

GM/CEO's FY2024 Proposed Budget- Service and Fare Optimization

Riders' Advisory Council

January 4, 2023



Service and Fare Optimization



Metrobus

- Launch the Better Bus network redesign
- Advance incremental changes to improve frequency and expand access



Metrorail

- More frequent service
 - Trains every 3 to 6 minutes in the core
 - Trains every 8 to 12 minutes systemwide
- Enable efficient and predictable transfers and increase access to destinations



Fares

- Simplify Metrorail fare structure
 - Eliminate peak / off-peak price difference
 - Align Metrorail and Metrobus base fare
- Launch a low-income fare discount program
- Encourage ridership, increase revenue, and advance equity

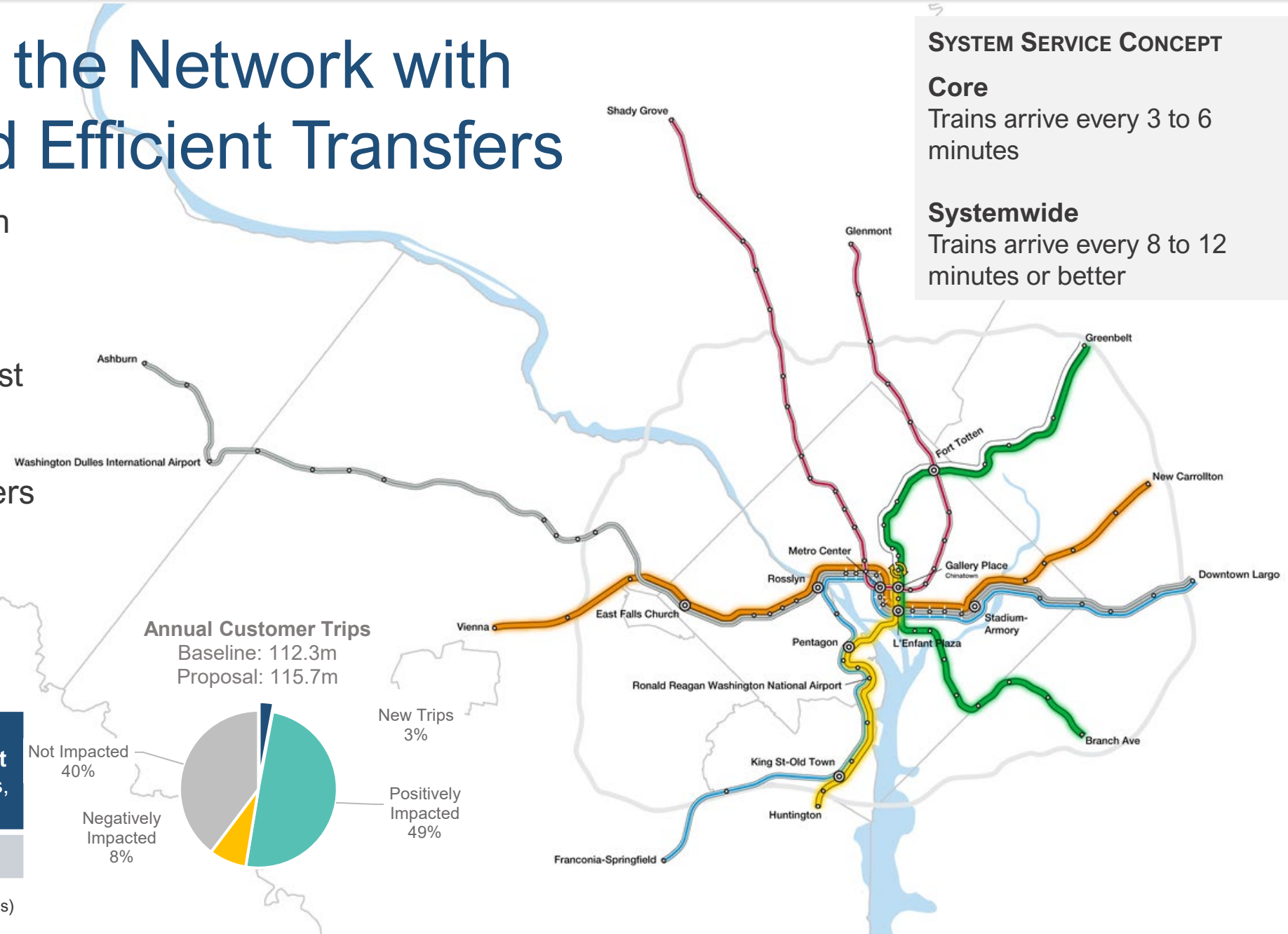
Strengthening the Network with Frequency and Efficient Transfers

- Increase core frequency on Green, Yellow, and Orange Lines
- Focuses service where the network is carrying the most customers and areas with high ridership potential
- Offers benefits for customers across the entire network, enabling efficient and predictable transfers and providing access to more destinations

Estimated Ridership Change (Annual)	Incremental Net Operating Budget Impact (\$, Millions, Annual)
3.4 million	\$ 19.0

3

Assumes railcar fleet fully available (including 7000 series)



Service Optimization – Metrorail

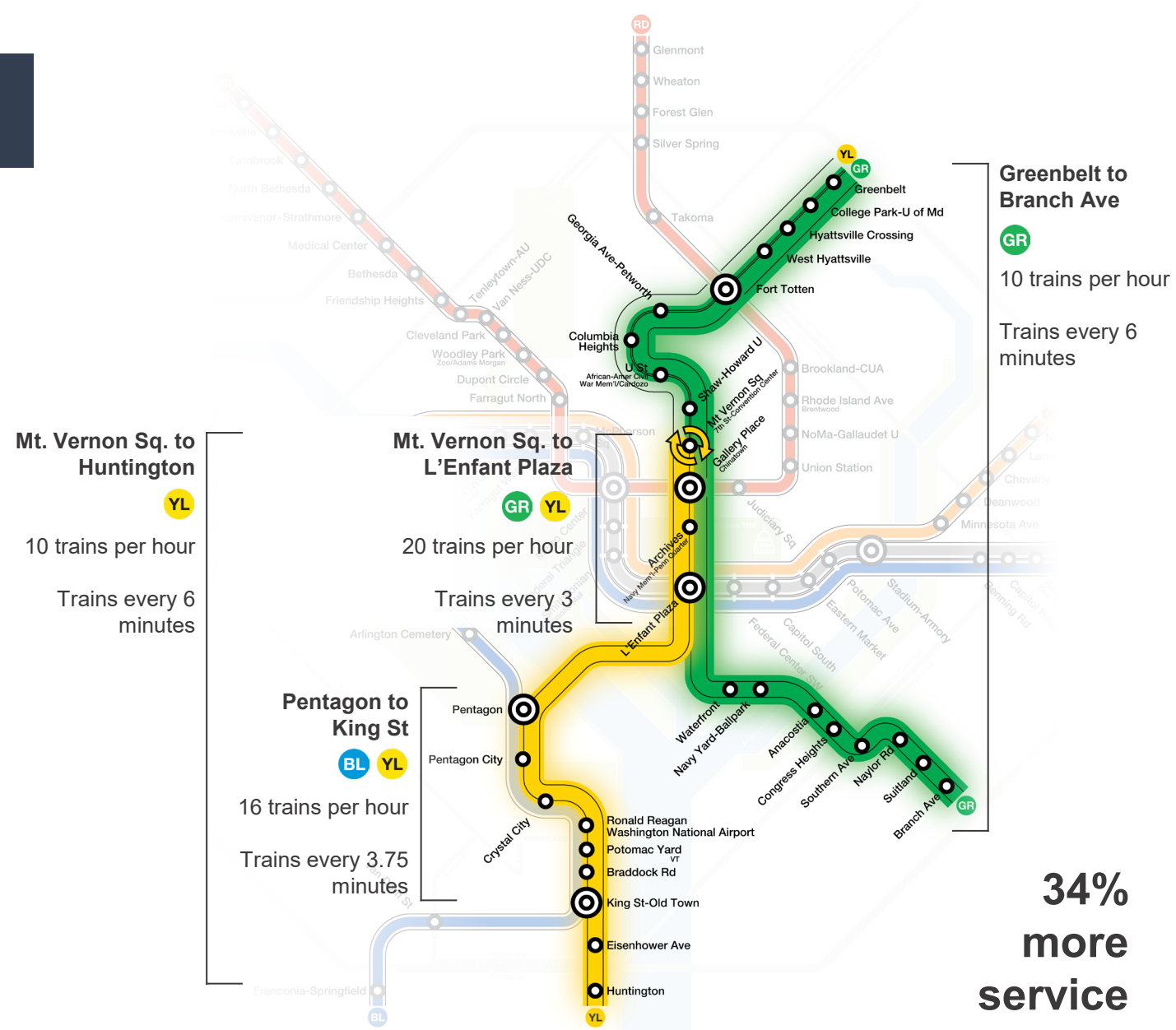
Green/Yellow Line Proposal

Increased Green and Yellow Service with Yellow Line Short Turns

By running more trains, the entire Green and Yellow Lines will receive 6 minute service all day, instead of only the combined parts

Opportunity to grow ridership with enhanced service for fast growing parts of system, games and other events at four major sports venues, airport travelers (DCA), and a new station (Potomac Yard)

Reduces transfer times at Gallery Place and L'Enfant Plaza, provides equity benefits on Southern Green Line, increases utilization of key assets (e.g., Yellow Line bridge)



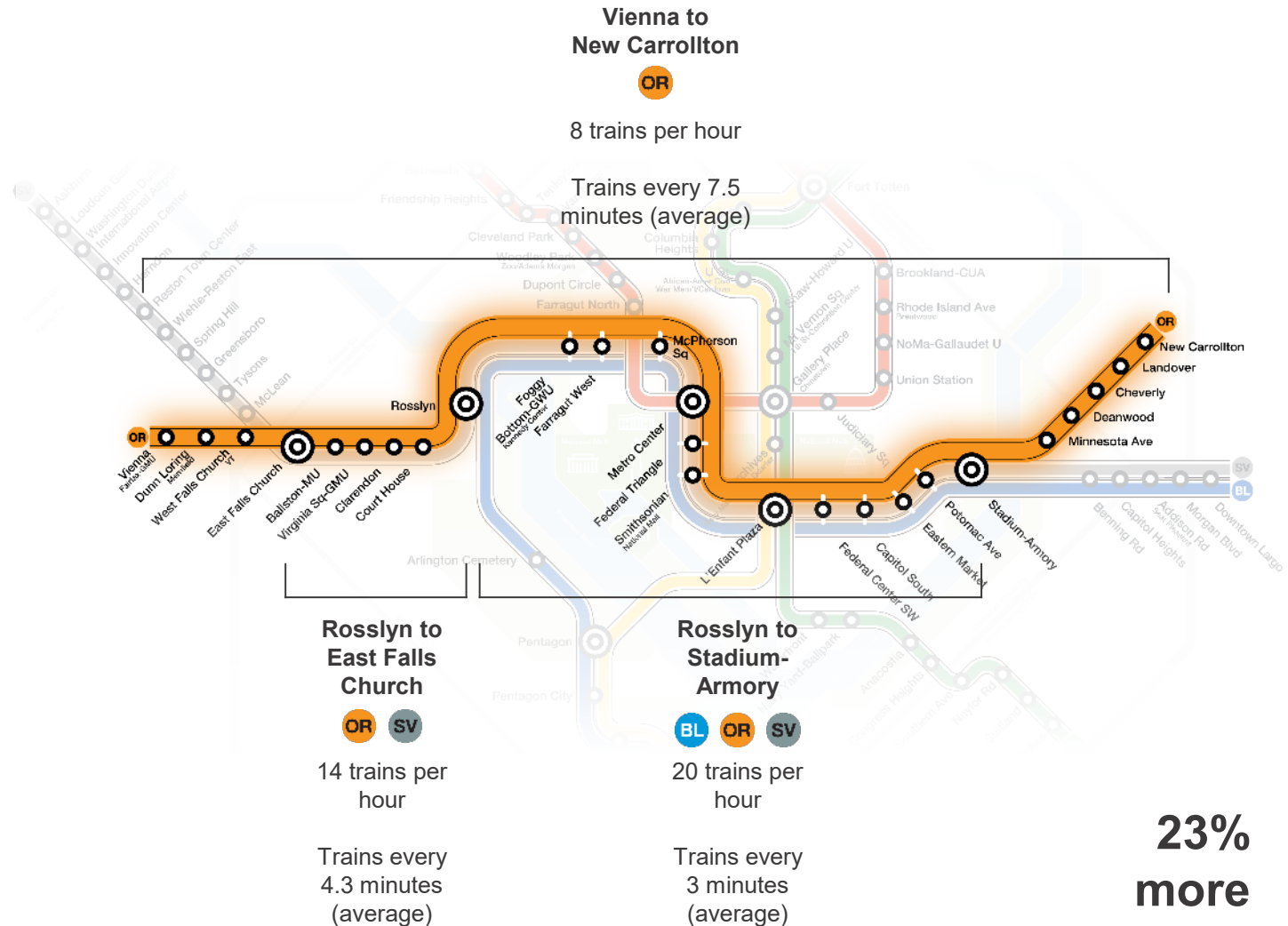
Orange Line Proposal

Improve Orange Line Service

Run more Orange Line trains to provide 7.5 minute peak frequency and 10 minute all day frequency

Improves potential connections at New Carrollton to Amtrak, MARC, and the future Purple Line and offers increased frequency in the busy Rosslyn to Ballston corridor

Current ridership on the eastern Orange and Blue/Silver branches is roughly even, and the New Carrollton branch historically had 10-25% more customers



**23%
more
service**

More Frequent Service for Customers

Trains every 3 to 6 minutes in the central part of the system, 8 to 12 minutes or better systemwide

Congress Heights
Weekend afternoon

GR

Eisenhower Avenue
Weekday midday

YL

Vienna
Weekday morning rush

OR

Baseline:
Trains every
12 minutes → Proposed:
Trains every
6 minutes

Baseline:
Trains every
12 minutes → Proposed:
Trains every
6 minutes

Baseline:
Trains every
10 minutes → Proposed:
Trains every
7.5 minutes
(average)

LN	CAR	DEST	MIN
GR	8	Greenbelt	1
GR	8	Greenbelt	7
GR	8	Greenbelt	13

LN	CAR	DEST	MIN
YL	8	Mt Vernon	2
YL	8	Mt Vernon	8
YL	8	Mt Vernon	14

LN	CAR	DEST	MIN
OR	8	NewCrIttn	ARR
OR	8	NewCrIttn	6
OR	8	NewCrIttn	15

Orange Line service would alternate between trains every 6 and 9 minutes in order to accommodate Blue and Silver Line services

Efficient and Predictable Transfers

Frequent service at transfer stations enhances regional access



	Line	Destination	Minutes
North	GR	Greenbelt	1
	YL	Mt Vernon Sq	4
	GR	Greenbelt	7
East	BL	Downtown Largo	1
	OR	New Carrollton	4
	SV	Downtown Largo	8
South	YL	Huntington	2
	GR	Branch Ave	5
	YL	Huntington	8
West	SV	Ashburn	ARR
	BL	Franconia-Springfield	4
	OR	Vienna	7

Reduced Travel Times with Efficient Transfers

Passengers perceive waiting time to be about twice as long as equivalent time on the train

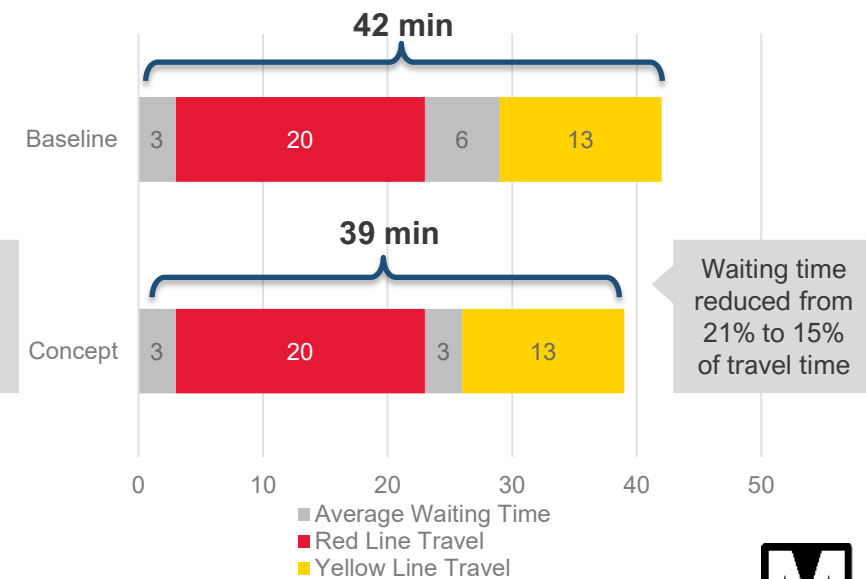
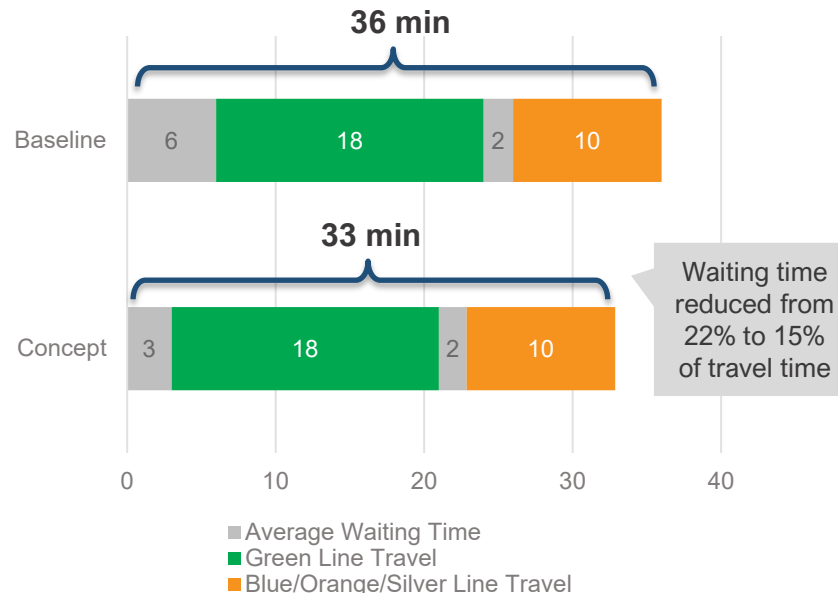
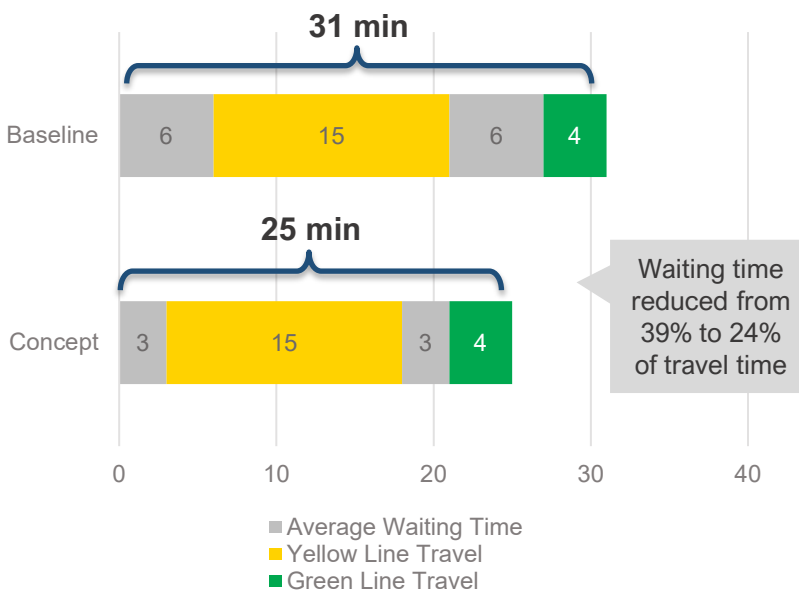
Example Trip:
**Braddock Road to
Navy Yard**
Weekend afternoon travel
Transfer at L'Enfant Plaza



Example Trip:
**Suitland to
Foggy Bottom**
Weekday mid-day travel
Transfer at L'Enfant Plaza



Example Trip:
**Silver Spring to
Reagan National Airport**
Weekday mid-day travel
Transfer at Gallery Place



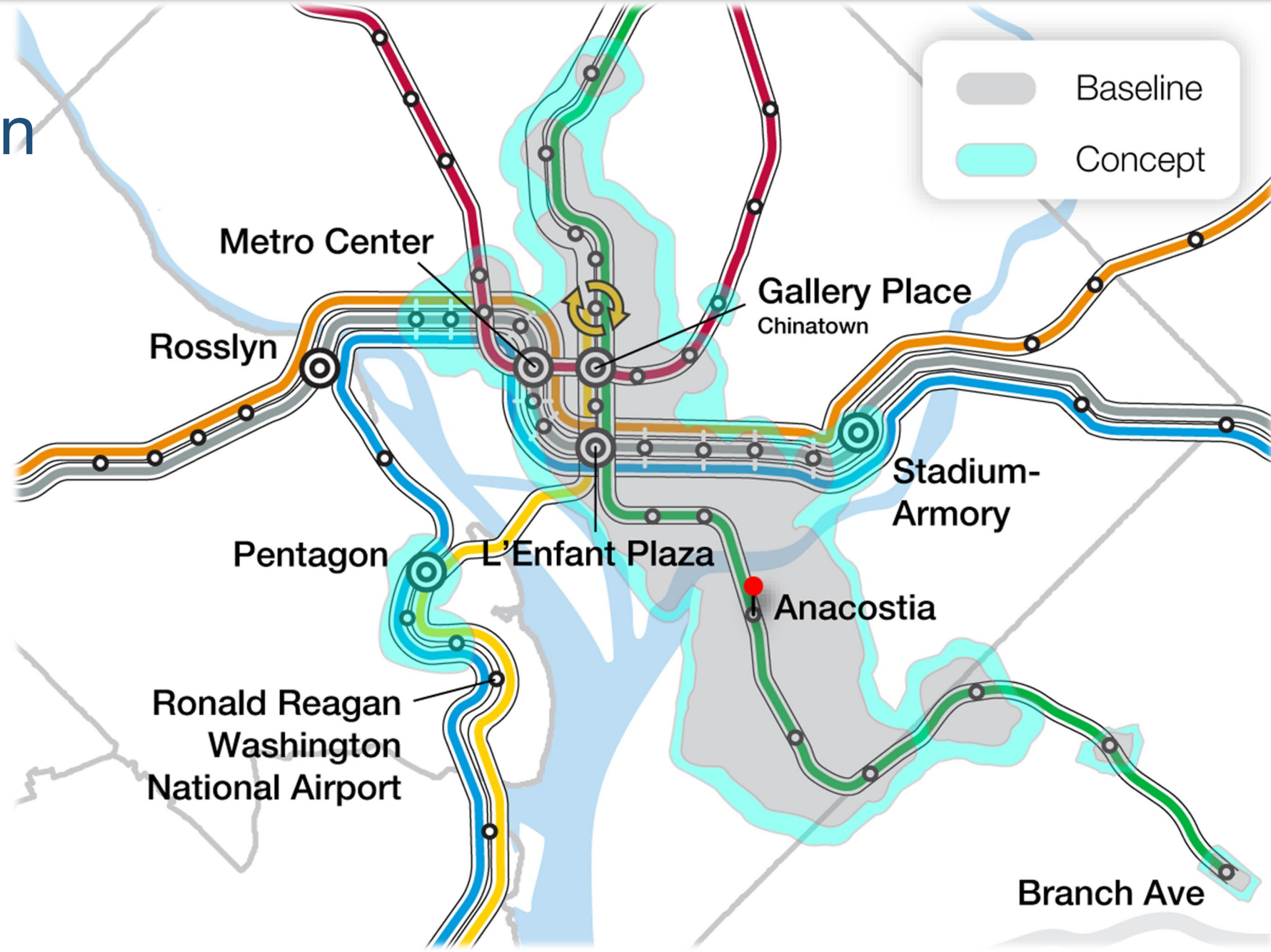
Destination Access Example

Anacostia Station

For a customer starting a short walk from Anacostia Metro Station...

By reducing average **wait times for Green Line trains** and enabling further time savings with quicker **transfers to Yellow or Orange Lines**:

Jobs accessible within 30 minutes increase approximately 25%



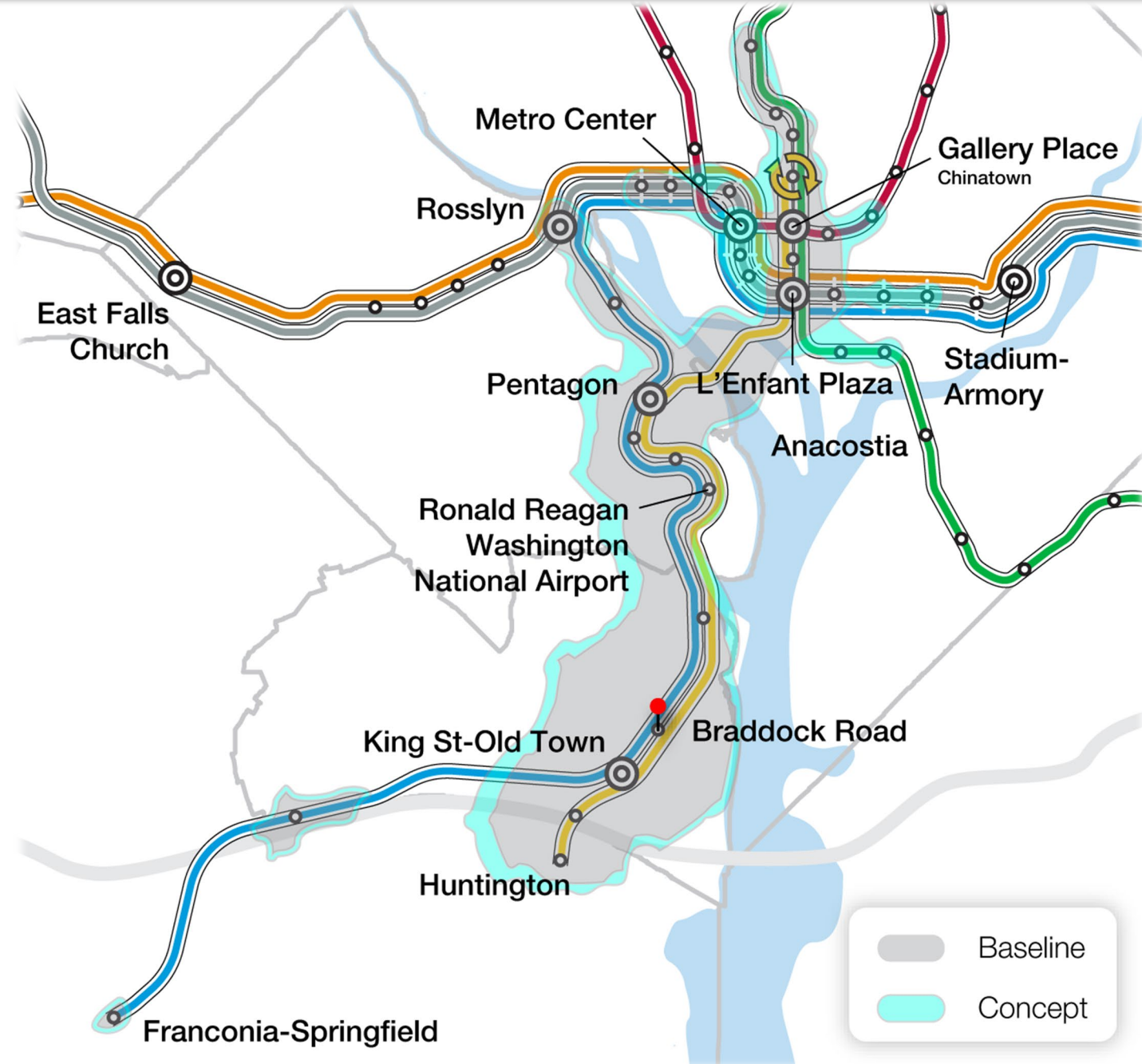
Destination Access Example

Braddock Road Station

For a customer starting at Braddock Road Metro Station...

By reducing average **wait times for Yellow Line trains** and enabling further time savings with quicker **transfers to Green or Orange Lines**:

Jobs accessible within 30 minutes increase approximately 15%



Rail Optimization Summary

Make service more frequent to reduce travel times, expand destination access, and grow ridership

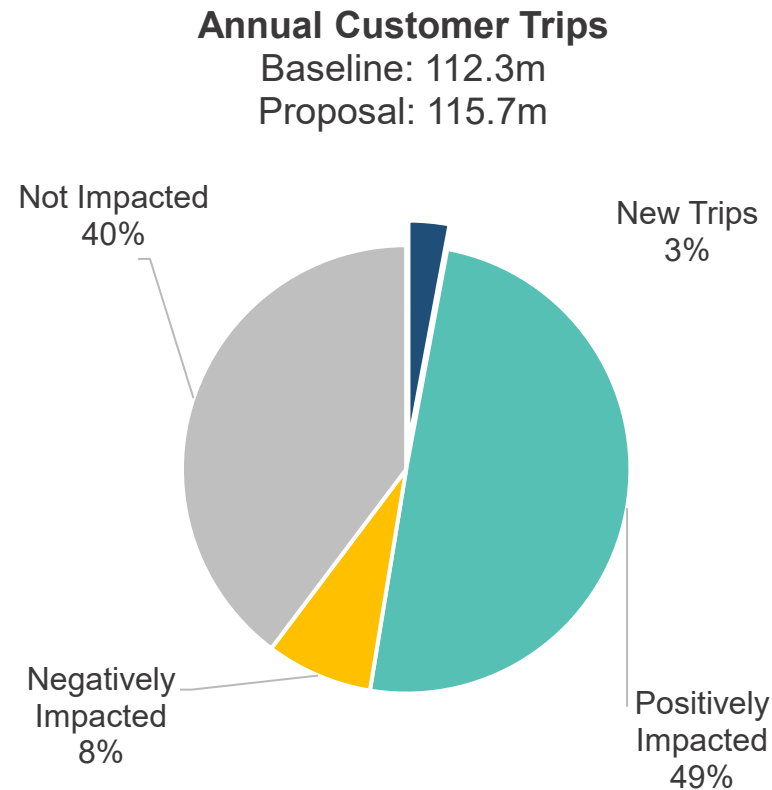
More frequent all day service

- **Core:** Trains arrive every 3 to 6 minutes
- **Systemwide:** Trains arrive every 8 to 12 minutes or better

Running 62% more daily train trips systemwide than today

- 101% more than in July 2022

Faster trips for customers, less time waiting to transfer



Delivering a Better Bus network

Metro is working to make bus service better and more frequent, addressing top customer priorities

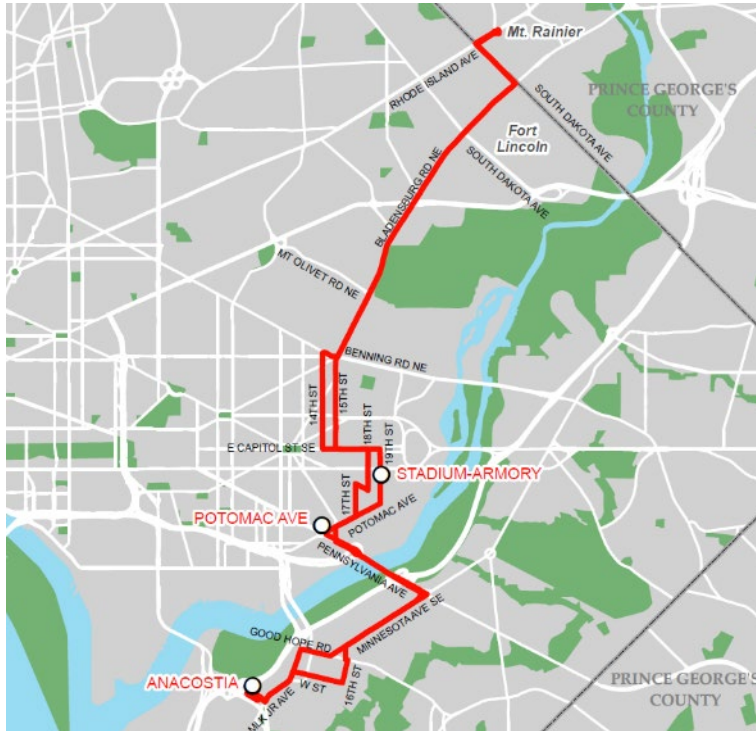
FY2022 to FY2023	FY2024	FY2024 and beyond
<p>Launched all day service improvements</p> <ul style="list-style-type: none">• 20 lines every 12 minutes• 16 lines every 20 minutes <p>Implemented free rail-bus transfers</p>	<p>Incremental changes to improve frequency and access</p>	<p>Designing a new network that is fast, frequent, reliable, and easier to understand</p> <p>Improving the customer experience with enhanced bus priority and better real-time information</p>

Improve Frequent Bus Service

Grow ridership, expand access, advance equity

B2 – District of Columbia

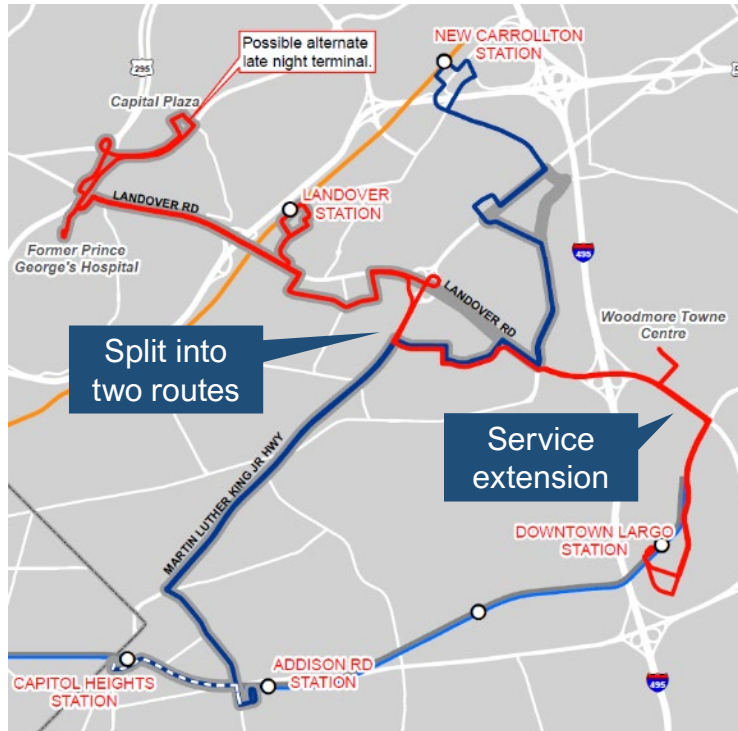
Upgrade busy **Bladensburg Road-Anacostia** line, a top 15 ridership route, to every 12 minutes all day



Frequency Improvement

A12 – Maryland

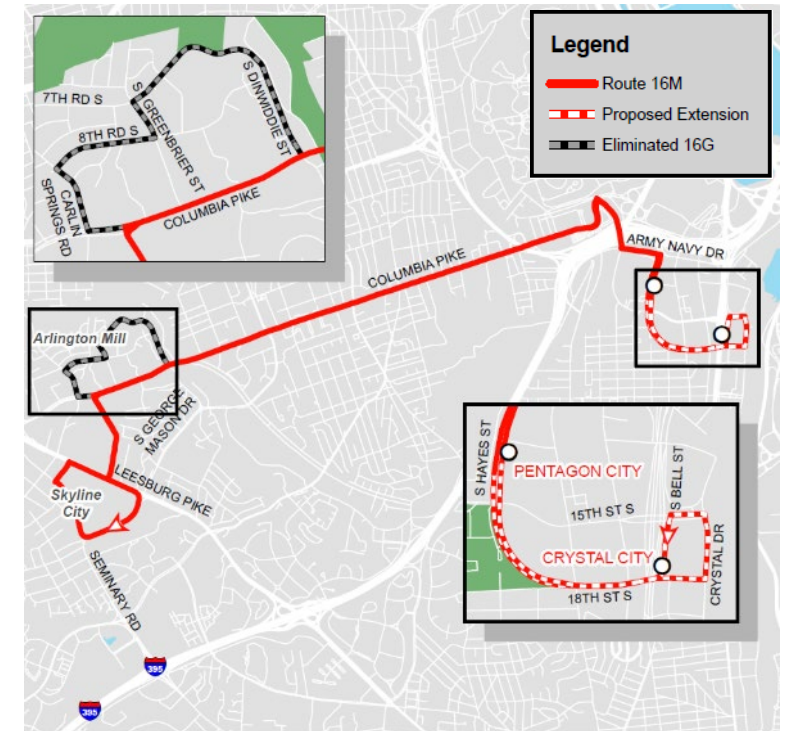
Restructure **Martin Luther King Jr. Highway** service, extending service every 20 minutes to **Downtown Largo**



Restructure/Extension

16M – Virginia

Restructure **Columbia Pike** service, connecting **Skyline** to **Crystal City** with service every 12 minutes all day



Restructure/Extension

Improve Frequent Bus Service

Grow ridership, expand access, advance equity

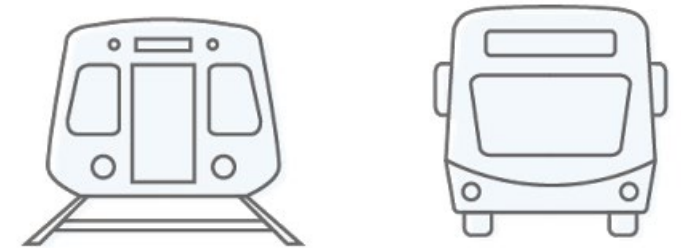
Annual Impact of Improved Service

Line	Jurisdiction	Cost (\$M)	Ridership(M)	Revenue (\$M)	Net Budget Impact (\$M)
B2 - Bladensburg Road-Anacostia	DC	\$2.5	0.30	\$0.19	\$2.3
A12 - Martin Luther King Jr. Highway	MD	\$2.0	0.25	\$0.15	\$1.9
16M – Columbia Pike – Crystal City	VA	\$1.0	0.10	\$0.08	\$0.9
Total		\$5.5	0.65	\$0.40	\$5.1

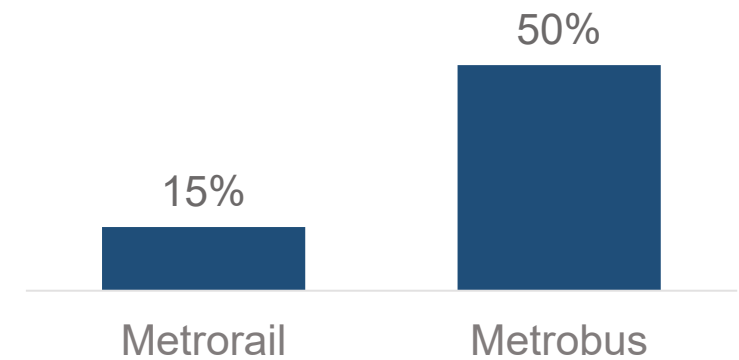
Implement Regional Low-Income Fare Program Administered by Metro

- Offer low-income customers a 50% discount, matching the discount for senior and disabled customers
- Customers qualify based on enrollment in jurisdictional Supplemental Nutrition Assistance Program (SNAP)
- Offer customers a straightforward sign-up process

Estimated Ridership Impact (FY2024)	Estimated Budget Impact (FY2024)
1.6 million	-\$4.0 million



Low Income Share of Ridership, %






Source: Rail and Bus Passenger Surveys

Fare Simplification Proposal

Standardize peak and off-peak fares, align rail and bus base fares, and discount fares for low-income customers

Current Fare Structure


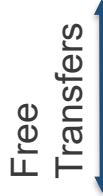

	Base Fare	Max Fare	Reduced Fare ¹
  	Peak \$2.25 <small>After first 3 miles, 0.326 per mile After 6 miles, \$0.288 per mile</small> Off-Peak Weekday \$2.00 <small>After first 3 miles, 0.244 per mile After 6 miles, \$0.216 per mile</small> Late Night² and Weekend	\$6.00 \$3.85 \$2.00	50% off the peak fare \$1.00
Bus		\$2.00	\$1.00

MetroAccess fares are twice the fastest comparable fixed-route fare with a maximum of \$6.50 per trip.

¹ For senior and disabled customers

² Late Night fares apply after 9:30pm

Proposed Fare Structure

	Base Fare	Max Fare	Reduced Fare ¹
  	Regular \$2.00 <small>After first 3 miles, \$0.40 per mile</small> Late Night² and Weekend	\$6.50 \$2.00	\$1.00 to \$3.25 \$1.00
Bus		\$2.00	\$1.00

MetroAccess fares are twice the fastest comparable fixed-route fare with a maximum of \$6.50 per trip.

¹ 50% discount for senior, disabled, and low-income customers

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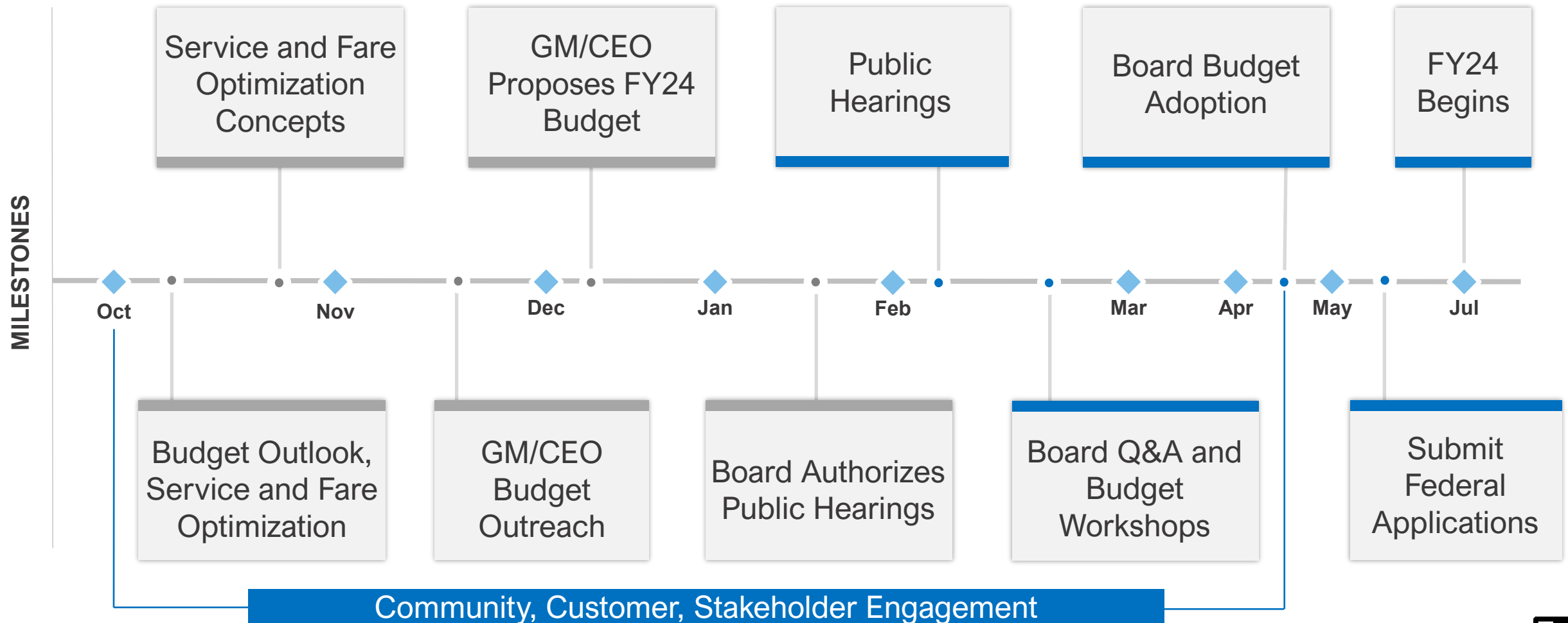
Fare Proposal

Simplify the Metrorail fare structure and offer discounts for low-income customers

- Proposal advances Metro's Fare Policy Principles
 - Simplifies and standardizes fares for customers
 - Enables offering reduced fares to low-income customers and preserves \$2 bus and late night & weekend rail fares
 - Expected to generate increased revenue and grow ridership

Proposals	Ridership Impact (Millions)	Budget Impact (Millions)	Metro Fare Policy Principles					
			Customer Focused	Simple and Convenient	Equitable	Seamless	Drives Ridership	Generates revenue
Fare Structure Simplification with Low-Income Fare Program	+1.9	+\$7.1	✓	✓	✓	✓	✓	✓








































FY2024 Budget Timeline



Appendix



Proposed Service Changes to Improve Frequency and Access





















	<div>METROBUS</div> <div>135 Lines</div>	<div><div></div>METRORAIL<div>(headways in minutes)</div></div> <div>1,278 Railcars</div>	<div><div></div>METROACCESS</div> <div>759 Vehicles</div>																												
FY2023 Budget	<table><tr><th>12 Min. Frequency</th><th>20 Min. Frequency</th></tr><tr><td>20 lines</td><td>16 lines</td></tr></table>	12 Min. Frequency	20 Min. Frequency	20 lines	16 lines	<table><tr><th>Line</th><th>AM/PM Rush</th><th>All Day</th><th>Late Night</th></tr><tr><td></td><td>5</td><td>6</td><td>10</td></tr><tr><td></td><td>10</td><td>12</td><td>15</td></tr></table>	Line	AM/PM Rush	All Day	Late Night		5	6	10	    	10	12	15	<table><tr><th>Vans</th><th>Sedans</th></tr><tr><td>532</td><td>227</td></tr><tr><td colspan="2">On-demand paratransit vehicles</td></tr></table>	Vans	Sedans	532	227	On-demand paratransit vehicles							
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Metrorail Service Frequency Detail

Peak Headway
Minutes between trains

All Day Base Headway*
Minutes between trains

Line	Segment	August**	FY23 Budget	Proposal***	August**	FY23 Budget	Proposal***
	Shady Grove to Glenmont	10	5	5	10	6	6
 	Mt. Vernon Sq to L'Enfant Plaza	7.5	5	3	7.5	6	3
 	Greenbelt Terminal****	15	5	6	15	6	6
	Branch Avenue Terminal	15	10	6	15	12	6
	Huntington Terminal	15	10	6	15	12	6
 	Pentagon to Reagan National Airport	7.5	5	3.75	7.5	6	4
  	Rosslyn to Stadium-Armory	5	3.3	3	5	4	3.75
 	East Falls Church to Rosslyn	7.5	5	4.3	7.5	6	5.5
	New Carrollton Terminal	15	10	7.5	15	12	10
 	Downtown Largo Terminal	7.5	5	5	7.5	6	6
	Franconia Terminal	15	10	10	15	12	12
	Vienna Terminal	15	10	7.5	15	12	10
	Wiehle (Future Ashburn) Terminal	15	10	10	15	12	12

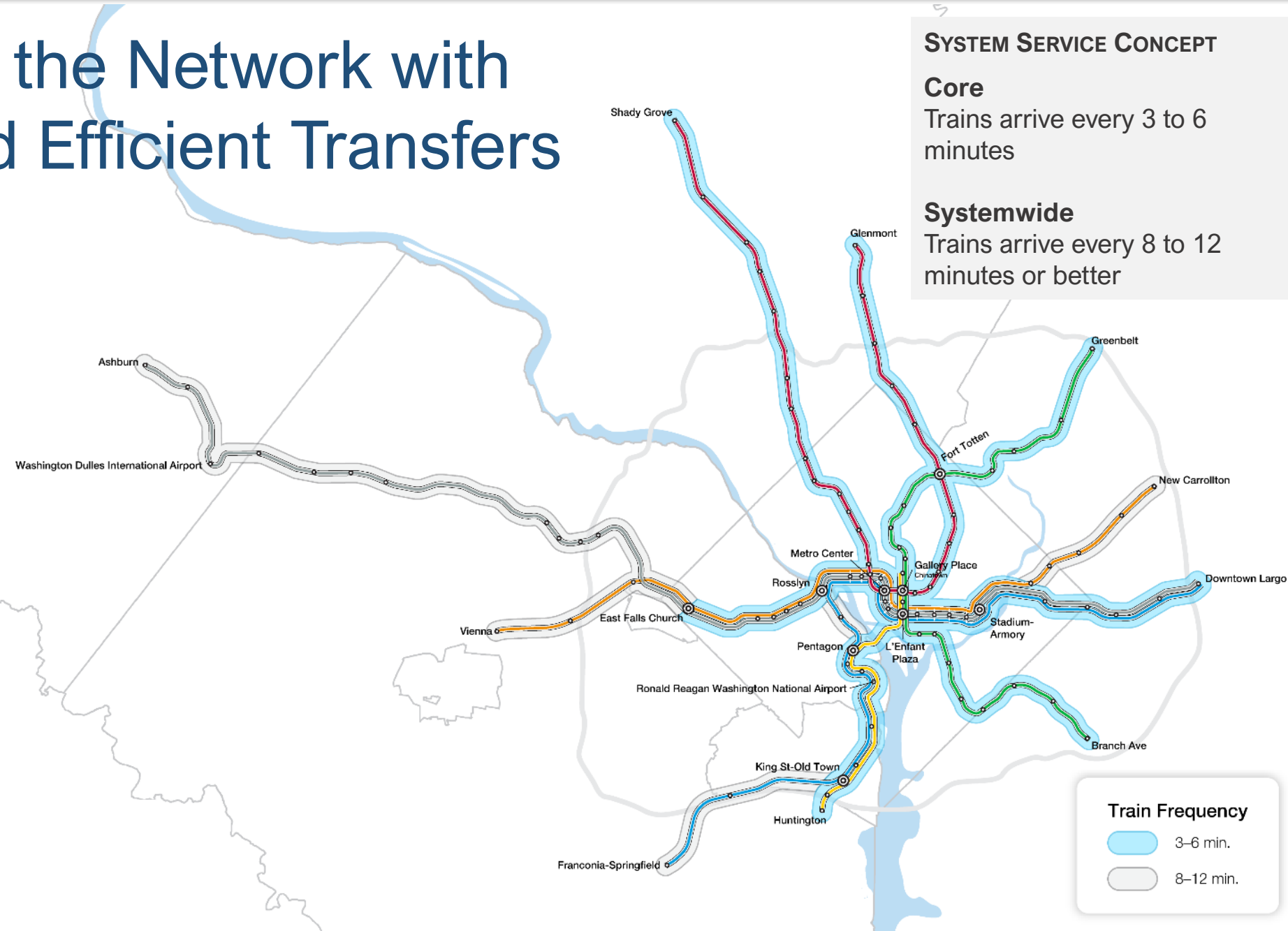
*Until 9:30pm, 7 days a week

***Assumes railcar fleet fully available (including 7000 series)

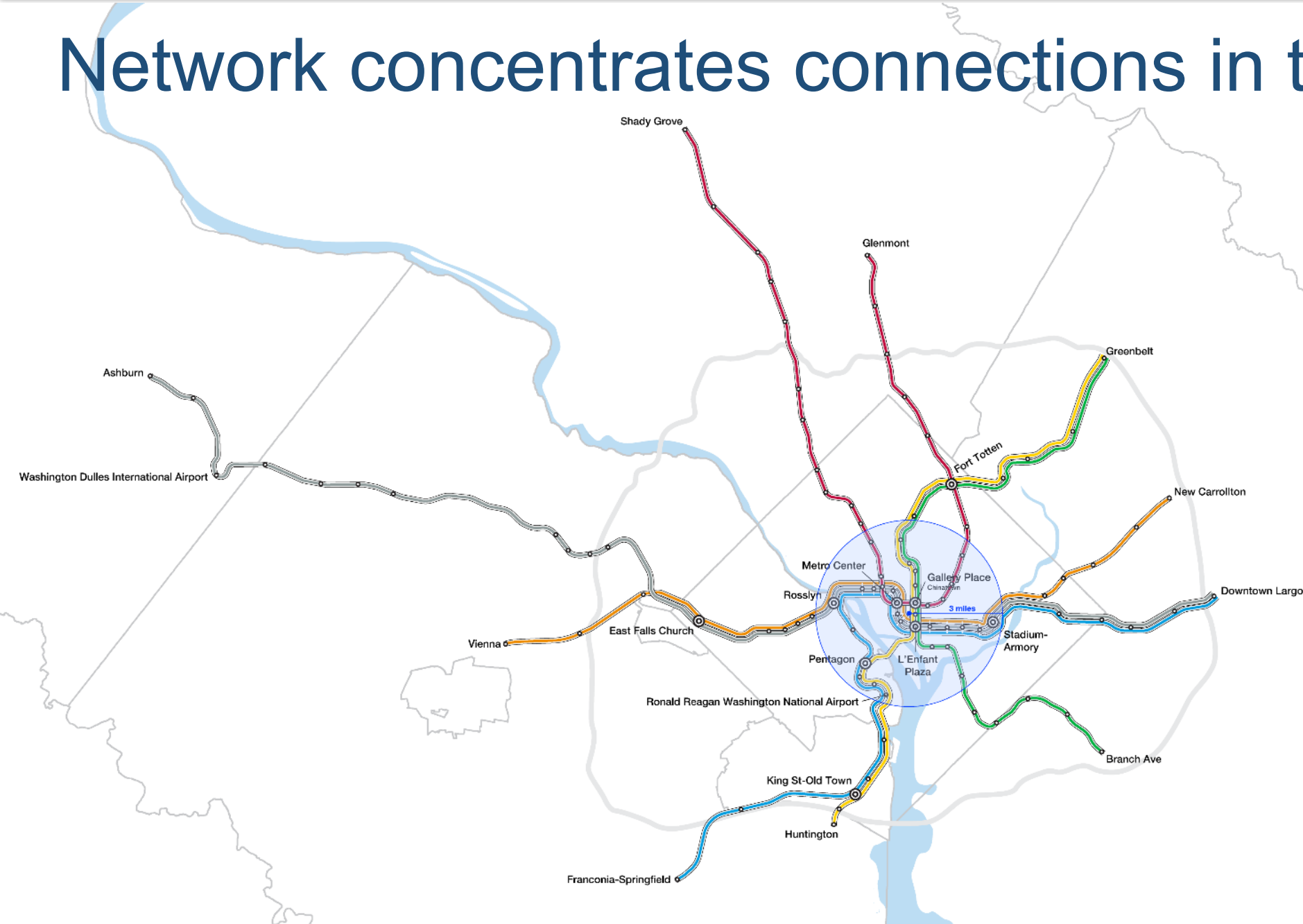
****Proposal includes all Yellow Line trains terminating at Mt. Vernon Sq; only Green Line trains serving Greenbelt

Strengthening the Network with Frequency and Efficient Transfers

- Proposal would increase the share of customer trips with 6 minutes or better service to 74% from 65%



Network concentrates connections in the center



Within a 3-mile radius from the system center:

High concentration of stations, destinations, and customers

- 34 of 97 current stations (35%)
- 60% of station entries and exits
- 10 of the top 10 ridership stations
- 18 of the top 20 ridership stations

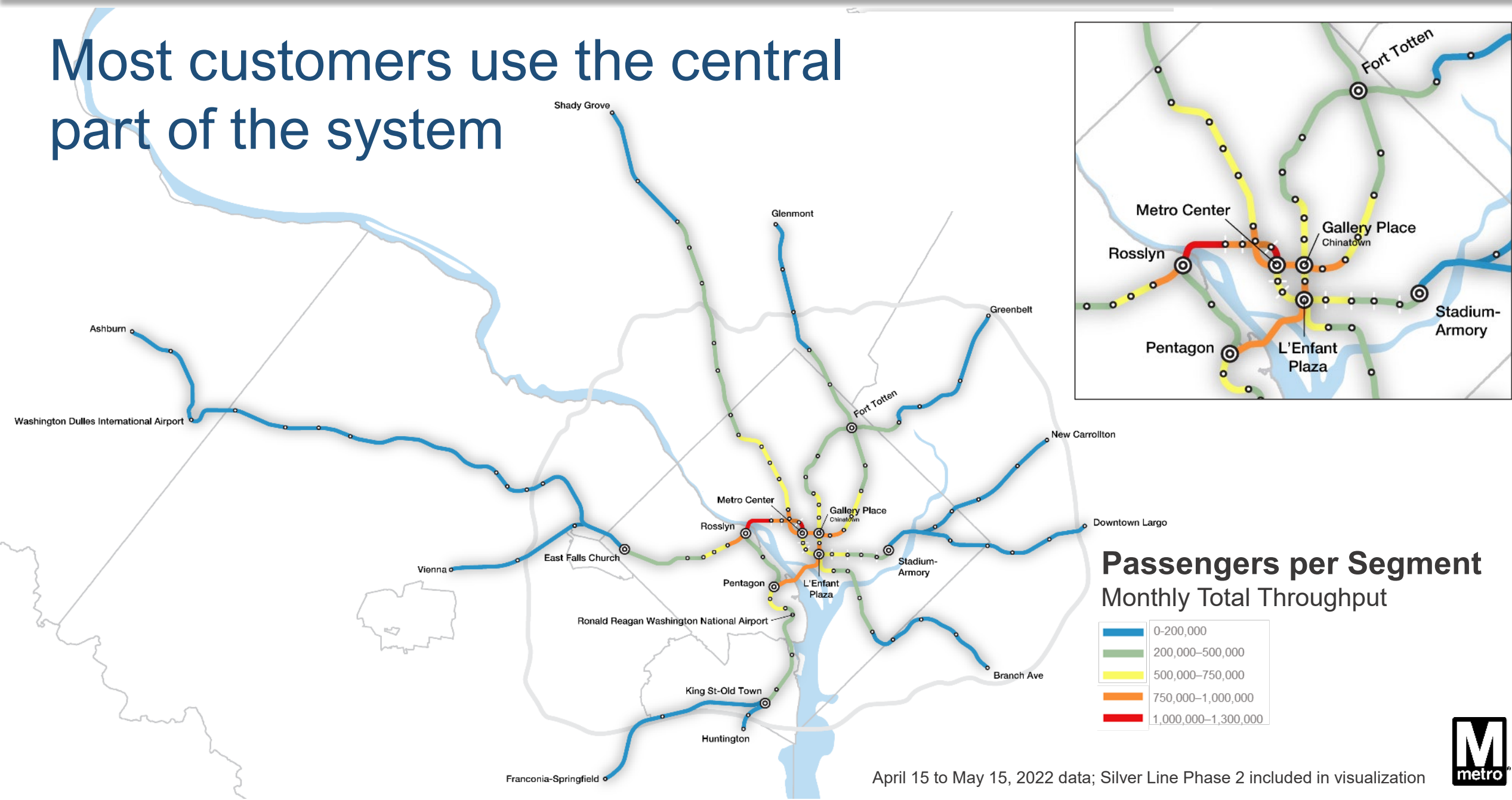
Where customers systemwide are traveling to and from

- 76% of weekday exits before 10 am – *where people are headed to*
- 75% of weekday entries after 7 pm – *where people are returning from*

Where customers transfer

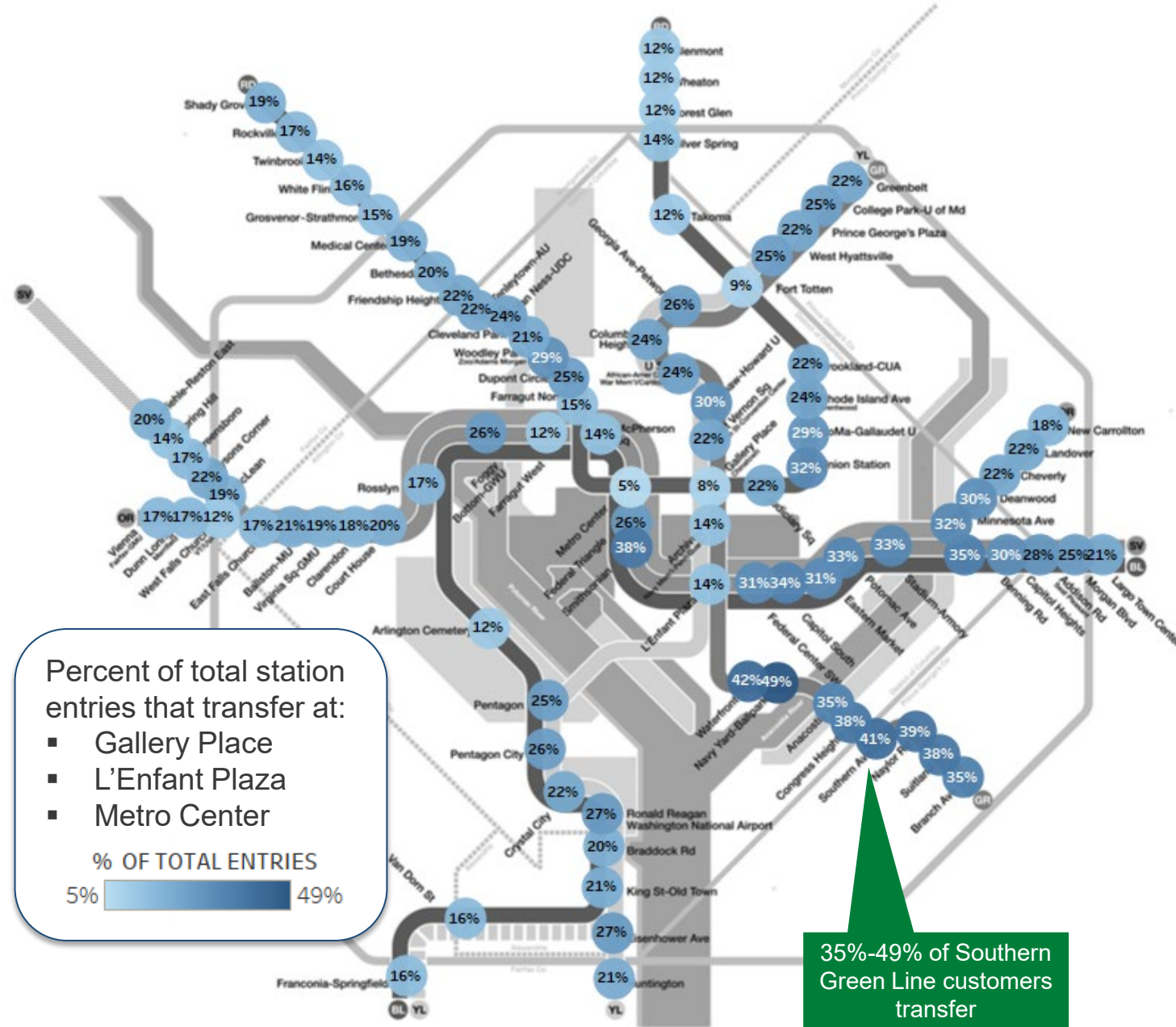
- 92% of line transfers with 86% at Metro Center, Gallery Place, and L'Enfant Plaza

Most customers use the central part of the system



How many customers are transferring?

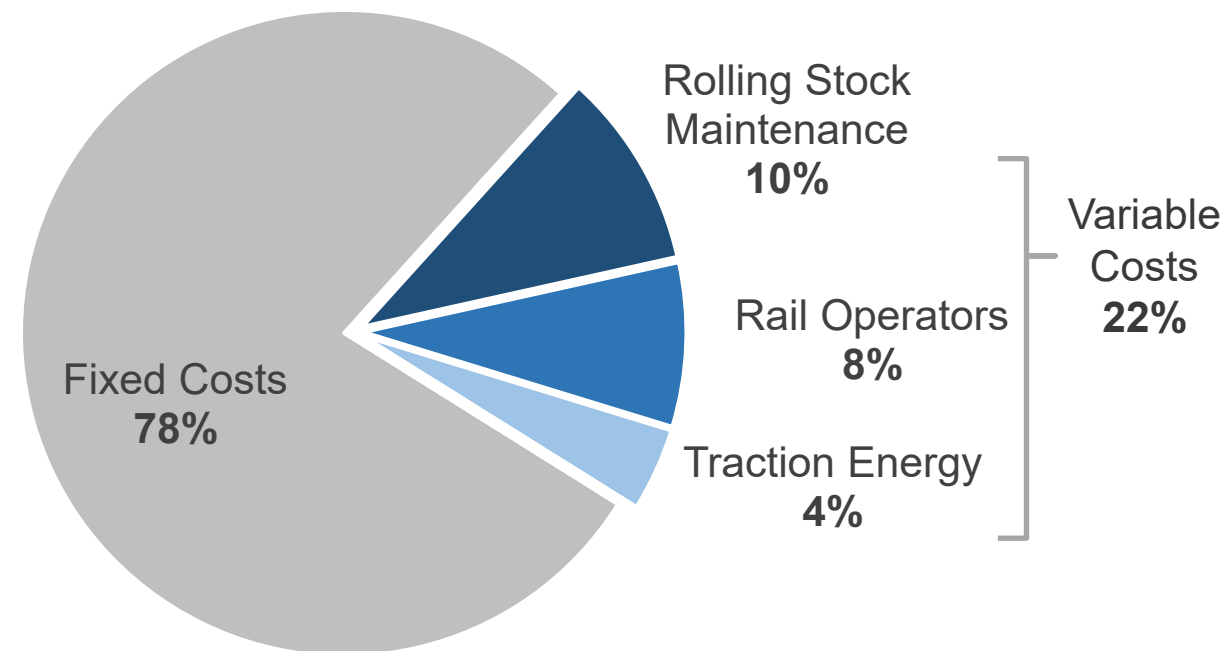
- Approximately 30% of customers transfer during their rail trips
- 86% of those transfers take place at Gallery Place, L'Enfant Plaza, and Metro Center
- For customers entering at non-transfer stations, transfer share ranges from 12% to 49%



Most Metrorail costs are operations and maintenance of fixed assets or otherwise do not vary with service levels

- Metrorail is a \$100 billion regional system supported by ongoing annual operating and capital expenditures maintaining and renewing assets
- The investment provides potential capacity to deliver service at relatively low marginal cost
 - Both fixed and variable costs are potentially changeable independent of service levels, but only variable costs necessarily scale with the amount of service delivered
 - Some types of service level changes affect fixed costs, including changes to operating hours (affecting the cost of operating stations) or changes above certain thresholds affecting fleet and facility footprint (long-term capacity)

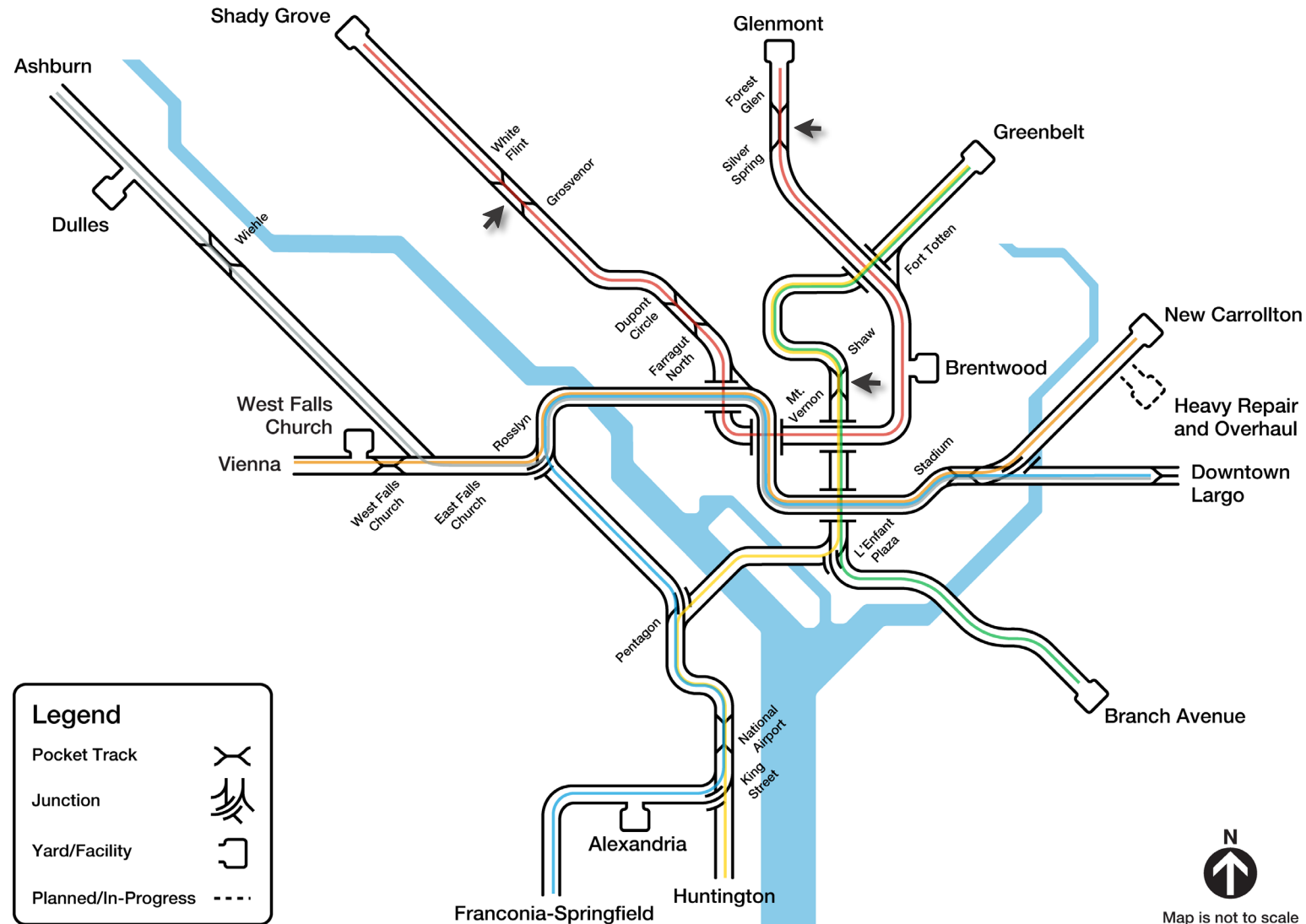
FY2023 Metrorail Costs
Share of \$1.3B Operating Budget



Fixed costs include operation and maintenance of railyards, track, structures, stations, signals, elevators/escalators, fare collection, maintenance equipment and vehicles, police and security, and administrative support.

Infrastructure & Railcars

- Limited locations to reliably turn trains in service
 - New infrastructure investment could enable more service flexibility beyond FY2024
- With railcar fleet (including 7000 series) fully available, can deploy more trains in service than FY2023 budget baseline



Fare Optimization Concepts Considered

Evaluate through
multiple lenses:



Customer
Focused



Equitable



Simple and
Convenient



Drives
Ridership



Seamless



Generates
Revenue

FY2024 Concepts



Fare increase/decrease: Consider fare level changes



Peak/off-peak: Change or eliminate time of day price difference



Zone fare: Establish zone fares to replace mileage charges



Low-income fare: Offer discounts for low-income customers



Parking fees: Reduce fees to increase utilization and ridership



\$1 Bus fare: Reduce standard bus fare to \$1 from \$2



MetroAccess Fare: Consider options to increase predictability

Post-FY2024 Concepts



Fare capping



Fare integration

Fare Structure Recommendations

Structural Concept	Recommendation	Rationale
Fare Free	Future consideration	Revenue replacement not feasible for FY2024; requires structural change in funding of transit
Flat Fare	Not recommended for FY2024 implementation; future consideration	High ridership and revenue tradeoffs, equity and Title VI challenges
Zone Fare	Not recommended for FY2024 implementation; future consideration	Continue staff analysis; design complications due to revenue, ridership, and equity considerations relative to benefits/value
Distance Fare Simplification	Eliminate peak/off-peak difference and adopt new distance charge in FY2024	Opportunity to simplify fare structure while encouraging ridership and maintaining revenue; also makes MetroAccess fares more predictable
Reduced Fares for Low-Income Customers	Implement in FY2024	Improves access for most price sensitive customers

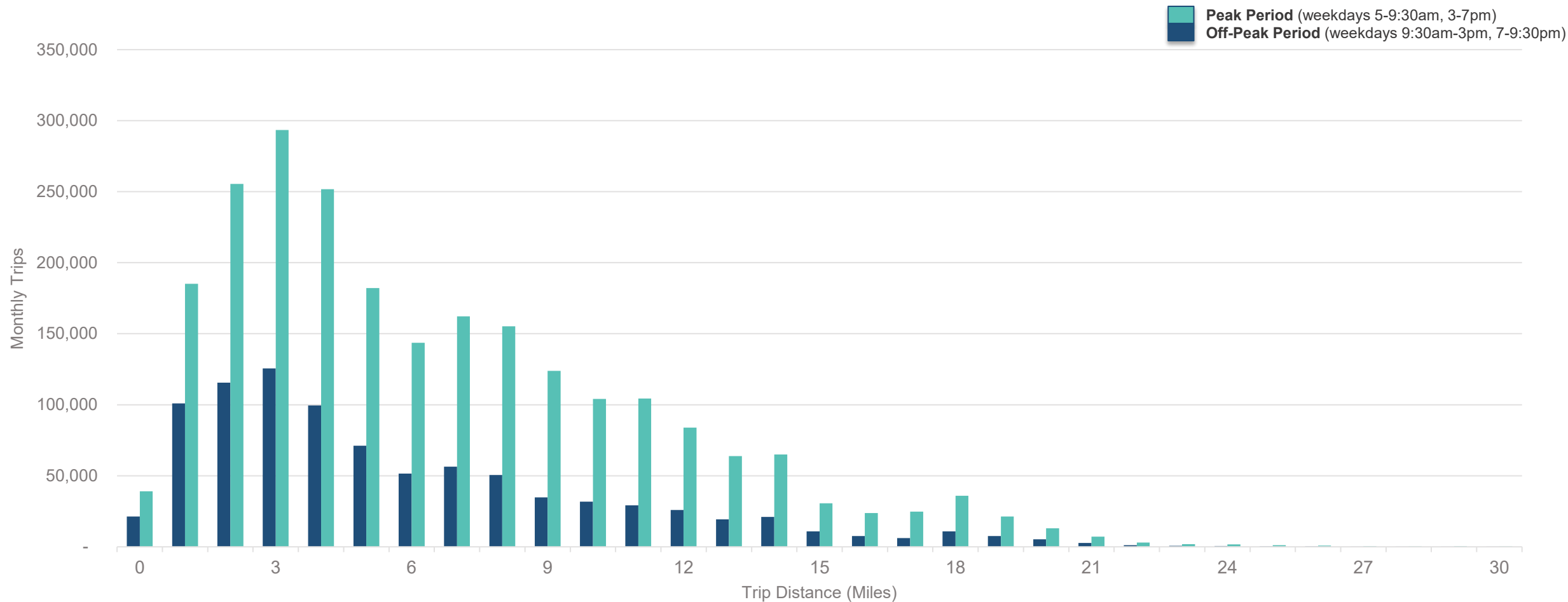
Metrorail Fares by Time Period

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5am							
7am	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00		
9:30am	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85		
3pm	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00	\$2.25-6.00		
7pm	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85	\$2.00-3.85		
9:30pm	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00		
12am							
1am							

- Peak Fare Periods
 - 51% of customer trips
 - 62% of fare revenue
 - 32.5% of operating hours
- Off-Peak Fare Periods
 - 20% of customer trips
 - 18% of fare revenue
 - 30.5% of operating hours
- Late Night and Weekend Fare Periods
 - 29% of customer trips
 - 20% of fare revenue
 - 37% of operating hours

- Peak Fare (42.5 hours/week)
- Off-peak Fare (40 hours/week)
- Weekend/Late-Night Fare (48.5/hours week)
- System Closed

Peak vs. Off-Peak Ridership by Trip Distance



Note: Ridership data from April 15 to May 15, 2022



Simplify Metrorail Fares for Customers

Current Fare Structure

1. Higher fares during rush periods when more customers are riding; Regular fare range from \$2.25 to \$6, off-peak range from \$2.00 to \$3.85
2. Mileage rates that start after 3 miles and decrease after 6 miles
3. Peak rail base fare higher than bus and non-peak rail base fare

Proposed Fare Structure

1. Consolidate weekday peak and off-peak fares
2. Standardize the mileage rate
3. Match rail and bus base fare

Bus and Rail Base Fare Integration

- Aligning base bus and rail fares further simplifies the customer experience
- Metrorail's base fare range is equivalent to the average bus trip distance (3 miles)
- Builds off past integration efforts, including free transfers (crediting full fare paid up to \$2)



Metrobus



Metrorail

Base Fare (Boarding Charge)

\$2

\$2 to \$2.25
Consolidate, align with bus

Base Fare Applicability Range

Entire distance

3 miles

Average Trip Distance

3 miles

6+ miles

Range of options to consolidate rail fare periods

Opportunity to simplify fares while collecting as much or more revenue

- Structures are flexible to different price levels – could accommodate a fare increase
- Possibility to offer consistent base charge across rail and bus all week as well as maintain flat night and weekend fares
- Options affect customers differently depending on where and when they travel

Concept	Base Fare	Max Fare	Night/ Weekend Fare	Max / Base Fare Ratio	Mileage Charge	Mileage Charge as a Percent of Base Fare	Ridership Impact (Million)	Revenue Impact (Million)	Preliminary Equity Scan
Compressed Range: \$2 to 5	\$2.00	\$5.00	\$2.00	2.5	\$0.40	20%	2.3	-\$1.9	✓
Consistent Range: \$2 to 6	\$2.00	\$6.00	\$2.00	3	\$0.40	20%	2.0	\$5.1	✓
Increased Range: \$2 to 6.50	\$2.00	\$6.50	\$2.00	3.25	\$0.40	20%	1.9	\$7.1	✓
Increased Range: \$2 to 7	\$2.00	\$7.00	\$2.00	3.5	\$0.40	20%	1.8	\$8.6	✓
Increased Range: \$2 to 7.50	\$2.00	\$7.50	\$2.00	3.75	\$0.40	20%	1.8	\$9.6	✓

Fare Increase and Fare Simplification Comparison

- Restructuring fares offers advantages over a general fare increase
 - Similar net budget impacts but structural change expected to increase ridership versus ridership loss expected with an across-the-board fare increase
 - Simplifies and standardizes fares for customers
 - Enables offering reduced fares to low-income customers
 - Preserves \$2 bus and late night & weekend rail fares

Fare Concepts Structure with Low-Income Fare	Rail Base Fare	Rail Max Fare	Rail Night/Weekend Fare	Bus Fare	Bus Ridership Impact (Million)	Rail Ridership Impact (Million)	Total Ridership Impact (Million)	Budget Impact (Million)
6% Fare Increase (current structure)	\$2.10	\$6.35	\$2.10	\$2.10	-0.6	-2.0	-2.6	\$7.8
Fare Simplification: \$2 to 6.50	\$2.00	\$6.50	\$2.00	\$2.00	1.2	0.7	1.9	\$7.1

Note: Ridership and budget impacts include low-income fare discount program impact