Arterial BRT Corridor Evaluation

NetworkNEXT

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Metro Transit

SRF

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Introduction

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 bus rapid transit (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 arterial BRT network development. Arterial BRT is one of several types of transit improvements, including service improvements to existing local and express bus routes, new routes, and other 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 is a primary evaluation factor.

Build on success to grow ridership

Arterial BRT corridors are designed as an improvement to 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

Arterial BRT corridors have been identified both for their location within the overall network and their location in areas that have higher residential and employment densities and pedestrian-friendly infrastructure that support regular transit use. Taken together, 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. Additionally, corridors are 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 have been identified in part based on demonstrated ridership success and past sustainability of high-frequency service on local routes.

CORRIDOR SCREENING, EVALUATION, AND PRIORITIZATION

This document summarizes the process, methods, and results of the arterial BRT corridor concept evaluation – the third of four phases in developing a program of projects to build out the arterial BRT network. The complete four-step evaluation process is summarized below.

1. **Identify:** Based on the Network Next Principles, identify approximately 20 corridors to be screened for their fit for arterial BRT implementation.
2. **Screen:** Conduct a screening evaluation to identify the most promising arterial BRT candidate corridors from the group identified in phase one (see *Screening Process and Results* memorandum).
3. **Evaluate:** Develop detailed arterial BRT concepts (see *Preliminary Alignment and Station Siting* memorandum) and apply robust evaluation criteria that incorporate cost, ridership, benefits, and other quantitative data.
4. **Prioritize:** Review top-performing arterial BRT concepts based on a set of project readiness criteria to further prioritize concepts for implementation; this includes coordination with major transitway projects and coordination with local partners.

CORRIDORS

The project team developed corridor concepts for each of the 10 corridors, shown in Table 1, that were advanced through the initial arterial BRT candidate corridor screening. Corridor concepts are meant to represent the application of arterial BRT in each corridor and provide adequate definition to facilitate corridor evaluation. Concepts include alignments, termini, and station locations. For details on each corridor concept, please refer to the *Arterial BRT Corridor Concepts* memo.

Table 1. Arterial BRT Corridors for Evaluation

Corridor	Approximate Terminals	Primary Underlying Route(s)
63rd Avenue/ Zane	Starlite Transit Center to Brooklyn Center Transit Center	724
Central	Downtown Minneapolis to Northtown Transit Center	10
Como/ Maryland	Downtown Minneapolis to Sun Ray Transit Center	3
Grand	Westgate Station to downtown Saint Paul	63
Johnson/ Lyndale	Silver Lake Village to Knox Boulevard and Knox Avenue S	4
Lowry	Robbinsdale Transit Center to Rosedale Transit Center	32
Nicollet	Downtown Minneapolis to American Boulevard	18
Randolph/ East 7th	Cleveland Avenue S and Ford Parkway to Sun Ray Transit Center	74
Rice/ Robert	Little Canada Transit Center to Dakota Co. Northern Service Center	62, 68*
West Broadway/ Cedar	Robbinsdale Transit Center to 38th Street Station	14, 22^

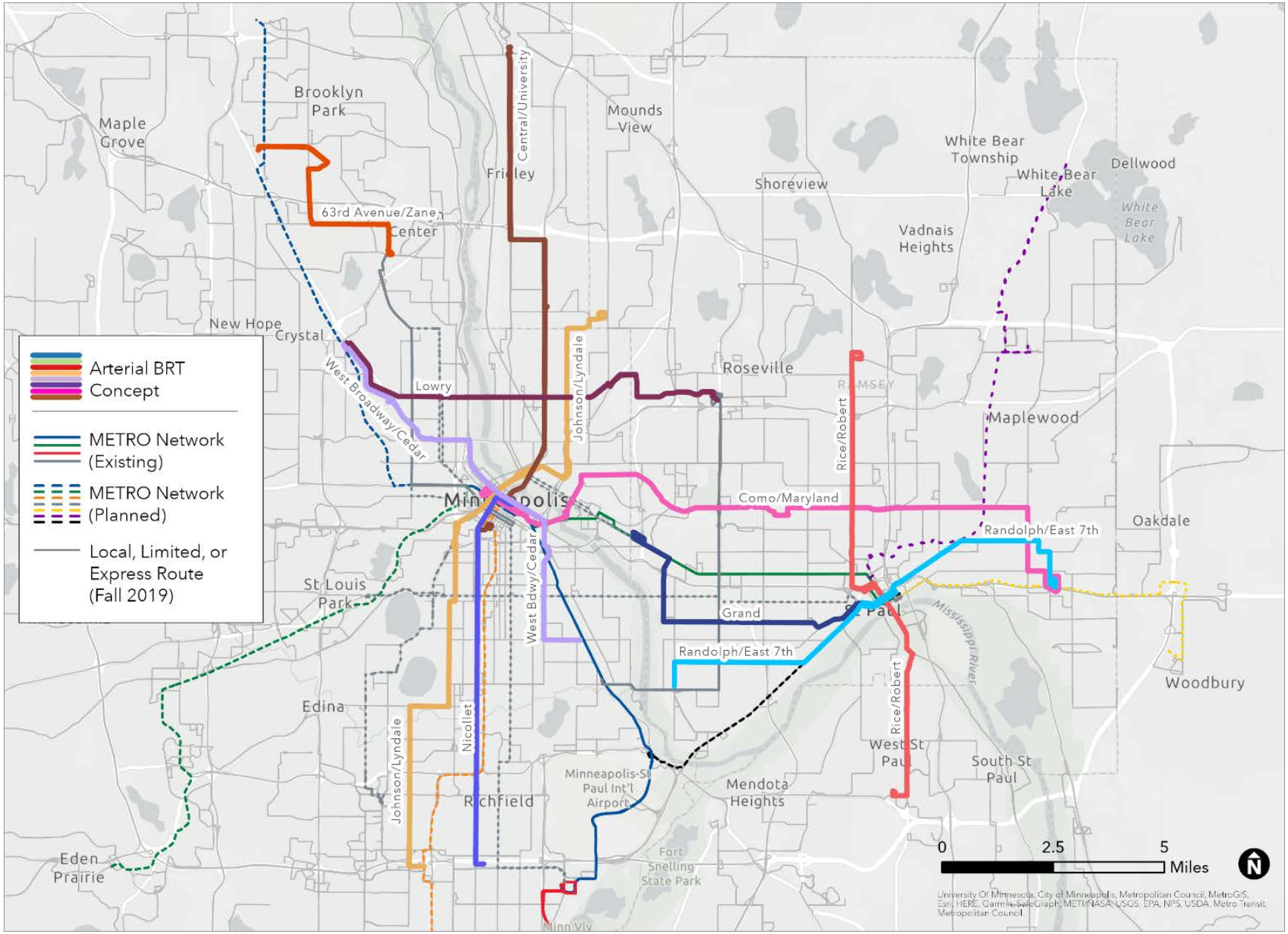
*Routes 62 and 68 are the primary routes on the northern and southern half of the corridor, respectively.
^Routes 14 and 22 are the primary routes on the northern and southern half of the corridor, respectively.

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 St. 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 will not advance in Network Next, leaving the 10 corridors listed above advancing for technical evaluation and prioritization.

Figure 1. Arterial BRT Corridors for Evaluation



Corridor Evaluation

PURPOSE OF CORRIDOR EVALUATION

Evaluation is the third of four phases used to develop a program of projects to build out the arterial BRT network, building upon the screening work completed to identify the most promising arterial BRT candidate corridors.

Technical evaluation criteria are applied to each of the 10 detailed arterial BRT corridor concepts to provide more granular indicators of potential success. These evaluation criteria assess the arterial BRT corridor concepts themselves – which include concept service plans, estimated costs and resource needs, and corridor ridership propensity – as well as the physical, social, and economic contexts in which they would operate.

TECHNICAL EVALUATION CRITERIA & WEIGHTING

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 is assigned a weight, or extent to which it impacts the total evaluation score relative to other Principles. The weight assigned to each of these four Network Next Principles are shown in Table 2.

Table 2. 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%
Total	*100%*

Each corridor is evaluated on a scale of 0 to 100 points in this analysis. For example, under the weighting shown in Table 2, 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.

Shown in Table 3 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 2). 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 3. Corridor Evaluation Criteria

Network Next Principle	**Criterion**	**Maximum Points per Criteria**
Advance equity and reduce regional racial disparities	People of Color	12.50
	Population Living in Poverty	12.50
	Low-Wage Jobs	12.50
	Renters	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
Total Technical Evaluation Score		*100.00*

READINESS EVALUATION CRITERIA

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 overall readiness for implementation. The purpose of the readiness evaluation is to avoid duplicative or conflicting transit improvement planning and investment between partner agencies. The key criterion determining implementation readiness is whether the proposed corridor is substantially impacted by other transit improvement studies led by the Metropolitan Council or other local partner agencies. Corridors affected by

other transit studies or plans are not recommended for near-term implementation but remain good candidates for arterial BRT investment pending the resolution of other planning efforts.

Technical Evaluation Results

Each of the evaluation criteria are described in detail in the following section. In addition to the results and total scores (subjected to weighting as shown in Table 3) for each corridor, each criterion is accompanied by a description of what the criterion is measuring, why the criterion is important to decision making, the methods and sources used for analysis, and how to interpret the results.

Table 19 at the end of this section summarizes the scores for each evaluation criteria and a total evaluation score for all 10 corridors.

PEOPLE OF COLOR

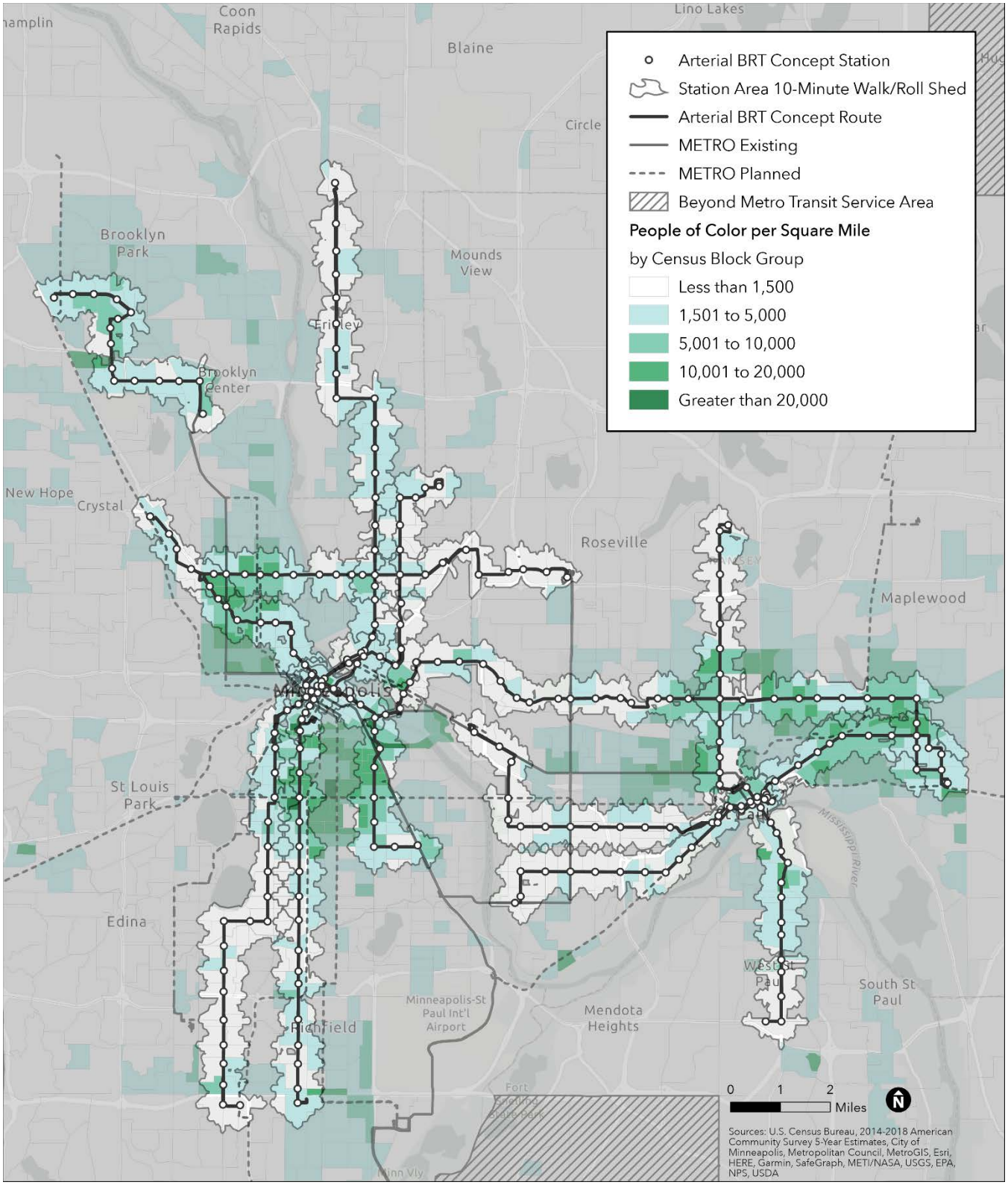
Description	• A measure of the total number of people of color living within a 10-minute walk of at least one of the corridor's conceptual BRT stations • People of color are defined as those who report their race and ethnicity as something other than white, not Hispanic or Latinx
Principle	• Advance equity and reduce regional racial disparities
Why it is Important	• The Twin Cities region has some of the worst disparities in outcomes between white people and people of color in the nation. Transit has an important role to play in reducing those disparities. • The Metropolitan Council seeks to prioritize transit improvements that improve connections between historically disadvantaged populations, including low income populations and people of color, to jobs and opportunities throughout the region.
Weight	• 12.5 percent of total evaluation score, or 12.5 out of 100 points.
Methods and Data Sources	• U.S. Census Bureau, 2014-2018 American Community Survey (ACS) 5-Year Estimates, Table B03002, by block group. • The total number of people identifying their race and ethnicity as something other than white, not Hispanic or Latinx who live within the 10-minute walk/ roll shed (the area an average person could walk/ roll within 10 minutes) around the conceptual BRT stations. For census block groups partially within the 10-minute walk/ roll shed, the population was multiplied by the percentage of the block group area within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher numbers of people of color. Points were allocated relative to the best performing corridor. For example, if there were 12.5 maximum points and the best performing corridor had a result of 5,000 people of color, that corridor would receive 12.5 points; a corridor with a result of 3,000 people of color would receive (3,000/5,000)*12.5 points or 7.5 points.

Table 4. Evaluation Results by Corridor: People of Color

Corridor	People of Color	Rank	Score (Max. 12.50)
Como/ Maryland	51,341	1	12.50
West Broadway/ Cedar	43,697	2	10.64
Johnson/ Lyndale	28,813	3	7.02
Nicollet	27,936	4	6.80
Randolph/ East 7th	27,223	5	6.63
Rice/ Robert	26,081	6	6.35
Central	21,086	7	5.13
Lowry	19,359	8	4.71
63rd/ Zane	16,295	9	3.97
Grand	8,494	10	2.07

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Figure 2. People of Color



POPULATION LIVING IN POVERTY

Description	• Total number of low-income people who reside within a 10-minute walk of at least one of the corridor's conceptual BRT stations • Low income people include all persons with incomes below 185 percent of the 2018 U.S. Census Bureau poverty thresholds[1].
Principle	• Advance equity and reduce regional racial disparities
Why it is Important	• The Metropolitan Council seeks to prioritize transit improvements that improve connections between historically disadvantaged populations, including low income populations and people of color, to jobs and opportunities throughout the region.
Weight	• 12.5 percent of total evaluation score, or 12.5 out of 100 points
Methods and Data Sources	• U.S. Census Bureau, 2014-2018 ACS, Table C17002, by block group • For census block groups partially within the 10-minute walk/ roll shed, the population was multiplied by the percentage of the block group area within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher numbers of low-income people. Points were allocated relative to the best performing corridor.

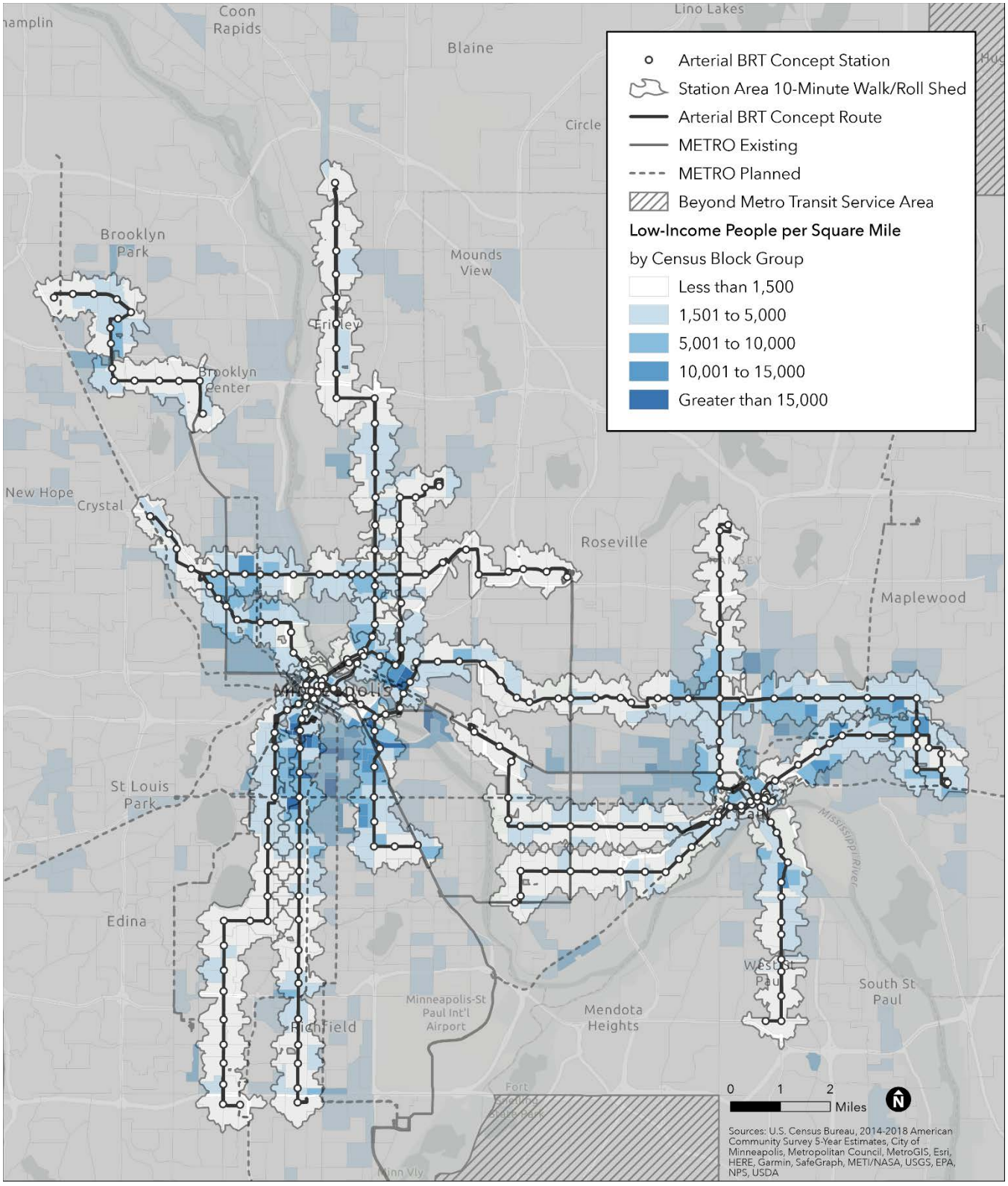
Table 5. Evaluation Results by Corridor: Population Living in Poverty

Corridor	Low-Income People	Rank	Score (Max. 12.50)
Como/ Maryland	42,722	1	12.50
West Broadway/ Cedar	32,221	2	9.43
Johnson/ Lyndale	28,806	3	8.43
Nicollet	23,184	4	6.78
Rice/ Robert	21,068	5	6.16
Randolph/ East 7th	20,911	6	6.12
Central	18,943	7	5.54
Lowry	14,413	8	4.22
Grand	9,424	9	2.76
63rd/ Zane	8,131	10	2.38

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

[1] Available at www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html

Figure 3. Population Living in Poverty (185% Census Bureau Poverty Thresholds)



LOW-WAGE JOBS

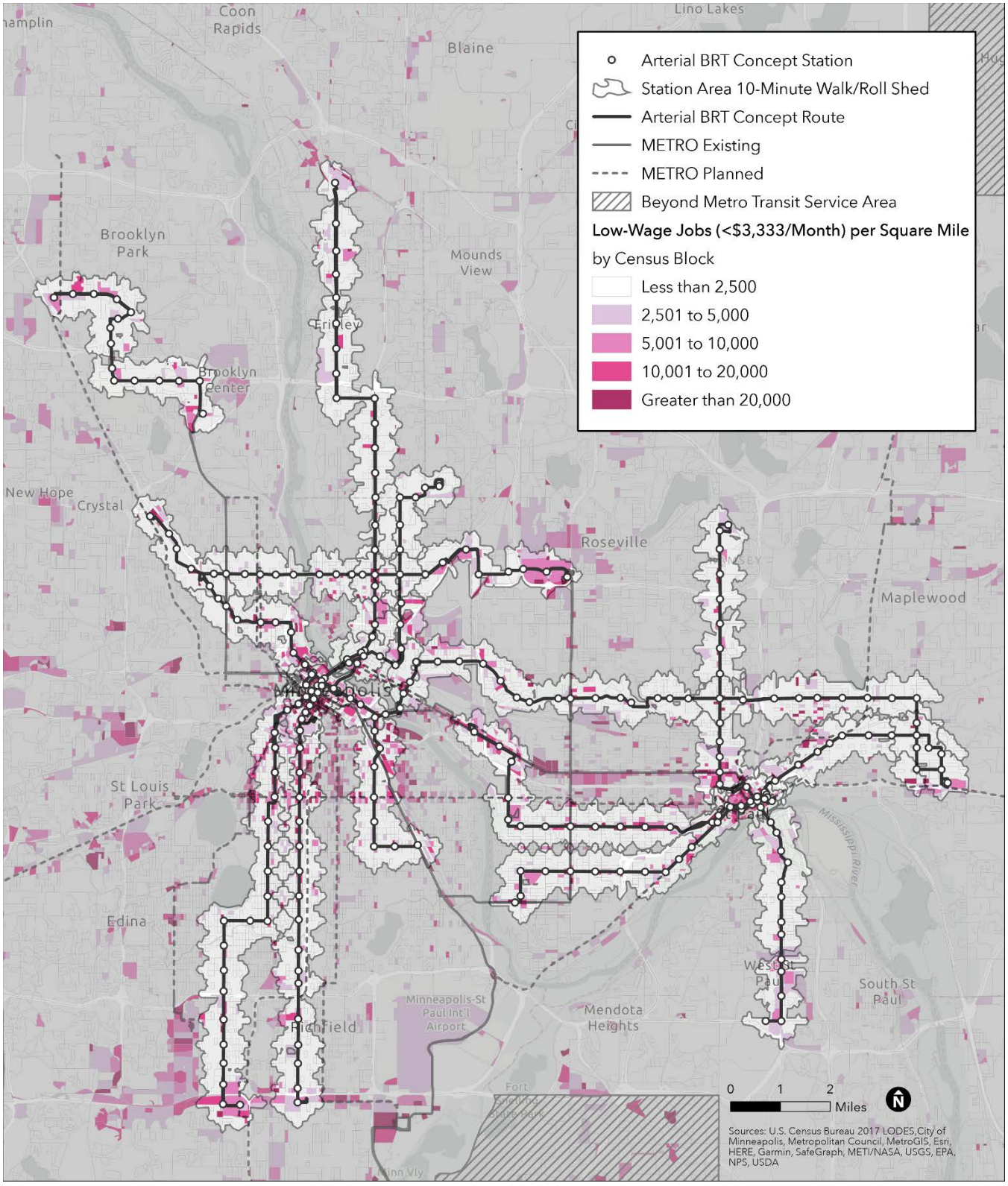
Description	• Total number of lower-wage jobs based within a 10-minute walk of at least one of the corridor's conceptual BRT stations • Low-wage jobs include the number of jobs (primary and secondary) with monthly earnings of $3,333 or less.
Principle	• Advance equity and reduce regional racial disparities
Why it is Important	• The Metropolitan Council seeks to prioritize transit improvements that improve connections between historically disadvantaged populations, including low income populations and people of color, to jobs and opportunities throughout the region.
Weight	• 12.5 percent of total evaluation score, or 12.5 out of 100 points
Methods and Data Sources	• U.S. Census Bureau, 2017 Longitudinal Employer Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) by parcel • Parcels were considered served, and their job values counted, if the center of the parcel was located within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher numbers of low-wage jobs. Points were allocated relative to the best performing corridor.

Table 6. Evaluation Results by Corridor: Low-Wage Jobs

Corridor	Low-Wage Jobs	Rank	Score (Max. 12.50)
Como/ Maryland	60,578	1	12.50
Johnson/ Lyndale	56,079	2	11.57
Central	50,180	3	10.35
Nicollet	47,423	4	9.79
West Broadway/ Cedar	46,599	5	9.62
Grand	30,015	6	6.19
Randolph/ East 7th	26,289	7	5.42
Rice/ Robert	25,828	8	5.33
Lowry	13,321	9	2.75
63rd/ Zane	5,645	10	1.16

Source: U.S. Census Bureau, 2017 Longitudinal Employer Household Dynamics Origin-Destination Employment Statistics

Figure 4. Low-Wage Jobs



RENTERS

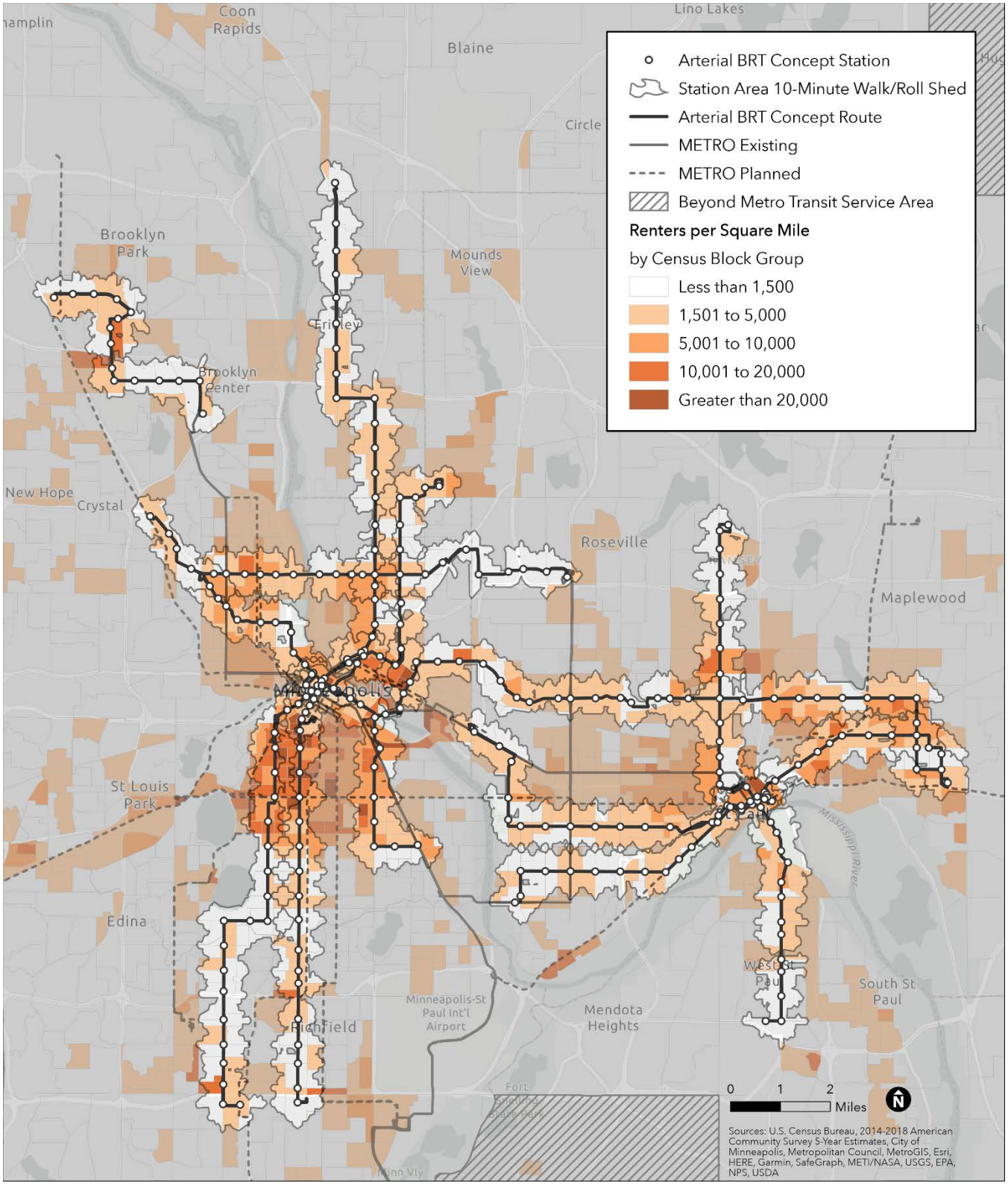
Description	• People who rent their home (renter population) living within a 10-minute walk of at least one of the corridor's conceptual BRT stations • The renter population includes the total number of people living in renter-occupied housing units.
Principle	• Advance equity and reduce regional racial disparities
Why it is Important	• The Metropolitan Council seeks to prioritize transit improvements that improve connections between historically disadvantaged populations, including low income populations and people of color, to jobs and opportunities throughout the region. • Upon reviewing historical ridership data, Metro Transit staff have identified a positive correlation between ridership activity and areas where a greater percentage of the population rent their home.
Weight	• 12.5 percent of total evaluation score, or 12.5 out of 100 points
Methods and Data Sources	• U.S. Census Bureau, 2014-2018 ACS, Table B25008, by block group • For census block groups partially within the 10-minute walk/ roll shed, the population was multiplied by the percentage of the block group area within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher numbers of renters. Points were allocated relative to the best performing corridor.

Table 7. Evaluation Results by Corridor: Renter Population

Corridor	Renter Population	Rank	Score (Max. 12.50)
Johnson/ Lyndale	58,300	1	12.50
Como/ Maryland	50,116	2	10.75
West Broadway/ Cedar	40,325	3	8.65
Nicollet	39,303	4	8.43
Central	30,963	5	6.64
Randolph/ East 7th	27,709	6	5.94
Rice/ Robert	26,931	7	5.77
Grand	19,306	8	4.14
Lowry	17,871	9	3.83
63rd/ Zane	10,162	10	2.18

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates

Figure 5. Renters



BRT RIDERSHIP PROPENSITY

Description	• A measure of propensity to generate BRT ridership • Calculated using a statistical demand model based on demographic and land use predictors of Metro Transit's existing bus ridership
Principle	• Build on success to grow ridership
Why it is Important	• The BRT Propensity value is a proxy for corridor ridership. 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.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources[2]	• The propensity scores were generated using a spatial direct demand model developed by Metro Transit to understand existing bus ridership. The model takes as inputs characteristics of the areas surrounding the proposed corridors, such as percent of residents under 35, or presence of a hospital. There are 11 such predictors overall, which have been found to be influential in predicting existing ridership. Additionally, the model considers the spatial relationship between predictors and geographies, as well as the relationship between neighboring geographies. The model then generates an expected, relative propensity of that corridor to generate rides per day, given a BRT level of service.[3] • The unit of geography in this model is the Census Block Group. All demographic and land use predictors are drawn from U.S. Census Bureau 2014-2018 American Community Survey 5-Year Estimates. Geographic locations of colleges and hospitals were obtained from Open Street Maps. • The propensity scores for each corridor were generated independently of each other, and of other existing transit service. This means that the propensity scores for proposed BRT corridors do not reflect added propensity from connections to other existing or proposed transit. Instead, the propensity score reflects how much relative demand the geography and demographics of a specific corridor would be expected to generate on that corridor alone. • *Propensity values are not ridership forecasts*. These values should only be used to compare corridors to one another. • Corridors receive more points and better scores for higher propensity values. Points were allocated relative to the best performing corridor.

[2] BRT Ridership Propensity replaces corridor-level future ridership forecasts as a technical evaluation criterion. Data availability prevented future ridership forecasting from being included in this analysis. Ridership forecasts are still planned to be completed and will inform additional BRT planning work.

[3] For additional information on the BRT ridership propensity model, see McKnight & Lind, 2021. *Analyzing Bus Ridership with a Spatial Direct Demand Model*. TRBAM-21-04281.

Table 8. Evaluation Results by Corridor: BRT Propensity

Corridor	BRT Propensity Value	Rank	Score (Max. 5.00)
Como/ Maryland	5,108.8	1	5.00
Johnson/ Lyndale	4,881.0	2	4.78
Central	4,875.7	3	4.77
West Broadway/ Cedar	4,342.8	4	4.25
Nicollet	4,170.4	5	4.08
Randolph/ East 7th	3,196.7	6	3.13
Lowry	2,723.4	7	2.67
Rice/ Robert	2,023.1	8	1.98
Grand	1,737.4	9	1.70
63rd/ Zane	1,735.2	10	1.70

RUNNING TIME REDUCTION

Description	• A measure of the projected percent reduction in end-to-end BRT running time (in minutes) compared to the running time (in minutes) of an existing local route operating in comparable space and time
Principle	• Build on success to grow ridership
Why it is Important	• This measure shows the potential in each corridor to reduce travel times for customers and speed up service. It demonstrates the impact of limited-stop operations, off-board fare collection, transit signal priority, and other arterial BRT service improvements on high-ridership routes. It does not include the impact of potential bus lanes or other priority treatments, though those will be developed as each corridor is implemented. • Through customer surveys, customer comments, and conversations during engagement opportunities, Metro Transit customers consistently report that speed, reliability, and safety are very important to their satisfaction and continued use of transit. Performance challenges in these areas are potential barriers to reversing the trend of declining ridership and returning to growth.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources	• Metro Transit used observations of improvement with existing arterial BRT projects, to scale observed running times on existing routes, as follows: o Each BRT candidate corridor was classified into trunk and (if existing) downtown sections o The "free flow time" for each corridor segment was observed as the typical fastest actual operational in-service time from existing route(s) on the segment o The observed typical passenger dwell time (doors open time) along a segment was reduced by 1/3rd to estimate savings from all-door boarding and improved stop spacing o The observed in-service delay (time between stops where bus takes longer than free flow to move along the route) was scaled to match the improvements observed from pre-construction Route 19 to C Line operational speed. This reduction encompasses improvements due to stop spacing, in-lane stop placement, and transit signal priority o The total estimated BRT running time for proposed corridors is calculated as [free flow time + passenger dwell + delay] o Estimated BRT running time (by direction) was compared against observed running time for underlying routes on the corridor, expressed as a percent of total underlying route running time. • Corridors receive more points and better scores for greater absolute change in running time reduction. Points were allocated relative to the best performing corridor. For example, if there were 5 maximum points and the best performing corridor had a 12 percent decrease in running time, that corridor would receive 5 points; a corridor with a 10 percent decrease would receive (-0.10/-0.12)*5 points or 4.2 points.

Table 9. Evaluation Results by Corridor: Running Time Reduction

Corridor	Existing Primary Underlying Route(s)	Projected Percent Change in End-to-End Running Time	Rank	Score (Max. 5.00)
Rice/ Robert	62, 68	-14.1%	1	5.00
Nicollet	18	-13.8%	2	4.89
Lowry	32	-13.6%	3	4.83
Grand	63	-12.6%	4	4.46
West Broadway/ Cedar	14, 22	-12.2%	5	4.34
63rd/ Zane	724	-12.0%	6	4.25
Randolph/ East 7th	74	-11.5%	7	4.09
Johnson/ Lyndale	4	-11.2%	8	3.97
Como/ Maryland	3	-10.9%	9	3.88
Central	10	-10.9%	10	3.87

TRIP DIVERSITY

Description	• A measure related to the probability that two randomly observed passenger trips are of the same trip type or purpose • Reported using a Trip Diversity Indicator, which scales from 0.1 to 1.0, and is based on passenger survey data from the existing primarily underlying local route(s) for each corridor (e.g., Route 4 in the Johnson/Lyndale corridor). The closer to 1, the more evenly distributed the passenger trips are across the different trip type categories in that corridor. The closer to 0, the more the corridor is dominated by a single trip type. • Trips were classified according to time of day and origin/ destination. The following trip type categories were used to assess and compare trip diversity across the different corridors: Peak period work commute (from home to work in the AM rush hour period or from work to home in the PM rush hour period); non-peak period work commute (from home to work outside of rush hours, or in non-peak directions [e.g., from work to home in AM peak]); job to job; college/ university commute; primary/ secondary school (K-12) commute; medical/ appointment; social/ community/ errands; event; and airport.
Principle	• Build on success to grow ridership
Why it is Important	• Routes with greater trip diversity are less susceptible to sudden changes in ridership that may result from unpredicted shocks or changes in factors impacting broad travel patterns (e.g., sudden dramatic increase in telecommuting). • A diverse set of trip purposes may indicate the usefulness of the route for trip chaining and subsequent growth in the number of boardings
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources	• Metropolitan Council, Travel Behavior Inventory (TBI) 2016 Transit On Board Survey • Trips on routes were classified as described above according to time of day and self-reported origin/ destination type. The percent was calculated by dividing each category into the total. • The Trip Diversity Indicator is a measure of evenness, a concept borrowed from biodiversity statistics. First a diversity index is calculated, which is related to the probability that two randomly observed trips are of the same type. The diversity index divided across the number of possible categories gives the evenness (Trip Diversity) indicator. • Trip Diversity Indicator scales from 0.1 to 1.0, with 1.0 being the best possible result. Points were allocated relative to the best performing corridor.

Table 10. Evaluation Results by Corridor: Trip Diversity

Corridor	Trip Diversity Index (Max. 1.000)	Rank	Score (Max. 5.00)
63rd/ Zane	0.583	1	5.00
Como/ Maryland	0.548	2	4.70
Grand	0.530	3	4.54
West Broadway/ Cedar	0.525	4	4.50
Lowry	0.486	5	4.17
Rice/ Robert	0.460	6	3.94
Johnson/ Lyndale	0.447	7	3.83
Central	0.444	8	3.81
Nicollet	0.383	9	3.28
Randolph/ East 7th	0.341	10	2.92

Source: Metropolitan Council, Travel Behavior Inventory 2016 Transit On Board Survey

EXISTING RIDERSHIP SERVED BY BRT STATIONS

Description	• A measure of the proportion of existing riders that would be served directly by the corridor's conceptual BRT stations • Expressed as a percent of existing weekday boardings within the corridor from the primary underlying local route(s) [(e.g., Route 4 in the Johnson/Lyndale corridor] that occurred within approximately one block of the arterial BRT corridor's conceptual stations
Principle	• Build on success to grow ridership
Why it is Important	• This criterion assesses the extent to which the arterial BRT service pattern would fit existing ridership distribution in a corridor. Arterial BRT includes stations approximately every half mile; corridor concepts have been developed to fit the arterial BRT model to each corridor. In corridors with ridership patterns already concentrated around these conceptual station nodes, existing riders would be more easily able to access potential stations. In corridors where ridership is less concentrated around nodes, riders may have to walk or roll further to access BRT service.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources	• Based on Metro Transit's fall 2019 automatic passenger counter (APC) data collected at the bus stop level, using all bus stops served by the existing primary underlying local route(s) within the corridor[4] • Calculated by summing the average weekday boardings from the existing primary underlying local route(s) from all bus stops within 1/8 mile (660 feet or about one long city block) from the arterial BRT station. This value is divided by the total average weekday boardings from the existing primary underlying local route(s) from all bus stops within the corridor. • Corridors receive more points and better scores as they approached 100% of existing average weekday boardings. Points were allocated relative to the best performing corridor.

[4] Because the proposed corridors do not align 1:1 with existing route lines, APC data were used to estimate boarding activity. The average daily boardings reported this way should not be expected to sum to publicly reported annual ridership on a route.

Table 11. Evaluation Results by Corridor: Existing Ridership Served by Concept BRT Stations

Corridor	Existing Underlying Local Route(s)	Existing Weekday Corridor Ridership	Existing Weekday Corridor Ridership within One Block (1/8 mile) of Concept BRT Stations	Percent of Existing Weekday Ridership Served by Concept BRT Stations	Rank	Score (Max. 5.00)
63rd/ Zane	724	1,746	1,572	90.0%	1	5.00
Central	10	7,192	6,086	84.6%	2	4.70
Grand	63	2,789	2,358	84.5%	3	4.70
Lowry	32	1,689	1,396	82.6%	4	4.59
Rice/ Robert	62, 68	3,781	3,043	80.5%	5	4.47
Johnson/ Lyndale	4	5,236	4,129	78.9%	6	4.38
Nicollet	18	9,936	7,710	77.6%	7	4.31
West Broadway/ Cedar	14, 22	3,020	2,336	77.4%	8	4.30
Randolph/ East 7th	74	3,899	2,910	74.6%	9	4.14
Como/ Maryland	3	5,722	3,701	64.7%	10	3.59

Source: Metro Transit, automatic passenger counter boarding data, fall 2019

TOTAL POPULATION

Description	• Total number of people living within a 10-minute walk or roll of at least one of the corridor conceptual BRT stations • Calculated in two time periods, weighted equally: Current, using data representing year 2019, and future, using year 2040 population projections
Principle	• Design a network that supports a transit-oriented lifestyle
Why it is Important	• There is a strong positive correlation between historical Metro Transit boarding activity and population density. • Designing a network that supports a transit-oriented lifestyle means making it easier to use transit for more than just getting to work downtown. It means expanding the network of frequent service, primarily in areas with higher population and employment densities and pedestrian-friendly environments, so that more people have access to transit that allows the flexibility of changing their plans, getting to appointments and errands, or visiting friends and family.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points, split evenly across the two time periods (current and future)
Methods and Data Sources	• Metropolitan Council, 2019 Small Area Estimates by block group • Metropolitan Council, 2040 Population Forecasts by transportation analysis zone (TAZ) • For census block groups and TAZs partially within the 10-minute walk/ roll shed, the population was multiplied by the percentage of the block group area or TAZ within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher population density values. Points were allocated relative to the best performing corridor.

Table 12. Evaluation Results by Corridor: Total Population, Existing (2019) and Future (2040)

Corridor	Existing (2019)			Future (2040)		
	Total Population	Rank	Score (Max. 2.50)	Total Population	Rank	Score (Max. 2.50)
Johnson/ Lyndale	120,958	1	2.50	134,497	1	2.50
Como/ Maryland	99,817	2	2.06	105,220	2	1.96
West Broadway/ Cedar	80,760	3	1.67	90,775	3	1.69
Nicollet	77,300	4	1.60	84,463	4	1.57
Randolph/ East 7th	67,812	5	1.40	74,578	6	1.39
Central	64,895	6	1.34	75,571	5	1.40
Rice/ Robert	50,123	7	1.04	56,798	7	1.06
Grand	48,151	8	1.00	54,174	8	1.01
Lowry	40,694	9	0.84	41,822	9	0.78
63rd/ Zane	24,024	10	0.50	27,352	10	0.51

Source: Metropolitan Council, 2019 Small Area Estimates; Metropolitan Council, 2040 Population Forecasts by Transportation Analysis Zone

Figure 6. Total Population (2019)

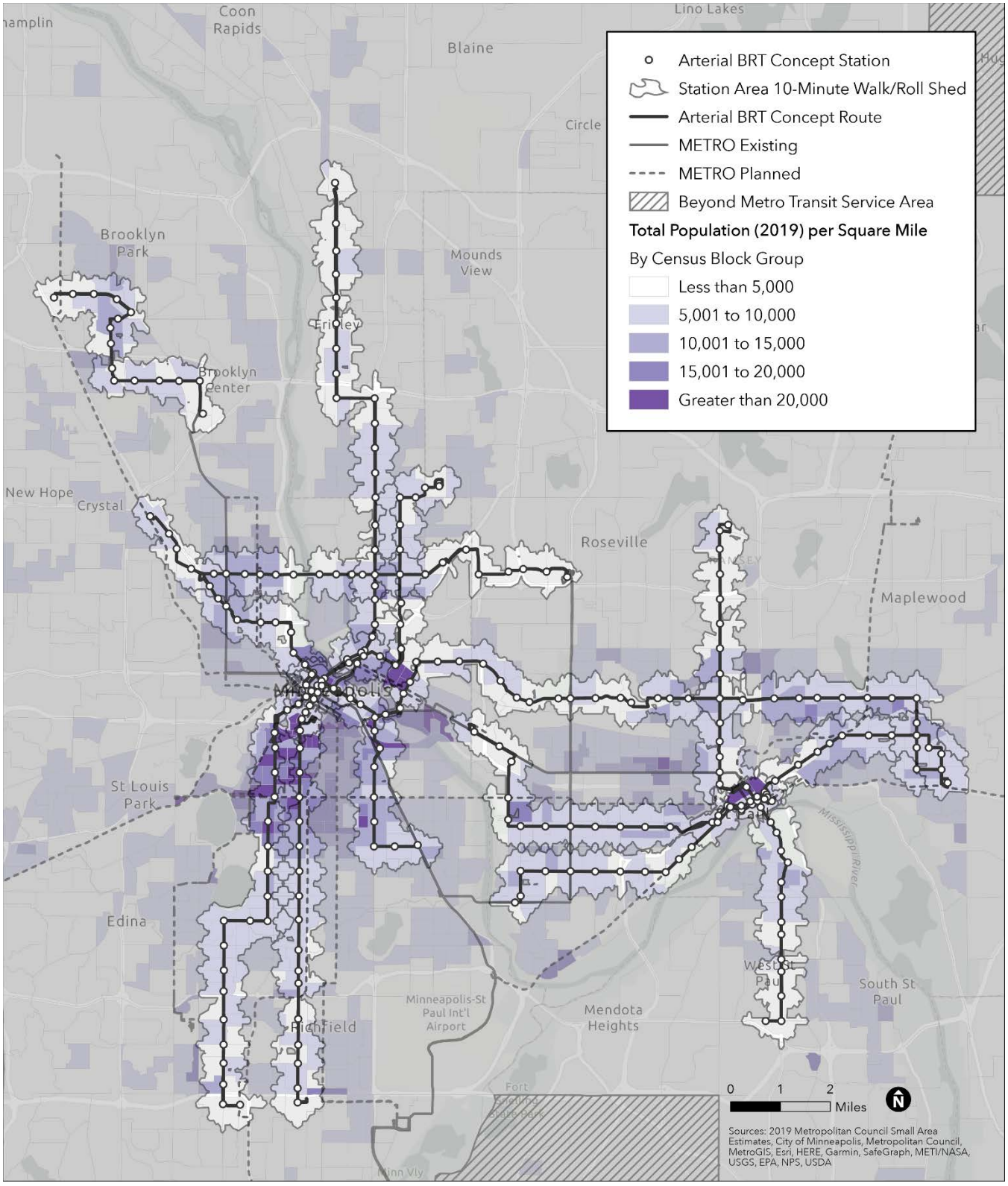
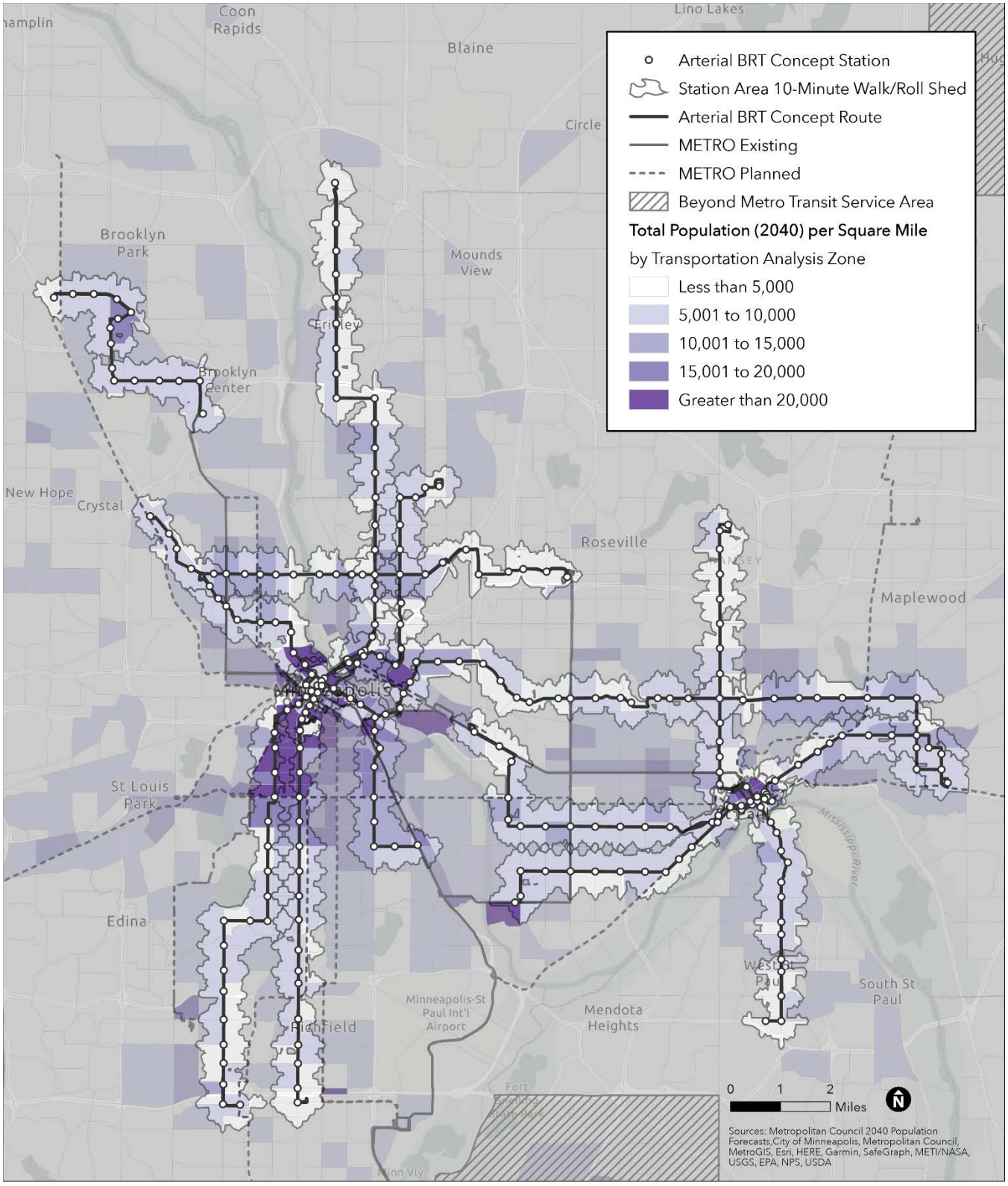


Figure 7. Total Population (2040)



TOTAL JOBS

Description	• Total number of jobs located within a 10-minute walk of at least one of the corridor's conceptual BRT stations • Calculated in two time periods, weighted equally: Current, using data representing year 2017, and future, using year 2040 employment projections
Principle	• Design a network that supports a transit-oriented lifestyle
Why it is Important	• There is a strong positive correlation between historical Metro Transit boarding activity and employment density. • Designing a network that supports a transit-oriented lifestyle means making it easier to use transit for more than just getting to work downtown. It means expanding the network of frequent service, primarily in areas with higher population and employment densities and pedestrian-friendly environments, so that more people have access to transit that allows the flexibility of changing their plans, getting to appointments and errands, or visiting friends and family.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points, split evenly across the two time periods (current and future)
Methods and Data Sources	• U.S. Census Bureau, 2017 LODES by census block. • Metropolitan Council, 2040 Employment Forecasts by TAZ • Parcels were considered served, and their job values counted, if the center of the census block was located within the 10-minute walk/ roll shed. For TAZs partially within the walk/ roll shed, the population was multiplied by the percentage of TAZ within the 10-minute walk/ roll shed. • Corridors receive more points and better scores for higher employment density values. Points were allocated relative to the best performing corridor.

Table 13. Evaluation Results by Corridor: Total Jobs, Existing (2017) and Future (2040)

Corridor	Existing (2017)			Future (2040)		
	Total Jobs	Rank	Score (Max. 2.50)	Total Jobs	Rank	Score (Max. 2.50)
Johnson/ Lyndale	170,580	1	2.50	175,135	1	2.50
Como/ Maryland	170,367	2	2.50	153,763	4	2.19
Central	157,452	3	2.31	166,672	2	2.38
Nicollet	148,289	4	2.17	161,929	3	2.31
West Broadway/ Cedar	141,401	5	2.07	144,303	5	2.06
Randolph/ East 7th	82,524	6	1.21	79,703	8	1.14
Rice/ Robert	74,272	7	1.09	84,761	7	1.21
Grand	73,061	8	1.07	86,586	6	1.24
Lowry	24,291	9	0.36	23,221	9	0.33
63rd/ Zane	7,818	10	0.11	7,679	10	0.11

Source: U.S. Census Bureau, 2017 Longitudinal Employer Household Dynamics Origin-Destination Employment Statistics by Census Block; Metropolitan Council, 2040 Employment Forecasts by Transportation Analysis Zone

Figure 8. Total Jobs (2017)

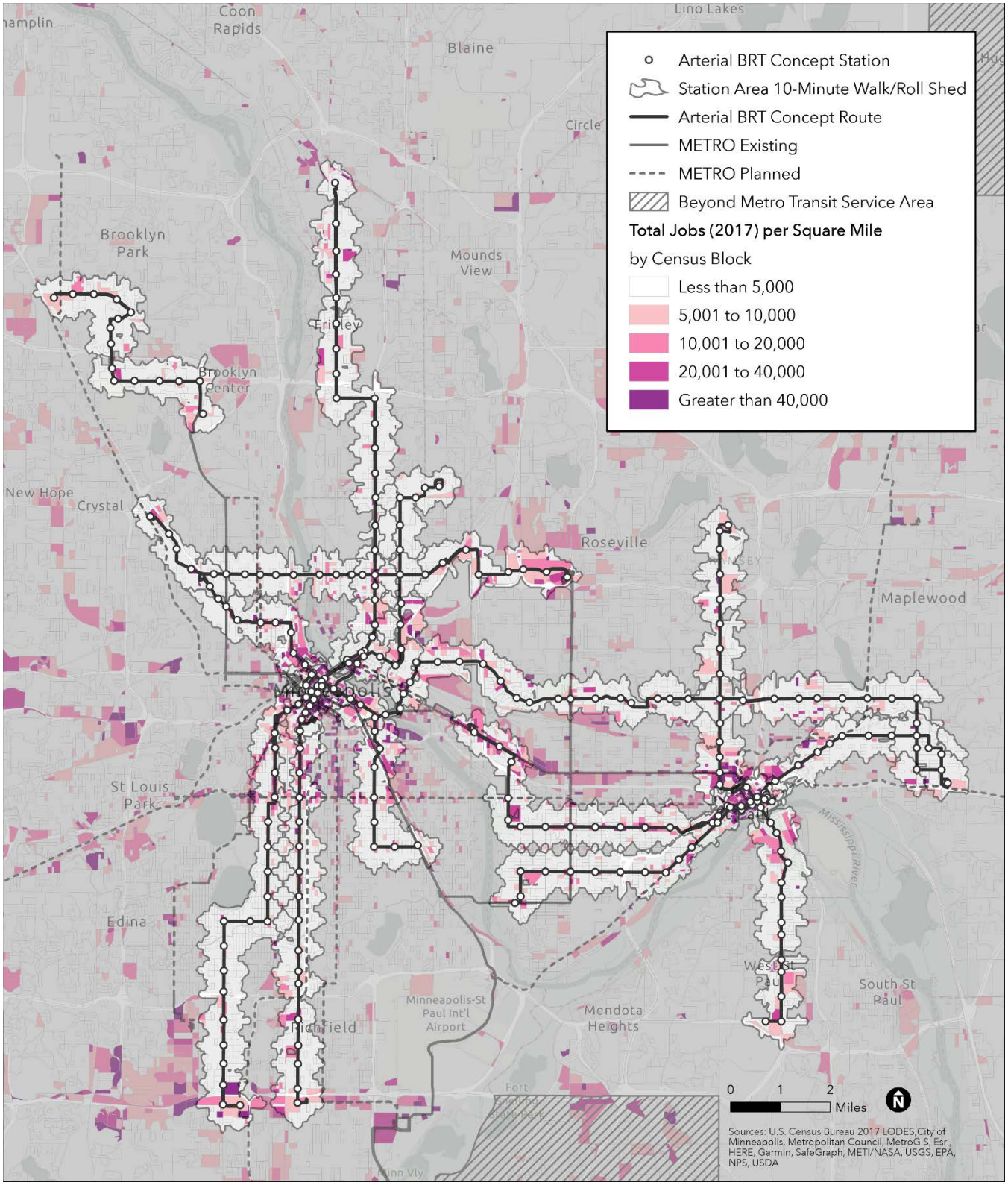
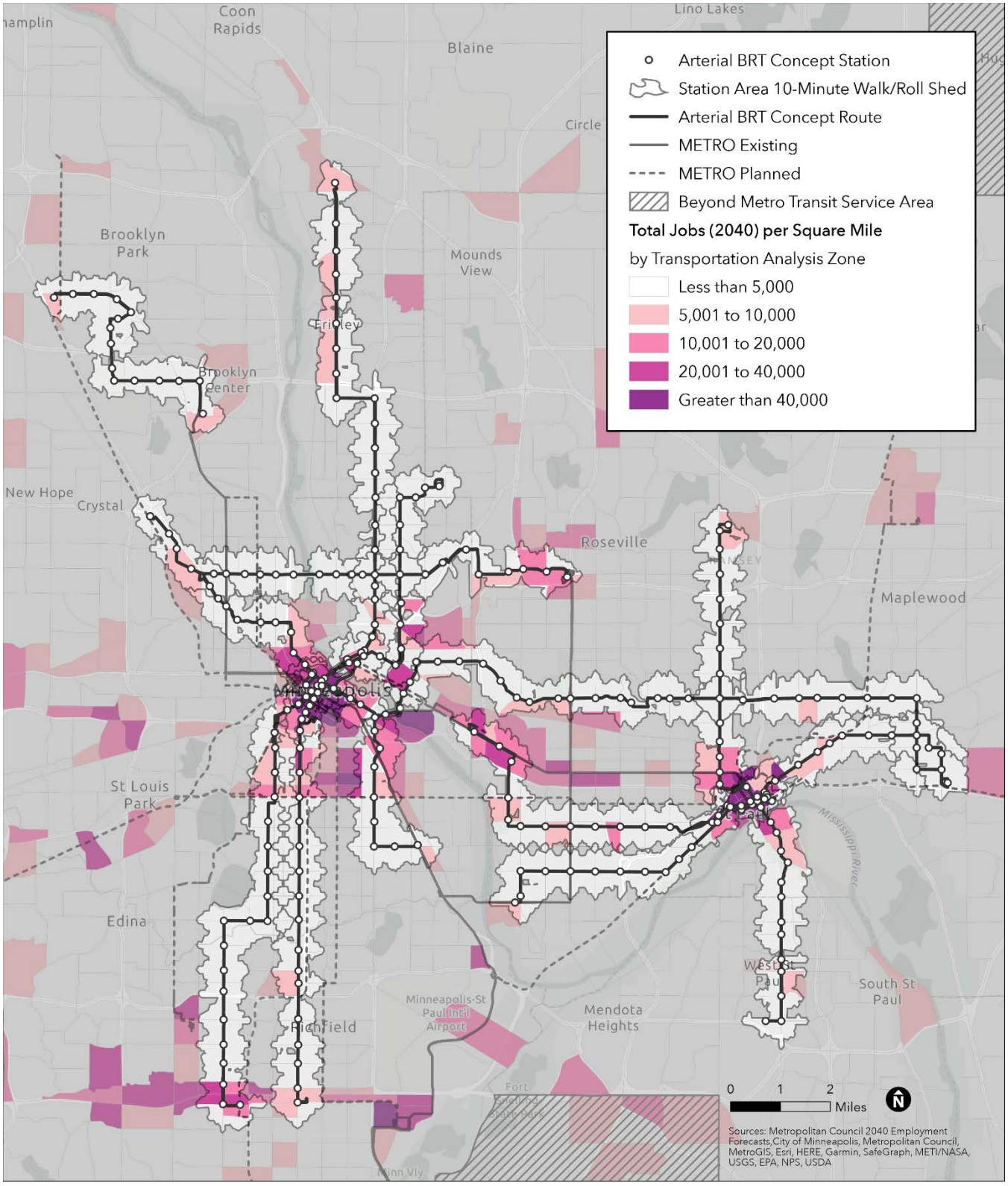


Figure 9. Total Jobs (2040)



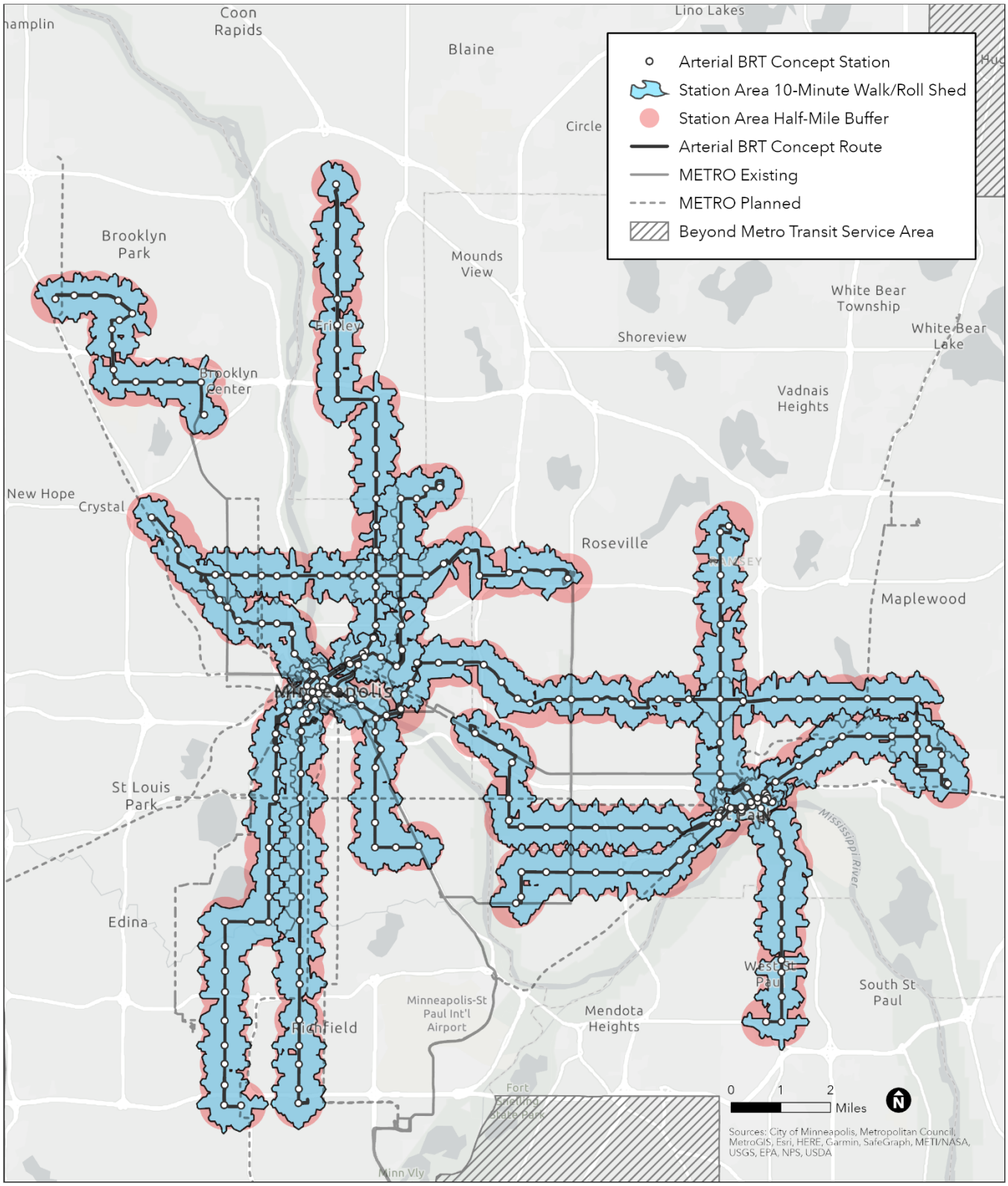
PEDESTRIAN ACCESS

Description	• A measure of the extent to which the area surrounding the arterial BRT corridor's conceptual stations is conducive to pedestrian access. • Reported as a Pedestrian Access Ratio, or the ratio of the area around arterial BRT stations accessible by pedestrian infrastructure to total area around arterial BRT stations, using the cumulative 10-minute walk/ roll shed based on the street network and cumulative half-mile straight line ("as the crow flies") buffers.
Principle	• Design a network that supports a transit-oriented lifestyle
Why it is Important	• All transit riders are pedestrians at some point in their journey. The ability of arterial BRT riders to easily access stations is critical to the success of the service. • The success of transit depends partly on the surrounding physical environment. Ridership on Metro Transit's bus network is highly concentrated in the denser, pedestrian-friendly, urban areas of the region. • Designing a network that supports a transit-oriented lifestyle means making it easier to use transit for more than just getting to work downtown. It means expanding the network of frequent service, primarily in areas with higher population and employment densities and pedestrian-friendly environments, so that more people have access to transit that allows the flexibility of changing their plans, getting to appointments and errands, or visiting friends and family.
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources	• Ten-minute walk/ roll sheds using non-highway street segments and half-mile straight line buffers created using geographic information system (GIS) software. There is not currently a spatial dataset of sidewalks spanning Metro Transit's service areas. This method assumes that non-highway streets have a useable sidewalk. This may not always be the case, but in the absence of a regional dataset of sidewalks, using non-highway street segments provides a high-level estimate of pedestrian accessibility within the street network. • Pedestrian Access Ratio calculated by dividing the number of square miles within the 10-minute station area walk/ roll sheds to the number of square miles within the half-mile straight line station area buffers • The best possible Pedestrian Access Ratio is 1.0 and the worst is 0.0. Points were allocated relative to the best performing corridor.

Table 14. Evaluation Results by Corridor: Pedestrian Access

Corridor	Pedestrian Accessible Area: Ten-minute Access shed around BRT Stations (Square Miles)	Total Area: Half-mile Buffer around BRT Stations (Square Miles)	Pedestrian Access Ratio (Max. 1.00)	Rank	Score (Max. 5.00)
Johnson/ Lyndale	13.24	16.12	0.82	1	5.00
Nicollet	7.46	9.15	0.82	2	4.96
Rice/ Robert	8.95	11.47	0.78	3	4.75
West Broadway/ Cedar	8.02	10.33	0.78	4	4.73
Randolph/ East 7th	8.73	11.29	0.77	5	4.70
Central	9.55	12.36	0.77	6	4.70
Como/ Maryland	12.00	15.91	0.75	7	4.59
Grand	6.11	8.11	0.75	8	4.59
Lowry	7.15	9.81	0.73	9	4.44
63rd/ Zane	4.38	6.07	0.72	10	4.40

Figure 10. Pedestrian Access



TRANSIT-SUPPORTIVE LAND USE

Description	• A measure of the extent to which the area surrounding the arterial BRT corridor's conceptual stations is, or is planned to be, used in a manner that is supportive of frequent transit service • Calculated as the percent of total area within the cumulative 10-minute walk/ roll shed around arterial BRT stations that is categorized as "transit-supportive," based on existing and planned land use classifications. • Calculated in two time periods, weighted equally: Current, using data representing year 2016, and future, using benchmark year 2040 (depending on data availability – see Appendix)
Principle	• Design a network that supports a transit-oriented lifestyle
Why it is Important	• Because transit depends on the surrounding environment for ridership, cities' existing and planned land use are key to the long-term success of investments in arterial BRT. • This future-oriented measure reflects the vision set by community plans and priorities, rather than relying solely on existing conditions
Weight	• 5 percent of total evaluation score, or 5 out of 100 points
Methods and Data Sources	• Metropolitan Council, 2016 Generalized Land Use. See Appendix for details about which land uses were considered "transit-supportive" for the purposes of this analysis. • Metropolitan Council, Regional Planned Land Use (2030/2040)[5]. See Appendix for details about which land uses were considered "transit-supportive" for the purposes of this analysis, as well as which planning benchmark years were used for specific municipalities based on data availability. • Corridors receive more points and better scores for higher percentages of transit-supportive land use. Points were allocated relative to the best performing corridor.

Table 15. Evaluation Results by Corridor: Transit-Supportive Land Use, Existing (2016) and Future

Corridor	Existing Land Use (2016)*			Future Land Use^		
	Percent Transit-Supportive Land Use*	Rank	Score (Max. 2.50)	Percent Transit-Supportive Land Use*	Rank	Score (Max. 2.50)
Nicollet	43.1%	1	2.50	67.5%	6	2.08
Rice/ Robert	42.8%	2	2.48	59.7%	9	1.84
Central	41.3%	3	2.40	60.1%	8	1.85
Grand	40.1%	4	2.33	79.8%	2	2.46
West Broadway/ Cedar	40.1%	5	2.32	71.8%	4	2.22
63rd/ Zane	39.7%	6	2.30	42.8%	10	1.32
Johnson/ Lyndale	38.8%	7	2.25	71.8%	5	2.21
Como/ Maryland	37.0%	8	2.14	77.2%	3	2.38
Randolph/ East 7th	31.9%	9	1.85	81.1%	1	2.50
Lowry	30.4%	10	1.76	65.1%	7	2.01

Source: Metropolitan Council, 2016 Generalized Land Use; Metropolitan Council, Regional Planned Land Use
*See Appendix for details on which land use types were classified as "transit-supportive"
^See Appendix for details on planning benchmark year

Figure 11. Transit-Supportive Land Use, Existing (2016)

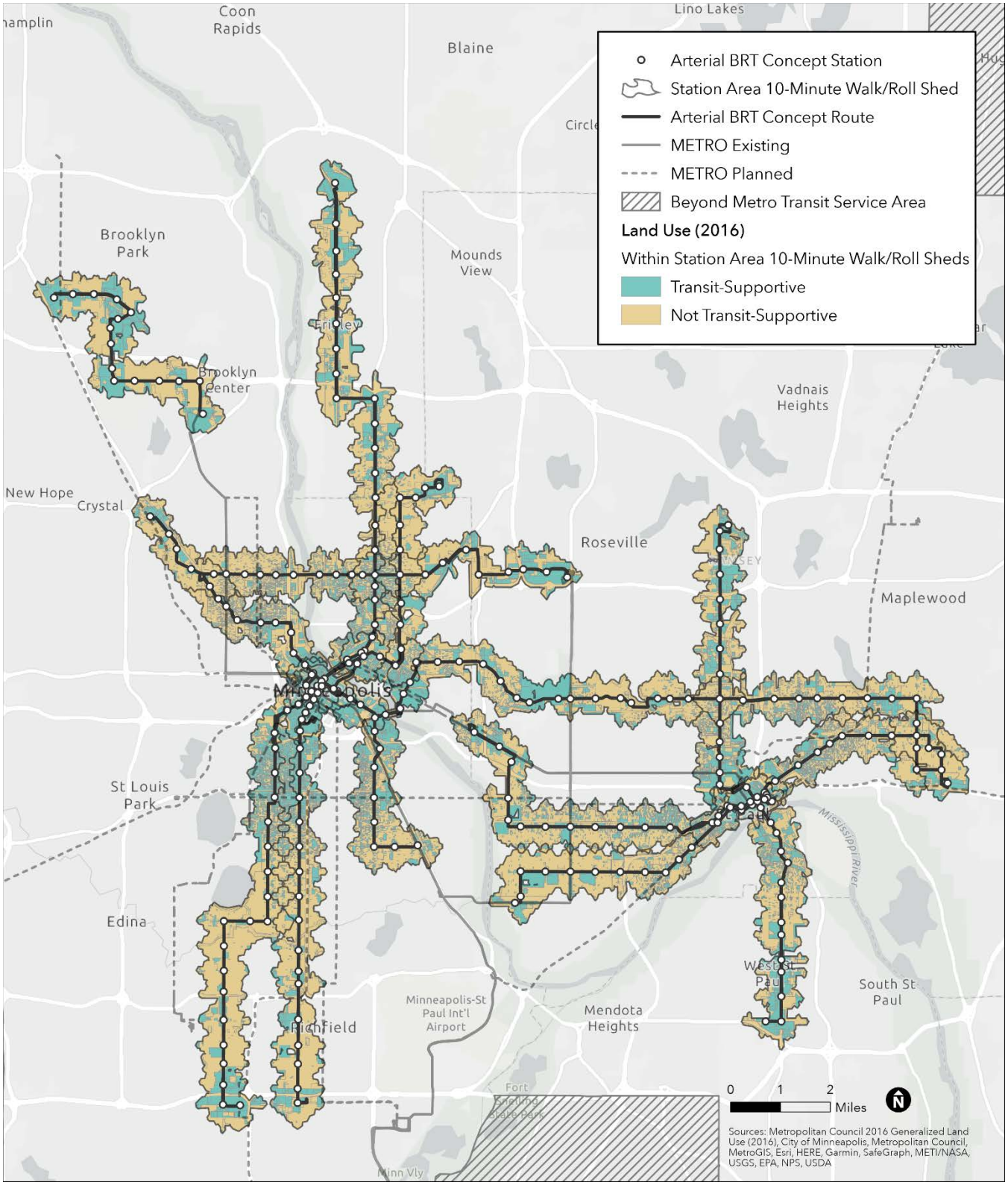
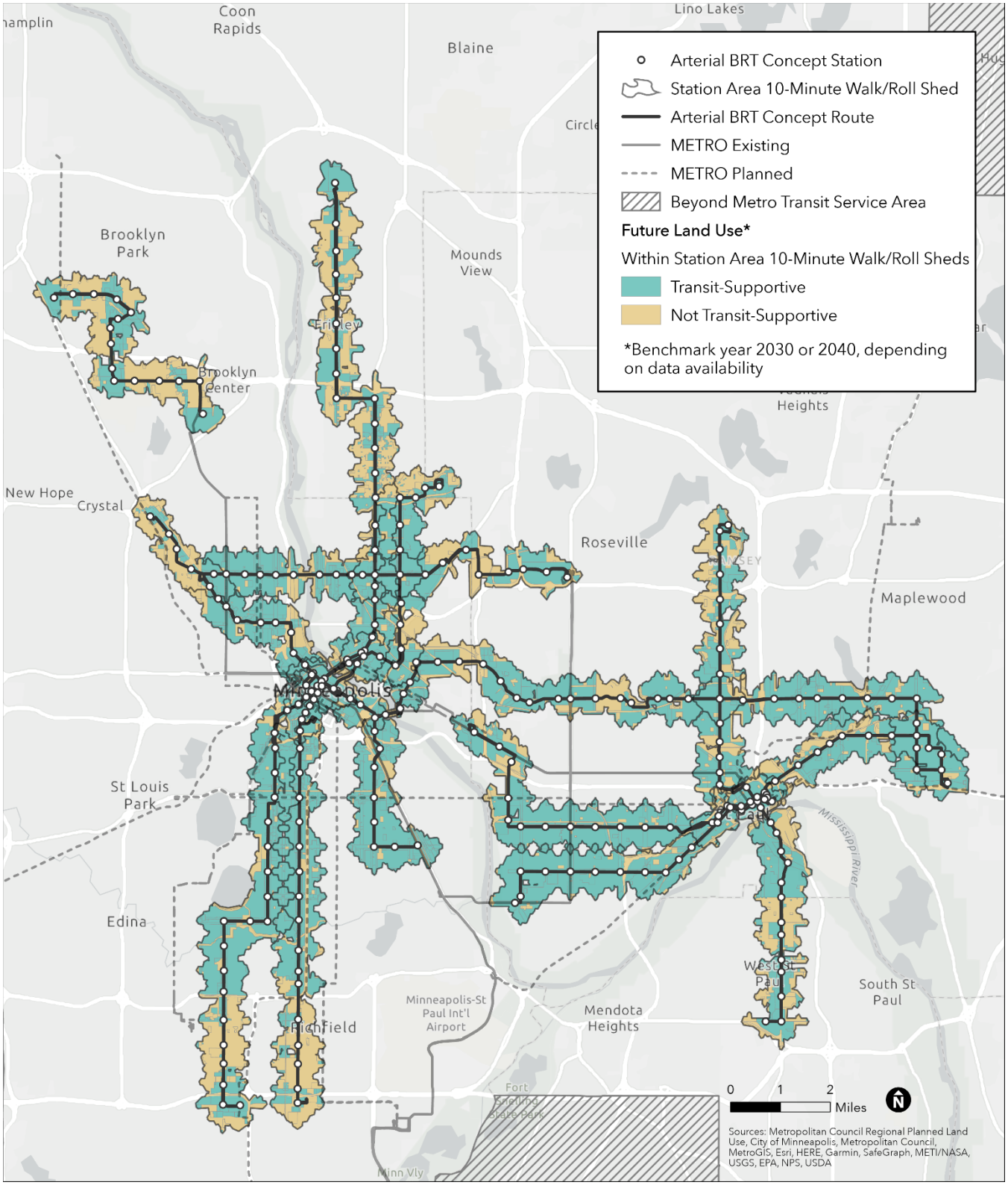


Figure 12. Transit-Supportive Land Use, Future



CAPITAL COSTS

Description	• The estimated total capital cost of the corridor
Principle	• Ensure the long-term sustainable growth of the bus network
Why it is Important	• Funding sources for arterial BRT expansion are limited and constrained. Thus, projects must be prioritized. Capital costs are one of several important considerations in developing a robust bus network that is sustainable long into the future.
Weight	• 3.3 percent of total evaluation score, or 3.3 out of 100 points
Methods and Data Sources	• Total capital costs are grouped into one of five categories: station shelters and pylons, fare collection equipment, other construction (e.g., sitework, communications, facilities), fleet, and other costs (e.g., right of way, professional services, and unallocated contingency). • Costs are for planning purposes only and are intended to compare order of magnitude costs between proposed corridors. Detailed cost estimates would be developed when scope, schedule, and projects are further defined. • Corridors receive more points and better scores for lower total capital cost. Points were allocated relative to the best performing corridor concept.

Table 16. Evaluation Results by Corridor: Capital Costs ($Millions, Year 2024)

Corridor	Stations & Construction	Fleet	Other	Total	Rank	Score (Max. 3.33)
63rd/ Zane	$21.8	$5.9	$7.6	$35.3	1	3.33
Grand	$21.2	$10.9	$7.4	$39.4	2	2.98
Lowry	$36.0	$10.9	$12.5	$59.4	3	1.98
Nicollet	$37.9	$15.9	$13.0	$66.8	4	1.76
Randolph/ East 7th	$40.0	$15.9	$13.8	$69.7	5	1.69
West Broadway/ Cedar	$42.3	$16.9	$14.6	$73.7	6	1.59
Rice/ Robert	$46.2	$15.9	$15.9	$77.9	7	1.51
Central	$47.3	$17.8	$16.2	$81.3	8	1.45
Johnson/ Lyndale	$51.7	$23.8	$17.9	$93.4	9	1.26
Como/ Maryland	$61.5	$21.8	$21.1	$104.5	10	1.13

OPERATIONS AND MAINTENANCE COSTS

Description	• The net total estimated annual operations and maintenance costs of the corridor and any associated underlying local service, compared to the actual operations and maintenance costs for the existing primary underlying local route(s)
Principle	• Ensure the long-term sustainable growth of the bus network
Why it is Important	• Funding sources for transit operations are constrained. Thus, projects must be prioritized. Annual operations and maintenance costs are one of several important considerations in developing a robust bus network that is sustainable long into the future. • Metro Transit must consider the financial sustainability of any service it provides to ensure it can meet communities' mobility needs in the near and long term.
Weight	• 3.3 percent of total evaluation score, or 3.3 out of 100 points
Methods and Data Sources	• Net total annual operations and maintenance costs are comprised of the cost of the BRT and underlying local service plus (based on fall 2019 service levels) savings from changes to existing local service ("net service costs"), and improvement costs, which include those related to station maintenance, fare enforcement, and the operations of transit signal priority (TSP) at corridor intersections. • Costs are for planning purposes only and are intended to compare order of magnitude costs between proposed corridors. Detailed cost estimates will be developed based on additional planning when scope, schedule, and projects are further defined. • Corridors receive more points and better scores for lower net annual operations and maintenance costs. Points were allocated relative to the best performing corridor.

Table 17. Evaluation Results by Corridor: Annual Operations and Maintenance Costs ($Millions, Year 2025)

Corridor	Net Annual Service Costs	Annual Improvement Costs			Net Annual Total Costs	Rank	Score (Max. 3.33)
		Stations	Fare Enforcement	TSP Intersections			
Nicollet	-$0.4	$4.2	$1.3	$0.11	$5.1	1	3.33
63rd/ Zane	$4.5	$2.6	$0.6	$0.05	$7.8	2	2.21
Grand	$4.3	$3.5	$1.0	$0.10	$8.9	3	1.93
Lowry	$8.2	$4.2	$1.0	$0.12	$13.5	4	1.27
Randolph/ East 7th	$7.8	$5.6	$1.4	$0.14	$14.8	5	1.16
Central	$8.6	$5.2	$1.5	$0.25	$15.5	6	1.11
West Broadway/ Cedar	$11.4	$4.7	$1.4	$0.18	$17.7	7	0.97
Como/ Maryland	$12.0	$7.0	$1.9	$0.18	$21.0	8	0.82
Johnson/ Lyndale	$16.5	$7.0	$2.1	$0.25	$25.8	9	0.66
Rice/ Robert	$19.7	$5.2	$1.4	$0.17	$26.4	10	0.65

EXISTING SERVICE LEVELS

Description	• A measure comparing the number of annual service hours associated with the existing primary underlying local route(s) [e.g., Route 4 in the Johnson/Lyndale corridor] relative to the estimated annual service hours of the corridor and any associated underling local route(s) planned • Annual service hours are a significant factor affecting operations and maintenance costs; this criterion identifies corridors where the cost of operating and maintaining the arterial BRT and underlying local route service is already "paid for" or accounted for in Metro Transit's existing operating budget. • Reported as a percent of annual service hours "paid for" by existing service
Principle	• Ensure the long-term sustainable growth of the bus network
Why it is Important	• This measure may identify opportunities to convert existing service into a higher quality product with marginal increases in operations and maintenance cost. • Metro Transit must consider the financial sustainability of any service it provides to ensure it can meet communities' mobility needs in the near and long term.
Weight	• 3.3 percent of total evaluation score, or 3.3 out of 100 points
Methods and Data Sources	• "Existing" service is representative of service from the primarily underlying local route(s) as of October 2019. Calculated for the complete route, regardless of the percentage of the route operating within the arterial BRT corridor. • "Proposed" service is representative of arterial BRT and any accompanying underlying local route service. Not all arterial BRT corridors are proposed to have underlying local service, and some BRT corridors would have multiple underlying local routes. • Calculated using in-service hours, which represents the time between first timepoint and last timepoint on the schedule. In-service hours were calculated for each scheduled trip then summed for each route by day of week. These values were annualized using 255 weekdays, 52 Saturdays, and 58 Sundays/holidays. • Corridors receive more points and better scores for higher percentages of transit-supportive land use. Points were allocated relative to the best performing corridor.

Table 18. Evaluation Results by Corridor: Existing Service Levels in Corridor

Corridor	Existing Annual Service Hours from Local Service	Proposed Annual Service Hours			Existing as Percent of Proposed	Rank	Score (Max. 3.33)
		BRT	Underlying Local	Total			
Nicollet	71,131	63,480	8,298	71,777	99.1%	1	3.33
Grand	40,894	50,522	8,797	59,319	68.9%	2	2.32
West Broadway/ Cedar	102,630	72,008	81,930	153,939	66.7%	3	2.24
Central	58,058	75,652	21,280	96,932	59.9%	4	2.01
Randolph/ East 7th	40,115	67,172	6,108	73,280	54.7%	5	1.84
Como/ Maryland	55,101	97,522	11,126	108,648	50.7%	6	1.71
63rd/ Zane	14,908	27,016	5,876	32,893	45.3%	7	1.52
Johnson/ Lyndale	58,785	103,465	26,767	130,232	45.1%	8	1.52
Rice/ Robert	61,799	60,760	86,929	147,690	41.8%	9	1.41
Lowry	14,526	46,623	0	46,623	31.2%	10	1.05

SUMMARY RESULTS

Table 19 summarizes the scores for each evaluation criteria applied to all 10 corridors.

Table 19. Evaluation Results 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
	Renters (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%)	BRT 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*

Readiness Evaluation Results

PURPOSE

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.

CRITERIA

Is the corridor affected by other transit plans or studies?

The key criterion determining implementation readiness is 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, Hennepin County and the Metropolitan Council 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 of these 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:

https://metrocouncil.org/Transportation/Projects/Light-Rail-Projects/METRO-Blue-Line-Extension.aspx

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 Locally Preferred Alternative, 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 Locally Preferred Alternative 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 St. 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:
https://www.ramseycounty.us/residents/roads-transportation/transit-corridors-studies/riverview-corridor

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 to develop arterial BRT in the Robert Street corridor. As a result of these factors the Rice/ Robert corridor should be considered for near-term implementation.

Recommended Implementation Tiers

Based on the technical and readiness evaluation results, the 10 corridors studied in this effort have been 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. The METRO F, G, and H Line will be identified from this tier, and implemented in alphabetical order, following the construction of the planned E Line in 2023. 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 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 CORRIDORS

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

- 63rd/ Zane
- Grand
- Lowry

Figure 13 below illustrates the two-step process of applying the technical evaluation score and the readiness evaluation to the studied corridors to determine the corridor groupings into prioritization tiers.

Figure 13. Arterial BRT Corridor Evaluation, Readiness, and Prioritization Results

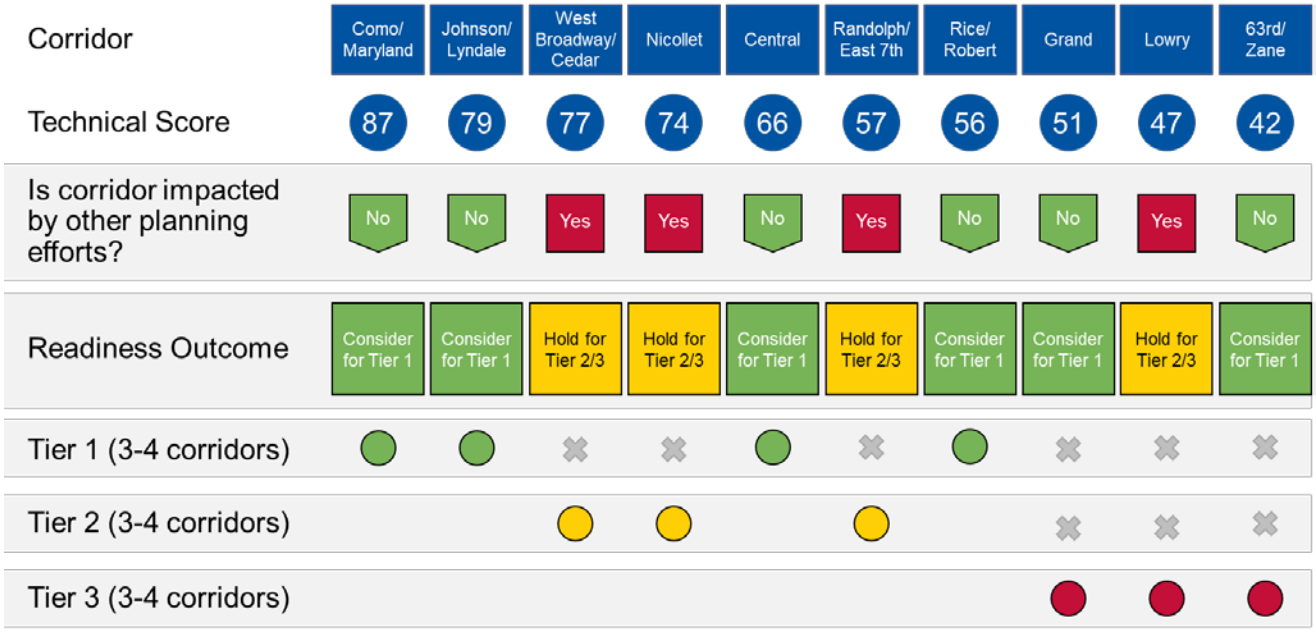
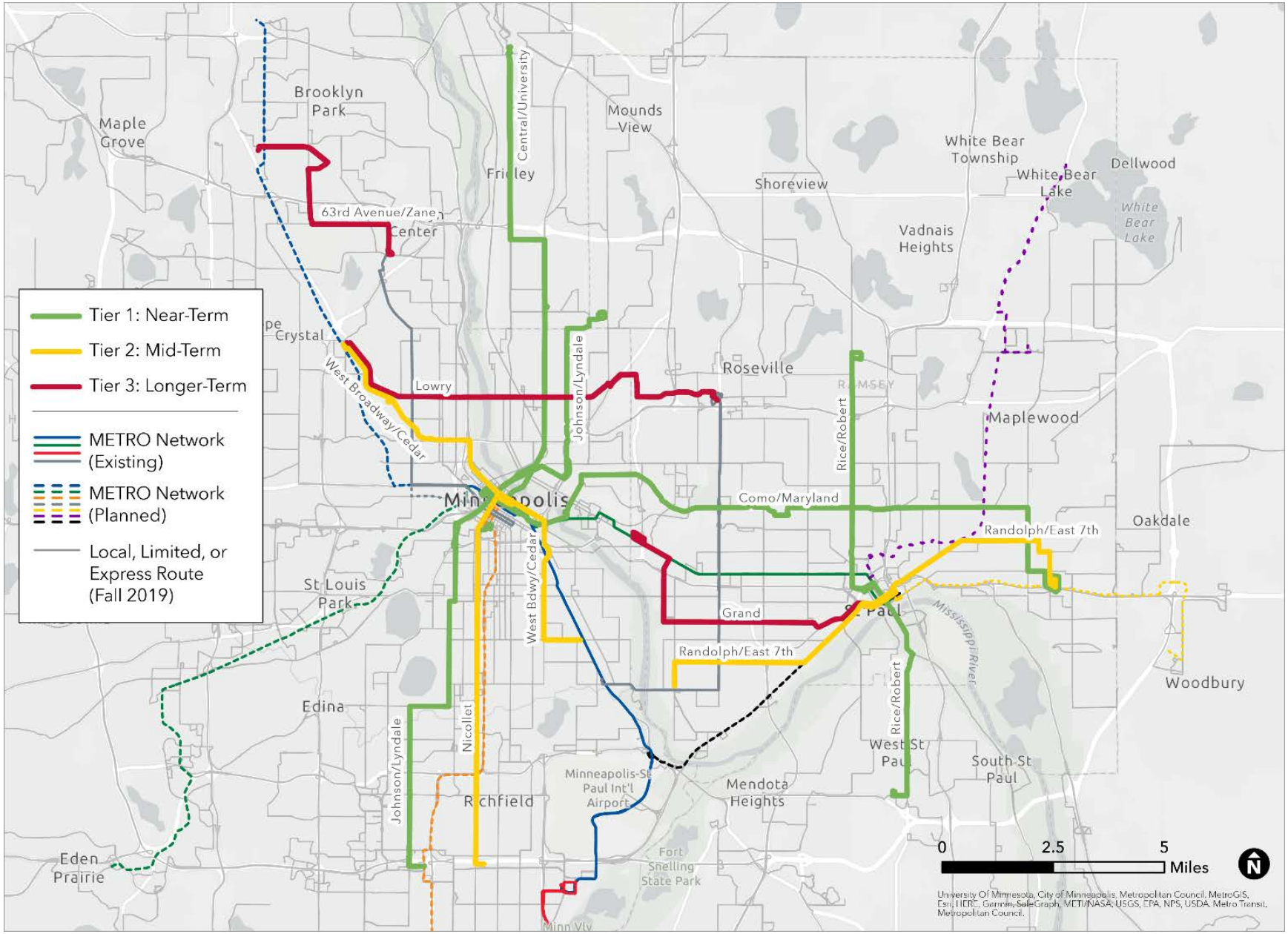


Figure 14. Arterial BRT Corridors by Prioritization Tiers



Appendix

LAND USE CLASSIFICATIONS

Transit-supportive land use is one of 15 evaluation criteria used to compare and rank the 10 arterial BRT corridors (Table 3). See Transit-Supportive Land Use and Table 15 for additional information and evaluation results. Below are technical notes regarding the transit-supportive land use source data, including "transit-supportive" designations by land use classification.

Existing Land Use

The Metropolitan Council categorizes individual communities' land use codes into common classifications for reporting at the regional level. Table 20 lists all common land use classifications, along with an indication of whether or not the land use was considered "transit-supportive" for the purposes of this evaluation. The source of these data is the Metropolitan Council's 2016 Generalized Land Use dataset, available at https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-generl-lnduse2016.

Future Land Use

The Metropolitan Council categorizes individual communities' *planned* land use codes into common classifications for reporting at the regional level. Table 21 lists all common detailed planned land use classifications, including an indication of whether or not the planned land use was considered "transit-supportive" for the purposes of this evaluation. The source of these data is the Metropolitan Council's Regional Planned Land Use dataset, available at https://gisdata.mn.gov/dataset/us-mn-state-metc-plan-pland-land-use.

The Council's dataset used was last updated September 23, 2020. At that time, several municipalities had not yet submitted, finalized, or had their 2040 planned land use incorporated into the regional dataset. As such, **the following municipalities' planned land use is representative of benchmark year 2030, rather than year 2040, in this report's analysis**: Blaine, Edina, Fridley, Hilltop, Little Canada, Robbinsdale, Roseville, St. Anthony, St. Paul, and Sunfish Lake.

Table 20. Generalized Land Use Classifications, 2016

Land Use Classification	Description	Transit-Supportive
Agricultural	Land used for agricultural purposes. Includes discernable cultivation (Ex: ground tillage or crop rows) horticulture, floriculture (exotic flowers), viticulture (grapes) activities, pasture, and a broad range of other agricultural activities such as horse boarding and training, kennels, sod farms, tree farms, fish production and processing, storage areas or buildings). Agricultural buildings (including feedlots) that are not surrounding a farmstead (see definition above) are included in this category.	No
Farmstead	Land that encompasses the single family residential dwelling and associated buildings of a farm. Associated buildings of a farm may include buildings used for animal husbandry (barns, chicken coops, grain solos, etc.) along with accessory uses, provided that such accessory uses are incidental to the agricultural activities.	No
Seasonal/Vacation	Land meeting the general definition of single-family residential containing a dwelling unit occupied seasonally or used as vacation property.	No
Single Family Detached	Land meeting the general definition of single-family residential and detached from any other residential dwelling unit (i.e., with open space on all four sides). Includes detached townhomes.	No
Single Family Attached	Land meeting the general definition of multifamily residential containing two or more attached dwelling units (share a common wall, each with primary ground floor access to the outside. Examples: attached townhome, double bungalow, triplex, large multi-unit structures with each unit having its own external entrance, etc.	Yes
Multifamily	Land meeting the general definition of residential containing two or more attached dwelling units, one or more of which does not have primary ground floor access to the outside. Examples: Apartment building, condominium with a main entrance for all residents.	Yes
Manufactured Housing Parks	Land meeting the general definition of Single-Family, Detached dwelling and designated for the placement of multiple manufactured housing structures. Note: this classification IS NOT used for an individual manufactured home.	Yes
Retail and Other Commercial	Land used for the provision of goods or services. This category is for general sales and services that comprise the vast majority of establishments typically associated with commercial land use. This category is used as the default for commercial/retail land uses. Examples: store, restaurant, hotel, bank, daycare facility, mini-storage facility, Metrodome, Excel Center, Canterbury Downs, YMCA, American Legion, skeet club/outdoor gun range (large game/gun clubs - 80 acres or more - will be coded as Park and Rec.).	Yes
Office	Land used predominantly for administrative, professional, or clerical services. Examples: law offices, accounting firms, clinics (but not hospitals), and veterinary clinics. Government office buildings are generally categories as Institutional. However, where government offices are housed on a privately owned parcel (e.g. leased office space), they may be included in the Office category.	Yes
Mixed Use Residential	Land containing a building with multiple uses in combination with at least a residential unit(s). Examples include: Galtier Plaza in St. Paul, a mom & pop bakery with living space above it.	Yes
Mixed Use Industrial	Land containing a building with multiple uses in combination with industrial uses and NO residential units. An example would be a building containing a warehouse, offices, and stores.	Yes
Golf Course	Land used for golfing, including driving range and practice areas.	No

Land Use Classification	Description	Transit-Supportive
Major Highway	Major roadway strips of land or area, on which a vehicular rights-of-passage exists under the following conditions: all interstate highways; all 4-lane divided highways with rights-of-way of 200 feet or greater in width; or all 4-lane roads with a Metropolitan Council functional class designation of "Principal Arterial". NOTE: Where closely aligned frontage roads exist along vehicular rights-of-way which meet the preceding criteria, these frontage roads will be included in the total rights-of-way. Additionally, land uses occurring within a Major Highway rights-of-way, as specified above, but clearly has a different use (i.e., agriculture - row crops) are to be classified by its actual use. In addition, for consistency, if some major roadways that don't meet the above criteria yet have been classified as a Major Highway in past land use dataset, will remain Major Highway. Includes Park-n-Rides lots adjacent to Major Highways	No
Railway	Land used and occupied or intended to be occupied by multiple railroad track lines or similar uses. This includes railroad classification, storage and repair yards; intermodal containerized freight and transload facilities; railroad depots, etc. that might otherwise be classified under as industrial Note: Single-track railroads are not delineated.	No
Airport	Land used for the operation of aircraft and any related uses that are on the airport property (Ex: parking lot or car rental) Uses such as ball fields on the airport property would not be included in this category.	Yes
Undeveloped	Land not currently used for any defined purpose that may or may not contain buildings or other structures or has no discernable use based on the aerial photos or available data. Undeveloped may include non-protected wetlands or lands currently under development. NOTE: These lands are NOT necessarily available for development.	No
Water	A body of open water or flowing waterway inclusive within a discernable shoreline. This typically does not include wetlands or periodically flooded areas. Generally only features three acres or greater in size were delineated. Areas definable as another land use type will not be depicted as in the Water category (e.g. major highway bridge over a river and marina).	No

Table 21. Regional Planned Land Use

Land Use Classification	Description	Transit-Supportive
Agricultural, Undifferentiated	Land used for agricultural purposes, including farming, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry and accessory uses provided that such accessory uses shall be incidental to the agricultural activities.	No
Farmstead	Land used constituting the area comprising of the livable space; house and surrounding agricultural buildings and activities which may include small dairying, and animal or poultry husbandry operations.	No
Cropland	Land used for agricultural purposes, including farming, pasturage, horticulture, floriculture, viticulture, and accessory uses.	No
Agricultural Support & Other	Land used for agricultural purposes, including major dairying, and animal or poultry husbandry operations; other unclassified accessory agricultural activities provided that such accessory uses shall be incidental to the agricultural activities.	No
Rural Residential	Land containing a building or portion thereof used for residential purposes, including mostly one-family homes, but may include some two-family (code 219), but not including hotels, motels, and boarding and lodging houses, nursing homes, or elderly care facilities; may include land used for agricultural purposes, including farming, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry and accessory uses; provided that such accessory uses shall be incidental to the agricultural activities. Housing development across the land use designation should not exceed 1 housing unit per 2.5 acre and no less than 1 housing unit per 40 acres.	No
Large-Lot Residential, Undifferentiated	Land containing a building or portion thereof used for residential purposes, including mostly one-family homes, but may include some two-family (code 219), but not including hotels, motels, and boarding and lodging houses, nursing homes, or elderly care facilities; most likely does not include any land for agricultural purposes. Housing development across the land use designation should not exceed 1 housing unit per 1 acre and no less than 1 housing unit per 2.5 acres.	No
Single Family, Detached Residential	Land meeting the general definition of residential and containing a residential building with not more than one dwelling unit entirely surrounded by open space on the same lot.	No
Seasonal/ Vacation Residential	Land that provides seasonal activities that may contain a single dwelling unit residential building that meets the general definition of residential the land and/or residence does not serve as a primary residence of an owner.	No
Manufactured Housing Park	Land meeting the general definition of residential and under single ownership that has been planned and improved for the placement of manufactured housing for dwelling purposes.	Yes
Single Family Residential, Undifferentiated	Land containing a building or portion thereof used exclusively for residential purposes, including one-family, two family, and multiple-family dwellings, but not including hotels, motels, and boarding and lodging houses, nursing homes, or elderly care facilities; or open space within or related to a residential development, not in individually owned lots or dedicated for public use, but which is designed and intended for the common use or enjoyment of the residents of the development. Residential type are unknown and housing density community designation is unknown or known to be low (approximately less than 4 to 6 units per acre).	No

Land Use Classification	Description	Transit-Supportive
Single Family, Detached or Attached Residential	Land meeting the general definition of residential and containing a residential building with not more than one dwelling unit entirely surrounded by open space on the same lot - or one or more buildings containing two or more dwelling units, each of which has primary ground floor access to the outside and which are attached to each other by party walls without openings	Yes, but only where the Metropolitan Council has also assigned the parcel a regional housing density range of "high" [8.1 to 12 housing units per acre] or greater
Single Family, Attached Residential	Land meeting the general definition of residential and containing one or more buildings containing two or more dwelling units, each of which has primary ground floor access to the outside and which are attached to each other by party walls without openings.	Yes
Single Family, Attached or Multifamily Residential	Land meeting the general definition of residential and containing one or more buildings containing one or more buildings containing two or more dwelling units, each of which has primary ground floor access to the outside and which are attached to each other by party walls without openings - or three or more dwelling units, one or more of which does not have primary ground floor access to the outside and which are attached to each other by party walls without openings.	Yes
Multi-Family	Land meeting the general definition of residential and containing one or more buildings containing three or more dwelling units, one or more of which does not have primary ground floor access to the outside and which are attached to each other by party walls without openings.	Yes
Multifamily Residential, Undifferentiated	Land containing a building or portion thereof used exclusively for residential purposes, including one-family, two-family, and multiple-family dwellings, but not including hotels, motels, and boarding and lodging houses, nursing homes, or elderly care facilities; or open space within or related to a residential development, not in individually owned lots or dedicated for public use, but which is designed and intended for the common use or enjoyment of the residents of the development. Residential type are unknown and housing density community designation is known to be "higher" (approximately 4 to 6 units per acre or more).	Yes
Commercial, Retail or Undifferentiated	Land use primarily engaged in the provision of goods or services for an unspecified market area.	Yes

Land Use Classification	Description	Transit-Supportive
Neighborhood Commercial	Land use primarily engaged in the provision of goods or services with a primary service radius of 1 to 1.5 miles. Neighborhood Commercial/Retail Land Uses would typically be located in a predominantly residential area and have a Gross Leasable Area (GLA) of approximately 25,000 square feet or less.	Yes
Community Commercial	Land use principally engaged in the provision of goods or services with a primary service radius of 3 to 5 miles. Community Commercial/Retail Land Uses would typically be located in a small commercial/retail/rural center with a Gross Leasable Area (GLA) of approximately 50,000 to 150,000 square feet.	Yes
Regional Commercial	Land use principally engaged in the provision of goods or services with a primary service radius of 10 or more miles. Regional Commercial/Retail Land Uses would typically be located in or near a large commercial/retail center with a Gross Leasable Area (GLA) of approximately 350,000 square feet or more.	Yes
Highway/ Convenience Commercial	Land use principally engaged in the provision of goods or services that primarily services customers attracted from a nearby major transportation arterial in a predominately rural setting located outside the MUSA line.	No
Rural Commercial	Land use principally engaged in the provision of goods or services that primarily services customers attracted from rural communities with a Gross Leasable Area (GLA) of approximately 25,000 square feet or less.	No
Office, Undifferentiated	Land use predominantly involved in administrative, professional, or clerical services; includes medical clinics	Yes
Marina	Land used for the operation of boating and sailing water sports and related leisure activities.	No
Industrial, Undifferentiated	Land used primarily in the manufacture and/or processing of unspecified products; could be light or heavy industrial land use.	No
Light Industrial	Land used primarily in the manufacture and/or processing, fabrication, assembly, packaging, incidental storage, sales, and distribution of predominantly previously prepared materials, finished products or parts. Light Industrial land uses would typically have all processing within buildings, require exterior storage, generate amounts of truck or rail traffic, and be free of hazardous or objectionable elements such as noise, odor, dust smoke, glare, or other pollutants.	No
Heavy Industrial	Land used primarily in the manufacture and/or processing of products from large bulky, predominantly raw, extracted, or hazardous materials; or use engaged in the storage of flammable, explosive, or other materials that may pose a threat to public health or safety. Heavy Industrial land uses may require exterior storage of large equipment or material, be engaged in outside processing or assembly, generate significant amounts of truck and/or rail traffic, or emit limited amounts of objectionable elements such as noise, odor, dust, smoke, glare, or other pollutants.	No
Extractive	Land used for certain branches of industry which are conveniently designated extractive: e.g., agriculture, pastoral and mining pursuits, cutting of lumber, etc	No
Utility	An area or strip of land, either public or private, occupied by a power plant or substation, electric transmission line, oil or gas pipeline, water tower, municipal well, reservoir, pumping station, water treatment facility, communications tower, or similar use.	No

Land Use Classification	Description	Transit-Supportive
Water Navigation (i.e., Locks)	Land used for the operation of water navigation and associated accessory uses; predominantly navigational lock and dams.	No
Institutional, Undifferentiated	Land used for primarily religious, governmental, educational, social or health care facilities excluding clinics, use unspecified.	Yes
Religious	Land used for primarily religious activities, may include churches, synagogues, temples, cemeteries, and other support activities.	No
Educational	Land used for primarily educational activities, may include schools and surrounding recreational facilities.	Yes
Governmental	Land used for primarily governmental activities.	Yes
Health	Land used for primarily health care facilities excluding clinics, may include hospitals or other medical/residential care facilities.	Yes
Mixed Use, Undifferentiated	Land containing or potentially containing a building with significant amounts of residential, industrial, commercial and/or office uses, composition of use unspecified.	No
Residential and Other Mixed Use	Land containing mixed uses comprising of no less than residential and one other land use predominantly contains residential apartments over commercial or office uses, but may contain other land uses.	Yes
Industrial and Other Mixed Use	Land containing mixed uses comprising of no less than industrial and one other land use but excluding any residential predominantly industrial uses with commercial or office uses.	No
Commercial and Other Mixed Use	Land containing mixed uses comprising of no less than commercial and one other land use but excluding any residential or industrial predominantly commercial and office uses.	Yes
Multi-Optional Development, Undifferentiated	Land that has yet to develop that potentially will contain a building with only one of the follow land uses: residential, industrial, commercial or office use. NOTE: The only property within the any of the corridors is Fridley's "potential redevelopment areas"	Yes
Residential or Other Use	Land that has yet to develop that potentially will contain a building with either residential or another land use individual use uncertain.	Yes
Industrial or Other Use	Land that has yet to develop that potentially will contain a building with either industrial or another land use but excluding residential individual use unspecified.	Yes
Commercial or Other Use	Land that has yet to develop that potentially will contain a building with either commercial or another land use but excluding residential or industrial, individual use unspecified	Yes
Community Park and Recreation	Land used primarily for public recreation activities improved with playing fields, playground or exercise equipment and associated structures. May include land containing a building(s) developed, used and maintained primarily for recreational activities	No
Golf Course	Land used for the operation of a golf course may include other leisure activities, such as pall-mall, tipcart, croquet and curling	No

Land Use Classification	Description	Transit-Supportive
Open Space: Passive or Undifferentiated	Land used and maintained which supports unorganized public or private recreational activities which may contain trails, picnic areas, public fishing/boating docks, etc. May include unspecified open space land use, unprotected wetland areas, or other privately owned lands.	No
Open Space: Natural	Land predominantly undeveloped or unaltered and preserved in its natural state for environmental or aesthetic purposes.	No
Open Space: Restrictive	Land used and maintained for resource protection, amenity, or buffer - Restricted use (i.e., floodplain, conservancy land, etc.).	No
Transportation, Undifferentiated	Land used for any undefined transportation activity	No
Vehicular Rights-of-Way	An area or strip of land, either public or private, on which an irrevocable right-of-passage has been recorded for the use of vehicles.	No
Pedestrian Rights-of-Way	An area or strip of land, either public or private, on which an irrevocable right-of-passage has been recorded for the use of pedestrians.	No
Railway Corridor	An area or strip of land occupied or intended to be occupied by freight-service rail or other similar use. Includes rail that may support passenger commuter rail.	No
Rail Transit Way	An area or strip of land occupied or intended to be occupied only by passenger rail or other similar uses. Includes light rail transit (LRT) and commuter rail.	No
Airport	Land used for the operation of aircraft and associated accessory uses provided accessory uses are incidental to the airport activity.	Yes
Vacant Land	Land not currently used for any defined purpose that may or may not contain buildings or other structures.	No
No Data	Land use information is missing information not submitted to the Metropolitan Council.	No
Uncertain	Land use information indistinguishable.	No
Open Water	Permanently flooded open water not including wetlands, or periodically flooded areas.	No