday	
		NB	SB	NB	SB	NB	SB
L1	AM Peak (6:00 AM–8:59 AM)	-	9	-	-	-	-
	PM Peak (3:00 PM–6:59 PM)	9	-	-	-	-	-
L2	AM (6:00 AM–8:59 AM)	9	11	7	8	6	6
	Midday (9:00 AM–2:59 PM)	18	18	18	18	14	15
	PM (3:00 PM–6:59 PM)	20	12	12	12	9	9

Key Destinations

Van Ness	Cleveland Park
Chevy Chase	Farragut Square
Adams Morgan	Woodley Park

Line Demographic Profile

Line Area Population (within ¼ mi of line)	73,100
Average Population Density (per sq mi)	13,900
Minority Population (Rider Survey, 2015)	31,400 (43%)
Low-income Population (Rider Survey, 2015)	17,500 (24%)



Connecticut Ave Line

WMATA Service Guideline Goals

Service Guidelines	Service Guideline Definition	Route		Current Service Snapshot
		L1	L2	
Span of Service	Weekdays: 6:00AM to 10:30PM Saturdays: 6:30AM to 10:00PM Sundays: 7:00AM to 10:00PM	NA	✓	<ul style="list-style-type: none"> Route L1 operates only during peak periods. Route L2 exceeds this Service Guideline.
Service Frequency	Weekday Peak: 20 minutes Weekday Off-Peak: 30 minutes Weekend: 60 minutes	✓	✓	<ul style="list-style-type: none"> Route L1 meets this peak period Service Guideline. Route L2 exceeds this Service Guideline at all times.
Route Directness	Deviation from direct route should not exceed 25% end-to-end travel time or 3 minutes per passenger on the route	✓	✓	Neither Routes L1 nor L2 have deviations that exceed 25% end-to-end travel time or 3 minutes per passenger on the route.
Fare Recovery	Buses should recover 25% of operating expenses from fares	✓	✓	<ul style="list-style-type: none"> Route L1 recovers 41.1% of its operating expenses. Route L2 recovers 33.4% on weekdays, 24.2% on Saturdays, and 23.7% on Sundays. The aggregate exceeds 25%.
Boardings Per Trip	At least 25 riders should board a bus per trip	✓	✓*	<ul style="list-style-type: none"> Route L1 has 43.2 boardings per trip. Route L2 has 26.1 boardings per trip; weekend service dips below this Service Guideline but the aggregate exceeds it.
Boardings Per Revenue Mile	At least 3 passengers should board per operating mile	✓	✓	<ul style="list-style-type: none"> Route L1 has 6.6 boardings per revenue mile. Route L2 has 4.9 boardings per revenue mile.
On-Time Performance	79% of buses should arrive within a window of 2 minutes early to 7 minutes late	X	X	Both Routes L1 and L2 regularly do not meet this Service Guideline during peak periods, resulting in reliability issues.
Headway Separation	Departure intervals should not be greater than (or less than) 5% of a scheduled time point	X	X	Both Routes L1 and L2 regularly do not meet this Service Guideline during peak periods, resulting in "bus bunching".
Load Per Trip Ratio	Bus capacity should not exceed 120% during peak periods or 100% during off-peak periods.	✓*	✓*	An average of one AM peak southbound bus trip for each route exceeds this Service Guideline. Routes L1 and L2 meet the Service Guideline at all other times.
Bus Stop Spacing	Distances between stops should be at least 0.2 miles (1,056 feet) apart	X	X	Average spacing between Routes L1 and L2 bus stops is 0.16 miles (849 feet) with a majority of the distances being less than 0.2 miles.

WMATA classifies the Connecticut Avenue Line as Framework bus service, meaning it serves a key arterial corridor in the Washington metropolitan area. Service Guidelines are based on this classification.

✓ Guideline Met
 ✓* Guideline Partially Met
 X Guideline Not Met
 NA Not Applicable



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Connecticut Ave Line Service Analysis

Service Guideline Analysis

On-Time Performance

- A bus is considered "on-time" if it arrives within the window of 2 minutes before or 7 minutes after the scheduled time
- WMATA's Service Guideline specifies a route's on-time performance should not fall below 79% of all daily trips
- Red text shows Service Guideline not met**

Route		Weekday			Saturday			Sunday		
		Early	On-Time	Late	Early	On-Time	Late	Early	On-Time	Late
L1	North	8.2%	49.6%	42.2%	-	-	-	-	-	-
	South	7.6%	76.9%	15.5%	-	-	-	-	-	-
L2	North	3.6%	77.2%	19.3%	9.7%	78.2%	12.1%	4.8%	89.0%	6.2%
	South	4.3%	78.1%	17.6%	4.2%	80.0%	15.8%	5.4%	83.0%	11.5%

Headway Separation

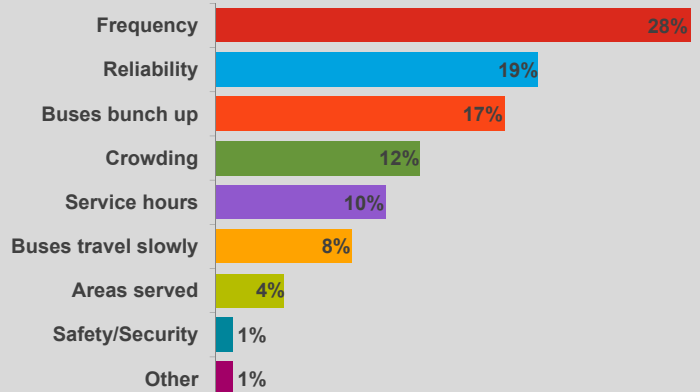
- This measures how much buses bunch together instead of following their scheduled intervals
- A route meets this Service Guideline if buses maintain their scheduled interval +/- 5%
- Worst bus bunching observed Downtown and along Connecticut Ave NW, north of Biltmore St NW

Route	Time Period	Percent of Buses NOT Meeting Guideline	
		NB	SB
L1	AM Peak (6:00 AM–8:59 AM)	-	45%
	PM Peak (3:00 PM–6:59 PM)	67%	-
L2	AM Peak (6:00 AM–8:59 AM)	22%	64%
	Midday (9:00 AM–2:59 PM)	28%	17%
	PM Peak (3:00 PM–6:59 PM)	79%	67%

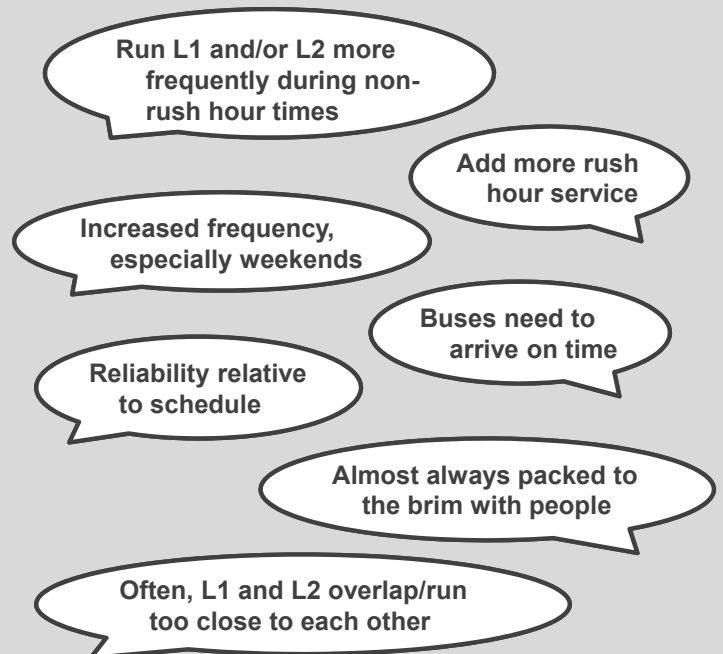
Source: WMATA On-time Performance Report, March 2017

Rider Concerns

Rider Survey Results (1,903 Total Respondents)



Rider Survey Comments Callout

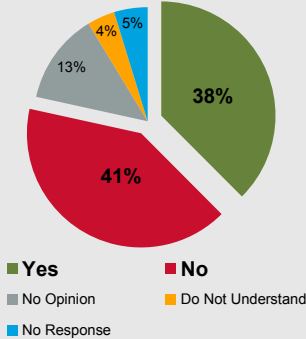
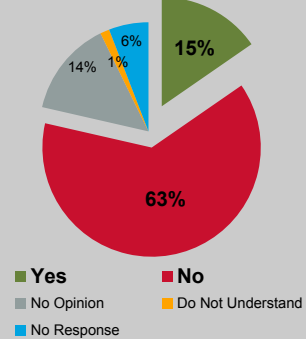
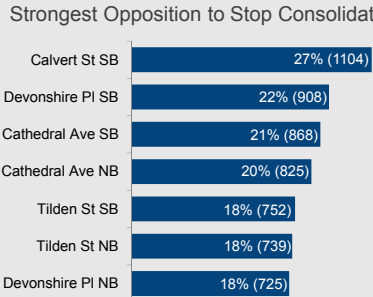


Source: Rider Survey, November 2017

Connecticut Ave Line

Initial Proposal Survey Results

After analyzing results from the Transit Service Assessment and Rider Survey, WMATA devised three proposed service changes. To gain rider input, WMATA surveyed riders in April/May 2018 to ask if they were in favor of each proposal. The survey generated 4,101 responses.

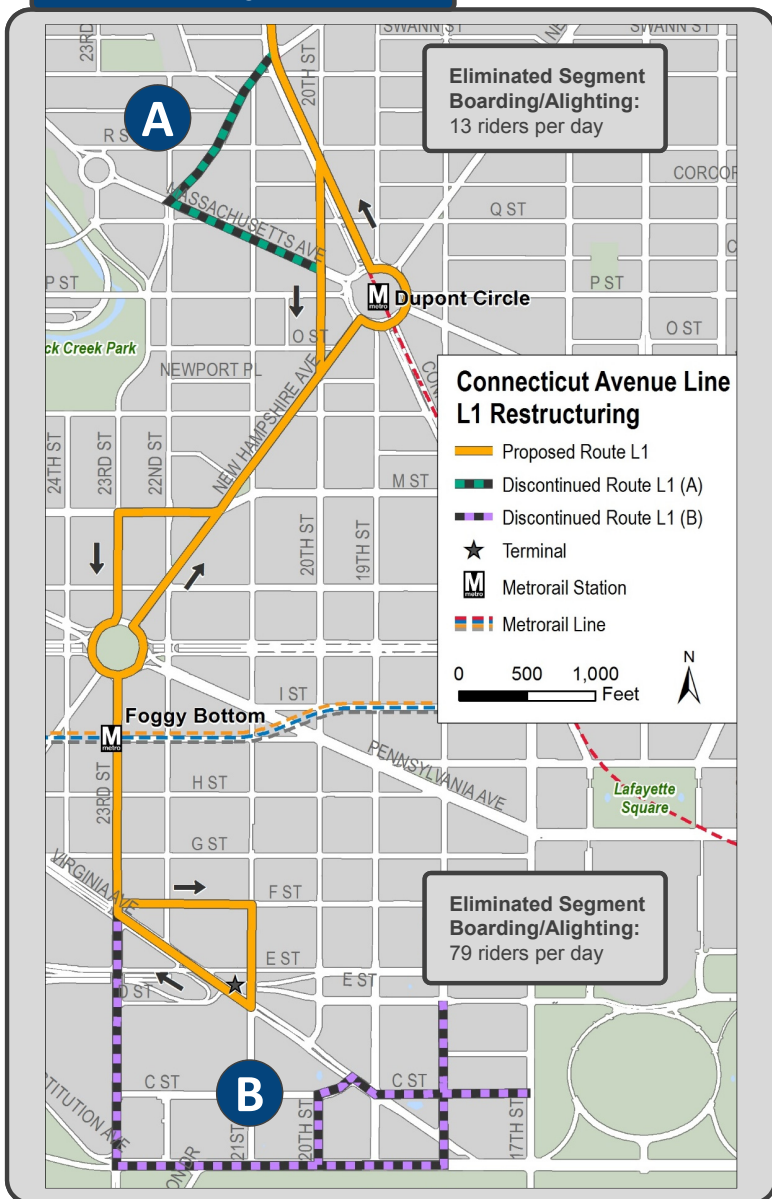
Proposal	Proposal Survey Results	Key Takeaways
<p>Proposal A</p> <p>Convert All Route L1 Trips to Route L2</p>	 <ul style="list-style-type: none"> • Similar percentages of respondents were in support (38%) and opposition (41%) of the proposal • Opinions did not differ significantly by income, race, or ethnicity 	<ul style="list-style-type: none"> • A high portion of respondents do not want to lose Route L1 service. • Respondents want to maintain direct access to Foggy Bottom destinations. <p>WMATA Response: The proposal will change based on survey feedback.</p>
<p>Proposal B</p> <p>Terminate Every Other Route L2 Trip at Woodley Park Metrorail Station (Weekends Only)</p>	 <ul style="list-style-type: none"> • The majority of respondents (63%) oppose this proposal • Low-income respondents more likely to oppose the proposal (76%) 	<ul style="list-style-type: none"> • Respondents overwhelmingly oppose terminating any buses at Woodley Park on weekends. • Respondents like direct access to Downtown and the alternative to Metrorail. <p>WMATA Response: The proposal will not continue.</p>
<p>Proposal C</p> <p>Consolidate Certain Bus Stops Along Connecticut Avenue</p>	<p>Strongest Opposition to Stop Consolidation</p>  <ul style="list-style-type: none"> • Opposition levels varied between 10% and 27% among respondents • Opposition to Jocelyn St NW and Rodman St NW consolidations twice as strong among low-income respondents compared to broader survey 	<ul style="list-style-type: none"> • Some respondents expressed concerns about maintaining certain stops for riders with mobility challenges. <p>WMATA Response: The proposal will continue.</p>



Connecticut Ave Line Proposal Change

After analyzing results from the April/May Proposal Survey, WMATA devised this proposal package. It maintains connectivity to Foggy Bottom, while making changes that address on-time performance and headway separation.

Route L1 Changed Proposals



Proposed Service Changes

Changed Proposal A

- Northbound Route L1 buses travel around Dupont Circle in lieu of Massachusetts and Florida Ave NW

Changed Proposal B

- Southbound Route L1 buses maintain current routing until terminating at the intersection of 21st St and Virginia Ave NW
 - Service discontinued along Constitution Ave NW
- Route L2 does not change

Justification

- Proposal aims to address on-time performance and headway separation issues
- Eliminating Florida and Massachusetts Ave NW service does so by reducing bus turns
- Terminating at 21st St and Virginia Ave NW does so by avoiding Constitution Ave NW congestion and saving 5 minutes of travel time
- Maintains service to Foggy Bottom destinations riders supported in surveys
- Maintains State Department service at Virginia Ave NW terminal bus stop

Considerations

- Northbound Route L1 service discontinued on Florida Ave NW and Massachusetts Ave NW
- Northbound Route L1 service added around Dupont Circle
- Service south of Virginia Ave NW eliminated



Connecticut Ave Line

Feedback

Your feedback regarding proposal refinements is critical to the decision-making process. Please mark your opinion by placing a sticker in the appropriate box next to the proposals here.

Proposal Refinement	I love this proposal! Move it forward!	I like this proposal but it needs certain adjustments.	I do not like this proposal. No need to consider!	I have no opinion or am not affected.
Changed Proposal A Northbound Route L1 buses travel around Dupont Circle in lieu of Massachusetts and Florida Ave NW				
Changed Proposal B Southbound Route L1 buses maintain current routing until terminating at the intersection of 21st St and Virginia Ave NW Constitution Ave NW service discontinued				

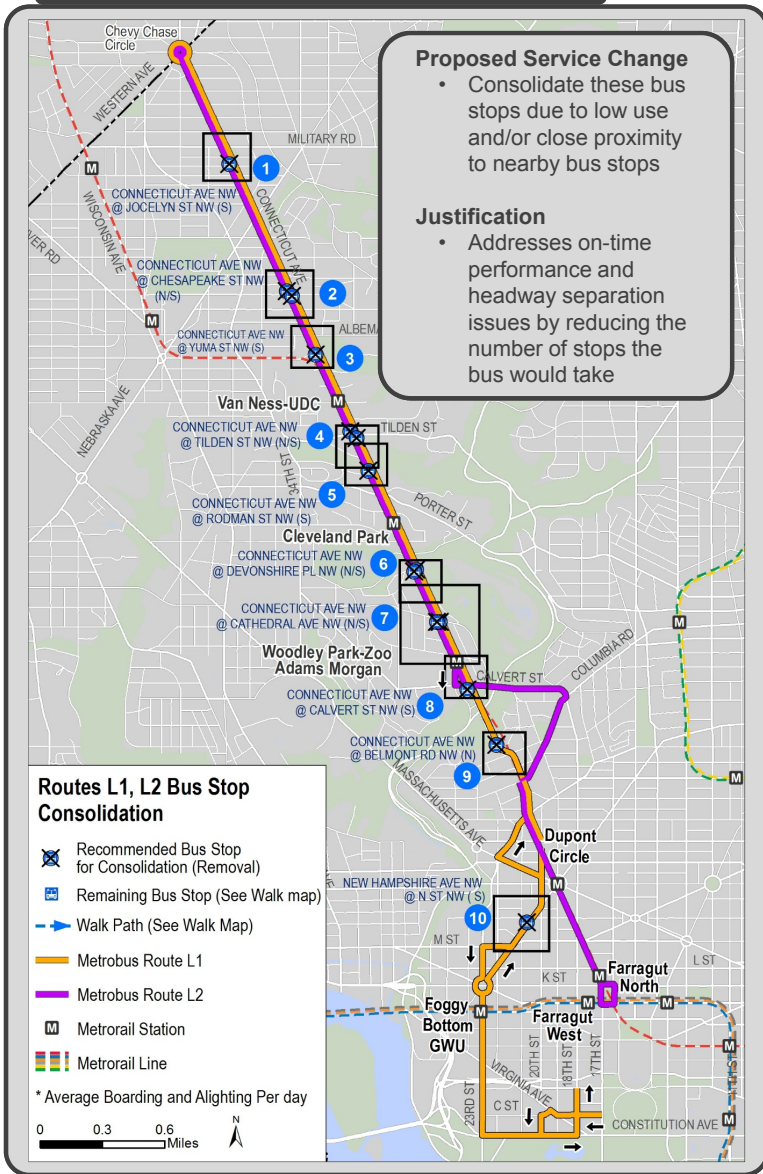
Did we miss anything?

Rider surveys, service analysis, and operator interviews shaped the initial proposals and their refinements. If there is another option that you would like us to consider, let us know! Tell a project team member, note it on your *Feedback Form*, or write it on the flip charts placed around the room.

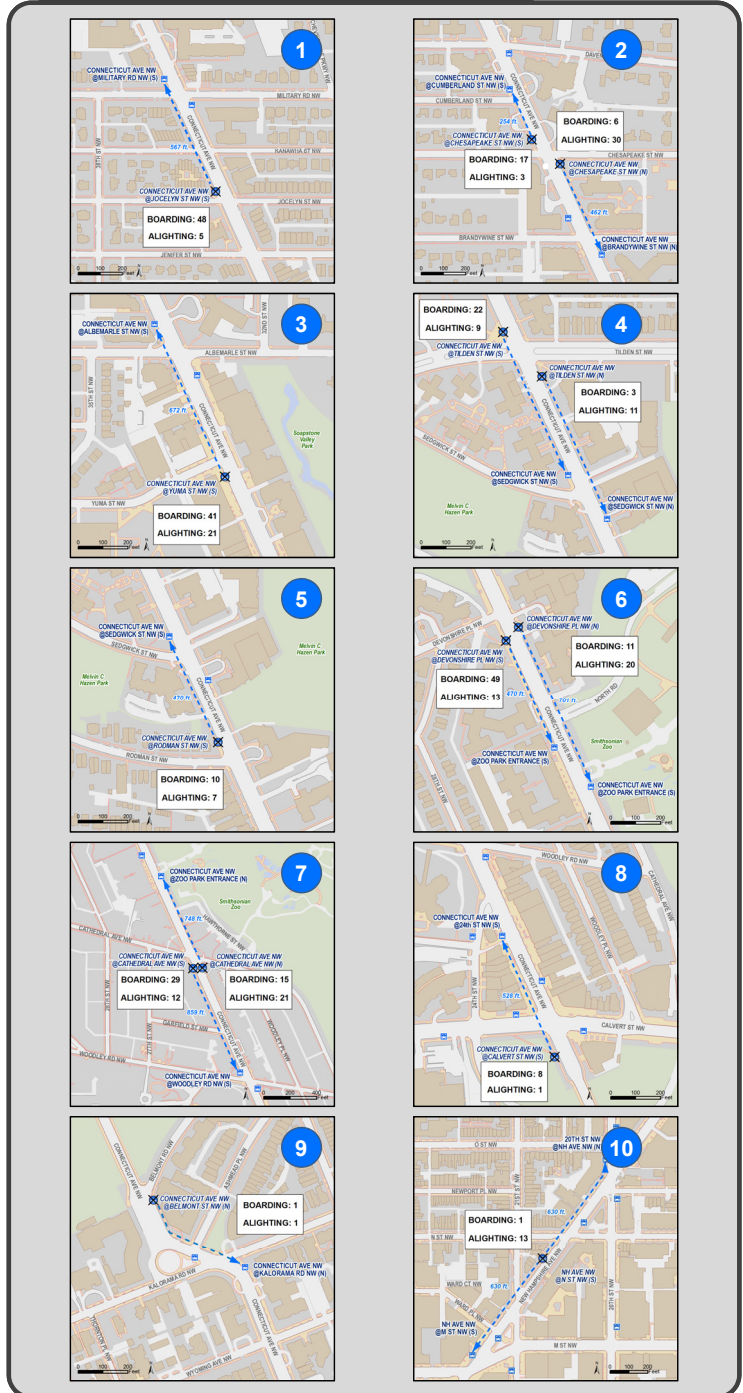
Connecticut Ave Line

Proposal Refinements (cont.)

Route L1 and L2 Bus Stop Consolidation



Bus Stop Alternative Walking Maps



Considerations

- Possibility of a slightly longer walk to the next bus stop
- Less immediate access to neighborhood destinations near consolidated stops
- Fewer bus stops improve reliability and on-time performance



Connecticut Ave Line

Feedback

Your feedback regarding bus stop consolidation is critical to the decision-making process. Please mark your opinion by placing a sticker in the appropriate box. Also, please provide your reason for opposing a bus stop's consolidation on the *Feedback Form*.

Map Number	Bus Stop	Direction	Mark which Connecticut Avenue Line bus stop(s) you DO NOT want WMATA to consolidate
1	Connecticut Ave NW @ Jocelyn St NW	South	
2	Connecticut Ave NW @ Chesapeake St NW	North	
	Connecticut Ave NW @ Chesapeake St NW	South	
3	Connecticut Ave NW @ Yuma St NW	South	
4	Connecticut Ave NW @ Tilden St NW	North	
	Connecticut Ave NW @ Tilden St NW	South	
5	Connecticut Ave NW @ Rodman St NW	South	
6	Connecticut Ave NW @ Devonshire Pl NW	North	
	Connecticut Ave NW @ Devonshire Pl NW	South	
7	Connecticut Ave NW @ Cathedral Ave NW	North	
	Connecticut Ave NW @ Cathedral Ave NW	South	
8	Connecticut Ave NW @ Calvert St NW	South	
9	Connecticut Ave NW @ Belmont St NW	North	
10	New Hampshire Ave NW @ N St NW	South	

Did we miss anything?

Rider surveys, service analysis, and operator interviews shaped the initial proposals and their refinements. If there is another option that you would like us to consider, let us know! Tell a project team member, note it on your *Feedback Form*, or write it on the flip charts placed around the room.

