

Identifying the Next Arterial Bus Rapid Transit Lines

Network**NEXT**

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Table of Contents

Introduction.....	3
What is Network Next?	3
The Arterial BRT Network.....	3
Network Next Principles and Arterial BRT	3
Planning Process.....	5
Step 1: Identify.....	5
Step 2: Screen	7
Step 3: Evaluate	15
Step 4: Prioritize	29
Arterial BRT Corridor Concept Profiles.....	39
63rd Avenue/ Zane.....	40
Central	42
Como/ Maryland.....	44
Grand	46
Johnson/ Lyndale.....	48
Lowry.....	50
Nicollet	52
Randolph/ East 7th.....	54
Rice/ Robert.....	56
West Broadway/ Cedar	58

Introduction

Arterial bus rapid transit (BRT) provides an improved customer experience with frequent service and faster trips in the region's busiest bus corridors. Metro Transit first studied a dozen potential arterial BRT lines in 2011-2012. This study led to the implementation of the METRO A Line in 2016 and the METRO C Line in 2019. Both have been highly successful, posting significant ridership increases and earning customers' satisfaction.

With the METRO A and C lines serving customers, and the METRO D, B, and E lines in development, Metro Transit is working to identify the next arterial BRT corridors. This work is being done as part of the broader Network Next planning effort.

What is Network Next?

Network Next establishes Metro Transit's vision for the bus network of 2040. It identifies opportunities to bring better transit to more people over the next 20 years in the Twin Cities. Focused on improvements beyond the existing resources available, it charts the course for new arterial BRT lines as well as more frequent service, longer hours, and better weekend service on existing local and express routes and new bus routes in areas without fixed-route service today.

More information about Network Next can be found at metrotransit.org/network-next.

The Arterial BRT Network

The arterial BRT network provides faster, frequent, and more reliable service with limited stops at enhanced stations on the highest ridership corridors in Metro Transit's bus network. Along with the other BRT and rail services within the METRO network, these corridors form the growing backbone of the regional transit network. When fully built out, the arterial BRT network will result in a more equitable, more useful transit network that is used by more people.

More information about Metro Transit arterial BRT can be found at metrotransit.org/brt.

Network Next Principles and Arterial BRT

There are four Network Next Principles guiding the development of the arterial BRT network. Arterial BRT is one of several types of transit improvements, including increased service on existing local and express bus routes, new routes, and speed and reliability improvements that Metro Transit will use to advance the Network Next Principles by 2040. A short discussion of the role arterial BRT plays in advancing these Principles is below.

Advance equity and reduce regional racial disparities

Metro Transit provides standard local bus service through many areas and serves populations that have been historically subject to underinvestment or disinvestment in transportation and other public resources. Arterial BRT corridors provide faster, more reliable service with enhanced stations beyond what is currently available in these areas. This results in a more useful service overall that is better able to meet the needs of riders. The degree to which proposed arterial BRT corridors would serve these areas and populations was a primary evaluation factor.

Build on success to grow ridership

Arterial BRT corridors are designed to improve existing local bus routes in corridors with demonstrated ridership success. The number of trips taken on transit and the number of people using transit are good measures of how useful the transit network is to people. Arterial BRT improvements build on successful local service to benefit as many existing riders as possible with transitway investment and attract new riders to the system.

Design a network that supports a transit-oriented lifestyle

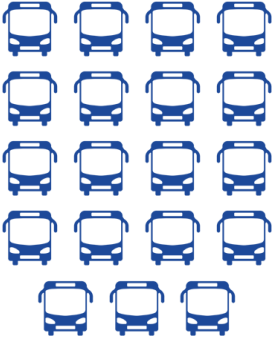
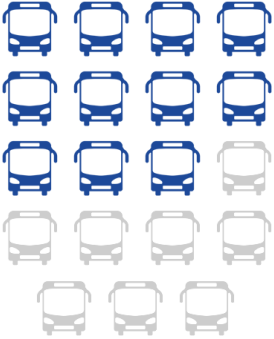




Potential arterial BRT corridors were identified based on their location in the transit network and the character of the populations and areas they serve. The arterial BRT network will expand access to transit service, facilitating flexibility and conveniently changing plans, getting to appointments and errands, or visiting friends and family. Corridors were screened and evaluated based on the potential to support the success and growth of arterial BRT service using land use and demographic indicators, and partner communities' policies and plans.

Ensure the long-term sustainable growth of the bus network

To ensure that the investments Metro Transit is making now will continue to operate for the long term, arterial BRT corridors were identified in part based on demonstrated ridership success and past sustainability of high-frequency service on local routes.

Planning Process

Metro Transit completed four steps to select the corridors that will become the METRO F, G, and H lines, with opportunities for public input along the way. These steps and subsequent results are summarized in this section.

1. Identify Spring 2020	2. Screen Summer 2020	3. Evaluate Fall 2020	4. Prioritize Winter 2020/2021
<p>Based on the Network Next principles, identify about 20 potential corridors for arterial BRT implementation.</p>	<p>Conduct screening to identify about 10 most promising arterial BRT candidate corridors to advance.</p>	<p>Develop detailed arterial BRT concepts and apply robust evaluation criteria including cost, ridership & other benefits to sort lines into three tiers.</p>	<p>Review top performers based on readiness criteria to further prioritize the next three lines for implementation.</p>
			 METRO F Line  METRO G Line  METRO H Line

Step 1: Identify

Table 1 lists the 19 arterial BRT candidate corridors identified for screening; these corridors are mapped in Figure 1. Candidate corridors were selected using the following considerations, based on the Network Next principles:

- High Frequency network:** The Metro Transit High Frequency network, consisting of routes operating every 15 minutes or better on weekdays and Saturday, was the starting point for the identification of candidate corridors. These routes have demonstrated both ridership success and long-term sustainability, in addition to forming the core structure of the existing local bus network.

- **Highest ridership corridors:** Several existing local routes have relatively high ridership but are not yet part of the High Frequency network. These routes were also considered in the identification of candidate corridors based on demonstrated ridership success and importance to the overall network.
- **Corridors previously studied for arterial BRT:** Several corridors previously studied for arterial BRT were included in this screening process.
- **Network balance:** Candidate corridors were also identified based on the need to ensure a balanced and useful overall network, rather than a collection of individual corridors. Specific consideration was given to the geographic distribution and overall role in the network of candidate corridors, with special attention to ensuring good cross-town connections to other routes and destinations. Local priorities for arterial BRT study were also considered.

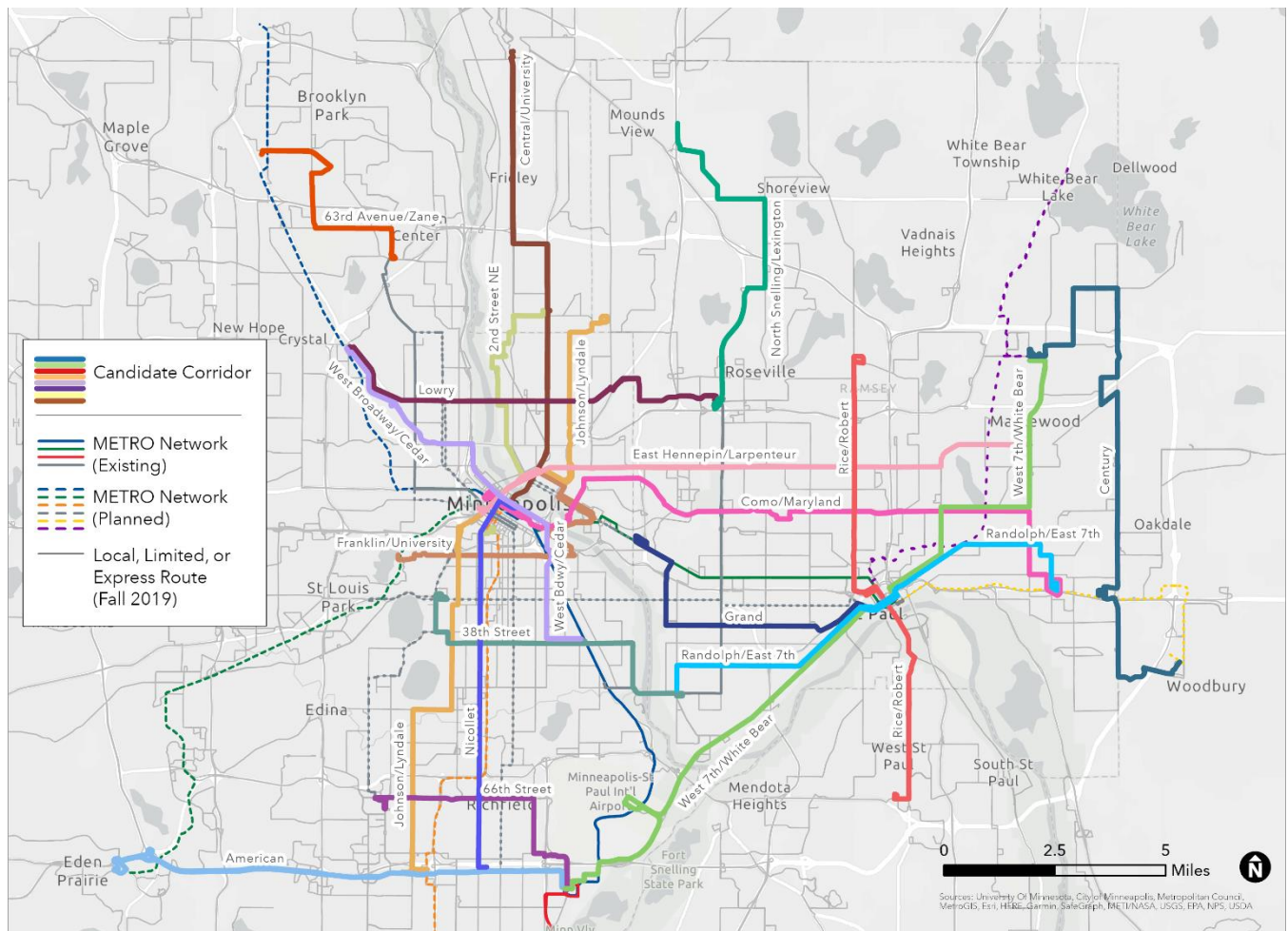
Table 1. Arterial BRT Candidate Corridors

Candidate Corridor (Listed Alphabetically)	Approximate Terminals	Primary Existing Underlying Route(s)
2nd Street NE	Downtown Minneapolis to Columbia Heights Transit Center	11
38th Street	Uptown Transit Station to Cleveland Avenue S and Ford Parkway	23
63rd Avenue/ Zane	Starlite Transit Center to Brooklyn Center Transit Center	724
66th Street	Southdale Transit Center to Mall of America Transit Station	515
American	Mall of America Transit Station to SouthWest Station	542
Central	Downtown Minneapolis to Northtown Transit Center	10
Century	Woodbury Theatre to Maplewood Mall Transit Center	219
Como/ Maryland	Downtown Minneapolis to Sun Ray Transit Center	3
East Hennepin/ Larpenteur	Downtown Minneapolis to White Bear Ave.	61
Franklin/ University	21st Street Station to SE 8th Street and Central Avenue NE	2
Grand	Westgate Station to downtown Saint Paul	63
Johnson/ Lyndale	Silver Lake Village to W 82nd Street and Knox Avenue S	4
Lowry	Robbinsdale Transit Center to Rosedale Transit Center	32
Nicollet	Downtown Minneapolis to American Boulevard	18
North Snelling/ Lexington	Rosedale Transit Center to TCAAP Redevelopment	225
Randolph/ East 7th	Cleveland Avenue S and Ford Parkway to Sun Ray Transit Center	74
Rice/ Robert	Dakota Co. Northern Service Center to Little Canada Transit Center	62, 68*
West 7th/ White Bear	Maplewood Mall Transit Center to Mall of America Transit Station	54
West Broadway/ Cedar	Robbinsdale Transit Center to 38th Street Station	14, 22^

*Routes 62 and 68 are the primary routes on the northern and southern half of the candidate corridor, respectively.

^Routes 14 and 22 are the primary routes on the northern and southern half of the candidate corridor, respectively.

Figure 1. Arterial BRT Candidate Corridors



Step 2: Screen

Screening criteria were developed to identify the most promising of the 19 arterial BRT candidate corridors to advance and further evaluate. Below is a summary of how Metro Transit screened arterial BRT candidate corridors. For more information, see the *Arterial BRT Candidate Corridor Screening* memorandum available at metrotransit.org/network-next.

Criteria

The screening criteria measured the potential success and suitability of arterial BRT candidate corridors (Table 2). Each criterion corresponds to one of the Network Next Principles. Weights were applied to each of the criterion, based on their relative importance to the success of an arterial BRT corridor. For example, an individual candidate corridor’s total score – the sum of scores from all five criteria – was 30 percent based on existing ridership (Table 2).

Table 2. Arterial BRT Candidate Corridor Screening Criteria

Criterion	Weight	Related Network Next Principle	Measure Description	Source
Equity	30%	Advance Equity and Reduce Regional Racial Disparities	Percent riders on the existing primary corridor route who are Black, Indigenous, and people of color or people experiencing poverty, based on information collected during on board passenger surveys	Metropolitan Council Travel Behavior Inventory (TBI) 2016 Transit On Board Survey
Existing Ridership	30%	Build on Success to Grow Ridership	Sum of average weekly boardings within the corridor from the corridor's primary route(s)	Metro Transit fall 2019 automatic passenger counter (APC) data
Market Potential	20%	Design a Network that Supports a Transit-Oriented Lifestyle	Weighted average Transit Market Index Range, calculated based on factors known to predict transit ridership: population density, employment density, automobile availability, and intersection density	Metropolitan Council 2040 Transportation Policy Plan; Transit Market Index formula and Transit Market Areas
Community Plans and Priorities	10%	Design a Network that Supports a Transit-Oriented Lifestyle	Scored based on three sub-measures: 1. Does the plan acknowledge and describe the nexus between land use and transit? 2. Is planned land use in the corridor supportive of arterial BRT investment? 3. Does the plan specifically state a need or desire for, or expectation of, increased transit investment in the arterial BRT candidate corridor?	Municipalities' 2040 comprehensive plans and/or other relevant transportation policy documents.
Midday Service Level	10%	Ensure the Long-term Sustainable Growth of the Bus Network	Daily average number of scheduled trips during the midday (11:00 AM to 1:00 PM) associated with the corridor's primary route	Metro Transit fall 2019 schedules

Results

Table 3 lists the raw results of the five screening criteria applied to all 19 candidate corridors. Table 4 summarizes the subsequent scores for all five screening criteria applied to the corridors, subject to the weights in Table 2.

Table 3. Preliminary Screening Result Values by Criterion

Candidate Corridor	Primary Underlying Route(s)	Screening Criterion				
		Equity: Percent Riders of Color or Experiencing Poverty	Existing Ridership: Average Weekly Boardings in Corridor	Market Potential: Weighted Average Transit Market Index Range*	Community Plans and Priorities: Max Score 3.00 [^]	Midday Service Level: Daily Average Scheduled Trips 11a-1p
2nd Street NE	11	43.8%	18,379	1.79	2.80	7.4
38th Street	23	30.7%	9,416	1.65	3.00	4.1
63rd Avenue/ Zane	724	65.4%	11,165	2.08	2.00	4.0
66th Street	515	43.6%	9,416	2.15	1.95	7.7
American	542	37.8%	928	2.47	2.85	0
Central	10	46.1%	44,373	1.96	2.79	11.1
Century	219	42.9%	2,233	2.79	2.21	3.1
Como/ Maryland	3	44.5%	31,768	1.63	2.97	7.6
East Hennepin/ Larpenteur	61	40.7%	7,002	2.37	2.28	3.1
Franklin/ University	2	51.2%	38,909	1.41	3.00	12.0
Grand	63	35.3%	16,893	1.47	3.00	6.0
Johnson/ Lyndale	4	33.1%	30,688	1.72	2.81	7.4
Lowry	32	53.0%	10,314	2.23	2.65	4.0
Nicollet	18	49.6%	62,615	1.47	2.93	15.2
North Snelling/ Lexington	225	40.1%	743	3.31	2.12	1.7
Randolph/ East 7th	74	45.7%	23,014	1.64	3.00	5.7
Rice/ Robert	62, 68	42.7%	23,621	2.09	2.72	5.6
West 7th/ White Bear	54	45.0%	34,425	2.53	3.00	7.7
West Broadway/ Cedar	14, 22	54.2%	24,450	1.33	3.00	5.8

* The best possible result is 1.0 and the worst is 5.0.

[^] The best possible result is 3.00 and the worst is 0.00.

Table 4. Preliminary Screening Result Scores by Criterion

For each criterion score, the values shown in **blue** and **orange** are the highest and lowest scores, respectively.

Candidate Corridor	Scores by Criterion					Total Score (Max. 100)	Rank
	Equity (Max. 30)	Existing Ridership (Max. 30)	Market Potential (Max. 20)	Midday Service Level (Max. 10)	Community Plans and Priorities (Max. 10)		
Nicollet	22.7	30.0	18.1	10.0	9.8	90.6	1
Franklin/ University	23.5	18.6	18.9	7.9	10.0	78.8	2
Central	21.2	21.3	13.6	7.3	9.3	72.5	3
West Broadway/ Cedar	24.9	11.7	20.0	3.8	10.0	70.4	4
Como/ Maryland	20.4	15.2	16.3	5.0	9.9	66.8	5
West 7th/ White Bear	20.6	16.5	10.5	5.1	10.0	62.7	6
Randolph/ East 7th	21.0	11.0	16.2	3.8	10.0	62.1	7
Johnson/ Lyndale	15.2	14.7	15.4	4.9	9.4	59.5	8
2nd Street NE	20.1	8.8	14.8	4.9	9.3	57.9	9
63rd Avenue/ Zane	30.0	5.4	12.8	2.6	6.7	57.4	10
Rice/ Robert	19.6	11.3	12.7	3.7	9.1	56.5	11
Grand	16.2	8.1	18.1	3.9	10.0	56.3	12
Lowry	24.3	4.9	11.9	2.6	8.8	52.6	13
66th Street	20.0	4.5	12.4	5.1	6.5	48.5	14
38th Street	14.1	4.5	16.2	2.7	10.0	47.5	15
East Hennepin/ Larpenteur	18.7	3.4	11.2	2.1	7.6	43.1	16
Century	19.7	1.1	9.5	2.1	7.4	39.7	17
American	17.3	0.4	10.8	0.0	9.5	38.1	18
North Snelling/ Lexington	18.4	0.4	8.0	1.1	7.1	35.0	19

Additional Qualitative Review

Table 4 presents the results of the quantitative screening evaluation process, based on the five screening criteria. While these results are critical in narrowing down the list of candidate corridors, they focus mainly on the magnitude of existing and potential transit use within a corridor, regardless of broader context. The five screening criteria do not effectively account for other critical considerations, including:

- The role that the existing underlying route plays in the broader bus network
- How people use transit in the corridor, including where they get on and off the bus, and how long they ride
- Design of the existing underlying route, and limitations of applying BRT route design principles to that route based on the street network, land use, and activity generators

Given the limitations of the five selected screening criteria, Metro Transit conducted an additional review based on the factors listed above. Despite quantitatively performing better than many other candidate corridors, the Franklin/ University and 2nd Street NE candidate corridors were removed from further consideration.

Franklin/ University (Route 2)

The Franklin/ University candidate corridor was not carried forward for further evaluation for the reasons listed below.

- **Circuitous route design:** The indirect, W-shaped route structure of Route 2 is not aligned with the goals of faster, more direct arterial BRT service.
 - While the design of Route 2 is neither simple nor direct, it continues to be among the highest ridership and most productive routes within the Metro Transit bus network. The route is designed to link together segments that serve multiple major trip generators, often with short passenger trips, while providing numerous connections to the broader transit network. Route 2 is productive because of its design and role in the network, not despite it.
 - A straightened route continuing east on Franklin Avenue past 26th Avenue, while simpler and more direct, would not serve the major destinations and connections along the Route 2. Straightening the route to make it a better fit for arterial BRT would result in a corridor with fast service potential but serving few of the destinations that makes Route 2 successful.
- **Limited potential to speed service:** Through Metro Transit's Better Bus Routes program, the agency has already implemented speed and reliability improvements within its control in the Franklin/ University candidate corridor. Capital investments in the corridor as part of the arterial BRT program are not likely to achieve additional significant speed and reliability improvements.
- **Future street changes:** Franklin Avenue is currently being studied by Hennepin County. With limited right-of-way and a goal to increase pedestrian/ bicyclist safety and calm traffic in this corridor, leading redesign concepts would slow overall traffic without providing dedicated space for bus priority. Given this, a future street configuration within the Franklin Avenue corridor may reduce bus speed and reliability compared to today.

While carrying the candidate corridor through evaluation may have shown the mismatch between speed improvements and capital investment, there were many other criteria that could obscure this result. The route is not a good fit for arterial BRT investment and was therefore not carried forward.

2nd Street NE (Route 11 North)

The 2nd Street NE candidate corridor was not be carried forward for further evaluation for the reasons listed below.

- **Indirect route design:** The indirect route structure of Route 11 north of Lowry Avenue NE is not aligned with the goals of arterial BRT.

- Given the street network north of Lowry Avenue NE, there is no viable option for straightening the route to achieve speed and reliability benefits while still maintaining transit access in the Marshall Terrace neighborhood. With limited fixed-route service options in this portion of northeast Minneapolis, existing Route 11 passengers benefit from the more coverage-oriented existing routing north of Lowry Avenue.
- A simplified BRT corridor along University Avenue NE along all or part of the existing Route 11 corridor would not adequately serve the neighborhoods in the area and would involve operating on significant portions of two-lane divided highway without pedestrian access.
- **Network impacts:** The 2nd Street NE candidate corridor does not fit well into the overall existing and planned transit network.
 - The portion of the Route 11 south of downtown was not identified as a candidate corridor because of its proximity to the planned METRO D Line, METRO Orange Line, and identified Nicollet Avenue (Route 18) candidate BRT corridor. This presents limited options for maintaining the existing level of local service on the Route 11 south of downtown while also incorporating the 2nd Street NE candidate corridor into the existing and planned transit network.

Advancing Corridors

The targeted outcome of screening was to identify approximately 10 arterial BRT candidate corridors to be considered for additional refinement, evaluation, and consideration. Additional refinements included the development of finer-grained arterial BRT routing, approximate station siting, and potential service plans for arterial BRT and any underlying/ connecting local service. These concept details are needed to develop operating and capital cost estimates, ridership forecasts, and additional evaluation of impacts and suitability.

Based on the screening outcomes, Metro Transit advanced 11 corridors to the next phase, Step 3, for concept development and evaluation. Figure 2 displays candidate corridor screening total scores by criterion, illuminating the impact of each criterion on total scores for each candidate corridor. Figure 3 presents the 11 candidate corridors that were advanced and those eliminated from consideration following screening.

Metro Transit staff reviewed whether to include the 11th-ranked candidate corridor, Lowry, whose total score of 52.6 points is a break point between the 10th- and 12th-ranked corridors (Table 4, Figure 2). The Lowry candidate corridor scored 4.2 points higher than the 66th Street corridor, and 3.7 points lower than the Grand corridor. The corridor was advanced for further development based on two key factors:

Equity: As shown in Figure 2, the Lowry corridor’s total score is bolstered by its equity score; Lowry has the third highest score in this criterion (Table 4).

Crosstown network: The Lowry candidate corridor presents an opportunity to develop arterial BRT on a crosstown, east-west service in north Minneapolis, responding to a consistent request from community.

Figure 2. Arterial BRT Candidate Corridor Screening Total Scores by Criterion

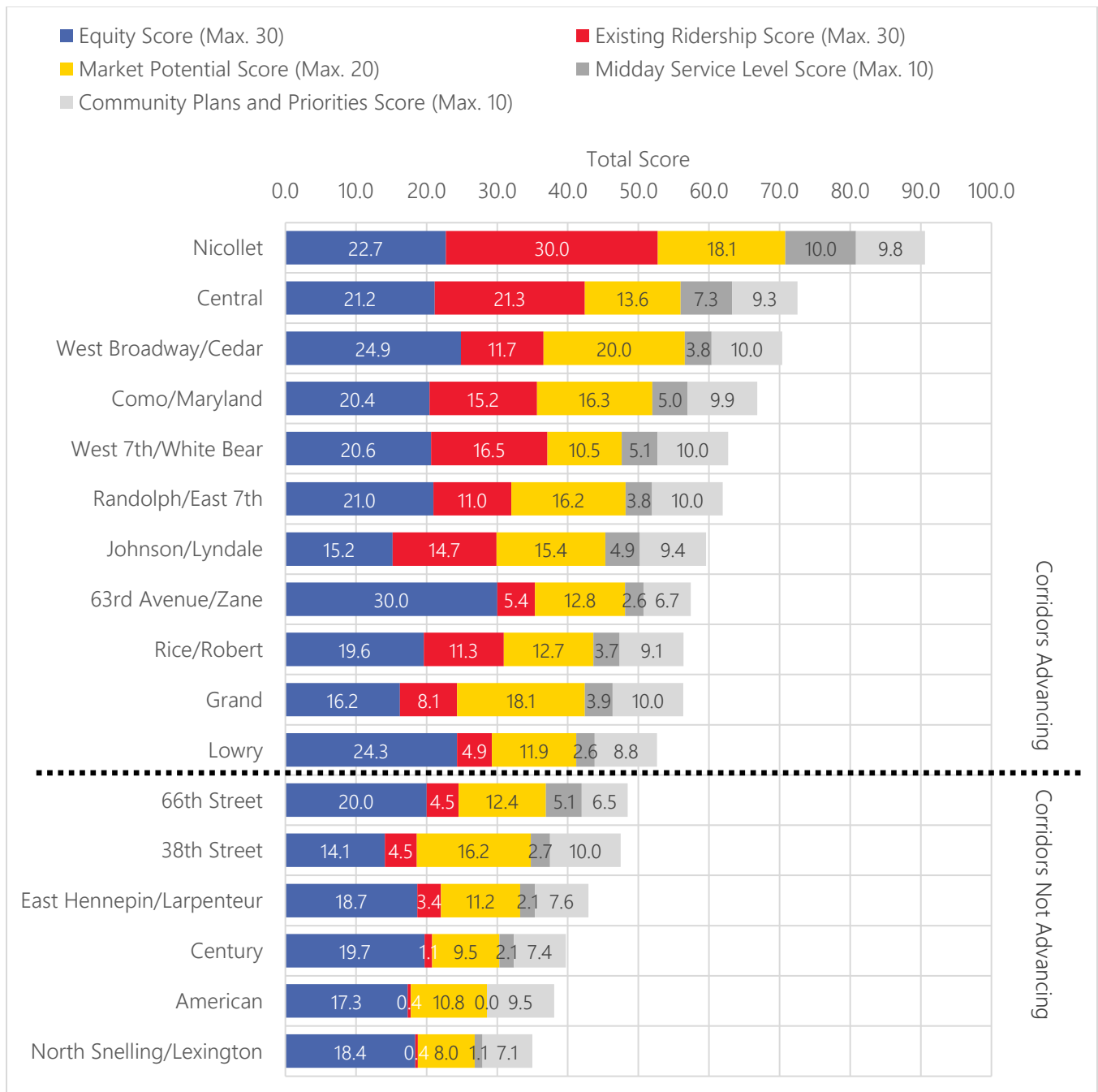
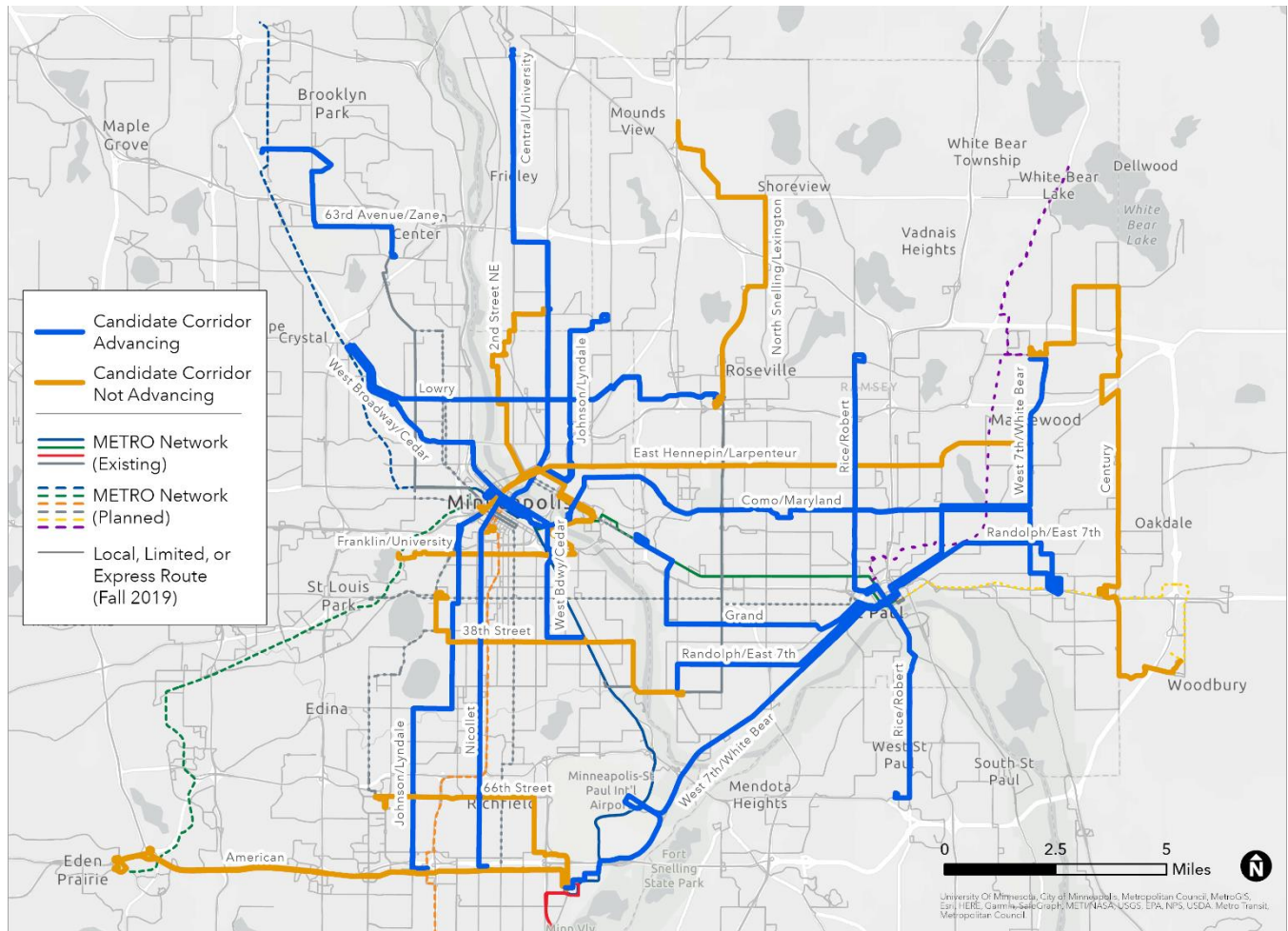


Figure 3. Advancing Arterial BRT Candidate Corridors



Subsequent West 7th/ White Bear Corridor Screening

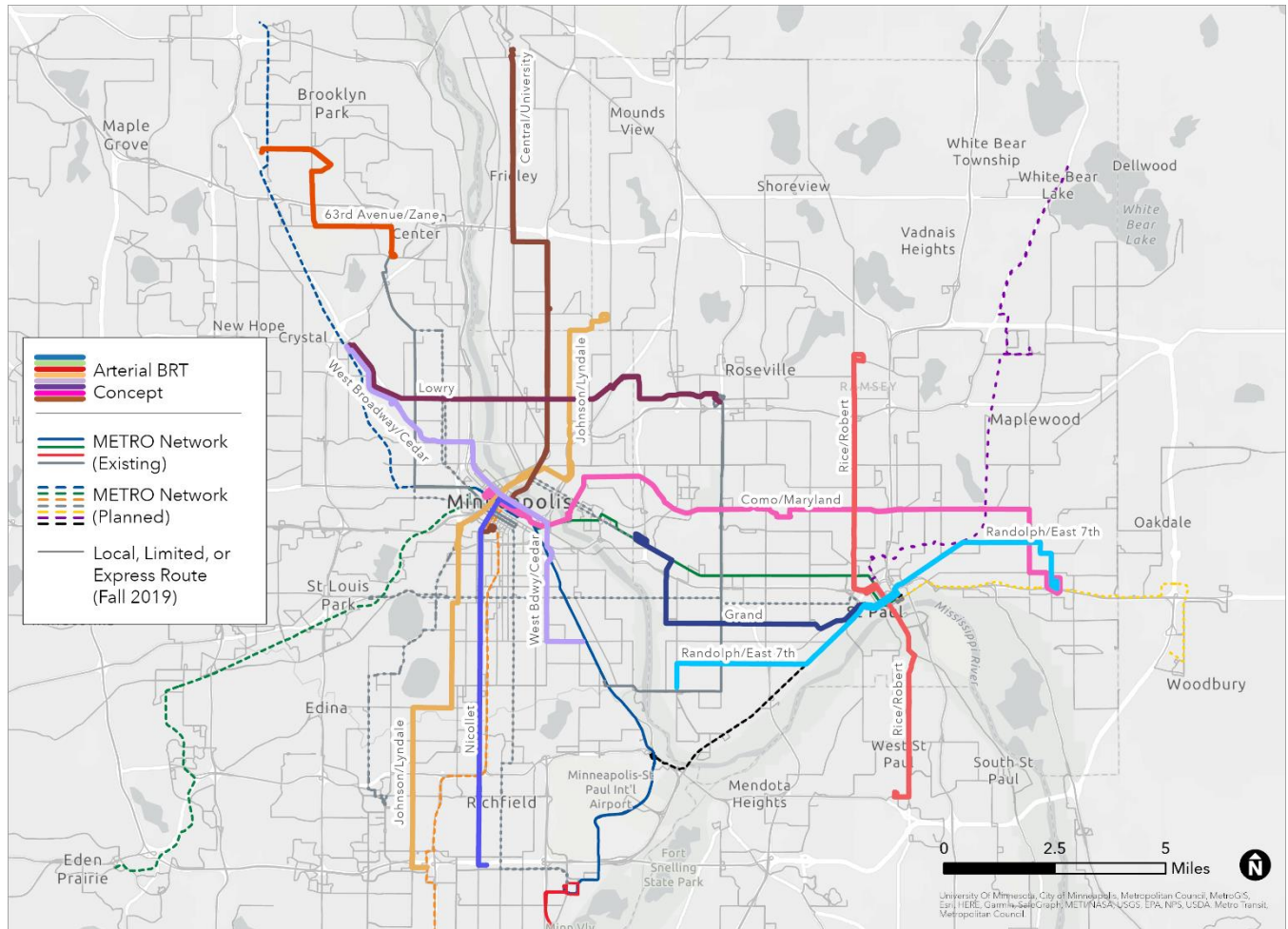
In fall 2020, Metro Transit engaged stakeholders around the 11 advanced corridors that emerged from the screening step. During this period, Ramsey County requested that Metro Transit remove the West 7th/ White Bear corridor from continued consideration in the Network Next process as the County advances efforts on the Riverview Corridor Modern Streetcar. The locally preferred alternative for the Riverview Corridor, a Modern Streetcar from downtown Saint Paul to the airport and Mall of America along West 7th Street, was adopted into the regional Transportation Policy Plan (TPP) in 2019. The Engineering and Pre-Environmental study phase of the Riverview project began in October 2020 and is planned to continue through 2023. This process will examine impacts and gather detailed information to inform the project’s preliminary design. These efforts will include detailed, corridor-specific analysis of both the Modern Streetcar locally preferred alternative and a BRT alternative.

The West 7th/ White Bear corridor was not advanced in Network Next, leaving 10 corridors for technical evaluation and prioritization.

Step 3: Evaluate

Metro Transit developed corridor concepts for each of the 10 corridors that advanced through the screening phase. Corridor concepts include alignments, termini, concept station locations, and concept service plans; these elements formed the basis of the corridor evaluation.

Figure 4. Advancing Corridors



Arterial BRT Concept Development

Corridor concepts represent the application of arterial BRT in each corridor and provide adequate definition to facilitate corridor evaluation. Concept station locations are shown at the intersection level. Generally, a station intersection is representative of two station platforms, one in each direction; an intersection located on a one-way street represents one station platform. Corridor service plans were developed to represent approximate level of arterial BRT and connecting/ supporting service within the corridors. Further planning and stakeholder engagement will refine station locations and service plans in future phases of corridor development.

The following is a summary of how Metro Transit developed the arterial BRT concepts used for evaluation. For more information, see the *Arterial BRT Corridor Concepts* memorandum available at metrotransit.org/network-next.

Stations

The project team identified concept station locations by creating a base map that incorporated trip generators and future land use, stop-level boarding and alighting counts and scheduled transit trips, as well as transit connections. Key stations were assigned near major land use trip generators, stops with high existing ridership, and major transfer points to local and METRO routes. Intermediate stations were assigned between the key stations with qualitative consideration for access and spacing, potential design fatal flaws, and pedestrian/ bike access. Stations were generally sited approximately 0.25 to 0.5 miles apart. Parallel corridors were compared for consistency in station spacing and locations.

The *Arterial BRT Corridor Concepts* memorandum includes for each corridor concept additional details on the concept station locations and rationale. Where proposed station locations differ from those identified in precedent studies (e.g., Arterial Transitway Corridors Study), an explanation for the change is provided. Overview maps show the station locations and current ridership activity in the corridors.

Table 5 lists the number of station intersections and average station spacing for each corridor concept.

Table 5. Corridor Concept Station Spacing

Corridor Concept	Approximate Length	Number of Station Intersections	Average Station Intersections per Mile	Average Spacing Between Station Intersections (Miles)
63rd Avenue/ Zane	6.0	15	2.5	0.40
Central	13.0	30	2.3	0.43
Como/ Maryland	16.6	40	2.4	0.42
Grand ¹	8.5	24	2.8	0.35
Johnson/ Lyndale ²	17.1	42	2.5	0.41
Lowry	10.5	24	2.3	0.44
Nicollet	9.2	24	2.6	0.38
Randolph/ East 7th ³	11.5	36	3.1	0.32
Rice/ Robert	11.5	30	2.6	0.38
West Broadway/ Cedar	10.5	27	2.6	0.39

¹ Includes four additional intersections for one-way pairs in downtown Saint Paul, calculation based on 20 station intersections.

² Includes two additional intersections for one-way pairs in northeast Minneapolis, calculation based on 40 station intersections.

³ Includes four additional intersections for one-way pairs in downtown Saint Paul, calculation based on 32 station intersections.

Downtown Alignments and Stations

Downtown station locations were generally excluded from the above alignment and station siting process. Instead, downtown corridor segments were assigned to an existing or potential transit spine. In downtown Minneapolis this included Hennepin Avenue, Nicollet Mall, 7th/ 8th Street, and Washington Avenue; in downtown Saint Paul this included Robert Street and 5th/ 6th Street. Figure 5 and Figure 6 show the downtown alignments included in each of the corridor concepts.

Figure 5. Corridor Concepts in Downtown Minneapolis

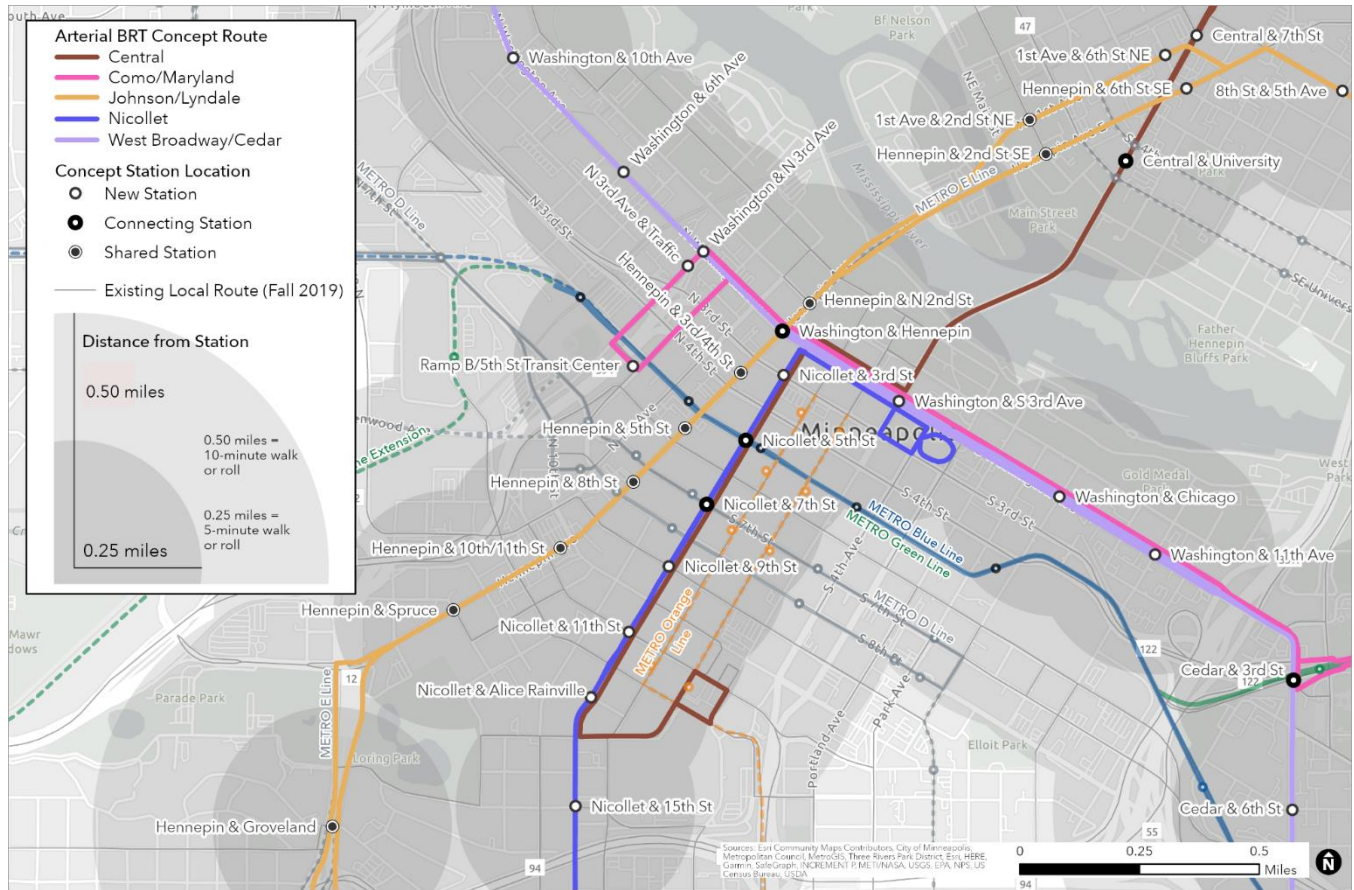
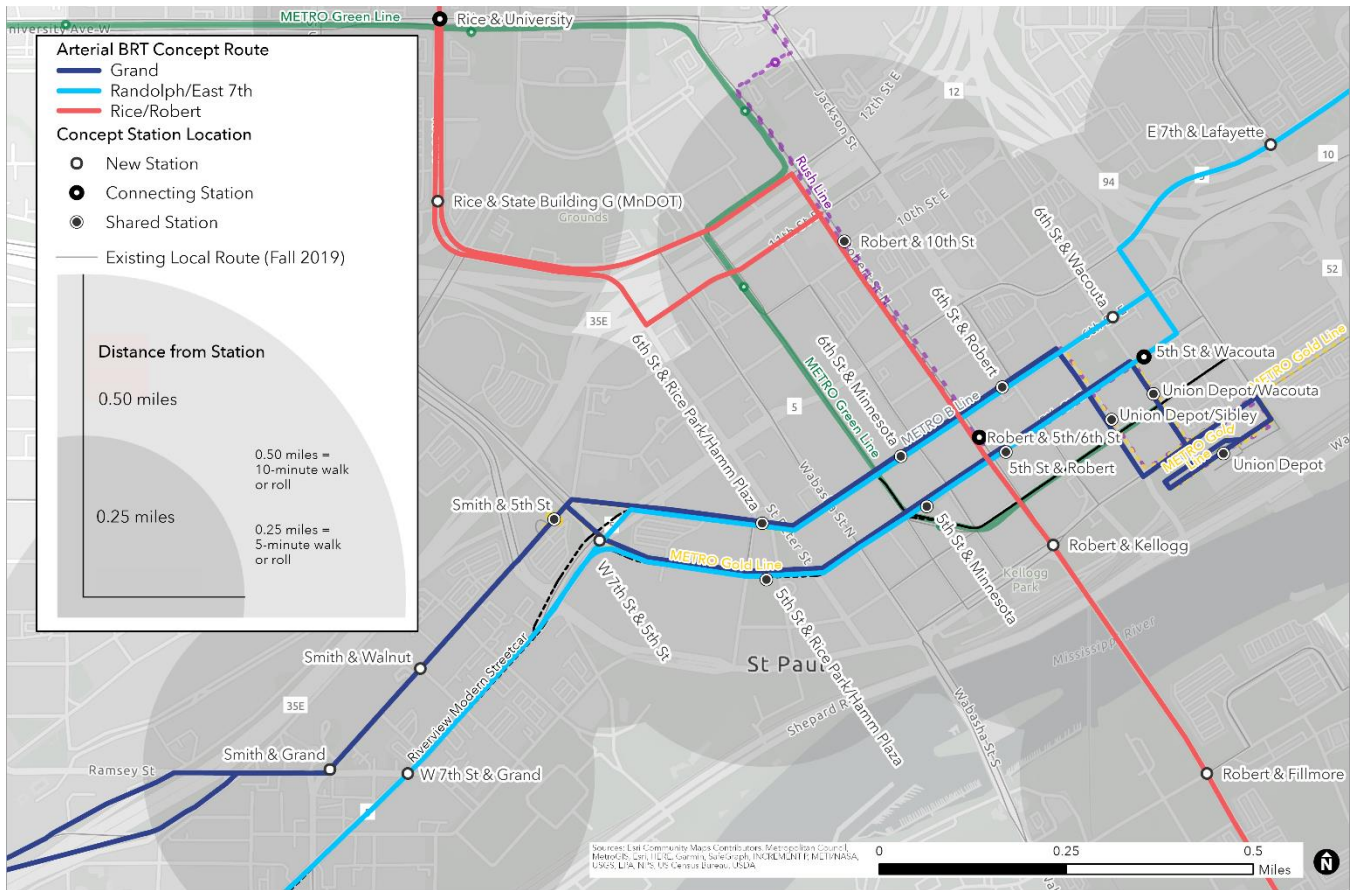


Figure 6. Corridor Concepts in Downtown Saint Paul



Concept Service Plans

A preliminary service plan was developed for each arterial BRT corridor concept for planning and evaluation purposes. These service plans represent approximate level of service within the corridors, including service from the arterial BRT line and connecting/ supporting local routes. The amount of connecting/ supporting local service in each corridor was developed with the goal of maintaining existing connections and preserving service on segments not identified for arterial BRT service. Additional planning and engagement will be done to determine final service plans prior to the implementation of the BRT corridor.

Technical Evaluation

Technical evaluation criteria were applied to each of the 10 arterial BRT corridor concepts to provide more granular indicators of potential success. These evaluation criteria assess the arterial BRT corridor concepts themselves as well as the physical, social, and economic contexts in which they would operate.

The following is a summary of how Metro Transit evaluated the arterial BRT concepts. For additional details regarding methodology and results, see the *Arterial BRT Corridor Evaluation and Prioritization* memorandum available at metrotransit.org/network-next.

Criteria

Fifteen evaluation criteria were selected to quantitatively compare the 10 corridors with one another. Each of the evaluation criteria correspond with one of the four Network Next Principles that apply to arterial BRT network development. Each of the Principles was assigned a weight, or extent to which it impacts the total evaluation score relative to other Principles. The weights assigned to each of these four Network Next Principles are shown in Table 6.

Table 6. Corridor Evaluation Weighting by Principle

Principle	Total Score Weight (Points)
Advance equity and reduce regional racial disparities	50%
Build on success to grow ridership	20%
Design a network that supports a transit-oriented lifestyle	20%
Ensure the long-term sustainable growth of the bus network	10%
<i>Total</i>	<i>100%</i>

Each corridor was evaluated on a scale of 0 to 100 points. For example, under the weighting shown in Table 6, the *Advance equity and reduce regional racial disparities* Principle accounts for 50 out of 100 points.

The weighting of the Principles toward a total evaluation score was selected based in part on public engagement efforts conducted in fall 2020. Through this effort, advancing equity was identified as a top priority among Metro Transit riders and community. Nearly half of survey respondents indicated this principle as their most important consideration for evaluating potential BRT corridors. Support for a transit-oriented lifestyle was identified as the second most important priority. Additionally, regional policy and priorities, stakeholder engagement, and lessons learned from implementation of the existing METRO A and C lines informed the final evaluation weights. Additional details on the engagement process and results can be found in the *Proposed BRT Corridors Community Engagement Summary* available at metrotransit.org/network-next.

Shown in Table 7 are the 15 evaluation criteria used to compare and rank the 10 corridors, organized by Network Next Principle. Each Principle's overall weight is distributed equally among all criteria within it. For example, there are four evaluation criteria within the *Build on success to grow ridership* Principle, which is assigned 20 percent of the total evaluation score (Table 6). Thus, each of the four evaluation criteria are worth 5 percent of the total evaluation score (or a maximum of 5 points out of 100).

Table 7. Corridor Evaluation Criteria

Network Next Principle	Criterion	Maximum Points per Criteria
Advance equity and reduce regional racial disparities	Population of Black, Indigenous, and People of Color	12.50
	Population Living in Poverty	12.50
	Low-Wage Jobs	12.50
	Renter Population	12.50
Build on success to grow ridership	Corridor Ridership Propensity	5.00
	Percent Reduction in End-to-End Running Time	5.00
	Trip Diversity on Corridor	5.00
	Percent of Existing Ridership Served by BRT Stations	5.00
Design a network that supports a transit-oriented lifestyle	Total Population (Existing and 2040)	5.00
	Total Jobs (Existing and 2040)	5.00
	Pedestrian Access	5.00
	Transit-Supportive Land Use (Existing and Planned)	5.00
Ensure the long-term sustainable growth of the bus network	Capital Costs	3.33
	Net Operations and Maintenance Costs	3.33
	Percent of Service Hours "Paid for" by Existing Service	3.33
<i>Total Technical Evaluation Score</i>		<i>100.00</i>

Results

Table 8 lists the raw results of the evaluation criteria applied to all 10 corridors. Table 9 summarizes the subsequent scores for all evaluation criteria applied to the corridors, subject to the weights in Table 7.

Table 8. Evaluation Result Values by Criterion by Corridor

Network Next Principle	Evaluation Criterion (Max. Points)	Corridor									
		63rd Avenue/ Zane	Central	Como/ Maryland	Grand	Johnson/ Lyndale	Lowry	Nicollet	Randolph/ East 7th	Rice/ Robert	West Broadway/ Cedar
Advance equity and reduce regional racial disparities	People of Color	16,295	21,086	51,341	8,494	28,813	19,359	27,936	27,223	26,081	43,697
	Population Living in Poverty	8,131	18,943	42,722	9,424	28,806	14,413	23,184	20,911	21,068	32,221
	Low-Wage Jobs	5,645	50,180	60,578	30,015	56,079	13,321	47,423	26,289	25,828	46,599
	Renter Population	10,162	30,963	50,116	19,306	58,300	17,871	39,303	27,709	26,931	40,325
Build on success to grow ridership	Corridor Ridership Propensity	1,735	4,876	5,109	1,737	4,881	2,723	4,170	3,197	2,023	4,343
	Running Time Reduction	-12.0%	-10.9%	-10.9%	-12.6%	-11.2%	-13.6%	-13.8%	-11.5%	-14.1%	-12.2%
	Trip Diversity	0.583	0.444	0.548	0.530	0.447	0.486	0.383	0.341	0.460	0.525
	Existing Ridership Served by BRT Stations	90.0%	84.6%	64.7%	84.5%	78.9%	82.6%	77.6%	74.6%	80.5%	77.4%
Design a network that supports a transit-oriented lifestyle	Total Population – 2019	24,024	64,895	99,817	48,151	120,958	40,694	77,300	67,812	50,123	80,760
	Total Population – 2040	27,352	75,571	105,220	54,174	134,497	41,822	84,463	74,578	56,798	90,775
	Total Jobs – 2017	7,818	157,452	170,367	73,061	170,580	24,291	148,289	82,524	74,272	141,401
	Total Jobs – 2040	7,679	166,672	153,763	86,586	175,135	23,221	161,929	79,703	84,761	144,303
	Pedestrian Access	72.3%	77.3%	75.5%	75.4%	82.1%	72.9%	81.6%	77.3%	78.0%	77.6%
	Transit-Supportive Land Use – Existing	39.7%	41.3%	37.0%	40.1%	38.8%	30.4%	43.1%	31.9%	42.8%	40.1%
	Transit-Supportive Land Use – Planned	42.8%	60.1%	77.2%	79.8%	71.8%	65.1%	67.5%	81.1%	59.7%	71.8%
Ensure the long-term sustainable growth of the bus network	Capital Cost	\$35.3	\$81.3	\$104.5	\$39.5	\$93.4	\$59.4	\$66.8	\$69.7	\$77.9	\$73.8
	Net Operations and Maintenance Cost	\$7.8	\$15.5	\$21.1	\$8.9	\$25.8	\$13.5	\$5.2	\$14.8	\$26.5	\$17.7
	Existing Service Levels	45.3%	59.9%	50.7%	68.9%	45.1%	31.2%	99.1%	54.7%	41.8%	66.7%

Table 9. Evaluation Result Scores by Criterion by Corridor

For each criterion score, the values shown in darkest blue and darkest orange are the highest and lowest scores, respectively

Network Next Principle (Percent of Total Points)	Evaluation Criterion (Max. Points)	Corridor									
		Como/ Maryland	Johnson/ Lyndale	West Broadway/ Cedar	Nicollet	Central	Randolph/ East 7th	Rice/ Robert	Grand	Lowry	63rd/ Zane
Advance equity and reduce regional racial disparities (50% of total points)	People of Color (12.50 points)	12.50	7.02	10.64	6.80	5.13	6.63	6.35	2.07	4.71	3.97
	Population Living in Poverty (12.50)	12.50	8.43	9.43	6.78	5.54	6.12	6.16	2.76	4.22	2.38
	Low-Wage Jobs (12.50)	12.50	11.57	9.62	9.79	10.35	5.42	5.33	6.19	2.75	1.16
	Renter Population (12.50)	10.75	12.50	8.65	8.43	6.64	5.94	5.77	4.14	3.83	2.18
Build on success to grow ridership (20%)	Corridor Ridership Propensity (5.00)	5.00	4.78	4.25	4.08	4.77	3.13	1.98	1.70	2.67	1.70
	Running Time Reduction (5.00)	3.88	3.97	4.34	4.89	3.87	4.09	5.00	4.46	4.83	4.25
	Trip Diversity (5.00)	4.70	3.83	4.50	3.28	3.81	2.92	3.94	4.54	4.17	5.00
	Existing Ridership Served by BRT Stations (5.00)	3.59	4.38	4.30	4.31	4.70	4.14	4.47	4.70	4.59	5.00
Design a network that supports a transit-oriented lifestyle (20%)	Total Population - 2019 (2.50)	2.06	2.50	1.67	1.60	1.34	1.40	1.04	1.00	0.84	0.50
	Total Population - 2040 (2.50)	1.96	2.50	1.69	1.57	1.40	1.39	1.06	1.01	0.78	0.51
	Total Jobs - 2017 (2.50)	2.50	2.50	2.07	2.17	2.31	1.21	1.09	1.07	0.36	0.11
	Total Jobs - 2040 (2.50)	2.19	2.50	2.06	2.31	2.38	1.14	1.21	1.24	0.33	0.11
	Pedestrian Access (5.00)	4.59	5.00	4.73	4.96	4.70	4.70	4.75	4.59	4.44	4.40
	Transit-Supportive Land Use – Existing (2.50)	2.14	2.25	2.32	2.50	2.40	1.85	2.48	2.33	1.76	2.30
	Transit-Supportive Land Use – Planned (2.50)	2.38	2.21	2.22	2.08	1.85	2.50	1.84	2.46	2.01	1.32
Ensure the long-term sustainable growth of the bus network (10%)	Capital Cost (3.33)	1.13	1.26	1.59	1.76	1.45	1.69	1.51	2.98	1.98	3.33
	Net Operations and Maintenance Cost (3.33)	0.82	0.66	0.97	3.33	1.11	1.16	0.65	1.93	1.27	2.21
	Existing Service Levels (3.33)	1.71	1.52	2.24	3.33	2.01	1.84	1.41	2.32	1.05	1.52
TOTAL (Max. 100 points)		86.90	79.38	77.29	73.97	65.76	57.27	56.04	51.49	46.59	41.95
Rank		1	2	3	4	5	6	7	8	9	10

Corridor Ridership Forecasts

A corridor ridership forecast was developed for each of the 10 BRT corridors evaluated (Table 10). Forecasts represent ridership on an average weekday in 2040 from corridor routes, that is, the arterial BRT line and the planned connecting/ supporting service within the corridor. In Table 10, the 2040 forecast ridership values are shown relative to those in the “no build” scenario, that is, the scenario without the BRT service. The “no build” scenario is representative of 2040 socioeconomic forecasts (demand) and current service levels (without the additional connecting/ supporting service).

These ridership values were not incorporated into the technical evaluation summarized above and in Table 8 and Table 9. Rather, the ridership forecasts are provided for additional context only.

Corridor ridership forecasts were developed using the Federal Transit Administration’s (FTA’s) Simplified Trips On Projects Software (STOPS). STOPS incorporates local and national data sources including socioeconomic forecasts from the Metropolitan Council, transit schedule data, and Census Transportation Planning Package data. While STOPS has a background national calibration, certain model parameters are adjustable by the model user to better fit the specific project and regional context. One parameter is a visibility factor meant to represent unquantifiable benefits associated with fixed-guideway transit. For the purposes of Network Next, the visibility factor was not applied to arterial BRT routes. This means that arterial BRT was not differentiated from local bus service in any way outside of the service plan. The decision to not apply the visibility factor and give arterial BRT service any implicit benefit in STOPS was made following a thorough investigation by the Metropolitan Council’s Regional STOPS Model Project Team. A full discussion of this choice along with more detailed information about the ridership forecasts can be found in the *Arterial BRT Corridor Evaluation and Prioritization: Ridership Forecasts* memorandum available at metrotransit.org/network-next.

Table 10. Forecast Average Weekday Ridership (Year 2040) by Corridor

Corridor	Corridor Ridership without BRT (“No Build”)	Corridor Ridership with BRT
63rd Avenue/ Zane	2,000	2,000
Central	9,400	12,100
Como/ Maryland	10,900	11,600
Grand	4,300	5,400
Johnson/ Lyndale	7,100	13,200
Lowry	1,700	2,300
Nicollet	9,100	9,100
Randolph/ East 7th	5,500	5,900
Rice/ Robert	7,100	9,100
West Broadway/ Cedar	3,900	8,800

Readiness Evaluation

In addition to the technical evaluation criteria used to identify the corridors that best align with the Network Next Principles on a quantitative basis, the corridors were also evaluated based on overall readiness for implementation. The purpose of the readiness evaluation is to identify those corridors where other transit improvement plans may complicate near-term BRT implementation, making longer-term BRT consideration more appropriate.

The following is a summary of how Metro Transit prioritized the arterial BRT concepts. For additional details, see the *Arterial BRT Corridor Evaluation and Prioritization* memorandum available at metrotransit.org/network-next.

Criteria

The key criterion determining implementation readiness was whether the proposed corridor is affected by other major transit improvement plans or studies led by the Metropolitan Council or other local partner agencies. Corridors currently affected by other transit studies or plans are not recommended for near-term implementation, but remain good candidates for future arterial BRT investment consideration pending the resolution of other planning efforts.

The corridors analyzed for BRT in Network Next are among the highest profile transit corridors in the region. Many of them are either currently or soon to be under study for increased transit investments by the Metropolitan Council or other partner agencies. This could include all or a significant segment of the identified corridor.

Plans for several major transit investments were reviewed for their effects on corridors' readiness for near-term BRT investment:

- METRO Blue Line Extension Light Rail Transit
- Nicollet-Central Modern Streetcar
- Riverview Corridor Modern Streetcar
- Robert Street Transitway Alternatives Study (2015)

Results

METRO Blue Line Extension Light Rail Transit

Hold on Lowry and West Broadway/ Cedar corridors

The METRO Blue Line Extension would extend light rail to the northwest suburbs of Minneapolis. The previous alignment would have followed Olson Memorial Highway and the BNSF freight railroad corridor to West Broadway Avenue in Brooklyn Park. In August of 2020, after years of unsuccessful discussions regarding co-location of light rail transit and freight rail, the Metropolitan Council and Hennepin County determined

that the project would need to advance without using freight railway right of way. Project partners are exploring opportunities to advance the light rail project using alternative routes. The next step in the project is to identify a community supported alternative route for the Blue Line Extension for environmental review and approval.

The exploration for alternative routes may include the areas served by portions of the Lowry and West Broadway/ Cedar corridors. A revised Blue Line Extension light rail alignment may further result in changes to the broader bus network in North Minneapolis, which could further reshape priorities for investment in BRT.

In addition to upcoming rail alternatives planning through the Blue Line Extension project, the West Broadway corridor was previously evaluated in a study completed by Metro Transit in 2017. The West Broadway Transit Study evaluated arterial BRT and streetcar improvements on West Broadway from downtown Minneapolis to Robbinsdale. The study project's Policy Advisory Committee recommended modern streetcar from downtown to North Memorial Medical Center as the project's locally preferred alternative, as well as robust, undefined corridor bus improvements. Further development of modern streetcar has not occurred since 2017. These study outcomes are not a key readiness factor for BRT implementation in the corridor, as upcoming Blue Line Extension rail planning introduces a more significant hold to BRT development in the near term.

To avoid duplicative or conflicting transit investments and allow for the planning questions in this corridor to be answered within the Blue Line Extension planning process, neither the Lowry nor West Broadway/ Cedar corridors is recommended for near-term implementation at this time. As plans for a revised Blue Line Extension alignment advance, this outcome may be reconsidered, at which point West Broadway Transit Study outcomes may also need to be evaluated for BRT project implementation to proceed.

More information about the METRO Blue Line Extension project is available at bluelineext.org.

Nicollet-Central Modern Streetcar

Hold on Nicollet corridor

The Nicollet-Central Modern Streetcar project is a planned transit connection from 8th Street/ Central Avenue in northeast Minneapolis to Lake Street via the Hennepin Avenue bridge, Nicollet Mall, and Nicollet Avenue.

In 2013, the City of Minneapolis adopted Modern Streetcar along this alignment as the Locally Preferred Alternative (LPA) and established a value capture district to generate revenues for streetcar implementation. The City, in partnership with the Metropolitan Council, is currently advancing an Environmental Assessment to document the potential social, economic, and environmental impacts that are anticipated as a result of the project. In the City of Minneapolis' Transportation Action Plan, the City is committed to partnering with

Metro Transit and other agencies to plan, design and construct high capacity, neighborhood-based transit along the Nicollet-Central corridor.

The potential Nicollet BRT corridor included in Network Next overlaps with this project along Nicollet Mall and Nicollet Avenue between downtown Minneapolis and Lake Street. Due to the significant segment overlap between the Nicollet Avenue corridor and the Nicollet-Central Modern Streetcar LPA the Nicollet Avenue corridor is not recommended for near-term implementation at this time. As the City's plans for transit in the Nicollet-Central advance, this outcome may be reconsidered.

[Advance Central corridor](#)

The extent of overlap between the Nicollet-Central Modern Streetcar LPA and the 13-mile Central Avenue BRT corridor is limited. BRT in this corridor would extend significantly further to Northtown Transit Center, carrying longer trips currently served by Route 10, which extends along this entire distance. The Central corridor should be considered for near-term implementation, with future coordination with the Nicollet-Central project needed for the area of overlap.

Riverview Corridor Modern Streetcar

[Hold on Randolph/ East 7th corridor](#)

The Randolph/ East 7th corridor shares segments with the Riverview Corridor along West 7th Street and in downtown Saint Paul. The locally preferred alternative for the Riverview Corridor, a Modern Streetcar from downtown Saint Paul to the airport and Mall of America along West 7th Street, was adopted into the regional Transportation Policy Plan (TPP) in 2019. The Engineering and Pre-Environmental study phase of the Riverview Corridor project began in October 2020 and is planned to continue through 2023. This process will examine impacts and gather detailed information to inform the project's preliminary design.

The Randolph/ East 7th corridor overlaps with the Riverview Corridor along West 7th Street north of Randolph Avenue. Although both BRT and modern streetcar could likely operate together on this segment of West 7th Street, it is challenging to advance near-term implementation plans for BRT while modern streetcar plans are still in preliminary stages. The future conditions of this street with modern streetcar may change how BRT fits into this segment of the corridor, and future construction for streetcar would likely require modifications to any near-term investment in BRT infrastructure.

Due to the significant segment overlap between the two corridors, the Randolph/ East 7th corridor is not recommended for near-term implementation at this time. As future conditions become more defined through future phases of the Riverview Corridor Modern Streetcar project, Randolph/ East 7th BRT may be reconsidered.

More information about the Riverview Corridor Modern Streetcar project is available at riverviewcorridor.com.

Robert Street Transitway Alternatives Study

Advance Rice/ Robert corridor

In 2015, Ramsey and Dakota counties completed a study of the Robert Street corridor from downtown Saint Paul to Rosemount. The study developed modern streetcar and arterial BRT concepts from Mendota Road to downtown Saint Paul and conducted public and stakeholder engagement. The study concluded with local interest in both streetcar and BRT alternatives, but without a recommended Locally Preferred Alternative (LPA). The study suggested further land use planning through comprehensive plan updates and subsequent evaluation of modes, as opportunities arose. Further steps to develop modern streetcar have not been pursued since the study concluded in 2015. During the Network Next process, both Ramsey and Dakota Counties expressed strong support for arterial BRT in the Robert Street corridor. As a result of these factors the Rice/ Robert corridor should be considered for near-term implementation.

Evaluation Results

Based on the technical and readiness evaluation results, the 10 corridors studied in this effort were grouped into tiers identifying priority for implementation: near-term, mid-term, and longer-term implementation.

Near-Term Priority Corridors

Corridors included in the near-term implementation tier are the highest priority corridors to implement, and are the candidates for becoming the METRO F, G, and H lines. The corridor identified as the F Line will be implemented first, planned for construction in 2025 (pending full funding), followed by the G and H lines. The corridors identified for near-term implementation (in alphabetical order) are:

- Central
- Como/ Maryland
- Johnson/ Lyndale
- Rice/ Robert

These four corridors have the highest technical evaluation scores among the corridors that are unaffected by other transit plans or studies.

Mid-Term Priority Corridors

Corridors included in the mid-term implementation tier are the next highest priority corridors to implement. These corridors will not be assigned a specific line name or implementation order in this planning process but are planned to be implemented following the completion of the near-term priority corridors. The corridors identified for mid-term implementation are:

- Nicollet
- Randolph/ East 7th
- West Broadway/ Cedar

Longer-Term Priority Corridors

Corridors included in the longer-term implementation tier remain good candidates for arterial BRT implementation but are a lower priority for implementation. The corridors identified for longer-term implementation are:

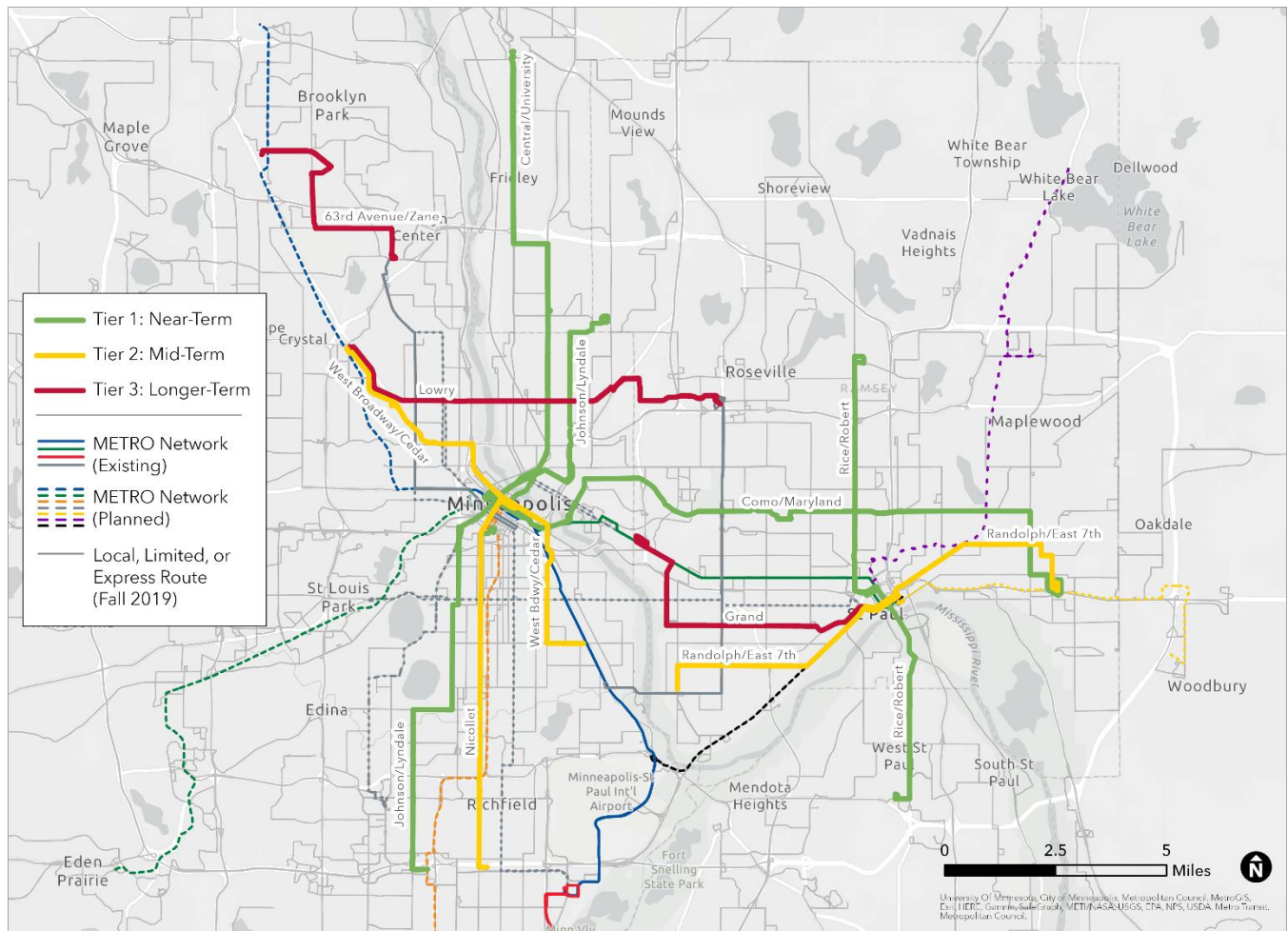
- 63rd/ Zane
- Grand
- Lowry

Figure 7 below illustrates the two-step process of applying the technical evaluation and the readiness evaluation to the studied corridors to determine the corridor groupings into prioritization tiers. Figure 8 is a map of the corridors grouped by prioritization tier.

Figure 7. Arterial BRT Corridor Evaluation, Readiness, and Prioritization Results

Corridor	Como/ Maryland	Johnson/ Lyndale	West Broadway/ Cedar	Nicollet	Central	Randolph/ East 7th	Rice/ Robert	Grand	Lowry	63rd/ Zane
Technical Score	87	79	77	74	66	57	56	51	47	42
Is corridor impacted by other planning efforts?	No	No	Yes	Yes	No	Yes	No	No	Yes	No
Readiness Outcome	Consider for Tier 1	Consider for Tier 1	Hold for Tier 2/3	Hold for Tier 2/3	Consider for Tier 1	Hold for Tier 2/3	Consider for Tier 1	Consider for Tier 1	Hold for Tier 2/3	Consider for Tier 1
Tier 1 (3-4 corridors)	●	●	✕	✕	●	✕	●	✕	✕	✕
Tier 2 (3-4 corridors)			●	●		●		✕	✕	✕
Tier 3 (3-4 corridors)								●	●	●

Figure 8. Arterial BRT Corridors by Prioritization Tiers



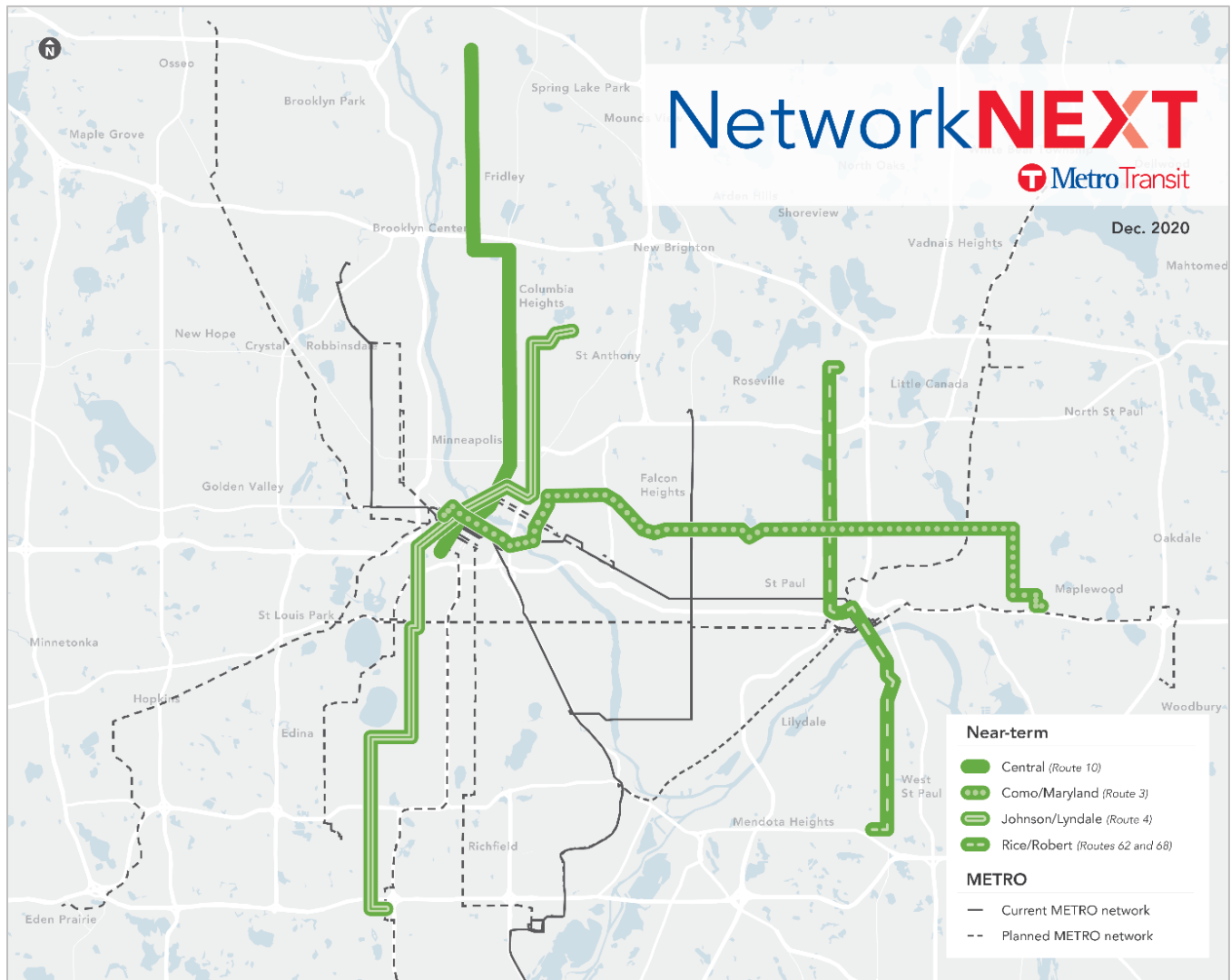
Step 4: Prioritize

The corridors identified for near-term implementation based on the results of the corridor evaluation process were the candidates for prioritization and designation as the METRO F, G, and H lines. These three lines are planned to be implemented in alphabetical order following the construction of the E Line. Based on the availability of funding, the F Line is planned to begin construction in 2025, with the G Line and H Line following prior to 2030.

The near-term corridors identified as candidates for designation as the F, G and H lines are shown in Figure 9 and listed below (in alphabetical order):

- Central
- Como/ Maryland
- Johnson/ Lyndale
- Rice/ Robert

Figure 9. Map of Near-term Priority Corridors



Prioritization Approach

Despite some difference in technical score between the corridors identified for near-term implementation, each corridor advances the four Network Next principles guiding the development of the future arterial BRT network. Based on the identification, screening, and evaluation processes, each corridor would represent an important addition to the METRO BRT network in the near term.

Although each corridor is a good candidate for near-term implementation, funding and program delivery constraints require prioritization among corridors to advance corridors sequentially. To select between corridors that each adequately advance the Network Next principles, Metro Transit identified key differentiators beyond the technical score for each corridor.

The prioritization approach to designate the F, G and H lines followed a two-step process:

1. What are the key differentiators in critical dimensions for identifying the F Line as a top priority?
2. What other network-based factors should be applied to identify the G and H lines?

Key differentiators for F Line Identification

Two key differentiators were applied in the designation of the F Line from the corridors under consideration. They are described in detail below.

Critical Dimension: Ridership

How many people can each corridor benefit?

Transit ridership is a key indicator of the success of a transit system. The number of trips taken on transit and the number of people using transit is a good measure of how useful the transit network is to people.

Future transit ridership, like any projection of future behavior, is difficult to model accurately. To capture this uncertainty and to balance the shortcomings of individual methodological approaches, Metro Transit incorporated several future ridership indicators developed throughout the Network Next process for consideration within this key corridor differentiator. The indicators considered in within this differentiator are discussed below, presented in order of confidence in the ability of the indicator to forecast ridership.

Existing Corridor Transit Ridership

Existing transit ridership on the existing local route(s) within the identified BRT corridor is the most certain of the ridership indicators considered. It is a product of both the existing levels of service in the corridor as well as the demand for transit within the corridor.

Observed Ridership Change in Operational BRT Corridors

Two arterial BRT corridors have been implemented to date in the Twin Cities region: the METRO A Line on Snelling Avenue and Ford Parkway in Saint Paul (substantially replacing Route 84) and the METRO C Line on Penn Avenue in Minneapolis (substantially replacing Route 19). Ridership in these corridors immediately following the implementation of arterial BRT increased between 25 and 35 percent over the existing local ridership. While there are differences between existing local service, planned concept-level connecting service, and corridor contexts, this range offers a useful starting point to consider the possible impact of implementing arterial BRT in each corridor.

Corridor Ridership Propensity

The surrounding land uses in a corridor, and the demographics and life stages of the people who live there, are strong predictors of transit ridership. Areas of high population and employment density tend to generate higher ridership than areas of low density. Areas with higher numbers of younger residents or those who rent their home generate more transit trips than other areas. However, ridership is also dependent on the existing levels of transit service in a corridor – a transit ride can only occur where a transit trip is provided.

To better understand the potential for transit ridership in a corridor independent of the level of transit service provided in a corridor, Metro Transit has developed a model of transit ridership propensity of the surrounding land uses and population characteristics.

This model considers characteristics of the surrounding land use (at the census block group level) known to predict transit ridership to generate a ridership propensity value for each corridor. There are 11 characteristics considered, including percent of residents under 35, population and employment density, and presence of a hospital. More information can be found on pages 19 and 20 of the *Arterial BRT Corridor Evaluation and Prioritization* memorandum available at metrotransit.org/network-next.

The model indicates places and neighborhoods that are more, or less, likely to generate higher levels of trip making on transit. Because it is connected to the geography in the corridor, it can forecast the relative success of the corridors if these characteristics are stable in the future. However, the model does not make a precise estimate of the number of daily trips to be made on transit in the corridor.

Corridor Ridership Forecast (STOPS)

Future (2040) ridership estimates were also generated using FTA’s STOPS model. STOPS is a travel demand model that creates synthetic origin-destination trips in a region, uses a mode choice model to assign some fraction of trips to transit, and assigns resulting transit trips to a particular route using the transit network. STOPS produces estimates of average weekday ridership based on the planned schedules for each BRT corridor and the concept-level connecting local bus service. Forecast BRT ridership in this model considers frequency improvements, connecting service changes, travel time improvements, and stop location changes, but no additional weight is assigned to arterial BRT to account for the added attractiveness of this service to riders beyond existing local bus. Additional information about this model can be found in the *Arterial BRT Corridor Evaluation and Prioritization: Ridership Forecasts* memorandum available at metrotransit.org/network-next.

Existing and Potential Ridership Corridor Comparison

Table 11 compares the values for each ridership indicator across the four corridors under consideration.

Table 11. Existing and Potential Ridership Corridor Comparison

Ridership Indicator	Central	Como/ Maryland	Johnson/ Lyndale	Rice/ Robert
Existing Corridor Ridership (Fall 2019)	7,192 (Rt 10)	5,722 (Rt 3)	5,236 (Rt 4)	3,781 (Rts 62/68)
Potential Initial Change Based on Operational BRT Performance (25 – 35% increase)	8,990 – 9,709	7,153 – 7,725	6,545 – 7,060	4,726 – 5,104
Corridor Ridership Propensity	4.8	5.0	4.8	2.0
STOPS Corridor Forecast Ridership (2040)	12,100	11,600	13,200	9,100

Critical Dimension: Costs

How much additional funding is needed to build and operate each line?

Corridor capital and operations & maintenance costs are a core consideration for the designation of the F Line. Given existing operating and capital funding constraints and potential uncertainty around near-term revenues due to the impact of the COVID-19 pandemic, cost considerations are as important as they ever have been.

Annual Corridor Operations & Maintenance Costs

Annual corridor operations & maintenance costs consider the costs to maintain the stations and transit signal priority equipment, fare collection, and the net costs of operating the transit service itself. To determine the net cost of operating the transit service, the operating costs of the future BRT corridor and the concept-level planned connecting bus service were compared to the existing cost of operating the local bus service in the corridor today. Table 12 shows costs in 2025 dollars, the first year feasible for F Line operation. Corridor operations & maintenance costs developed through Network Next are for planning and comparison purposes only. Detailed cost estimates will be developed and refined as each corridor advances.

Table 12. Corridor Operations & Maintenance Cost Comparison (Figures shown in \$Millions)

Cost Category	Central	Como/ Maryland	Johnson/ Lyndale	Rice/ Robert
Annual Corridor Operating & Maintenance Costs (\$2025)	\$15.5	\$21.0	\$25.8	\$26.4
Operating & Maintenance Costs Comparison Result	Very Good	Good	Fair	Fair

Corridor Capital Costs

Corridor capital costs consider the costs to construct BRT stations and install the station elements (including shelters and pylons), purchase vehicles, install communications equipment, and other associated costs. Table 13 shows capital costs in \$2024, the first year feasible for F Line construction. Corridor capital costs developed through Network Next are for planning and comparison purposes only. Detailed cost estimates will be developed and refined as each corridor advances.

Table 13. Corridor Capital Cost Comparison (Figures shown in \$Millions)

Cost Category	Central	Como/ Maryland	Johnson/ Lyndale	Rice/ Robert
Corridor Capital Costs (\$2024)	\$81.3	\$104.5	\$93.4	\$77.9
Capital Costs Comparison Result	Very Good	Fair	Fair	Very Good

Result: F Line (Central)

Table 14 below shows the comparison results across each corridor for the critical dimensions of ridership, capital costs, and operations & maintenance costs. Reviewing the performance of each corridor shows that the Central Avenue corridor is the top performer across each of the key differentiators.

The Central Avenue corridor currently serves the highest number of existing riders, is among the top two future forecast ridership corridors, and has an acceptable capital cost, and the lowest anticipated operating & maintenance cost of any of the candidate corridors. Based on this comparison, the Central Avenue corridor is designated as the F Line.

Table 14. Corridor Comparison Across Key Differentiators

Key Differentiator	Central	Como/ Maryland	Johnson/ Lyndale	Rice/ Robert
Existing and Potential Ridership	Very Good	Good	Good	Fair
Operating & Maintenance Costs	Very Good	Good	Fair	Fair
Capital Costs	Very Good	Fair	Fair	Very Good
Result	F Line	Consider for G or H Line	Consider for G or H Line	Consider for G or H Line

Identifying the G and H Lines

With the Central Avenue corridor designated as the F Line, additional factors were reviewed to identify the G and H lines from the remaining corridors under consideration:

- Como/ Maryland
- Johnson/ Lyndale
- Rice/ Robert

Network Considerations

In addition to the key differentiators used to identify the F Line, two additional factors relating to each corridor’s role in the overall development of the future arterial BRT network were considered. They are described below:

How well does the corridor expand the reach of the METRO network?

A key goal for the Metropolitan Council, Metro Transit, shared by regional stakeholders engaged in the Network Next process, is to expand the reach of the METRO network of high-frequency, high-capacity transit lines, to grow a robust regional network of corridors, particularly in areas with high potential for transit ridership. The arterial BRT program is a key component of advancing that goal.

To account for this goal in the prioritization of the near-term corridors, each corridor under consideration for designation as the G Line or H Line was reviewed for whether it expanded the METRO network into a part of the region not currently served at the regional scale. To account for potential transit demand, the Metropolitan Council’s Transit Market Areas were underlaid on the network map. See Figure 10 for a map of the corridors under consideration and their impact on the reach of the METRO network. A discussion of the impact of each corridor is shown below:

Johnson/ Lyndale

With the designation of the Central Avenue corridor as the F Line, both the north and south sections of the Johnson/ Lyndale corridor will operate within approximately 1/2 mile of a parallel existing or planned METRO BRT line. While this corridor does serve independently pedestrian accessible transit markets in each segment, it does not significantly expand the reach of the planned METRO Network.

Rice/ Robert

The Rice/ Robert corridor will provide new METRO service in areas of Market Areas I and II that are not currently within the existing or planned METRO network. This includes West St. Paul, the west side of Saint Paul, the north end of Saint Paul, and portions of Maplewood and Little Canada.

How does each corridor fit into the existing bus network?

In addition to how well each corridor expands the METRO network, each corridor was reviewed for how it fits into the existing bus network and how changes to the bus network would need to be phased around new BRT lines. A discussion of each corridor is below:

Como/ Maryland

The Como/ Maryland corridor is primarily based on the Maryland Avenue branch of the existing Route 3. However, the Como/ Maryland BRT corridor departs from the existing Route 3 alignment on the east side of Saint Paul. Rather than continuing into downtown Saint Paul via Rice Street along the current Route 3 alignment, the Como/ Maryland corridor continues east along Maryland Avenue, connecting with the planned Rush Line and Gold Line. This new alignment would connect new opportunities, creating an east-west connection that stakeholders have long requested. However, the change would eliminate an existing one-seat ride into downtown Saint Paul for many current Route 3 riders. For this reason, the Como/ Maryland corridor should be implemented after the Rice/ Robert corridor, to facilitate a comfortable and convenient transfer between the two corridors in place of the existing one-seat ride. Como/ Maryland is also a lower local priority for Saint Paul and Ramsey County, behind Rice/ Robert.

Johnson/ Lyndale

The Johnson/ Lyndale corridor is primarily based on the Penn Avenue branch of the Route 4 from the future METRO Orange Line station at Knox Avenue and American Boulevard to Silver Lake Village in Saint Anthony. The concept-level connecting bus plan would retain the Lyndale branch of the Route 4 into downtown Minneapolis. The Johnson/ Lyndale corridor and concept connecting service plan would not require any other corridors under consideration to be implemented ahead of this corridor.

Rice/ Robert

The Rice/ Robert corridor is based primarily on the existing Route 62 on Rice Street north of downtown Saint Paul, and the Route 68 on Robert Street south of downtown. The concept-level connecting bus service plan

would combine the remaining portions of the Routes 62 and 68 into a single new Route 68. The Rice/ Robert corridor and concept connecting service plan would not require any other corridors under consideration to be implemented ahead of this corridor. As noted above, the Rice/ Robert corridor is identified to be implemented ahead of the Como/ Maryland corridor. Rice/ Robert is also a higher local priority for Saint Paul and Ramsey County, ahead of Como/ Maryland.

Result: G Line (Rice/ Robert) and H Line (Como/ Maryland)

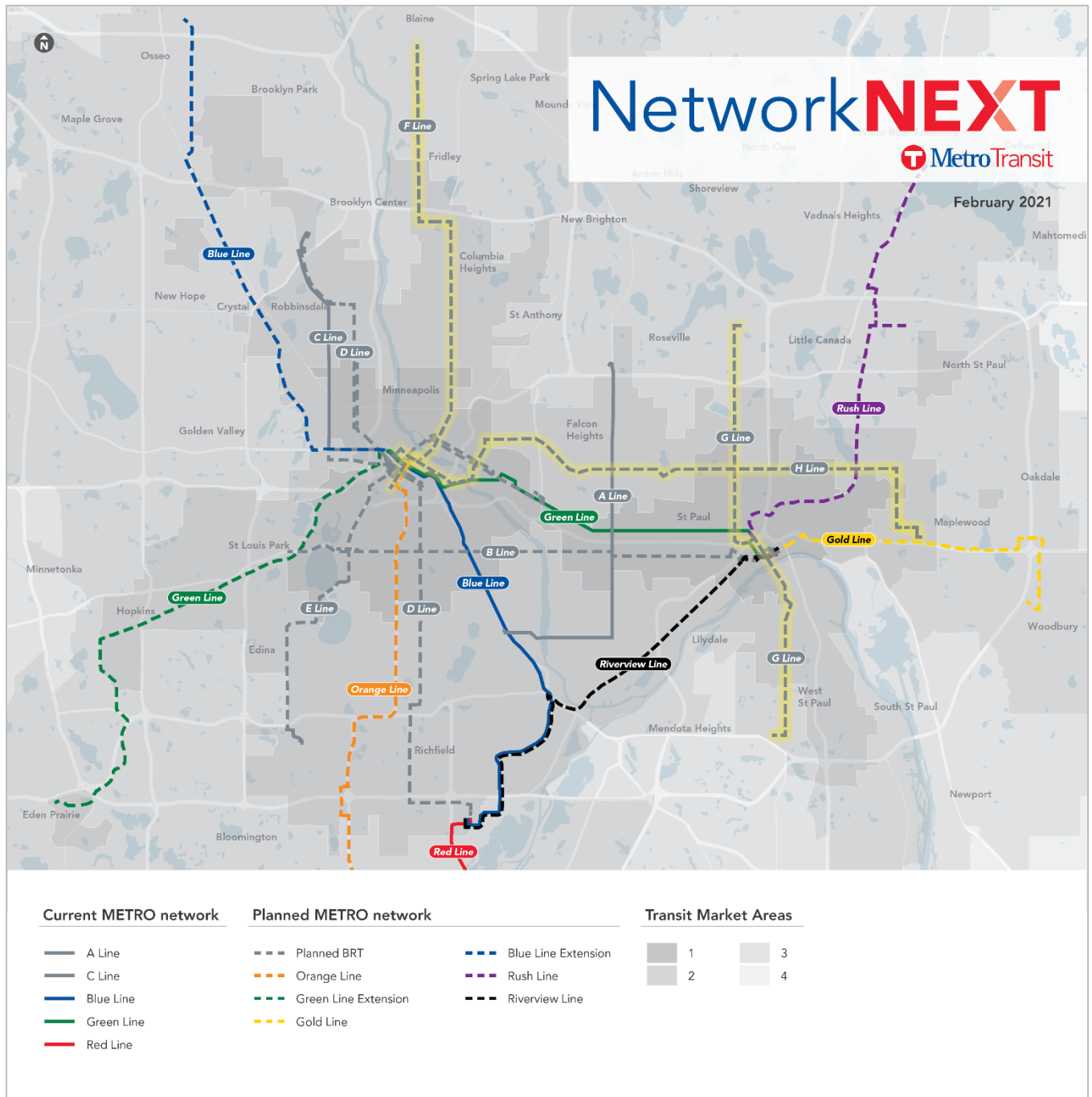
Table 15 below shows the comparison of network considerations between each of the three corridors under consideration for designation as the G Line and H Line. Reviewing these additional considerations shows that both the Como/ Maryland and Rice/ Robert corridors expand the reach of the planned METRO network more than the Johnson/ Lyndale corridor, and that the Rice/ Robert corridor should be implemented ahead of the Como/ Maryland corridor.

Taking these considerations into account results in the designation of the Rice/ Robert corridor as the G Line and the Como/ Maryland corridor as the H Line. Johnson/ Lyndale, while not designated as a specific programmed line, remains an important corridor within the planned arterial BRT network and will be considered for mid-term implementation. Figure 11 shows a map of the planned METRO F, G, and H lines.

Table 15. Corridor Network Impacts Comparison

Key Differentiator	Como/ Maryland	Johnson/ Lyndale	Rice/ Robert
Expand Reach of METRO Network	Yes, corridor expands reach of METRO Network	No, corridor does not expand reach of METRO Network	Yes, corridor expands reach of METRO Network
	Very good	Fair	Very good
Integration with Existing Bus Network	Implement after Rice/ Robert corridor	No integration issues	No integration issues
Result	H Line	Implement corridor in mid-term	G Line

Figure 11. Map of Planned METRO F, G, and H Lines



Arterial BRT Corridor Concept Profiles

The following pages include a profile of each of the 10 BRT corridors that were subject to evaluation and prioritization. Each corridor profile includes:

- Description and map of the concept alignment and station locations
- Concept service plan with proposed BRT and local service headways
- Overview of the population, employment, and riders within the corridor
- BRT concept by the numbers, including average station spacing and estimated speed improvements
- Forecasted year 2040 weekday ridership within the corridor
- Cost estimates, including the cost to build and annual operating cost

63RD AVENUE/ ZANE

From north to south, the corridor begins at the Starlite Transit Center in Brooklyn Park and ends at the Brooklyn Center Transit Center. The 63rd Avenue/ Zane preliminary concept identifies 15 station intersections over the approximately 6.0-mile corridor. Today, the corridor is primarily served by Route 724.

The arterial BRT concept would share a station with the existing METRO C Line and future METRO D Line at the Brooklyn Center Transit Center and connect to the future METRO Blue Line Extension near Starlite Transit Center. The Metropolitan Council is committed to working closely with community and city partners to determine the best course forward for the METRO Blue Line Extension project.

Within the Corridor

- **24,000** people – 27,400 by 2040
- **16,300** people of color
- **8,100** low-income people
- **10,200** renters
- **7,800** jobs, including 5,600 low-wage jobs
- **65%** of Route 724 riders are people of color or live in low-income households

Concept Service Plan

The 63rd Avenue/ Zane arterial BRT concept would operate every 10 minutes for most of the day. The arterial BRT service would replace the existing limited stop Route 724 that operates within the corridor today. The proposed Route 724 would be modified to instead operate between the Starlite Transit Center (the proposed northern terminal BRT station) and the Target North Campus. Modified Route 724 would operate approximately every 30 minutes throughout most of the day, seven days per week (comparable to existing service).

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
724	-	30	30	30	30	-

BRT Concept by the Numbers

- **6.0 miles** long
- **15** station intersections
- **0.40 miles** on average between stations
- **90%** of existing Route 724 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	1,700
Corridor Ridership Propensity (out of 5.0)*	1.7
Corridor Weekday Forecast Ridership (2040)	2,000

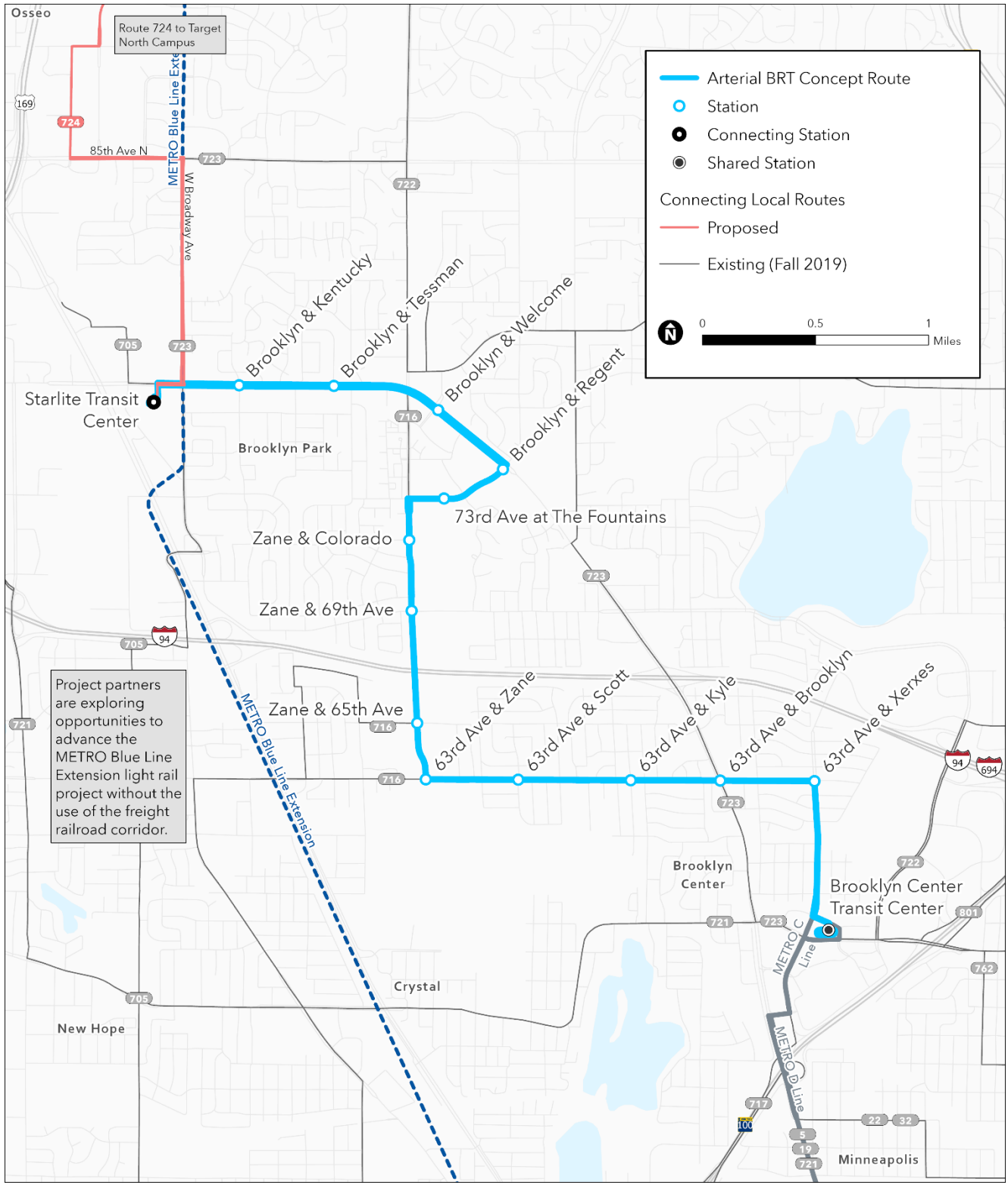
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$21.8
Fleet	\$5.9
Other (e.g., right of way, professional svcs., etc.)	\$7.6
Total capital costs	\$35.3

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$6.7
Savings from local service changes	-\$2.2
Net service costs	\$4.5
BRT improvement costs (e.g., maint., TSP, etc.)	\$3.2
Net total annual operations costs*	\$7.8

*Expenses alone; excludes passenger revenue



CENTRAL

From north to south, the corridor begins at the Northtown Mall in Blaine and ends in downtown Minneapolis. The arterial BRT concept would partially operate on a new Washington Avenue transit spine in downtown Minneapolis. The BRT would connect to or be near multiple existing and planned METRO routes in downtown Minneapolis, including Blue, Green, Orange, C, D, and E lines.

Within the Corridor

- **64,900** people – 75,600 by 2040
- **21,100** people of color
- **18,900** low-income people
- **31,000** renters
- **157,500** jobs, including 50,200 low-wage jobs
- **46%** of Route 10 riders are people of color or live in low-income households

Concept Service Plan

The corridor is served today primarily by Route 10, which operates three main patterns (or branches) based out of downtown Minneapolis. Additionally, Route 59 serves this corridor, providing peak-only limited stop service on Central Avenue between 53rd Avenue and downtown Minneapolis. Route 10 would continue to operate on a path similar to the existing Route 10N, maintaining service through Spring Lake Park and Fridley along Central and Monroe Avenues north of 53rd Avenue. Modified Route 10 would operate approximately every 30 minutes throughout most of the day, seven days per week. Route 59 would be eliminated and replaced by BRT as part of the Central arterial BRT concept plan.

The Central arterial BRT concept route mirrors the structure of existing Route 10U and would operate between downtown Minneapolis and Northtown Transit Center via Central Avenue to 53rd Avenue and via University Avenue north of 53rd Avenue. The arterial BRT concept would operate every 10 minutes for most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
10	-	30	30	30	30	-

BRT Concept by the Numbers

- **13.0 miles** long
- **30** station intersections
- **0.43 miles** on average between stations
- **85%** of existing Route 10 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	7,200
Corridor Ridership Propensity (out of 5.0)*	4.8
Corridor Weekday Forecast Ridership (2040)	12,100

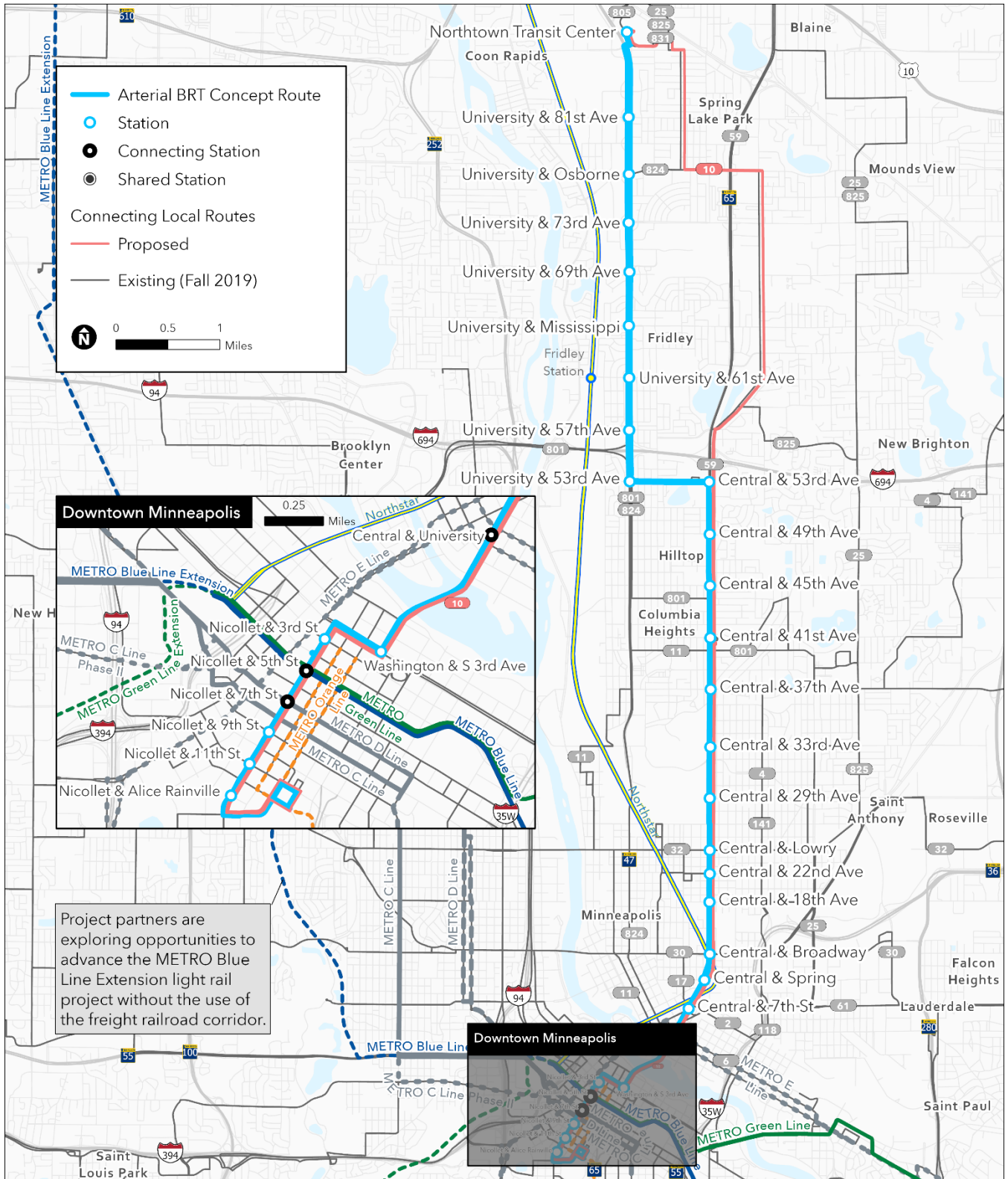
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$47.3
Fleet	\$17.8
Other (e.g., right of way, professional svcs., etc.)	\$16.2
Total capital costs	\$81.3

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$17.4
Savings from local service changes	-\$8.8
Net service costs	\$8.6
BRT improvement costs (e.g., maint., TSP, etc.)	\$7.0
Net total annual operations costs*	\$15.5

*Expenses alone; excludes passenger revenue



COMO/ MARYLAND

From west to east the corridor begins in downtown Minneapolis and ends at the Sun Ray Transit Center in Saint Paul, near the planned METRO Gold Line station. Today, the corridor is served primarily by Route 3, but also by Route 64 and Route 80 east of Payne Avenue in Saint Paul.

The arterial BRT concept would operate on a new Washington Avenue transit spine in downtown Minneapolis, as opposed to the current operation of Route 3 on 3rd Street and 4th Street, a one-way pair. The BRT would connect to or be near multiple existing and planned METRO routes in downtown Minneapolis, including Blue, Green, Orange, C, D, and E lines; as well as METRO A and Gold lines and Rush Line in Saint Paul.

Within the Corridor

- **99,800** people – 105,200 by 2040
- **51,300** people of color
- **42,700** low-income people
- **60,600** renters
- **170,400** jobs, including 60,600 low-wage jobs
- **45%** of Route 3 riders are people of color or live in low-income households

Concept Service Plan

Route 3 would be eliminated and replaced with arterial BRT service and a new Route 66. The Como/ Maryland arterial BRT concept would operate every 10 minutes for most of the day, seven days per week.

Route 66 would provide connecting local service from the State Fairgrounds at Como Avenue just west of Snelling Avenue to downtown Saint Paul, via Energy Park Drive, Front Avenue, and Como Avenue. This area is served today by the Route 3B branch. Route 66 would operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
66	-	30	30	30	30	-

BRT Concept by the Numbers

- **16.6 miles** long
- **40** station intersections
- **0.42 miles** on average between stations
- **65%** of existing Route 3 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	5,700
Corridor Ridership Propensity (out of 5.0)*	5.0
Corridor Weekday Forecast Ridership (2040)	11,600

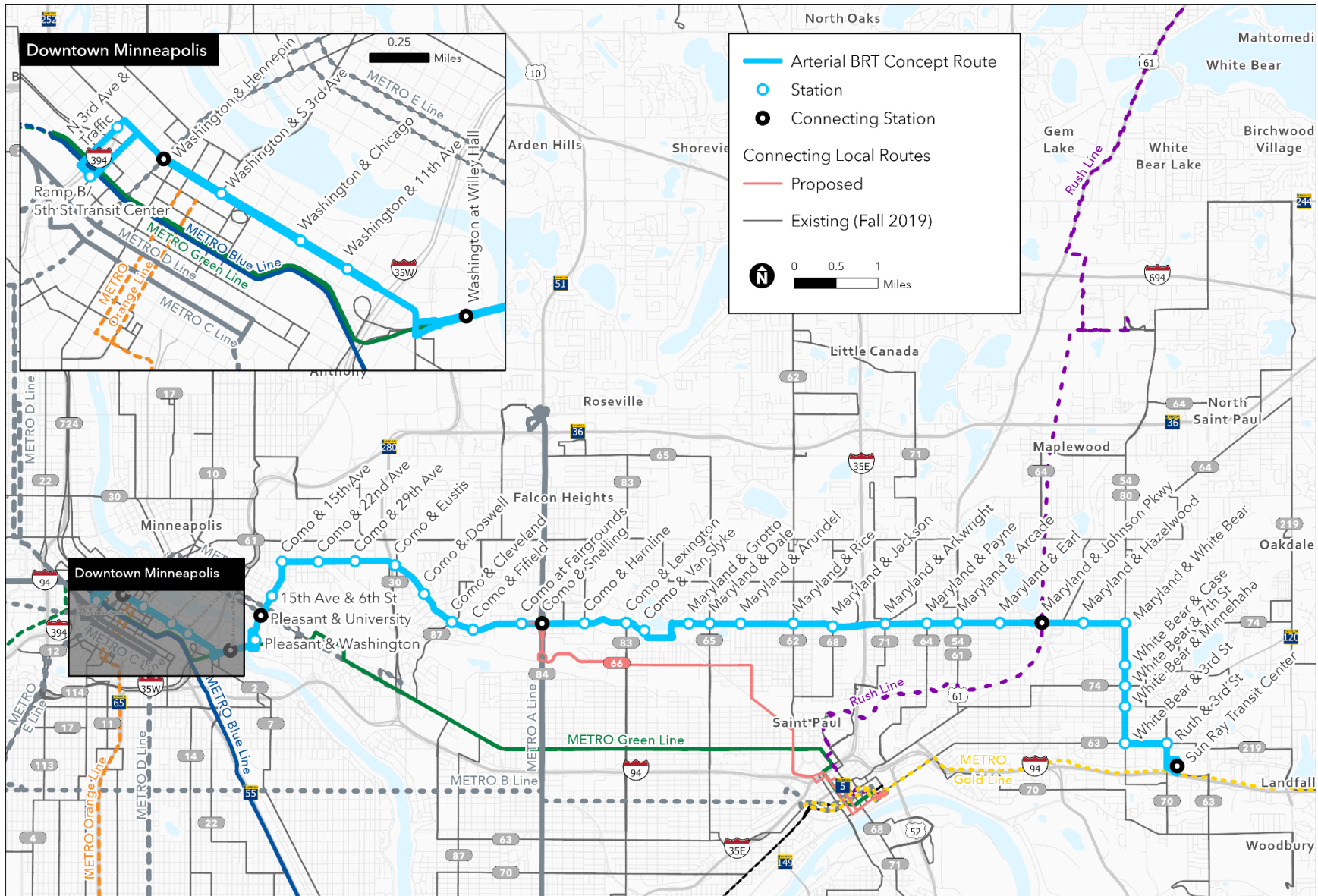
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$61.5
Fleet	\$21.8
Other (e.g., right of way, professional svcs., etc.)	\$21.1
Total capital costs	\$104.5

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$22.6
Savings from local service changes	-\$10.6
Net service costs	\$12.0
BRT improvement costs (e.g., maint., TSP, etc.)	\$9.0
Net total annual operations costs*	\$21.0

*Expenses alone; excludes passenger revenue.



GRAND

From west to east, the corridor begins at Berry Street by the Westgate METRO Green Line station and planned METRO E Line and ends in downtown Saint Paul. Today, the corridor is primarily served by Route 63.

The arterial BRT concept would operate on 5th Street and 6th Street, a one-way pair, in downtown Saint Paul. The Grand BRT would share stations with 10 planned METRO Gold Line and B Line stations in downtown Saint Paul; the three stations furthest east (around Union Depot) would also be served by the planned Rush Line. Outside of downtown Saint Paul, the concept would connect to the METRO Green, A, and E lines.

Within the Corridor

- **48,200** people – 54,200 by 2040
- **8,500** people of color
- **9,400** low-income people
- **19,300** renters
- **73,100** jobs, including 30,000 low-wage jobs
- **35%** of Route 63 riders are people of color or live in low-income households

Concept Service Plan

The Grand arterial BRT concept would operate every 10 minutes for most of the day, seven days per week. The arterial BRT service would replace the existing Route 63, which operates today from Berry Street & University Avenue through downtown Saint Paul to the Sun Ray Transit Center before terminating at McKnight Road and Lower Afton Road. As part of the concept service plan, Route 63 would be modified to operate between the Smith Ramp on the western edge of downtown Saint Paul and Sun Ray Transit Center via East 3rd Street, with service approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
63	-	30	30	30	30	-

BRT Concept by the Numbers

- **8.5 miles** long
- **24** station intersections
- **11** shared station intersections with existing or planned METRO lines
- **0.35 miles** on average between stations
- **85%** of existing Route 63 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	2,800
Corridor Ridership Propensity (out of 5.0)*	1.7
Corridor Weekday Forecast Ridership (2040)	5,400

*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$21.2
Fleet	\$10.9
Other (e.g., right of way, professional svcs., etc.)	\$7.4
Total capital costs	\$39.4

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$12.0
Savings from local service changes	-\$7.7
Net service costs	\$4.3
BRT improvement costs (e.g., maint., TSP, etc.)	\$4.6
Net total annual operations costs*	\$8.9

*Expenses alone; excludes passenger revenue

JOHNSON/ LYNDALE

From north to south, the corridor begins at Silver Lake Village in St. Anthony and ends in Bloomington near the METRO Orange Line station at Knox Avenue & American Boulevard. Today, the corridor is primarily served by Route 4. The arterial BRT concept would operate on Hennepin Avenue in downtown Minneapolis and share nine station intersections with the METRO E Line. Additionally, the concept would connect to METRO Blue, Green, Orange, B, C, and D lines.

Within the Corridor

- **121,000** people – 134,500 by 2040
- **28,800** people of color
- **28,800** low-income people
- **58,300** renters
- **170,600** jobs, including 56,100 low-wage jobs
- **33%** of Route 4 riders are people of color or live in low-income households

Concept Service Plan

Existing Route 4 operates multiple patterns (or branches) from New Brighton to south Minneapolis and Bloomington via downtown Minneapolis. The Johnson/ Lyndale arterial BRT concept mirrors the structure of the existing Route 4P and 4B variants, with service between Silver Lake Village in St. Anthony and Knox Avenue & American Boulevard in Bloomington via Penn Avenue in south Minneapolis, Richfield, and Bloomington. The BRT concept would operate every 10 minutes for most of the day, seven days per week.

A modified Route 4 would operate between downtown Minneapolis and Knox Avenue & American Boulevard via Lyndale Avenue south of 46th Avenue. A new Route 804 shuttle would connect the BRT's northern terminal station in St. Anthony to 1st Avenue Northwest & Old Highway 8 in New Brighton; this shuttle serves as a replacement for existing Route 4 branch G and Route 141, which would be eliminated. Modified Route 4 and new Route 804 would both operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
4	-	30	30	30	30	-
804	-	30	30	30	30	-

BRT Concept by the Numbers

- **17.1 miles** long
- **42** station intersections
- **9** shared station intersections with existing or planned METRO lines
- **0.41 miles** on average between stations
- **79%** of existing Route 4 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	5,200
Corridor Ridership Propensity (out of 5.0)*	4.8
Corridor Weekday Forecast Ridership (2040)	13,200

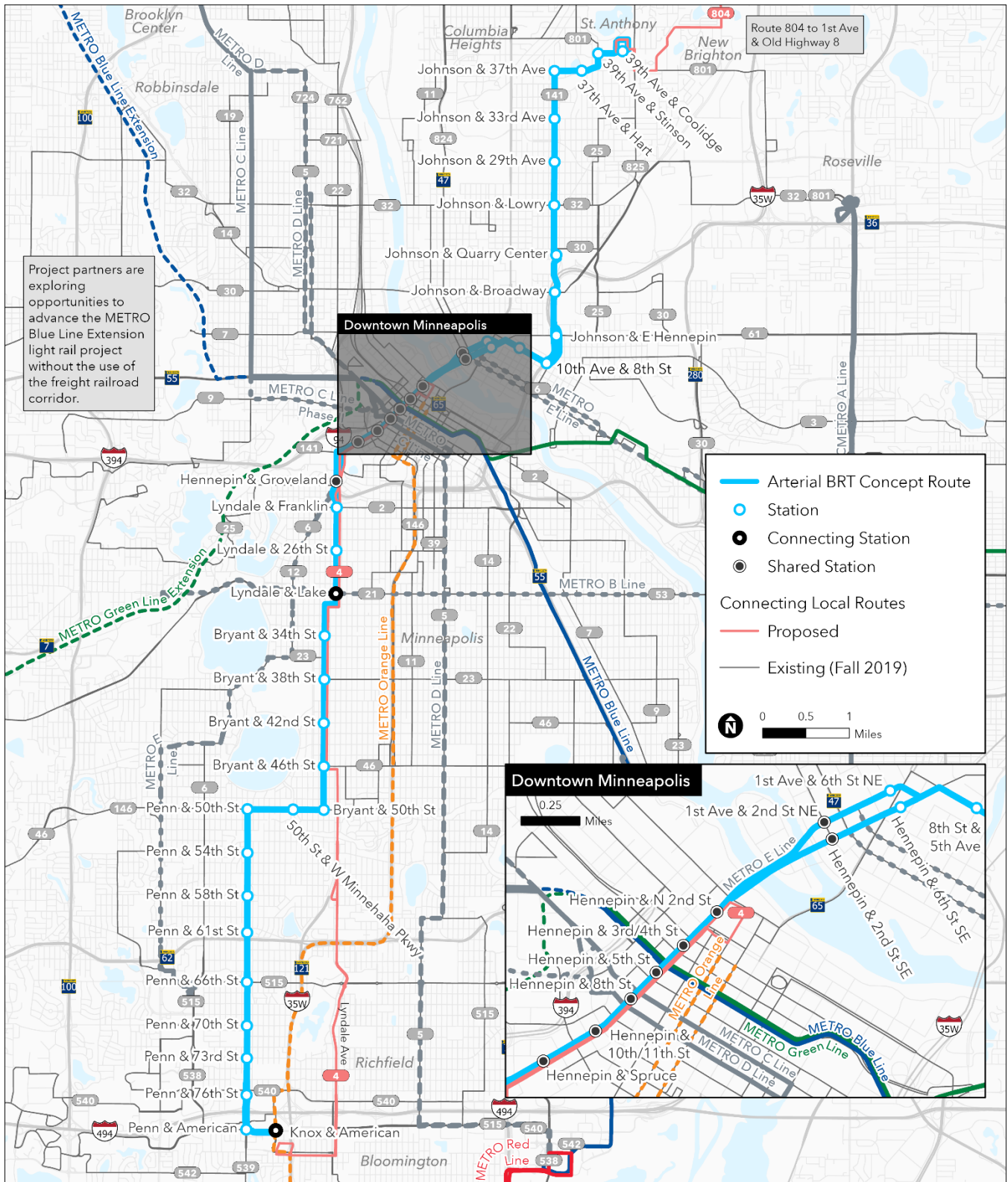
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$51.7
Fleet	\$23.8
Other (e.g., right of way, professional svcs., etc.)	\$17.9
Total capital costs	\$93.4

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$24.2
Savings from local service changes	-\$7.7
Net service costs	\$16.5
BRT improvement costs (e.g., maint., TSP, etc.)	\$9.3
Net total annual operations costs*	\$25.8

*Expenses alone; excludes passenger revenue



LOWRY

From west to east, the corridor begins in downtown Robbinsdale and ends at the Rosedale Transit Center, where it would connect with the METRO A Line. Today, the corridor is primarily served by Route 32.

In addition to the METRO A Line, the arterial BRT concept would connect to METRO C and D lines, and the future METRO Blue Line Extension near the Robbinsdale Transit Center. The Metropolitan Council is committed to working closely with community and city partners to determine the best course forward for the METRO Blue Line Extension project.

Within the Corridor

- **40,700** people – 41,800 by 2040
- **19,400** people of color
- **14,400** low-income people
- **17,900** renters
- **24,300** jobs, including 17,900 low-wage jobs
- **53%** of Route 32 riders are people of color or live in low-income households

Concept Service Plan

The Lowry arterial BRT concept would operate seven days per week with service every 10 minutes for most of the day. The arterial BRT service would replace the existing Route 32, which today operates along the same streets as the arterial BRT concept.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30

BRT Concept by the Numbers

- **10.5 miles** long
- **24** station intersections
- **0.44 miles** on average between stations
- **83%** of existing Route 32 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	1,700
Corridor Ridership Propensity (out of 5.0)*	2.7
Corridor Weekday Forecast Ridership (2040)	2,300

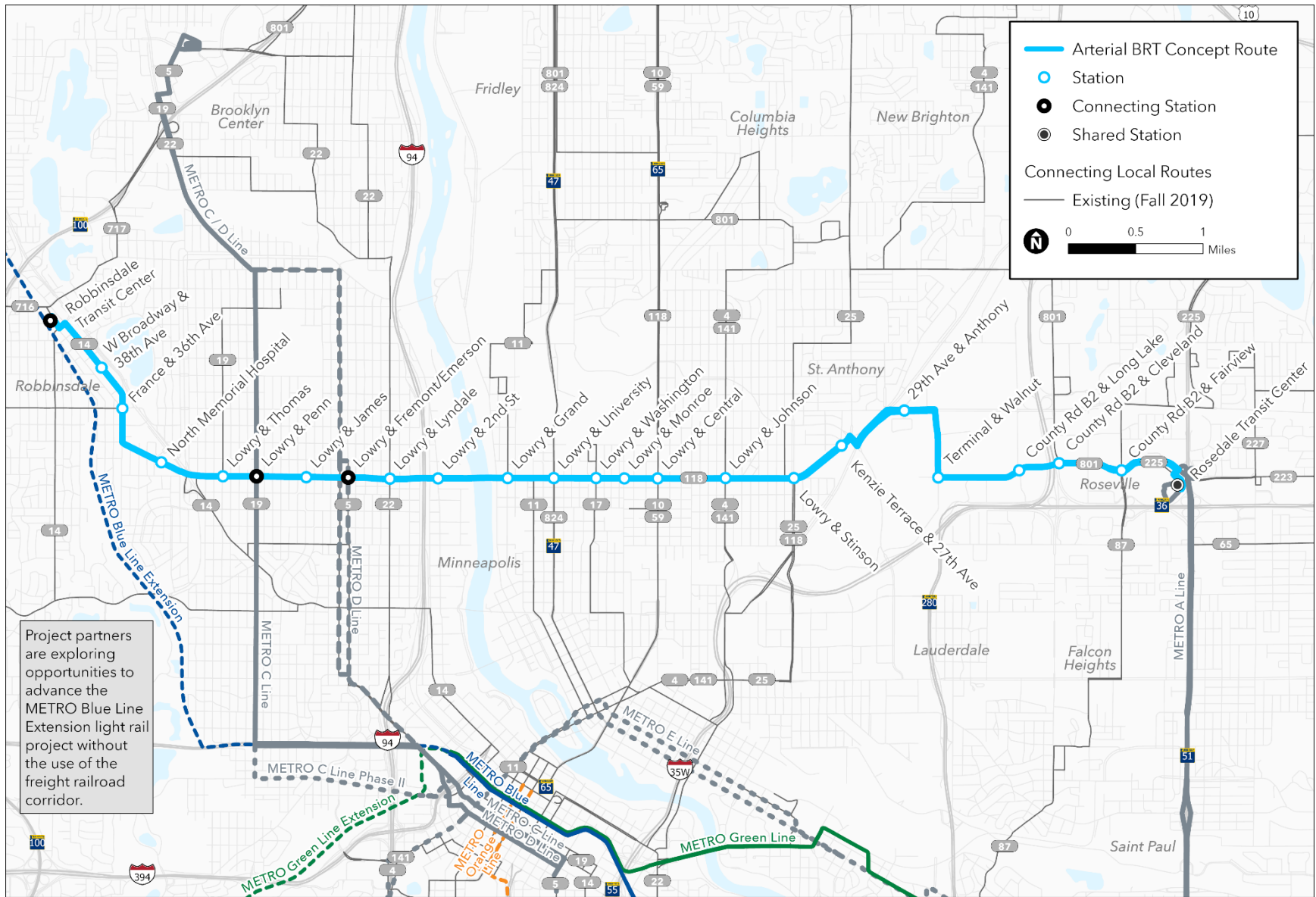
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$36.0
Fleet	\$10.9
Other (e.g., right of way, professional svcs., etc.)	\$7.4
Total capital costs	\$59.4

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$11.7
Savings from local service changes	-\$3.5
Net service costs	\$8.2
BRT improvement costs (e.g., maint., TSP, etc.)	\$5.3
Net total annual operations costs*	\$13.5

*Expenses alone; excludes passenger revenue



NICOLLET

From north to south, the corridor begins in downtown Minneapolis near Washington Avenue and 3rd Avenue South and ends in Bloomington near American Boulevard. The arterial BRT concept would connect to METRO Blue, Green, Orange, B, C, and D lines. South of downtown, most Nicollet BRT stations would be parallel to those of the METRO D Line. Today, the corridor is primarily served by Route 18.

Within the Corridor

- **77,300** people – 84,500 by 2040
- **27,900** people of color
- **23,200** low-income people
- **39,300** renters
- **148,300** jobs, including 47,400 low-wage jobs
- **50%** of Route 18 riders are people of color or live in low-income households

Concept Service Plan

The Nicollet arterial BRT concept would operate every 10 minutes for most of the day, seven days per week. The BRT concept incorporates multiple existing Route 18 branches. Existing Route 18 service headways diminish as the alignment travels south. In general, average weekday service headways are 8 minutes north of 46th Street, 15 minutes between 46th Street and American Boulevard, and 30 minutes between American Boulevard and south Bloomington.

Route 18 would be eliminated and replaced by the arterial BRT service between downtown Minneapolis and American Boulevard. A new Route 518 would be introduced to cover areas south of American Boulevard currently served by Route 18. Route 518 would begin at the planned METRO Orange Line station at Knox Avenue & 76th Boulevard, connect with Nicollet arterial BRT at 77th Avenue & Nicollet Avenue, then continue south on Nicollet Avenue to terminate at 104th St & W Bloomington Freeway Road. The route would operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
518	-	30	30	30	30	-

BRT Concept by the Numbers

- **9.2 miles** long,
- **24** station intersections
- **0.38 miles** on average between stations
- **78%** of existing Route 18 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	9,900
Corridor Ridership Propensity (out of 5.0)*	4.1
Corridor Weekday Forecast Ridership (2040)	9,100

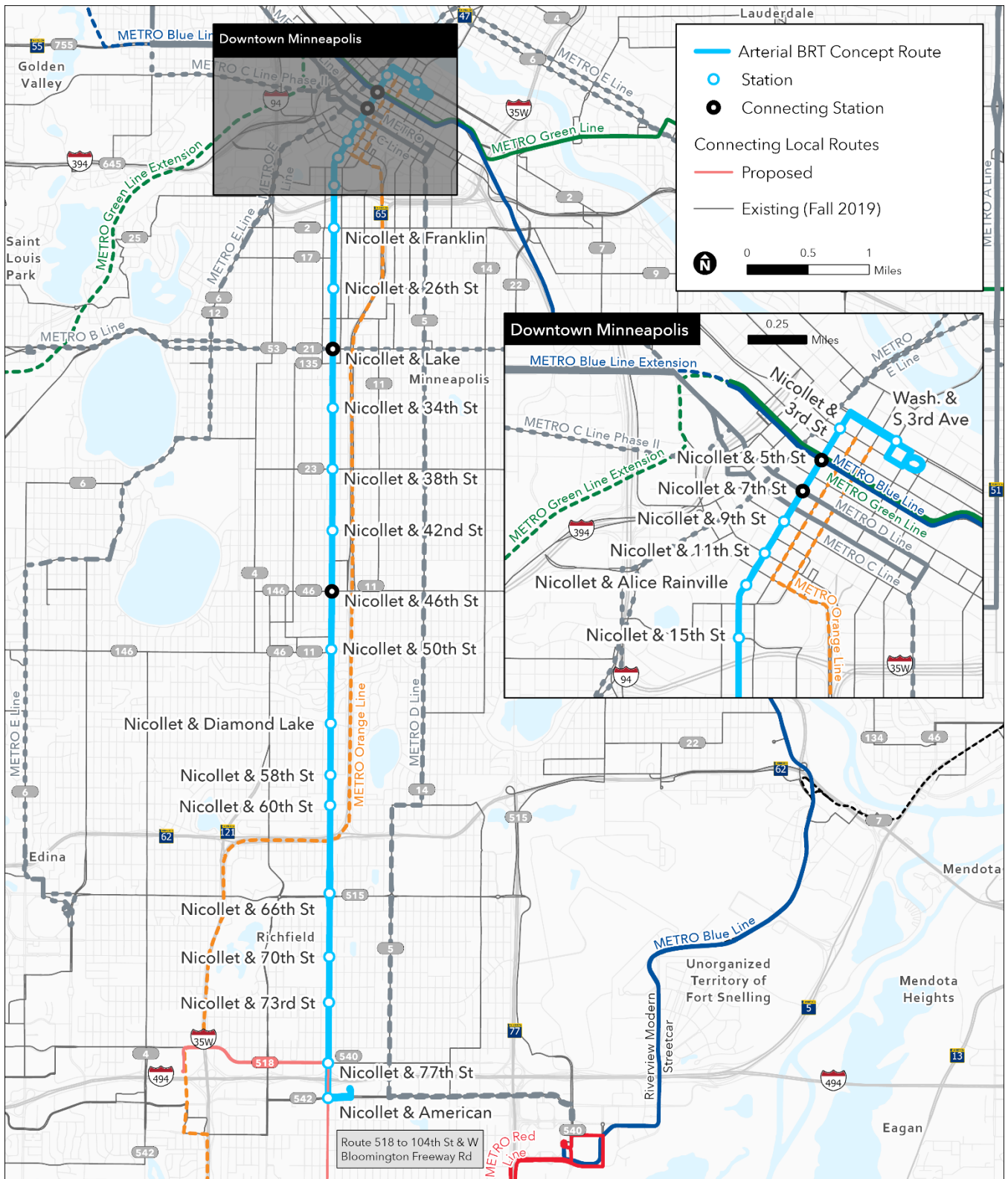
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$39.7
Fleet	\$15.9
Other (e.g., right of way, professional svcs., etc.)	\$13.0
Total capital costs	\$66.8

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$14.7
Savings from local service changes	-\$15.1
Net service costs	-\$0.4
BRT improvement costs (e.g., maint., TSP, etc.)	\$5.6
Net total annual operations costs*	\$5.2

*Expenses alone; excludes passenger revenue



RANDOLPH/ EAST 7TH

From west to east, the corridor runs through Saint Paul from the Ford & Finn METRO A Line station near the future Highland Bridge Development (“Ford Site”) and ends at the Sun Ray Transit Center, connecting to the METRO Gold Line. Today, the corridor is primarily served by Route 74.

The arterial BRT concept would operate on 5th Street and 6th Street, a one-way pair, in downtown Saint Paul. The Randolph/ East 7th BRT would share six stations with the planned METRO Gold and B lines in downtown Saint Paul; and connect with the METRO Green Line and planned Rush Line and Riverview Corridor Modern Streetcar.

Within the Corridor

- **67,800** people – 74,600 by 2040
- **27,200** people of color
- **20,900** low-income people
- **27,700** renters
- **82,500** jobs, including 26,300 low-wage jobs
- **46%** of Route 74 riders are people of color or live in low-income households

Concept Service Plan

The Randolph/ East 7th arterial BRT concept would operate seven days per week, with service every 10 minutes for most of the day. Route 74 would be eliminated and replaced by the arterial BRT service between Ford & Finn and Sun Ray Transit Center. A new Route 324 would be introduced to cover areas north and east of Sun Ray Transit Center currently served by Route 74. Route 324 would operate between the Sun Ray Transit Center and Ivey Avenue & Century Avenue in Maplewood via Ruth Street, East Minnehaha Avenue, Stillwater Avenue, Nokomis Avenue, and East Maryland Avenue. The route would operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
324	-	30	30	30	30	-

BRT Concept by the Numbers

- **11.5 miles** long
- **36** station intersections
- **0.32 miles** on average between stations
- **75%** of existing Route 74 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	3,800
Corridor Ridership Propensity (out of 5.0)*	3.1
Corridor Weekday Forecast Ridership (2040)	5,900

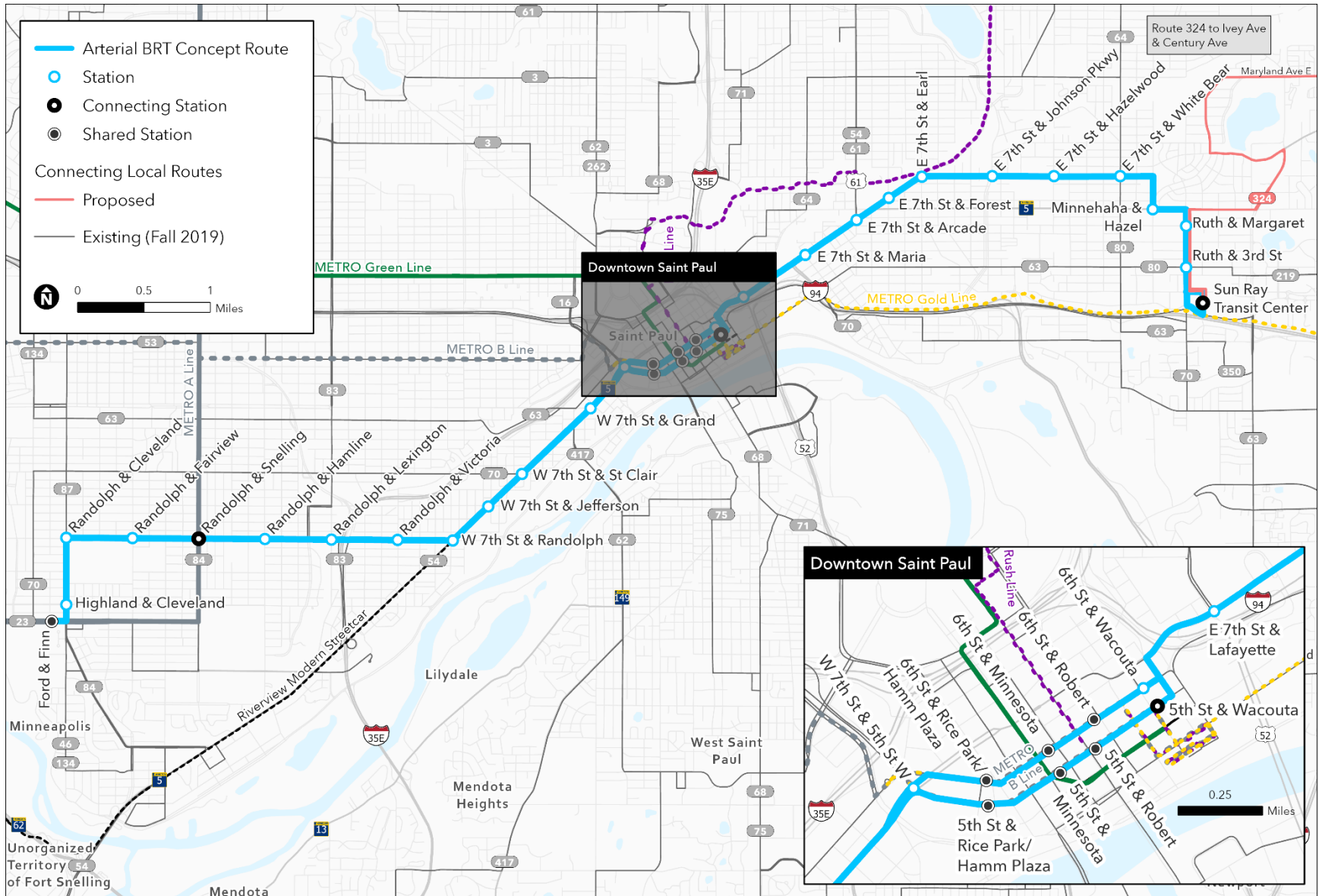
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit’s existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$40.0
Fleet	\$15.9
Other (e.g., right of way, professional svcs., etc.)	\$13.8
Total capital costs	\$69.7

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$15.9
Savings from local service changes	-\$8.2
Net service costs	\$7.7
BRT improvement costs (e.g., maint., TSP, etc.)	\$7.1
Net total annual operations costs*	\$14.8

*Expenses alone; excludes passenger revenue



RICE/ ROBERT

From north to south, the corridor begins in Little Canada, continues south to downtown Saint Paul via Rice Street, and ends at the Northern Dakota County Service Center in West St. Paul via Robert Street. Today, the corridor is primarily served by Route 62 along Rice Street and Route 68 along Robert Street. The arterial BRT concept would operate on Robert Street in downtown Saint Paul, with a shared station with the planned Rush Line at 10th Street. Also in downtown Saint Paul, the Rice Robert BRT would connect with the METRO Green Line and planned METRO Gold and B lines.

Within the Corridor

- **50,100** people – 56,800 by 2040
- **26,100** people of color
- **21,100** low-income people
- **26,900** renters
- **74,300** jobs, including 26,900 low-wage jobs
- **43%** of Route 62 and Route 68 riders are people of color or live in low-income households

Concept Service Plan

The Rice/ Robert arterial BRT concept would operate every 10 minutes for most of the day, seven days per week. Route 62 would be replaced by the BRT and a modified Route 68; the latter would serve areas south of Marie Avenue, to the west of the corridor (e.g., Smith Avenue, today served by Route 62), and east of the corridor (e.g., Jackson Street north of downtown Saint Paul). Modified Route 68 would operate approximately every 15-20 minutes throughout most of the day, seven days per week. Additionally, a new Route 222 would connect the BRT's northern terminal station at Little Canada Transit Center to the Shoreview Community Center about four miles north via Rice Street and Hodgson Road, similar to the existing Route 62C branch. Route 222 would operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
68	20	15	20	15	30	-
222	-	30	30	30	30	-

BRT Concept by the Numbers

- **11.5 miles** long
- **30** station intersections
- **0.38 miles** on average between stations
- **81%** of existing Route 62 and 68 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	3,800
Corridor Ridership Propensity (out of 5.0)*	2.0
Corridor Weekday Forecast Ridership (2040)	9,100

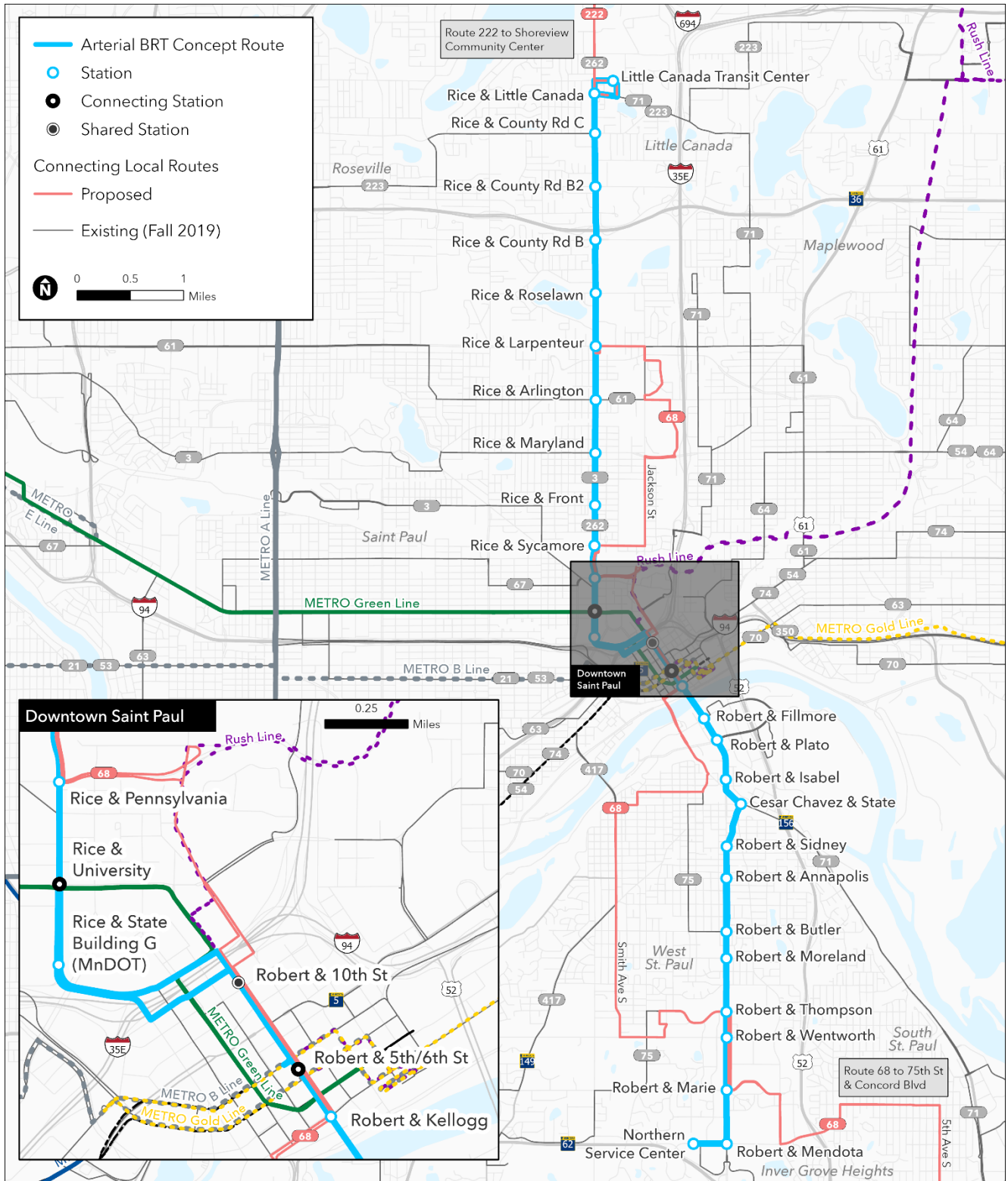
*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$46.2
Fleet	\$15.9
Other (e.g., right of way, professional svcs., etc.)	\$15.9
Total capital costs	\$77.9

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$15.8
Savings from local service changes	+\$3.9
Net service costs	\$19.7
BRT improvement costs (e.g., maint., TSP, etc.)	\$6.7
Net total annual operations costs*	\$26.4

*Expenses alone; excludes passenger revenue



WEST BROADWAY/ CEDAR

From north to south, the corridor begins at the Robbinsdale Transit Center and ends at the METRO Blue Line 38th Street Station in Minneapolis. Today, the corridor is primarily served by Route 14 along West Broadway and Route 22 along Cedar Avenue. In addition to the METRO Blue Line, the arterial BRT concept would connect to METRO Green, B, C, D, and E lines, and the future METRO Blue Line Extension near Robbinsdale Transit Center. The Metropolitan Council is committed to working closely with community and city partners to determine the best course forward for the METRO Blue Line Extension project.

Within the Corridor

- **80,800** people – 90,800 by 2040
- **43,700** people of color
- **32,200** low-income people
- **40,300** renters
- **141,400** jobs, including 46,600 low-wage jobs
- **54%** of Route 14 and Route 22 riders are people of color or live in low-income households

Concept Service Plan

The BRT route would operate every 10 minutes for most of the day, seven days per week. The service plan includes a modified Route 22, representing a combination of existing Routes 14 and 22, to maintain service coverage parallel to and beyond the corridor. Modified Route 22 would travel between 66th Street in Richfield and Brooklyn Center Transit Center via Bloomington Avenue, 7th and 8th Streets in downtown, North Lyndale Avenue, and 57th Avenue North. The route would operate approximately every 10 minutes throughout most of the day, seven days per week. Additionally, a new Route 24 would connect the BRT's southern terminal station at 38th Street to the VA Medical Center via 28th Avenue South. This area is served today by Route 22. The new Route 24 would operate approximately every 30 minutes throughout most of the day, seven days per week.

Proposed Service Headways in Corridor

Route	Early	AM Peak	Midday	PM Peak	Evening	Night
BRT	20	10	10	10	20	30
22	30	10	10	10	30	30
24	-	30	30	30	30	-

BRT Concept by the Numbers

- **10.5 miles** long
- **27** station intersections
- **0.39 miles** on average between stations
- **77%** of existing Route 14 and Route 22 riders in the corridor would be directly served by a station in this concept

Ridership Potential

Existing Weekday Corridor Ridership (Fall 2019)	4,100
Corridor Ridership Propensity (out of 5.0)*	4.3
Corridor Weekday Forecast Ridership (2040)	16,100

*Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership. For additional details, see the Arterial BRT Corridor Evaluation and Prioritization memorandum at metrotransit.org/network-next.

Cost Estimates

Capital Costs (\$ Millions, Year 2024)	
Stations and construction	\$42.3
Fleet	\$16.9
Other (e.g., right of way, professional svcs., etc.)	\$14.6
Total capital costs	\$73.7

Annual Operations Cost (\$ Millions, Year 2025)	
Cost to operate BRT service	\$16.4
Savings from local service changes	-\$5.0
Net service costs	\$11.4
BRT improvement costs (e.g., maint., TSP, etc.)	\$6.3
Net total annual operations costs*	\$17.7

*Expenses alone; excludes passenger revenue

