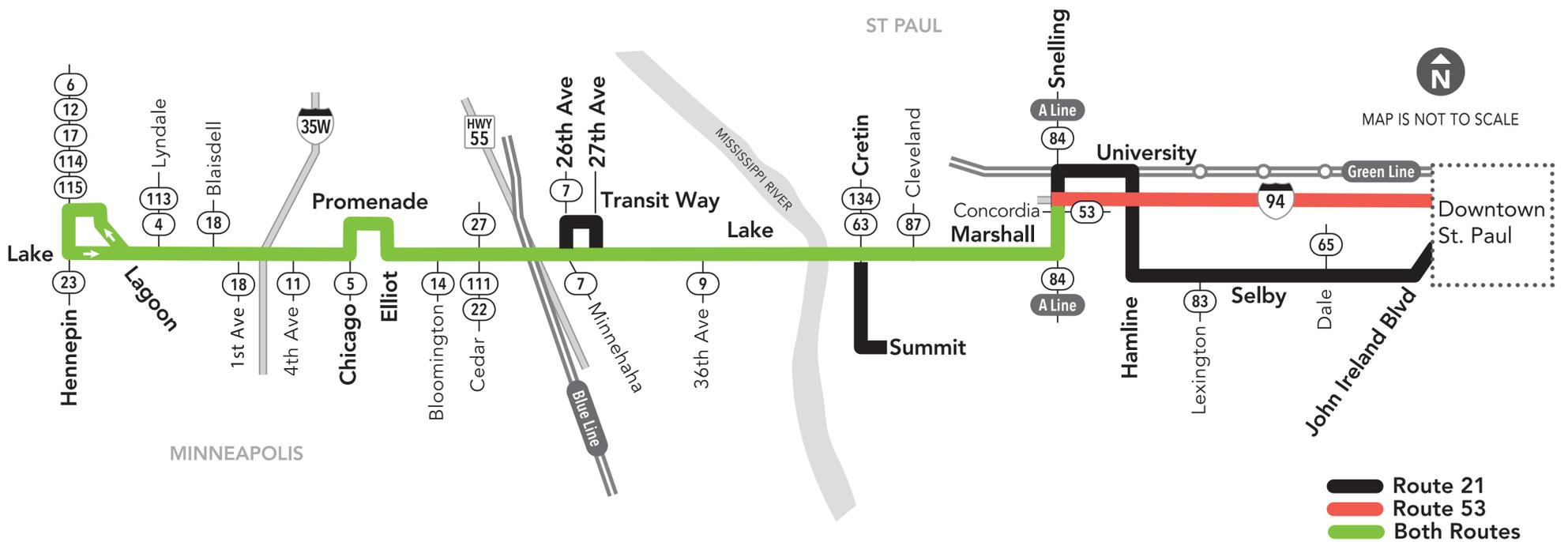


Route 21 corridor: What does it look like today?



10,000 weekday rides on Route 21, Metro Transit's second busiest route, with another 700 daily on Route 53

Carries 20% of people in vehicles in some places, while making up less than 2% of vehicles

Connects to important community destinations and other major transit routes



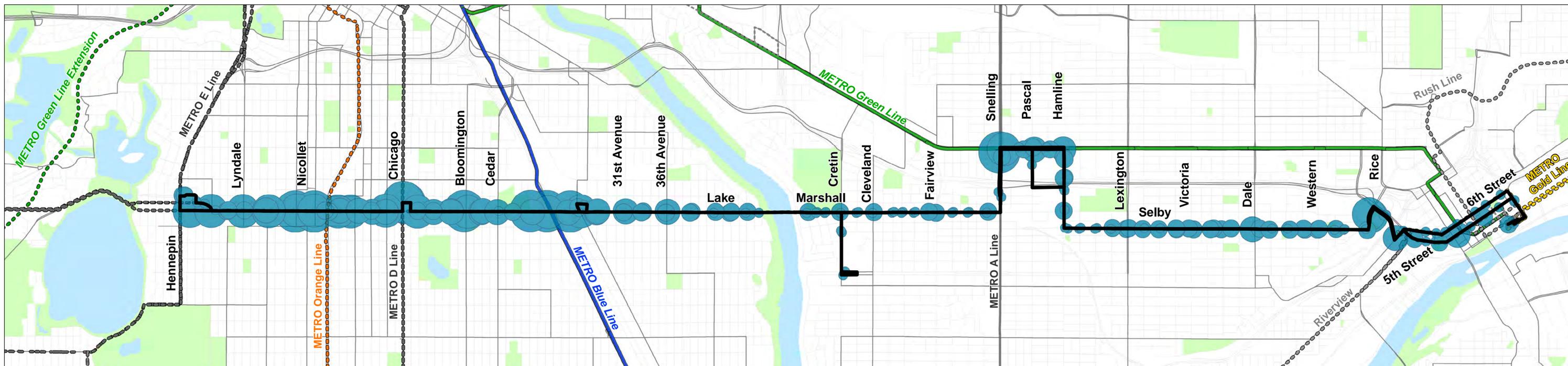
Average Route 21 trip spends 50% of its time stopped

Average Route 21 speeds can be as slow as 8 miles per hour

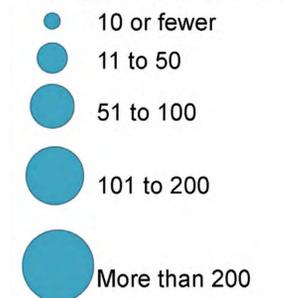
Ridership has been declining

Route 21 Ridership

Fall 2018



Average Weekday Boardings



— Route 21
— Other bus routes

Route 21 Ridership Highlights

- More than 10,000 average weekday rides, second-highest Metro Transit ridership route
- Third most productive local bus route (number of passengers per hour of service)
- One of the Metro Transit routes on which customers most frequently experience crowded buses
- Highest ridership between Hennepin Avenue and Hiawatha Avenue
- Weekend and midday ridership also make up important part of Route 21 ridership
- Highest transfer activity between Route 21 and: Route 5 (Chicago Ave.), Route 18 (Nicollet/Blaisdell/1st Ave.), METRO Blue Line (Hiawatha Ave.), and Route 14 (Bloomington Ave.)

How will METRO BRT provide a faster trip?

Limited stops, frequent service

Today, local bus service in the corridor provides frequent service, stopping about every other block for most of the route.

Local Bus



1/8 mile between stops

BRT would substantially replace local bus service to become the primary service in the corridor, with high frequency service all day, and on nights and weekends. Stations would be spaced every third to half mile on average.

BRT



1/3 to 1/2 mile between stations

Local bus may continue to run at a reduced frequency to serve existing bus stops. Concept service plans with specific details on spacing and service will be developed during the planning phase.

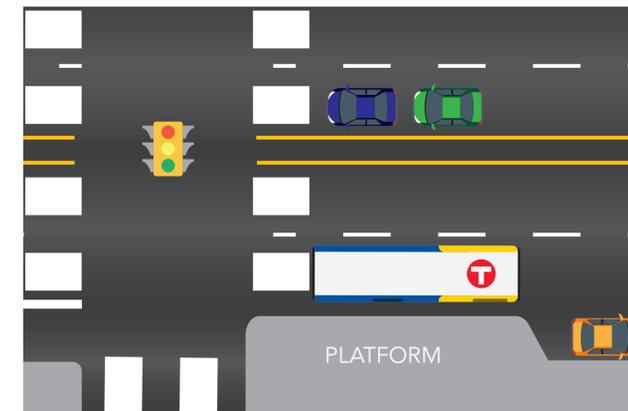
Pay before boarding for faster stops

For speedier boarding through all doors, BRT buses won't have fareboxes. Customers will purchase a ticket or tap a Go-To Card at the station, just like light rail. Metro Transit Police officers check fare payment.



Curb extensions for speed and space

Where BRT buses run in general traffic, stations will be built on curb bumpouts to avoid delay caused by merging back into general traffic.



Curb bumpouts provide space for station amenities and pedestrians

Transit advantages throughout the corridor

Transit advantages at key locations along BRT lines will help keep buses moving. Transit advantages could include:

Transit Signal Priority

To keep moving, BRT buses could "ask" traffic signals for early or extended green lights.

Queue Jump Lanes

BRT buses could use separate space at intersections to pull ahead of traffic stopped at a red light. Dedicated green lights could allow the bus to go first.

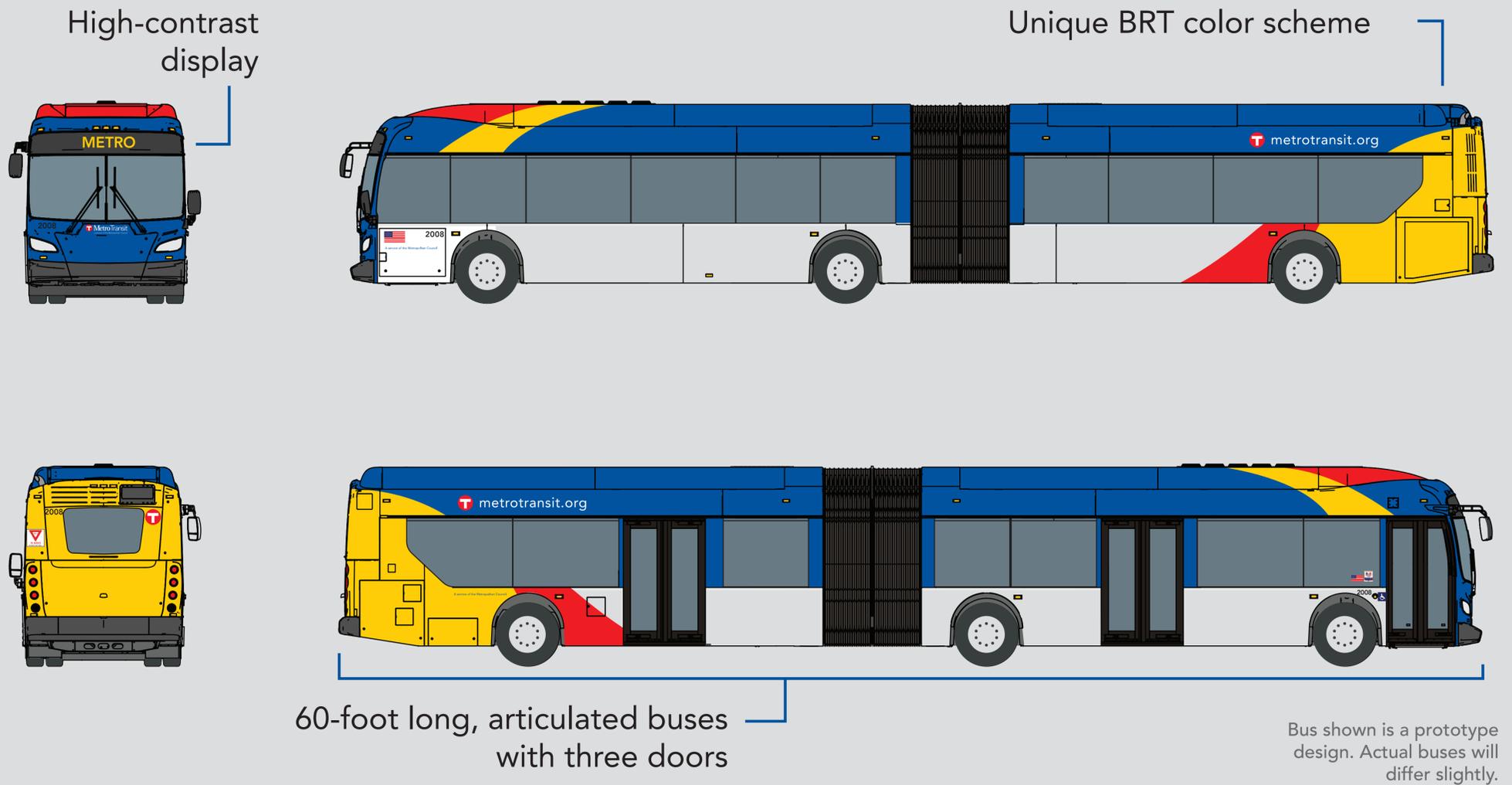
Bus Approach Lanes

BRT buses could also use a short dedicated lane as they approach busy intersections. As with queue jump lanes, dedicated green lights could allow the bus to go first.

Dedicated Bus-only Lanes

To avoid getting stuck behind traffic, BRT buses could travel in their own lane on the most congested portions of the route.

How will METRO BRT buses work?



BRT lines will use premium buses designed for bus rapid transit service. BRT buses will look different than other Metro Transit buses so they will be easy to spot.

More seats and more space:

The center aisle will be extra wide for easier movement through the bus. Three extra-wide doors will open sideways instead of out so customers can move on and off the bus at the same time.

Enhanced on-board experience:

Buses will feature fixed windows with uninterrupted views, on-board automated announcements and an on-board display screen showing the next station.

Low floors, high curbs:

BRT buses will have lower floors and stations will have higher curbs for a shorter step into the bus. Buses will have fold-out ramps common to most newer Metro Transit buses.

No more stop cord: Instead of a pull cord for signaling stops, a yellow stop strip will be placed throughout the bus—including in designated ADA seating areas—so that customers can more easily request stops no matter where they sit or stand.

New securing system for

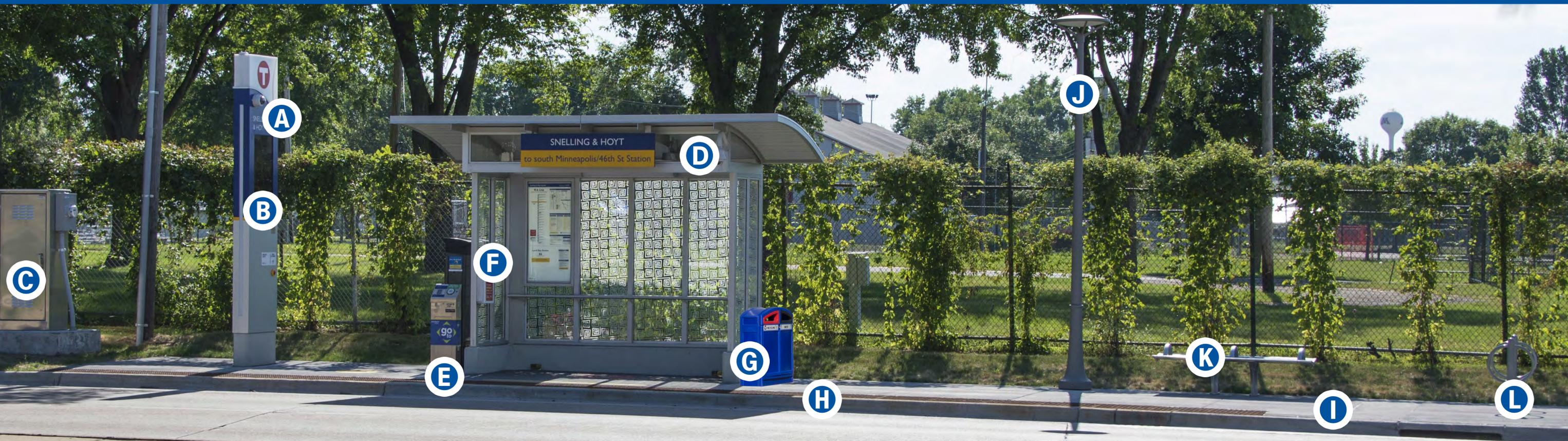
customers in wheelchairs: Each BRT bus will have two wheelchair spaces at the front with a new securing system for more efficient use by customers and bus drivers.

Take your bike along or park at the station: Every BRT bus will have a front bicycle rack and stations will have bike parking.

Planning for an electric future:

Metro Transit will pilot battery electric buses on the METRO C Line beginning in 2019. Pending successful demonstration, Metro Transit has plans to run at least 50% electric buses on future BRT lines.

What will METRO BRT stations look like?



A **Pylon markers** help riders identify stations from a distance.

B **Real-time NexTrip signs** provide bus information, and on-demand **annunciators** speak this information for people with low vision.

C **Utility boxes** near station areas house necessary communications and electrical equipment.

D **Shelters** provide weather protection and feature push-button, on-demand **heaters** and shelter **lighting**. Shelter sizes will vary based on customer demand (small shown here).

E **Ticket machines** and **fare card validators** collect all payment before customers board the bus.

F **Emergency telephones** provide a direct connection to Metro Transit police. Stations also feature **security cameras**.

G Stations feature **trash and recycling** containers.

H Platform edges are marked with a cast-iron **textured warning strip** to keep passengers safely away from the curb while the bus approaches. Many stations also feature **raised curbs** for easier boarding.

I **Platform areas** are distinguished by a dark gray concrete pattern.

J Some stations have pedestrian-scale **light fixtures** to provide a safe, well-lit environment. Fixtures will match existing lights in the surrounding area.

K **Benches** at stations provide a place to sit.

L Stations have **bike parking**.

What are the goals of the B Line Project?

Provide faster, more reliable transit trip times in the Route 21 corridor

Improve transit experience at stops and on vehicles

Expand equitable access to destinations

Provide efficient connections to the existing and planned transit network

B Line Corridor Planning Frequently Asked Questions

What is the METRO B Line?

The METRO B Line is a planned bus rapid transit line, like the A Line, that will provide faster and more reliable transit service in the Route 21 corridor along Lake Street and Marshall Avenue.

Why was the Route 21 corridor selected for bus rapid transit service?

Route 21 is the second busiest bus route in the Twin Cities. Today it carries approximately 10,000 passengers per weekday. The 2012 Arterial Transitway Corridors Study and 2014 Midtown Corridor Alternatives Analysis found that enhanced bus service in the Lake Street corridor would perform well in the corridor. In 2016, this corridor was identified as the B Line project and slated to become the region's fourth arterial bus rapid transit line.

How much faster will B Line service be compared to Route 21?

A scheduled trip on Route 21 sees significant delays, depending on the time of day. The goal of the B Line is to make service approximately 20 percent faster by stopping less often, allowing customers to board faster, and stopping at fewer red lights. Similar travel time improvements have been achieved on the A Line.

How will future bus service levels compare with today's Route 21?

Today, Route 21 runs every 10-15 minutes for much of the day through Lake Street and Marshall Avenue. The B Line is planned to become the main transit service along the western portion of the corridor (Uptown in Minneapolis to Snelling & University in St. Paul), with service about every 10 minutes throughout most of the day and evening and less frequent service early in the morning and late at night. To plan for a sustainable long-term operation, Metro Transit is considering fully replacing Route 21 with the B Line.

As planning progresses, Metro Transit staff will collect feedback from the community on the following questions:

- Should the B Line extend along the full Route 21 corridor from Snelling Avenue along Selby Avenue to downtown St. Paul? If so, what alignment should it use between Snelling Avenue and Lexington Avenue?
- At what intersection should each future station be located?
- If Route 21 is completely replaced by the B Line, where should stops be placed to best balance speed and access?

A Draft Corridor Plan in late 2019 will answer these questions, and determine the location of B Line stops and the future transit service mix within the corridor.

What will happen to Route 53 service?

Route 53 service provides weekday peak-only service between Lake Street/Marshall Avenue and downtown St. Paul via Interstate 94. Because Route 53 serves a different purpose than the Route 21, the B Line is not anticipated to result in any change in Route 53 service.

What will be the frequency and hours of service?

The B Line will provide frequent service all day on weekdays, Saturdays and Sundays. Exact schedules and service plans will be formed through project development.

When will construction begin?

Construction is currently set to begin as early as 2022. This schedule may shift based on funding opportunities and availability.

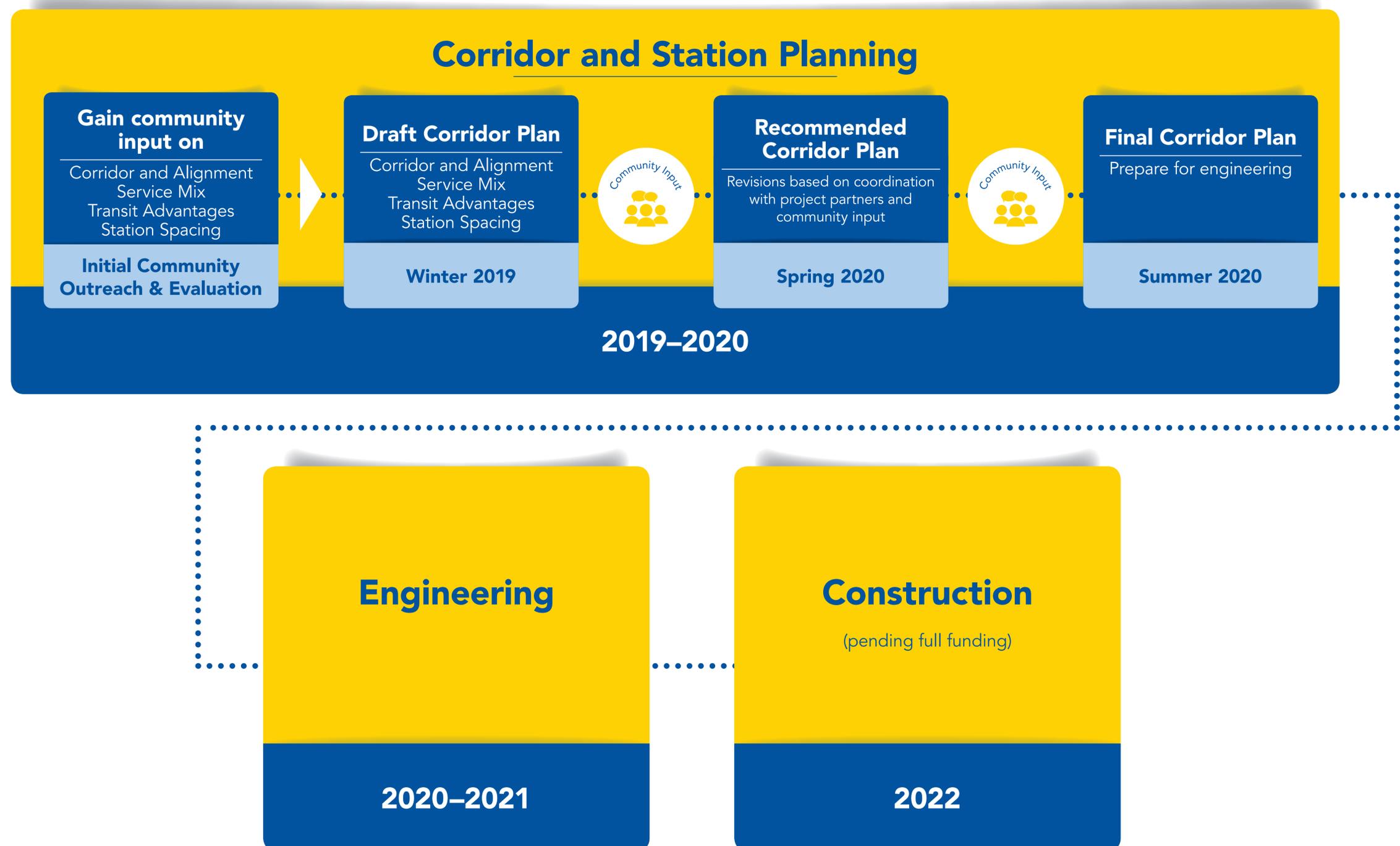
How much will the B Line cost?

The preliminary estimated cost of the B Line project is \$54 million. This includes the cost of stations and related technology/fare collection elements, new BRT vehicles, transit signal priority, and the cost of designing and delivering the line. Cost estimates will be refined as planning and engineering progress.

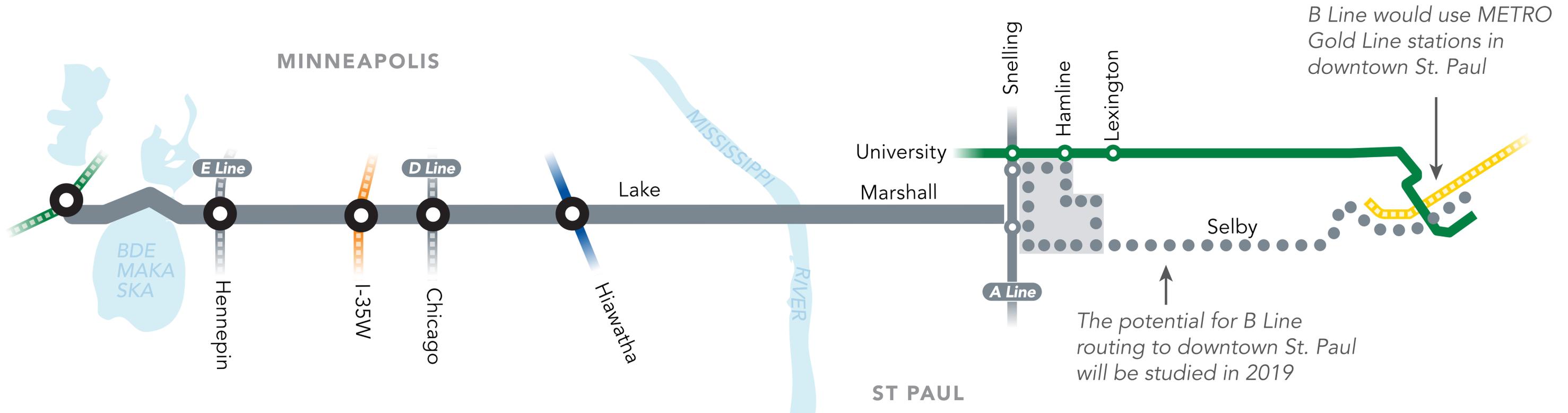
How is the project funded?

\$23 million of federal and Metropolitan Council funds have been identified for the B Line project to date.

What is the timeline for implementing the B Line?

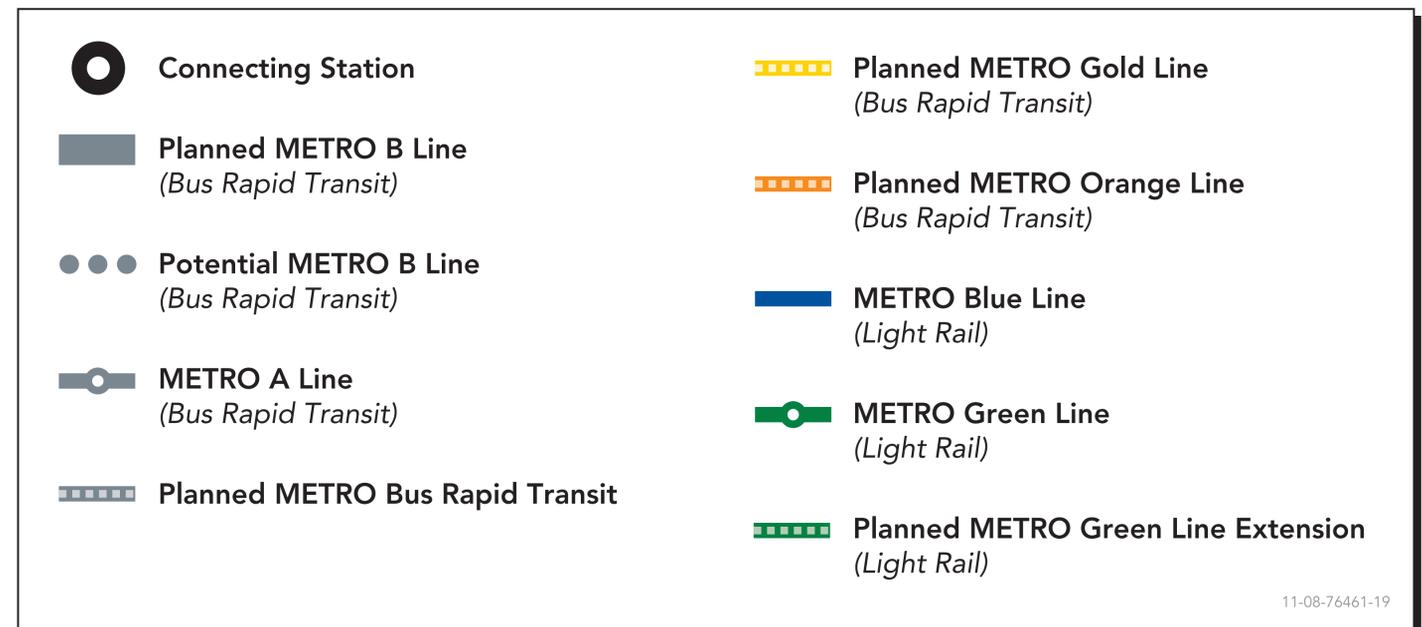


B Line Corridor Map



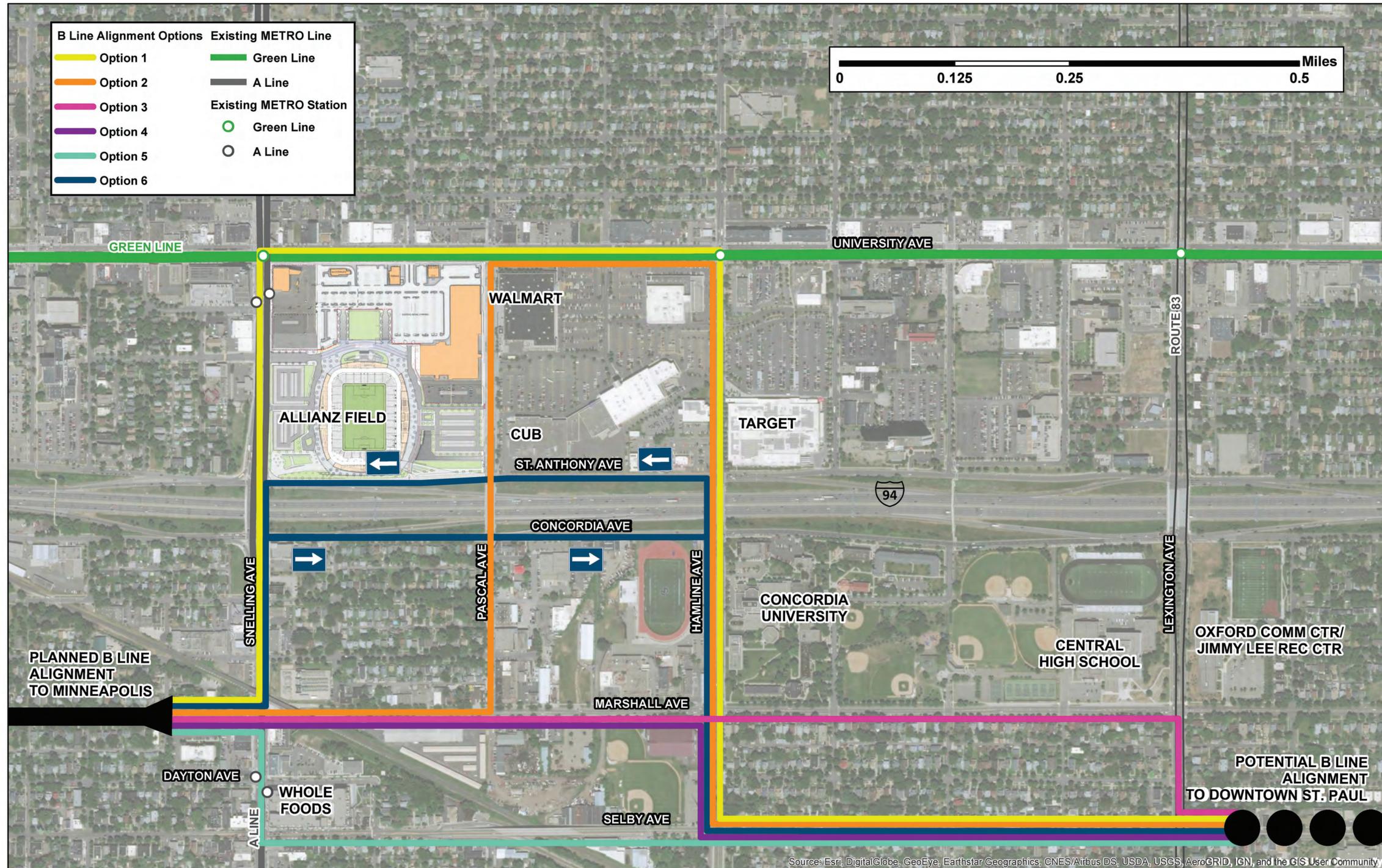
BRT service will be evaluated for implementation beyond Snelling Avenue extending to downtown St. Paul. As part of this decision, there are a number of facts to consider. Extending the B Line to downtown St. Paul would be expected to result in:

- Higher project construction costs and operating costs
- An additional east-west transitway connection to downtown St. Paul
- Improved travel times or more direct routing for more origins and destinations
- Greater challenges in providing reliable service due to longer alignment
- Expanded access to destinations for areas of concentrated poverty
- Relatively lower ridership than B Line segments west of Snelling Avenue
- Additional coordination with METRO Gold Line planning in downtown St. Paul



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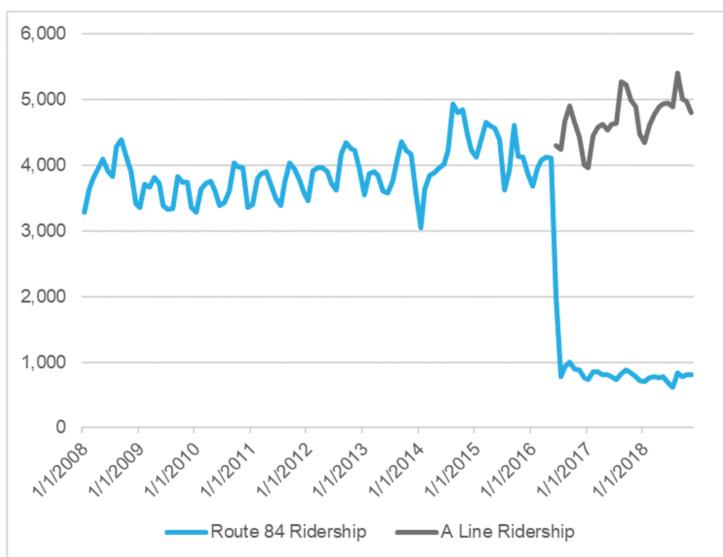
Potential Downtown St. Paul B Line Routing: Options Between Snelling Ave and Lexington Ave



Service Mix and Station Spacing Tradeoffs

Upon opening the METRO A Line in 2016, Metro Transit continued to operate Route 84 in the same corridor as a less frequent local travel option.

A similar approach was taken for the Route 16, which provides local service on University Avenue alongside the METRO Green Line.

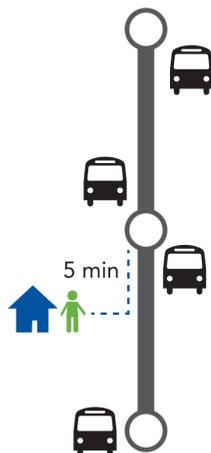
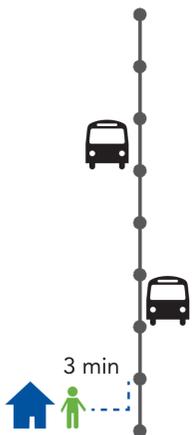


To plan for a sustainable long-term operation, for the B Line and the E Line, Metro Transit is considering fully replacing underlying local bus service. With that in mind, it will be important to strike a balance between faster and more reliable service with stop spacing and accessibility.

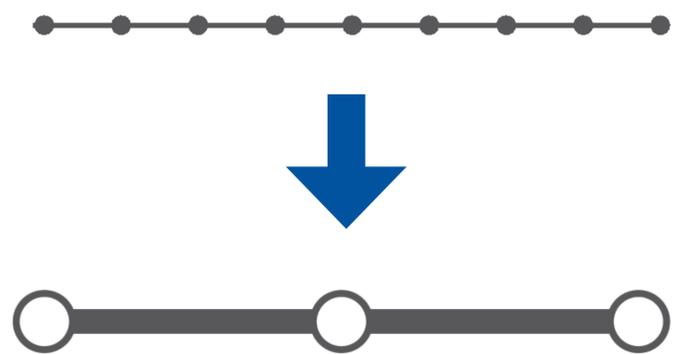
More Stops vs. Fewer Stops

More Stops
Shorter walk, but longer bus ride and less reliable service

Fewer Stops
Longer walk, but shorter bus ride and more reliable service



However, as the A Line and Green Line have been successful in attracting riders, the local underlying service on Route 84 and Route 16, respectively, has not kept pace with standards for ridership or productivity, leading to service reductions.



Wider stop placement

- Reduces overall travel times
- Helps make buses more reliable
- Provides a smoother ride with less starting, stopping, weaving
- Saves operating costs
- Allows Metro Transit to focus maintenance, snow removal resources on fewer station areas

Help us decide and prioritize

When we plan BRT lines we try to strike a balance between faster and more reliable service with stop spacing and accessibility. A key goal of BRT is to make transit service in the corridor approximately 20 percent faster than the existing local bus service.

Place a dot by the top three items that are most important for your experience using the bus:

Overall travel time	
Bus arriving at planned time	
Bus arrives at steady frequency	
Smooth ride – less starting and stopping	
Less delay in traffic or stop lights	
Walk distance to bus stop	
Amenities at stop	

What are Transit Advantages?

Transit advantages are treatments that improve transit speed and reliability between stops by changing the designation of street space or the operation of traffic signals.

	Description	Benefit to Transit Users	Considerations
Transit Signal Priority	A traffic signal turns green earlier or stays green longer when a bus approaches	Increases speed and reliability by reducing delay at traffic signals	<ul style="list-style-type: none"> - Works well with in-lane stops - Best used in corridors with long distances between signals and at signals with long cycles - May change signal phasing of cross-street, increasing wait times
Queue Jump Lane	A shared bus/turn-lane allows the bus to avoid backed-up traffic and cross the intersection before other vehicles	Increases speed and reliability by allowing buses to move around backed-up traffic at intersections	<ul style="list-style-type: none"> - Enforcement necessary to avoid use by unauthorized vehicles - Atypical signal configuration and phasing - Best at intersections with low right-turn volumes - Can be paired with transit signal priority - May increase wait times for other vehicles
Bus Approach Lane	Exclusive street space for buses as they approach an intersection	Increases speed and reliability by allowing buses to stay in lane and avoid backed-up traffic at intersections	<ul style="list-style-type: none"> - Enforcement necessary to avoid use by unauthorized vehicles - Best at intersections with high right-turn volumes - Can be paired with transit signal priority - May increase queue lengths in adjacent lane - Can be used all day or peak-only
Bus-only Lane	Exclusive street space for buses	Increases speed and reliability along frequently-congested street segments	<ul style="list-style-type: none"> - Enforcement necessary to avoid use by unauthorized vehicles - Can be paired with transit signal priority - May increase traffic volume in adjacent lane - Can be used all day or peak-only, can share or prohibit turns, can share with bicycles

