MINNESOTA

Guideway Status Report

November 2017

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Legislative Request

This report was completed to comply with 2016 Minnesota Statutes 174.93, subdivision 2.[1]

174.93 Guideway Investment.

Subdivision 2. Legislative report.

(a) By January 15, 2012, and by November 15 in every odd-numbered year thereafter, the commissioner shall prepare, in collaboration with the Metropolitan Council, and submit a report electronically to the chairs and ranking minority members of the legislative committees with jurisdiction over transportation policy and finance concerning the status of guideway projects (1) currently in study, planning, development, or construction; (2) identified in the transportation policy plan under section473.146; or (3) identified in the comprehensive statewide freight and passenger rail plan under section 174.03, subdivision 1b.

(b) At a minimum, the report must include, for each guideway project:

(1) a brief description of the project, including projected ridership;

(2) a summary of the overall status and current phase of the project;

(3) a timeline that includes

(i) project phases or milestones;
(ii) expected and known dates of commencement of each phase or milestone; and
(iii) expected and known dates of completion of each phase or milestone;

(4) a brief progress update on specific project phases or milestones completed since the last previous submission of a report under this subdivision; and

(5) a summary financial plan that identifies, as reflected by the data and level of detail available in the latest phase of project development and to the extent available:

(i) capital expenditures, including expenditures to date and total projected expenditures, with a breakdown by committed and proposed sources of funds for the project;
(ii) estimated annual operations and maintenance expenditures reflecting the level of detail available in the current phase of the project development, with a breakdown by committed and proposed sources of funds for the project; and
(iii) if feasible, project expenditures by budget activity.

(c) The report must also include a systemwide capacity analysis for investment in guideway expansion and maintenance that:

(1) provides a funding projection, annually over the ensuing ten years, and with a breakdown by committed and proposed sources of funds, of:

(i) total capital expenditures for guideways;
(ii) total operations and maintenance expenditures for guideways;

[1] In 2017 1st Special Session, HF3, Ch. 3, Art. 3, Sec. 104 modified the language under Minn. Stat. 174.93. Although not repealed, the changes made to the language were substantial moving the responsibility for this report from the Minnesota Department of Transportation and placing it with the Metropolitan Council. This necessitated moving the law into the chapters of law directly related to the Metropolitan Council. The new language, beginning with the October 15, 2018 report will then list Minn. Stat. 473.4485, subd. 2.

(iii) total funding available for guideways, including from projected or estimated farebox recovery; and
(iv) total funding available for transit service in the metropolitan area; and

(2) evaluates the availability of funds and distribution of sources of funds for guideway investments.

(d) The projection under paragraph (c), clause (1), must be for all guideway lines for which state funds are reasonably expected to be expended in planning, development, construction, or revenue operation during the ensuing ten years.

(e) Local units of government shall provide assistance and information in a timely manner as requested by the commissioner or council for completion of the report.

Report Cost:
The cost of preparing the report elements required by 2016 Minn. Stat. 174.93 is approximately $25,000 for MnDOT, Metropolitan Council, transit agency and county staff to compile and analyze data, write and produce the report.

Introduction

In 2010 the Minnesota Legislature adopted Minn. Stat. 174.93, which required the Minnesota Department of Transportation to prepare, in collaboration with the Metropolitan Council, a biennial report on the status of "guideway" projects in the state, with an emphasis on funding sources and project progress. In the 1st Special Session of 2011, the legislature amended the statute to require that the report take a system view as well as a project view and that it include information about uses of funds in addition to funding sources. The last report was submitted in November 2015. The statute required the report in mid-November of odd-numbered years. This is the 2017 Guideway Status Report.

The statute defines "guideway" as a form of transportation service provided to the public on a regular or ongoing basis that operates on exclusive or controlled rights of way. Thus, guideways include light rail transit, commuter rail, street cars, intercity passenger rail and bus service that use a dedicated or managed lane. The statute further requires that the report include those guideways undergoing planning, design or construction, as well as those already in operation.

The statutory definition of "guideway" is slightly narrower than the term "transitway," which is the term more commonly used by regional transit planners. In addition to light rail transit, commuter rail and dedicated bus rapid transit corridors, the region's 2040 Transportation Policy Plan includes in the definition of "transitway" those corridors with bus rapid transit operating on major arterial roadways without a dedicated or managed lane. While the term "transitway" may be used in general discussion within this report, the scope of this report is only for those corridors meeting the narrower definition of a "guideway."

Because this report is statutorily limited to guideways, it provides neither a complete overview of planned regional transit investment nor the full context of planned comprehensive transportation policy and investments.

Statewide Planning

Minnesota GO

MnDOT completed Minnesota GO, a collaborative, 50-year visioning process in November 2011. The objective of this process was to better align the transportation system with what Minnesotans expect for their quality of life, economic competitiveness and environmental health. By having an overall direction for the transportation system, policies and strategies are laid out to help determine how investments will be made and how success is measured.

The broad goals of this vision and related 20-year Statewide Multimodal Transportation Plan, which was updated in January 2017, guide planning efforts within the state, including local and regional transportation planning, as well as intercity passenger rail.

Intercity Passenger Rail

Intercity passenger rail is a statewide issue that transcends localities and regions and is overseen by MnDOT. Federal oversight and grants for passenger rail are available through the Federal Railroad Administration. The FRA currently does not have a grant program similar in scale to the Federal Transit Administration's New Starts program and is in process of formulating common guidance and criteria for states to use when implementing intercity passenger rail.

In 2008, the Minnesota Legislature required that MnDOT prepare a Comprehensive Statewide Freight and Intercity Passenger Rail Plan. This was the first plan of its kind and was completed in February 2010. It identifies rail corridors with the most potential for passenger rail development and divides them into two phases of

development. Among the Phase I corridors, three stand out as having the most potential for development in the next 10 years. These corridors include the Northern Lights Express between the Twin Cities and Duluth, the Midwest Regional Rail Initiative high speed rail service between the Twin Cities and Chicago, and the Rochester ZIP Rail between the Twin Cities and Rochester. All are discussed in this report.

In addition to intercity passenger rail, MnDOT has authority to plan, develop and construct light rail transit and commuter rail. For commuter rail, MnDOT may delegate this authority to local entities such as the Met Council or a regional railroad authority. For light rail, both MnDOT and the Met Council have concurrent authority, and state statute requires that the Governor designate one of the agencies as the project lead. After projects are constructed, the Met Council operates and maintains light rail facilities, as well as commuter rail facilities located completely or partially within the Twin Cities metropolitan area.

Regional Planning

Metropolitan Council – 2040 Transportation Policy Plan

The vision for transitway development in the Twin Cities metropolitan area is identified in the Transportation Policy Plan (TPP). In January 2015, the Met Council adopted the 2040 TPP as an update to the previous 2030 TPP. A strategy in the 2040 TPP that relates to the development of transitways reads as follows, "Regional transportation partners will invest in an expanded network of transitways that includes but is not limited to bus rapid transit, light rail, and commuter rail." [2]

This strategy establishes the basis for two investment scenarios that identify transitways the region is planning for by the year 2040. The first scenario is called the Current Revenue Scenario. This scenario assumes revenues the region can reasonably expect to be available based on past experience and current laws and allocation formulas. Under federal regulations, this scenario is called "fiscally constrained." The Increased Revenue Scenario assumes revenues the region might reasonably attain through policy changes, laws or decisions that increase local, state or federal funding sources.

Under federal regulations, the programs or projects in the Increased Revenue Scenario are illustrative of what may be achieved with additional revenues, but the projects are not considered part of the approved plan. The 2040 TPP acknowledges that additional resources will be necessary to build the system of transitways that is envisioned for this region in the Increased Revenue Scenario.

The 2040 TPP also includes strategies and investment plans for the rest of the transit system beyond the transitways and the investment scenarios including the costs of implementing transitways not covered by this report, such as arterial bus rapid transit. The corridor summaries provided in this report only focus on potential guideway projects included in either the Current Revenue Scenario or the Increased Revenue Scenario, since planning for these corridors is an ongoing activity regardless of the investment realities.

The 2040 TPP is currently undergoing an update that is expected to be adopted in 2018. Through this update, the status of transitways in the Plan will be updated to reflect the most recent developments and the Current Revenue and Increased Revenue scenarios will be updated with a current list of projects.

Planning Process

Each of the metropolitan area transit corridors incorporated into this report are identified in the TPP as either having completed a local planning process or as in the process of doing so. The planning process is designed to identify the locally preferred transit alternative for a corridor.

[2] Page 164 and page 190 in the 2040 Transportation Policy Plan adopted on January 14, 2015

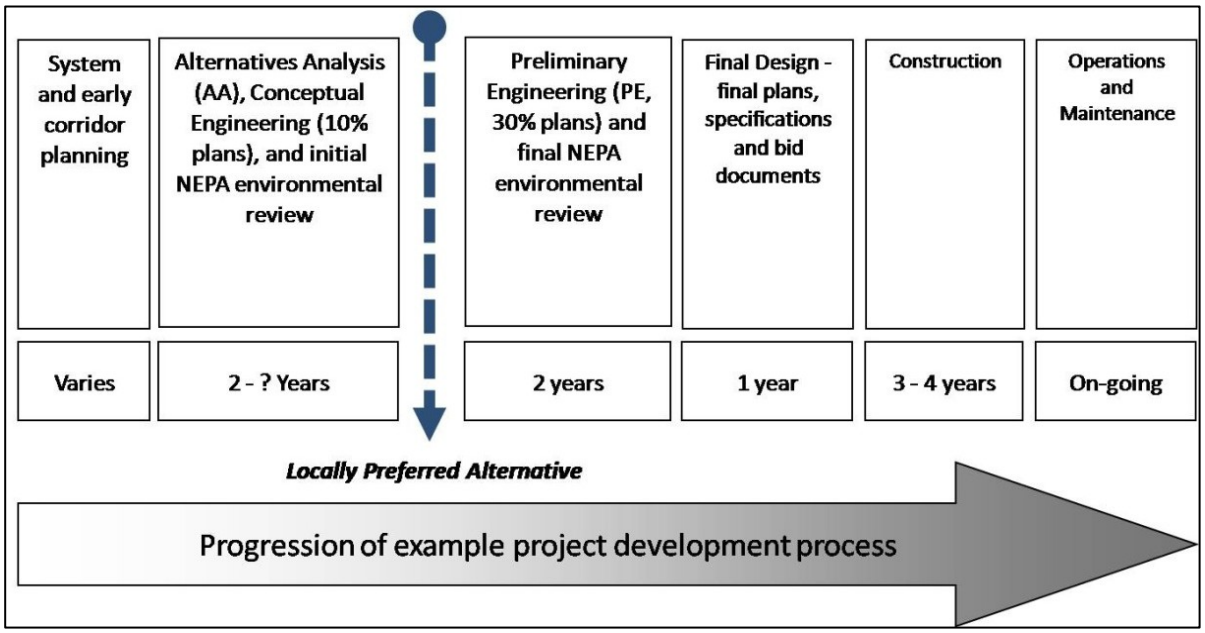
Typically, this local corridor planning process is initiated and led by the county or counties in which the corridor is located. A city may also lead a corridor study when a majority of the corridor is contained within its boundaries. In February of 2012, the Met Council adopted the Regional Transitway Guidelines to help ensure that transitway projects in the Twin Cities metropolitan area are planned and implemented in a consistent, equitable, and efficient manner regardless of the entity leading the process.

The process typically begins with system level planning—done in the TPP—that identifies the most promising transit corridors for study and development. The next step is an alternatives analysis, or corridor study, aimed at identifying the most appropriate mode and alignment or set of transitway improvements for a corridor. These studies can take two years or more, depending on the number of transit alternatives studied and the level of agreement among corridor stakeholders regarding the preferred alternative.

The alternatives analysis process ends with the selection of a locally preferred alternative, which is then amended into the TPP. After a preferred alternative is selected, planning efforts mature into a project for implementation. In the case of light rail, the Met Council will usually assume responsibility to carry the project to completion.

The graphic that follows shows the typical project development process for a corridor seeking to implement a transit option as a solution to an identified transportation need.

Figure 1: Transit Corridor Project Development Process



The next step is the design phase, which includes preliminary engineering, environmental review and final design. These steps involve progressively refining and documenting project details and associated project implementation plans and cost estimates. The process involves the Met Council, MnDOT, local stakeholders and other funding partners such as Federal Transit Administration, counties, and regional railroad authorities. When sufficient funding is secured, the project is designed, constructed and opened for revenue service and subsequently operated and maintained as part of the region's transit system.

Typical Funding Sources

Transit funding can come from a variety of sources. For capital projects, funding sources most often include federal grants through the FTA, state bonds, metropolitan sales tax revenues for transportation from counties, and local property taxes. For operating costs, current sources include fare revenues, state general funds, motor vehicle sales tax revenue, county sales tax revenues, and federal flexible transportation funds, which can be used in the first three years of new operations. Ongoing capital maintenance costs, on the other hand, are currently paid almost exclusively by regional federal formula funds (approximately 80 percent) and the Met Council's regional transit capital funds (approximately 20 percent), which are bond funds authorized by the legislature with the debt service paid through the Met Council's property tax levy.

The Counties Transit Improvement Board (CTIB) was a major local funding partner for the transitway system from 2008 until its dissolution in mid-2017. CTIB provided funding from a ¼-cent local sales tax collected in five metropolitan counties (Anoka, Dakota, Hennepin, Ramsey and Washington) specifically for transitway development. As part of the dissolution of CTIB, each county is now administering a local sales tax independently at ¼-cent or ½-cent to be used for transportation purposes, not exclusively for transitway development. In most cases, this new sales tax source replaces the funding previously assumed from CTIB.

More detailed information about transit funding sources is available in the capacity analysis section and in Appendix A: Transit Funding Sources.

System Branding

The Met Council approved a branding framework in 2010 that unified the light rail, highway and dedicated bus rapid transit services in the Twin Cities region under a single system name and identity, with color names for different lines. The goal is to clearly communicate that users can expect service that it is frequent, fast and reliable, with special vehicles on dedicated running ways.

The key is that BRT service will be light rail-like in terms of service quality and service levels (all-day frequent service) and that the connected system allows users to travel throughout the network of color-coded transit lines, without needing a schedule. The system is branded the "METRO" system. Currently, the open lines on the METRO system include the Blue, Green, and Red lines. Extensions of the Blue and Green lines are also in development along with plans for new Orange and Gold lines. The Northstar Line is not included in this system branding because the service is not available all day.

Explanation of Remaining Contents

This report has two main sections. First, it contains informational summaries for individual corridors that are undergoing study, planning, design or construction, or those already in operation as a guideway project. Following these corridor summaries, the report takes a 10-year, system-wide view of capital costs, operating costs and maintenance costs. This part of the report, called the capacity analysis, includes only guideway projects that are in design, construction or operation because only these projects have chosen a guideway mode and have sufficient cost data to meaningfully look ahead 10 years.

Eight guideway projects meet the criteria for inclusion in the capacity analysis section of this report:

- Blue Line (Hiawatha LRT)
- Blue Line Extension (Bottineau LRT)
- Northstar Commuter Rail
- Red Line (Cedar Avenue BRT)
- Green Line (Central Corridor LRT)
- Green Line Extension (Southwest LRT)
- Orange Line (I-35W South BRT)
- Gold Line (Gateway Dedicated BRT)

Potential guideway projects that are still in the feasibility or alternatives analysis study phases are not included in the capacity analysis. These corridors are still considering several transit alternatives with varying modes and alignments, leading to a wide range of potential capital and operating costs. However, the individual corridor summaries do include their potential cost ranges, if project costs have been estimated for the corridor. In addition, given that these corridors are still being studied, it is uncertain whether a guideway project will be selected as the preferred transit option for the corridor and/or whether the project will progress into design and construction during the 10-year timeframe of the capacity analysis.

Metropolitan area corridors in the study phase include the following:

- Highway 169
- Midtown
- Nicollet-Central Modern Streetcar
- Robert Street
- Rush Line
- Riverview
- West Broadway

Intercity passenger rail projects are also among the group of corridors still in the study phase. Intercity passenger rail projects included in the corridor summaries are:

- Northern Lights Express corridor from Minneapolis to Duluth
- Twin Cities to Milwaukee High Speed Rail

Terminated and Suspended Corridors

Since the previous report was published in 2015, the following corridors have been removed from future studies and/or consideration:

- I-35W North
- Red Rock
- Rochester ZIP Rail

These corridors are still included in this summary document and the individual description of each route has been updated to show their current status.

Summaries: Corridors in Operation, Construction or Design

METRO Blue Line (Hiawatha) LRT

Corridor Description

The METRO Blue Line is a 12-mile light-rail transit line linking downtown Minneapolis and the Mall of America via the Minneapolis-St. Paul International Airport. The corridor travels through Minneapolis and Bloomington with 19 stations, including five stations shared with METRO Green Line in downtown Minneapolis.

The METRO Blue Line opened for service in 2004. It operates 24 hours a day with train frequencies every 10 minutes during rush hours and midday, every 15 minutes in the early morning and early evening hours, and less frequent service overnight. There are park-and-ride facilities at Fort Snelling and 28th Avenue Stations. Connecting bus service is available at most other stations.

In 2016, the METRO Blue Line carried 10.3 million rides, an average of 30,300 riders per day. The Blue Line connects directly to the U.S. Bank Stadium/Mall of America Field and Target Field, with connections to Northstar at the Target Field Station. The METRO Blue Line also provides special event service.

Project Status and Timeline

The METRO Blue Line was extended to Target Field in 2009 to provide service to Target Field and the Northstar commuter rail line. This extension was funded as part of the Northstar project.

Progress Update

Target Field Station provides multimodal connections between the METRO Blue Line, METRO Green Line, and the Northstar commuter rail. Target Field Station will accommodate a future METRO Green Line Extension, METRO Blue Line Extension and High Speed Rail Amtrak Service. Construction was completed in 2014.

Summary Financial Plan-Blue Line

Capital Cost, Funding and Budget Activities

The METRO Blue Line cost $715.3 million to construct. Due in part to higher-than-anticipated demand, the following large capital improvements were made since construction was completed:

- 31st Street park-and-ride (Lake Street Station) (no longer active as of March 2015)
- 28th Avenue park-and-ride
- American Boulevard Station
- Operating and maintenance facility expansion
- Rail Systems facility building
- Three-car train station extensions
- Three-car train sub-stations at Mall of America and Target Field
- Three-car light-rail trains
- Light rail vehicle storage building
- Light rail positive train control technology
- Automatic Passenger Counters “APC’s”
- Rail Interlockings

The cost of these improvements totals approximately $127.5 million, all of which has been committed, with $116 million spent to date and the remainder to be spent in 2017. After combining these subsequent improvements with initial construction, the total capital cost for the METRO Blue Line project is $842.8 million.

Table 1: Blue Line Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Federal	414.1		414.1	49
State G.O. Bonds	100.0		100.0	12
State T.H. Bonds	20.1		20.1	2
Metropolitan Airport	87.0		87.0	11
Hennepin County	84.2		84.2	10
Mall of America (in-kind)	9.9		9.9	2
Total for the Initial Construction Costs	715.3		715.3	86
Federal	97.0		97.0	11
State of Minnesota (G.O. Bonds)	1.0		1.0	<1
Metropolitan Council	29.1		29.1	3
Other	0.4		0.4	<1
Total for Subsequent Improvements	127.5		127.5	14
TOTALS	842.8		842.8	100

Note: Spent as of July 2017

Table 2: Blue Line Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
LRV procurement	74.7		74.7
Transitway design-build	269.4		269.4
Fare collection equipment	3.6		3.6
Capital and equipment	162.3		162.3
Project contingency	12.0		12.0
Airport segment	143.5		143.5
Corridor improvements	49.8		49.8
Subsequent capital improvements	116	11.5	127.5
TOTAL	831.3	11.5	842.8

Note: Spent as of July 2017

Annual Operating and Maintenance Costs

When the METRO Blue Line opened, after farebox revenue, the net operating funding was provided through a state general fund appropriation and by the Hennepin County Regional Railroad Authority. When the CTIB was formed in 2008, the Hennepin County RRA's share was shifted to CTIB. In addition, Minn. Stat. 473.4051 passed in 2008 requiring that "after operating and federal money have been used to pay for light rail operations, 50 percent of the remaining costs must be paid by the state." From 2009 to 2013, due to state budget deficits, the state

general fund appropriation has been held constant and did not increase to cover additional operating costs. In fiscal year 2011 the base state general fund appropriation for the METRO Blue Line was $5.2 million annually, or approximately 33 percent of net operating costs.

Beginning in fiscal year 2014 the state provided a general fund appropriation to cover the full 50 percent of the net operating costs, as reflected in the table below. In 2017, the proposed budget for the METRO Blue Line is expected to be $36.1 million. With anticipated farebox and other revenues of $11.4 million, the net operating cost is expected to be $24.7 million.

Table 3: 2017 Blue Line Proposed Operating Budget

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	10.6		10.6	30
State	12.4		12.4	34
CTIB/County Sales Tax	12.4		12.4	34
Other revenues*	0.7		0.7	2
TOTAL	36.1		36.1	100

Note that percentages in the table above are based on total operating cost, not net operating cost.

*Primarily from Advertising

Note that percentages in the table above are based on total operating cost, not net operating cost. Capital maintenance costs are different from operating costs. Operating costs include vehicle operator salary and benefits, fuel, vehicle cleaning and maintenance and other administrative costs. Annual capital maintenance includes track maintenance, periodic vehicle overhauls, signal work and other smaller-scale capital improvements. Because such costs vary significantly year-to-year, this report takes a multi-year view.

From 2004 to 2014, the METRO Blue Line's average capital maintenance cost was approximately $3.0 million per year. Due to continued heavy use of system equipment, the age of the equipment and periodic vehicle overhauls, the average annual average amount is estimated to increase to $12.1 million per year for the period of 2015 to 2025. After 2025, maintenance costs will continue to rise as equipment ages and vehicle and equipment overhauls are necessary. For more information about capital maintenance costs by year, see the capacity analysis portion of this report.

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

Project Contact

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Figure 2: METRO Blue Line Map

Northstar Commuter Rail

Corridor Description

The Northstar commuter rail line travels 40 miles from Big Lake in Sherburne County to downtown Minneapolis, where it connects with the METRO Blue Line and the METRO Green Line at the Target Field Station.

The Northstar line provides 14 weekday trips. This breaks down to six inbound and six outbound trips, and one reverse commute peak hour trip each morning and afternoon. The line serves six suburban park-and-ride stations on its way to downtown Minneapolis at Big Lake, Elk River, Ramsey, Anoka, Coon Rapids, and Fridley. Three roundtrips are offered on weekends.

The Northstar line carried over 711,000 riders in 2016, an average of more than 2,534 riders per weekday. It also provides event rides to Target Field Station for Twins and Vikings games and other special events.

Project Status and Timeline

The Northstar line was completed in 2009. The project included an extension of the METRO Blue Line from the Warehouse District Station to Target Field Station, where it connects with the Northstar.

Progress Update

Target Field Station provides multimodal connections between the METRO Blue Line, the METRO Green Line, and the Northstar commuter rail. Target Field Station was built to accommodate future extensions of the METRO Green Line, the Blue Line, and High Speed Rail Amtrak Service.

Summary Financial Plan-Northstar

Capital Cost, Funding Sources and Budget Activities

The Northstar line was constructed as a part of the FTA's program called New Starts. The initial budget was $320 million, including $2.6 million provided by the Minnesota Twins outside the full funding grant agreement. The Fridley station was built concurrently with the overall project but funded separately at a cost of $14.4 million.

Additionally, the Ramsey station was funded separately and completed in 2012 at a cost of $13.4 million. This brings the total budgeted capital cost for the Northstar line to $347.7 million, as shown in the Capital Funding Sources table below.

To date, Northstar has expended $340.7 million, with an additional $2.1 million expected expenditures for the remainder of the project, for a total of $342.8 million.

Table 4: Northstar Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
FTA New Starts	161.9		161.9	46
State of Minnesota	102.6		102.6	29
Northstar Corridor Development Authority	51.0		51.0	15
Metropolitan Council	7.4		7.4	2
Other (Minnesota Twins)	2.6		2.6	1
CTIB	12.9		12.9	4
Anoka County RRA	1.9		1.9	<1
City of Fridley	3.8		3.8	1
City of Ramsey	3.6		3.6	1
TOTAL	347.7		347.7	100

Table 5: Northstar Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
Initial Cost of Northstar			
Construction	80.9	2.1	83.0
ROW & existing improvements	110.9		110.9
Vehicles	67.7		67.7
Professional services	49.3		49.3
Unallocated contingency	0		0
Finance charges	4.1		4.1
Total Initial Cost	312.9	2.1	315.0
Fridley Station			
Construction	8.6		8.6
ROW & existing improvements.	4.5		4.5
Vehicles			
Professional services	1.3		1.3
Unallocated contingency			
Finance charges			
Total Initial Cost	14.4	0	14.4
Ramsey Station			
Construction	6.5		6.5
ROW & existing improvements.	5.0		5.0
Vehicles			
Professional services	1.2		1.2
Unallocated. contingency	0.7		0.7
Finance Charges			
TOTAL	13.4	0	13.4

*Spent as of July 2017

Annual Operating and Maintenance Costs

Throughout the planning, construction and applications for federal funding of the Northstar, it was assumed that the Northstar's net operating costs would be funded similarly to the METRO Blue Line. It was planned that the local entities-Anoka, Sherburne and Hennepin counties-would fund half of the cost while the state would fund the other half. With the creation of the CTIB in 2008, the Anoka County and Hennepin County shares were transferred to the CTIB to be paid using metropolitan area sales tax revenues. Due to state budget deficits since 2008, no state funding for the Northstar's operating costs was appropriated and the states' share was paid by the Met Council (41.95 percent) and MnDOT (8.05 percent) using motor vehicle sales tax funds. The local share of net operating costs was shared by the CTIB (41.95 percent) and Sherburne County (8.05 percent).

In 2017, the budget for the Northstar line is expected to be $19.0 million. With anticipated farebox revenues of $2.4 million, the expected net operating cost for the line is $16.6 million.

Table 6: Northstar's 2017 Proposed Operating Budget

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	2.4		2.4	13
Metropolitan Council (MVST)	7.0		7.0	37
CTIB/County Sales Tax	7.0		7.0	37
MnDOT (MVST)	1.3		1.3	<7
Local (Sherburne County)	1.3		1.3	<7
TOTAL	19.0	0	19.0	100

Note that the percentages in the table above are based on total operating cost, not net operating cost.

Capital maintenance costs are different from operating costs. Operating costs include vehicle operator salary and benefits, fuel, vehicle cleaning and maintenance, and other administrative costs. Annual capital maintenance includes periodic vehicle overhauls, systems upgrades, passenger stations, vehicle maintenance facility improvements and other smaller-scale capital improvements. Because such costs vary significantly year-to-year, this report takes a multi-year view.

For years 2017 to 2027, the average annual capital maintenance cost for the Northstar is expected to be approximately $3.78 million per year. These costs will continue to increase as the system ages and vehicle and equipment overhauls are necessary. For more information about capital maintenance costs by year, see the capacity analysis portion of this report.

Other Project Information

Lead Agency

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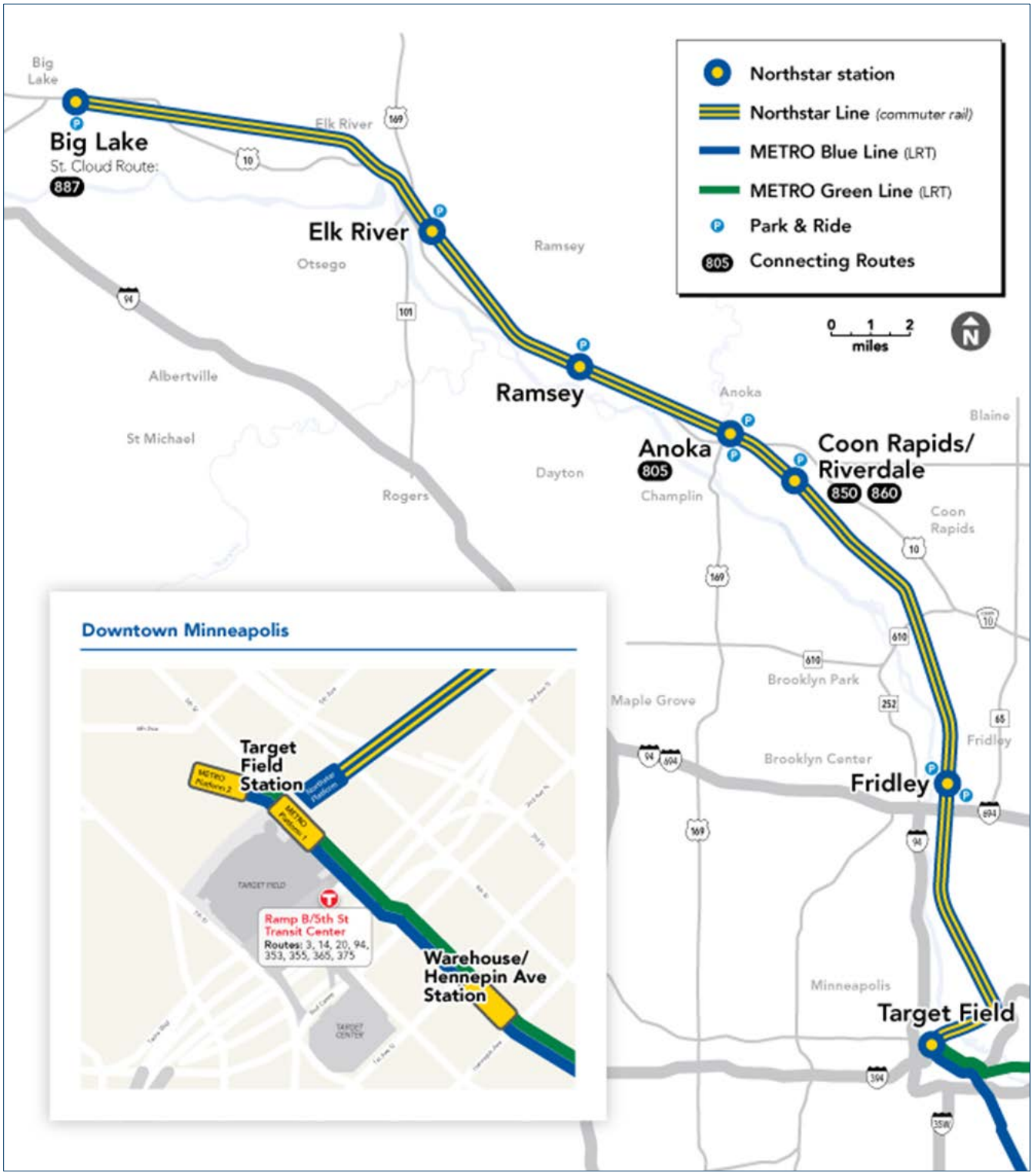
Figure 3: Northstar Line Map



Red Line Bus Rapid Transitway/Cedar Avenue Transitway

Corridor Description

The METRO Red Line/Cedar Avenue Transitway is a bus rapid transitway that extends from the Mall of America in Bloomington to 181st Street in Lakeville, connecting Bloomington, Eagan, Apple Valley and Lakeville. The Red Line includes six stations. Four stations are park and ride facilities, and are located at the Mall of America, Cedar Grove, Apple Valley Transit Station and in Lakeville on Cedar at 181st Street. In addition to the park and ride stations, there are two walk-up stations located near 140th and 147th streets in Apple Valley.

Stage 1 work is complete and the Red Line launched service in June 2013. Stages 2, 3, 4, and 5 are planned to occur from 2017 – 2040. More detailed information on these stages is published as part of the Cedar Avenue Implementation Plan adopted in December 2015.

Projected 2016 ridership is just over 253,000 and ridership is anticipated to increase about 1.0 percent a year.

Table 7: Red Line BRT Project Status and Timeline

Milestone	Date(s)
Locally Preferred Alternative	2004
Project Development	2006-2008
Engineering	2008-2010
UPA Investments	2008-2010
Stage 1: Construction of park-and-rides	2009-2010
Stage 1: Expansion of BRT express services	2009-2010
Stage 1: Construction of bus shoulder lanes	2011-2013
Stage 1: Construction of stations	2012-2013
Stage 1: Launch of BRT station-to-station service	June 2013
Stage 2	2015-2020
Stage 3	2021-2025

Progress Update

The Red Line began operations in June 2013.

Summary Financial Plan-Red Line

Capital Cost, Funding Sources and Budget Activities

Stage I of the transitway was recently completed at a total cost of approximately $110 million. The following figures relate to stages 2 and 3 (through 2026) of the Cedar Avenue Transitway.

Table 8: Red Line Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Other Federal	12.4	11.5	23.9	31
State of Minnesota	1.3	18.1	19.4	25
CTIB	10.4		10.4	14
Local (Counties/RRAs)	3.6	13.7	17.3	22
Local (Other)	1.4	4.9	6.3	8
TOTAL	29.1	48.2	77.3	100

Table 9: Red Line Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
Construction	11.5	51.1	62.6
ROW, Land, Existing Improvements			
Vehicles		5.7	5.7
Professional Services		9.0	9.0
Unallocated Contingency			
Finance Charges			
TOTAL	11.5	65.8	77.3

*Spent as of December 31, 2016

Annual Operating and Maintenance Costs

Table 10: Red Line 2017 Annual Operating and Maintenance Costs

Source	Committed ($M)*	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	0.2		0.2	6
Motor Vehicle Sales Tax	1.6		1.6	46
CTIB	1.6		1.6	46
Other (advertising)	0.1		0.1	2
TOTAL	3.5	0	3.5	100

Other Project Information

Lead Agency

Metropolitan Council

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Figure 4: Red Line Map

METRO Green Line/Central Corridor LRT

Corridor Description

The METRO Green Line is 11 miles long and connects downtown St. Paul and downtown Minneapolis via University Avenue and the University of Minnesota. The corridor also travels through the State Capitol complex and the Midway area. The line has 18 stations and shares five stations with the METRO Blue Line in downtown Minneapolis, connecting to the Northstar commuter rail line at Target Field Station. The Green Line makes three stops in downtown St. Paul.

The METRO Green Line opened for service in 2014. It operates 24 hours a day with train frequencies every 10 minutes during rush hours and midday, every 15 minutes in the early morning and early evening hours, and less frequent service overnight.

In 2016, the METRO Green Line carried 12.7 million riders, an average of 39,386 rides per day. The METRO Green Line connects directly to the U.S. Bank Stadium Station and Target Field with connections to Northstar at the Target Field Station.

Project Status and Timeline

The METRO Green Line was completed in June 2014.

Progress Update

Target Field Station provides multimodal connections between the METRO Blue Line, METRO Green Line and the Northstar commuter rail. Target Field Station will accommodate a future METRO Green Line Extension, METRO Blue Line Extension and High Speed Rail Amtrak Service.

Summary Financial Plan-Green Line

Capital Cost, Funding Sources and Budget Activities

The METRO Green Line cost $956.8 million to construct. Due in part to higher-than-anticipated demand, the following large capital improvement projects were made since construction was complete:

- LRT Diagnostics and Technology System Enhancements
- Operating Maintenance Facility SCADA Modifications
- Traffic Controller Upgrades
- Rail Interlockings

The cost of these improvements totals approximately $10.2 million, all of which has been committed, with $2.6 million spent to date and the remainder to be spent in 2017. After combining these subsequent improvements with initial construction, the total capital cost for the METRO Green Line is $967 million.

Table 11: Green Line Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Federal Sources	478.4		478.4	49
CTIB	284.0		284.0	29
State of Minnesota	91.5		91.5	9
Ramsey County RRA	66.4		66.4	7
Hennepin County RRA	28.2		28.2	3
St. Paul	5.2		5.2	1
Central Corridor Funders Collaborative	0.5		0.5	<1
Metropolitan Council	2.6		2.6	<1
Total for Initial Construction Costs	956.8	0	956.8	98+
Federal Sources	8.2		8.2	1
Metropolitan Council	2.0		2.0	<1
Total for Subsequent Improvements	10.2	0	10.2	1+
TOTALS	967.0	0	967.0	100

Table 12: Green Line Capital Funding Uses

Budget Activity	Spent to-date ($M)*	Projected ($M)	TOTAL ($M)
Construction	517.1	2	519.1
ROW, land, existing improvements	38.4	0	38.4
Vehicles	178.3	0	178.3
Professional services	188.9	2	190.9
Unallocated Contingency	11.6	2	13.6
Finance charges	2.9	13.6	16.5
Subsequent capital improvements	2.6	7.6	10.2
TOTAL	939.8	27.2	967.0

*Spent as of July 2017

Annual Operating and Maintenance Costs

Revenue service started June 14, 2014 with the State of Minnesota, as required under Minn. Stat. 473.4051, and the CTIB each expected to provide 50 percent of net operating costs. In 2017, the proposed budget for the METRO Green Line is expected to be $38.2 million. With anticipated farebox and other revenues of $12.6 million, the net operating cost is expected to be $25.6 million. For more detail about future operations funding, see the capacity analysis portion of this report.

Table 13: Green Line 2017 Proposed Operating Budget

Budget Activity	Spent to-date ($M)	Projected ($M)	TOTAL ($M)	Share (%)
Fare Revenue	11.8		11.8	31
Federal (CMAQ)	1.2		1.2	3
State (general fund)	12.2		12.2	32
CTIB/County Sales Tax	12.2		12.2	32
Other (advertising)	0.8		0.8	2
TOTAL	38.2	0	38.2	100

Note that the percentages in the table above are based on total operating costs, not net operating costs

Capital maintenance costs are different from operating costs. Operating costs include vehicle operator salary and benefits, fuel, vehicle cleaning and maintenance, and other administrative costs. Annual capital maintenance includes track maintenance, periodic vehicle overhauls, signal work and other smaller-scale capital improvements. Because such costs vary significantly year-to-year, this report takes a multi-year view.

For years 2017 to 2027, the average annual capital maintenance cost for the Green Line is expected to be approximately $5.1 million per year. These costs will continue to increase as the system ages and vehicle and equipment overhauls are necessary. For detailed information about annual capital maintenance costs, see the capacity analysis portion of this report.

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

Project Contact

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Figure 5: METRO Green Line Map

METRO Green Line Extension (Southwest LRT)

Corridor Description

The METRO Green Line Extension, more commonly known as the Southwest Light Rail Transit Project, will operate from downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka and Eden Prairie, passing in close proximity to the city of Edina. The alignment is primarily at-grade and includes 15 new stations (excluding Eden Prairie Town Center, which is deferred for construction at a later date) and approximately 14.5 miles of double track. The line will connect major activity centers in the region including downtown Minneapolis, the Opus/Golden Triangle employment area in Minnetonka and Eden Prairie, downtown Hopkins, Park Nicollet Methodist Hospital in St. Louis Park, the Eden Prairie Center Mall and the Chain of Lakes. Ridership is projected at about 34,000 weekday boardings. As an extension of the METRO Green Line, it will provide a one-seat ride from Eden Prairie to downtown St. Paul. It will be part of an integrated system of transitways, including connections to the METRO Blue Line, the Northstar Commuter Rail line, major bus routes and proposed future transitways.

An additional 27 light rail vehicles will be added to the Green Line fleet for the operation of the Southwest LRT line. The additional LRVs will be stored and maintained in a new Operations and Maintenance Facility that will be located in Hopkins.

Project Status and Timeline

On Sept.2, 2011, the FTA approved the Southwest LRT project to enter Preliminary Engineering. On Aug.19, 2016, the Southwest Project Office transmitted the project's 2016 New Starts submittal for FFY 2018 and documented its completion of the Preliminary Engineering/Project Development phase. On Dec. 21, 2016 FTA approved the project to enter Engineering based on an overall medium-high rating.

Table 14: METRO Green Line Extension/Southwest LRT Project Status and Timeline

Project Milestone	Date(s)
Locally Preferred Alternative	May 2010
Preliminary Engineering	Sept. 2011 - Dec. 2016
Record of Decision	July 2016
Engineering	Dec. 2016 - 2018
Construction	2018 - 2022
Full Funding Grant Agreement	2019
Revenue Service	2023

Progress Update

The project received approval under Minnesota's municipal consent law from all cities along the proposed route and Hennepin County in August 2014. In May 2015, the Met Council published the Green Line Extension Supplemental Draft Environmental Impact Statement, which evaluated potential impacts in three segments of the proposed LRT route resulting from adjustments to the design of the project since publication of the Draft EIS in 2012. In September 2015, Hennepin County and municipalities along the route provided approval for the project in a second municipal consent process, covering changes in project scope described in the Supplemental Draft EIS.

In May 2016, the FTA and Met Council published the Final EIS followed by the FTA's issuance of the Record of Decision in July 2016. In August 2016, the project secured local funding to apply for the federal match and the Met Council approved the final project scope and budget. The Met Council also submitted the application to enter the engineering phase of the Federal Transit Administration's New Starts funding process. In December 2016, the FTA approved Southwest LRT to enter the engineering phase of the New Starts process and the Met Council awarded the Light Rail Vehicle contract to Siemens.

In 2017, the Met Council finalized the 100 percent design plans, worked on the construction bid documents and started hiring construction staff. The civil construction contract Invitation for Bids was issued in February 2017. In September the Met Council rejected all four bids. The Met Council issued a second Invitation for Bids on October 10, 2017 with bids due in May 2018.

Summary Financial Plan-Southwest LRT

Capital Cost, Funding Sources and Budget Activities

The current overall cost estimate for the Southwest LRT Project is $1.858 billion.

Table 15: Southwest LRT (Green Line Extension) Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Federal Transit Administration		928.8	928.8	50.0
Hennepin County	393.6		393.6	21.2
Counties Transit Improvement Board (CTIB)	226.4		226.4	12.2
State of Minnesota	30.4		30.4	1.6
Hennepin County Regional Railroad Authority (HCRRA)	185.8		185.8	10.0
Other Local	92.7		92.7	5.0
Total	928.8	928.8	1,857.7	100

Table 16: Southwest LRT (Green Line Extension) Capital Funding Uses

Budget Activity	Spent to date ($M) *	Projected ($M)	TOTAL ($M)
Construction		982.8	982.8
ROW, Land, Existing Improvements	17.6	234.4	252.0
Vehicles	23.4	102.9	126.3
Professional Services	179.7	97.7	277.4
Unallocated Contingency		164.1	164.1
Finance Charges		55.0	55.0
TOTAL	220.7	1,636.9	1,857.6

*Spent as of Sept 30, 2017

Annual Operating and Maintenance Costs

The Green Line Extension is forecast to begin revenue service in 2023. Operating costs for the first full year of operation are estimated at $30.4 million. With anticipated farebox and other operating revenues of $9.5 million, the net annual operating costs to be covered by Hennepin County and other local sources are estimated to be $20.9 million.

Table 17: Southwest LRT (Green Line Extension) Proposed Operating Budget (first full year of operation)

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue		8.7	8.7	28
State (general fund)				
County Sales Tax and Other Local		20.9	20.9	69
Other (advertising)		0.8	0.8	3
TOTAL	0	30.4	30.4	100

Capital maintenance costs are different from operating costs. Operating costs include vehicle operator salary and benefits, fuel, vehicle cleaning and maintenance, and other administrative costs. Annual capital maintenance includes track maintenance, periodic vehicle overhauls, signal work and other small-scale capital improvements. For more information about capital maintenance costs, see the capacity analysis portion of this report.

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

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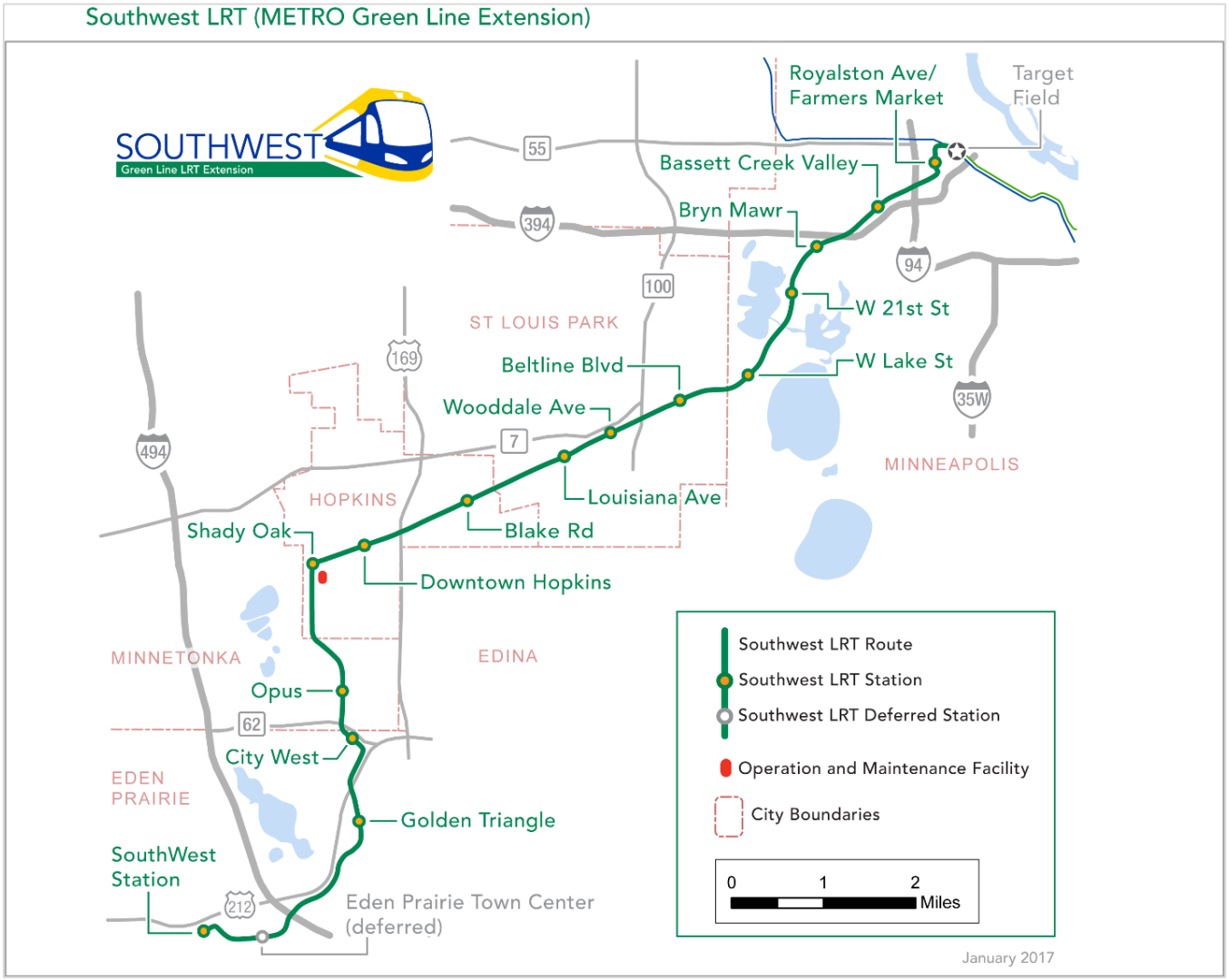
Figure 6: Map of METRO Green Line Extension



METRO Orange Line BRT/I-35W South

Corridor Description

The 17-mile METRO Orange Line BRT project will use roadway improvements, upgraded transit stations and improved bus service to provide fast, frequent and reliable all-day transit service along I-35W. Buses will travel on Marquette and 2nd Avenues in downtown Minneapolis, using congestion-free, transit-only lanes. South of downtown, the Orange Line will provide frequent, limited-stop service to upgraded stations at Lake Street and 46th Street in Minneapolis, 66th Street and 76th Street in Richfield, American Boulevard and 98th Street in Bloomington, and Nicollet Avenue and Burnsville Parkway in Burnsville. A second phase of the project could extend service and improvements to six additional miles from Burnsville to Lakeville.

Major infrastructure improvements are planned for the I-35W & Lake St and Knox Ave & American Blvd stations. All Orange Line stations will have upgrades in platform ticketing, information technology and passenger amenities. Numerous investments in the I-35W South corridor have helped to establish strong transit markets for both station-to-station and express BRT, while also providing major station improvements that are critical to opening Orange Line service. The suite of corridor transit services will continue to benefit from shared capital improvements and complementary service planning.

Express and limited stop services in the corridor currently carry about 14,000 daily rides. Orange Line service is forecast to carry around 11,000 rides each weekday by 2040, for a corridor total of 26,000 daily rides between transitway and express service.

Project Status and Timeline

BRT was the clear modal choice for this corridor. For many decades, bus investments were made in this corridor, and incremental BRT implementation has followed MnDOT's *2005 35W Bus Rapid Transit Study.* The runningway for the Orange Line was developed throughout several MnDOT projects to install MnPASS express lanes on I-35W between Burnsville and Minneapolis. This includes the Crosstown Commons reconstruction, which was concurrent with construction in 2009 of the I-35W & 46th St Station. Several elements of the Orange Line were advanced by the 2007 Urban Partnership Agreement grants from the USDOT and associated local matches from state and local sources. The UPA grants included: the funded conversion of HOV lanes to MnPASS HOT lanes, the construction of four transit-only lanes on Marquette and 2nd Avenue, the construction of the Kenrick park-and-ride in Lakeville, and the purchase of buses for express service. The costs of these past roadway projects are not included in the overall cost of the Orange Line BRT project below.

The Orange Line Project Plan Update, adopted in July 2014, summarizes all planned components of the BRT project to date, detailing preferred station locations, routing and right of way needs, frequency of service and technology recommendations. The Project Plan also served as the basis for entry into the Federal Transit Administration Small Starts Project Development program in November 2014. The Orange Line received NEPA clearance in January 2017 from the FTA, and submitted an updated Small Starts project information in September 2017 to be considered for a Small Starts Grant Agreement.

The Orange Line is the product of a significant partnership between federal and local agencies. A large portion of the project is made possible by a concurrent I-35W Transit/Access highway project advanced by the Minnesota Department of Transportation. Elements of the Orange Line project will be delivered through a MnDOT-held construction contract that was let in June 2017 letting and awarded in August 2017. The Orange Line received a Letter of No Prejudice from FTA in February 2017 to advance these project elements with local funding and protect federal funds. Orange Line project scope elements delivered through the MnDOT Partnership Agreement include the construction of the 12th Street Ramp and I-35W & Lake St Station.

Metro Transit began station design and engineering in 2016 and will reach 100% design by early 2018. The project is initiating real estate acquisition in the Knox Avenue & I-494 area, with anticipated completion by early 2018. Project construction, apart from the I-35W Transit/Access scope elements, will begin in 2018. The Orange Line will continue to engage partner agencies, community members, transit riders, employers, institutions, and other stakeholders, as the project completes design and initiates construction. Revenue service will begin following the completion of MnDOT's I-35W construction project, in 2020 or 2021.

Table 18: Orange Line BRT Project Status and Timeline

Milestone	Date(s)
MnDOT BRT Study	2005
UPA/managed lane construction	2008 – 2010
Marquette and 2nd downtown transit lanes open	2009
Project Plan Update	2014
Project Development	2015 – 2017
Station Design & Engineering	2016 – 2018
Land Acquisition	2017-2018
Construction	2017 – 2020

Summary Financial Plan

Capital Cost, Funding Sources and Budget Activities

Including potential transit-related costs of corridor roadway improvements, the Orange Line's estimated project cost is $150.8 million in year-of -expenditure, with construction expected to occur between 2017 and 2020. Funding was anticipated from local, state and federal sources, including participation by the Counties Transit Improvement Board. With the dissolution of CTIB, the remaining CTIB funding share will be split between the participating counties. The project's federal Small Starts funding request was $74.1 million. Cost estimates have remained stable as the project has progressed to 100% design of the I-35W MnDOT road/transit scope and 60% design of the remaining project elements.

Table 19: Orange Line Capital Funding Sources (2017 dollars)

Source	Committed ($M)	Proposed ($M)	Total ($M)	Share (%)
FTA New Starts (5309)		74.1	74.1	49
Federal, Other (5307 &CMAQ)	8.8		8.8	6
CTIB (2015-2017	7.9		7.9	6
Post CTIB Hennepin County and HCRRA	38.6		38.6	25
Post CTIB Dakota County and DCRRA	5.9		5.9	4
State of Minnesota & Metropolitan Council	15.5		15.5	10
TOTAL	76.7	74.1	150.8	100

Table 20: Orange Line Capital Funding Uses (thru July 31, 2017)

Budget Activity (2017 dollars)	Spent to date ($M)	Projected ($M)	Total ($M)
Construction		93.0	93.0
ROW, Land, Existing Improvements		14.0	14.0
Vehicles		11.9	11.9
Professional Services & Soft Costs	7.4	12.1	19.5
Unallocated Contingency		12.3	12.3
TOTAL	7.4	143.3	150.7

Annual Operating and Maintenance Costs

A significant amount of express and limited bus service existed in the I-35W corridor prior to the UPA improvements, estimated in 2010 dollars at approximately $15.5 million annually. This service is funded through fares and the Met Council's general transit operating revenues. It is anticipated that most of this service and base funding will continue after full implementation of Orange Line BRT.

Orange Line service is expected to begin in 2020, with its first full year of operations in 2021. The net operating costs of this station-to-station service are expected to be shared equally between the state and Hennepin and Dakota counties. The total operating costs of the Orange Line BRT service in 2021 are estimated at $8.04 million, which includes the ongoing maintenance of stations.

Table 21: 2021 Orange Line Estimated Operations Costs – First Full Year of Service

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Metropolitan Council/MVST		2.1	2.1	26
Farebox Revenues		3.9	3.9	48
Hennepin and Dakota Counties		2.1	2.1	26
TOTAL	0	8.1	8.1	100

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

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Figure 7: METRO Orange Line Map

METRO Blue Line Extension / Bottineau LRT

Corridor Description

The METRO Blue Line Extension, also known as the Bottineau LRT, will operate on approximately 13.5 miles of new double track from downtown Minneapolis to the northwest serving the communities of Minneapolis, Golden Valley, Robbinsdale, Crystal and Brooklyn Park. The light rail transit is anticipated to serve a broader area to the northwest, including the communities of New Hope, Brooklyn Center, Plymouth, Maple Grove, Osseo, Champlin and Dayton. The line will serve 11 new stations. The line is expected to have an average of 27,000 weekday riders by 2040. When complete, the Blue Line Extension will connect to the existing Blue Line at Target Field Station from the northern terminus at Oak Grove Parkway Station in Brooklyn Park.

The line will connect major activity centers, including downtown Minneapolis, Theodore Wirth Regional Park, downtown Robbinsdale, the Crystal Shopping Center, the Brooklyn Park commercial strip, North Hennepin Community College and the Target North Corporate Campus. The line will provide a one-seat ride to activity centers on the METRO Blue Line, including the VA Medical Center, Minneapolis-St. Paul International Airport and Mall of America. It will be part of an integrated system of transitways, including connections to the METRO Green Line, the Northstar Commuter Rail line, major bus routes and proposed future transitways.

An additional 28 light rail vehicles will be added to Metro Transit's fleet for the operation of the Blue Line Extension. These LRVs will be stored and maintained in a new Operations and Maintenance Facility to be located in Brooklyn Park.

Project Status and Timeline

On Aug. 22, 2014, the FTA approved the Blue Line Extension project to enter Project Development. On Aug. 19, 2016, the Met Council transmitted the project's 2016 New Starts submittal for FFY 2018 and documented its completion of the project development phase. On Jan. 19, 2017 FTA approved the project to enter engineering and received an overall medium-high rating.

Table 22: Blue Line Extension/Bottineau LRT Project Status and Timeline

Project Milestone	Date(s)
Locally Preferred Alternative	May-13
Project Development	Aug. 2014 - Aug 2016
Municipal Consent	Sept. 2016
Enter Engineering Phase	Jan. 2017 - 2018
Full Funding Grant Agreement	TBD
Heavy Construction	TBD
Revenue Service	TBD

Progress Update

The project received approval under Minnesota's municipal consent law from all cities along the proposed route and Hennepin County in March 2016. In July 2016, the FTA and Met Council published the Final EIS. In August 2016, the Met Council submitted its first New Starts application. In September 2016, the FTA issued the Record of Decision and the Met Council submitted its application to enter the engineering phase of the FTA's New Starts

funding process. The application to enter the engineering phase of the New Starts process for the Blue Line Extension was approved by the FTA in January 2017.

In December 2016, the Met Council awarded the Light Rail Vehicle contract for the Southwest LRT project to Siemens with the option to purchase additional LRVs for the Blue Line Extension.

Sixty percent of the civil and OMF design plans were completed in March 2017 and the Systems 60 percent design plans were completed in May 2017. The plans were sent to Hennepin Country, the cities along the alignment and other stakeholders for review.

Summary Financial Plan-Bottineau LRT

Capital Cost, Funding Sources and Budget Activities

The current overall cost estimate for the Blue Line Extension is LRT Project is $1.536 billion.

Table 23: Blue Line Extension (Bottineau LRT) Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
FTA New Starts		752.7	752.7	49.0
Hennepin County	530.9		530.9	34.5
Counties Transit Improvement Board	85.5		85.5	5.6
State of Minnesota	1.0		1.0	0.1
HCRRA	149.4		149.4	9.7
Other – Local	16.4		16.4	1.1
TOTAL	783.2	752.7	1,535.9	100

Table 24: Blue Line Extension (Bottineau LRT) Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
Construction		907.5	907.5
ROW, Land, Existing Improvements		65.9	65.9
Vehicles		131.9	131.9
Professional Services	91.3	170.7	262.0
Unallocated. Contingency		138.8	138.8
Finance Charges		30.0	30.0
TOTAL	91.3	1,444.8	1,536.1

*Spent as of Sept 30, 2017

Annual Operating and Maintenance Costs

Operating costs for the first full year of operation are estimated at $27.6 million. With anticipated farebox and other operating revenues of $9.7 million, the net annual operating costs to be covered by the state is estimated at $8.9 million and Hennepin County or other local sources is estimated to be $8.9 million.

Table 25: Blue Line Extension (Bottineau LRT) Proposed Operating Budget (first full year of operation)

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)
Fare revenue		9.0	9.0
State (general fund)		8.9	8.9
Local		8.9	8.9
Other (advertising)		0.8	0.8
TOTAL	0	27.6	27.6

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

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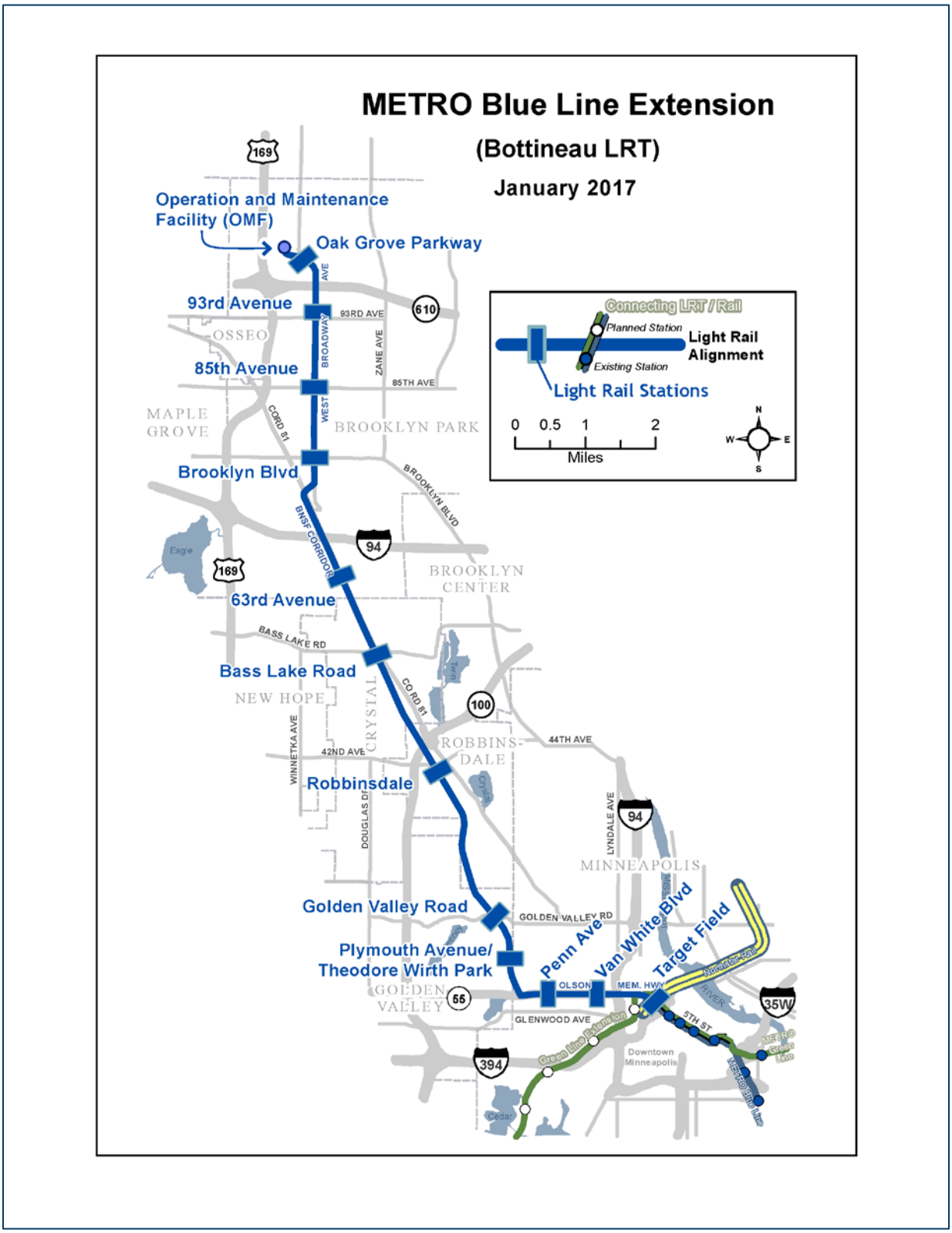
Figure 8: Blue Line Extension (Bottineau LRT) Map



Metro Gold Line (Gateway Corridor) BRT

Corridor Description

The Metro Gold Line, formerly known as the Gateway Corridor, is a 9-mile long bus rapid transit transitway located in Ramsey and Washington counties. The corridor generally runs parallel to Interstate 94, connecting downtown St. Paul with its east side neighborhoods and the suburbs of Maplewood, Landfall, Oakdale and Woodbury. The corridor will feature new all-day service primarily within roadway lanes dedicated to transit, a specialized BRT vehicle fleet, and robust stations and technology improvements. The Gold Line will connect to downtown St. Paul, including the Union Depot multimodal transportation hub, and is expected to carry over 8,000 passengers per weekday by 2040.

The purpose of the Gold Line project is to provide transit service to meet the existing and long-term regional mobility and local accessibility needs for businesses and the traveling public within the project area.

Project Status and Timeline

Table 26: Metro Gold Line /Gateway Corridor BRT

Milestone	Date(s)
Locally Preferred Alternative	Dec-16
Project Development	Dec 2017 – 2019
Engineering	2019 – 2020
Full Funding Grant Agreement	2021
Construction	2021 – 2023
Revenue Service	2024

Progress Update

After the 2013 Fixed Guideway Report was completed, the scoping phase of the Draft Environmental Impact Statement was also completed and the locally preferred alternative was adopted into the Metropolitan Council's 2040 Regional Transportation Policy Plan. In the fall of 2014 cities and counties adopted resolutions supporting the Gold Line locally preferred alternative recommendation. A draft Environmental Impact Statement was prepared for the Gold Line. In 2015, the City of Lake Elmo withdrew its LPA support and the project underwent additional planning. A revised LPA routes into Woodbury and offers significant project benefits and was approved by all corridor cities and counties by late 2016. The revised locally preferred alternative will be adopted by the Metropolitan Council during its regular TPP update in 2018.

During 2016, the environmental review for the Gold Line switched from an Environmental Impact Statement to a less intensive Environmental Assessment. This work will be completed during the project development phase, with all environmental documentation completed in 2019.

Summary Financial Plan

Capital Cost, Funding Sources, and Budget Activities

Table 27: Gold Line / Gateway Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
FTA New Starts		189.0	189.0	45
State of Minnesota	2.0		2.0	0.5
Counties Transit Improvement Board	6.0		6.0	1.5
Ramsey County	8.5	103.0	111.5	27
Washington County	8.5	103.0	111.5	27
TOTAL	25.0	395.0	420.0	100

Table 28: Gold Line / Gateway Capital Funding Uses

Budget Activity	Spent to date ($M)	Projected ($M)	TOTAL ($M)
Construction		242.0	242.0
ROW, Land, Existing Improvements		53.0	53.0
Vehicles		14.0	14.0
Professional Services		70.0	70.0
Unallocated. Contingency		36.0	36.0
Finance Charges		5.0	5.0
TOTAL	0	420.0	420.0

Annual Operating and Maintenance Costs

Table 29: Gold Line / Gateway Estimated Operating Costs

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue		TBD	TBD	TBD
Federal (CMAQ)				
State (general fund)		2.6	2.6	50
Local		2.6	2.6	50
Other (advertising)		TBD	TBD	TBD
TOTAL	0	5.2	5.2	100

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

Project Contact

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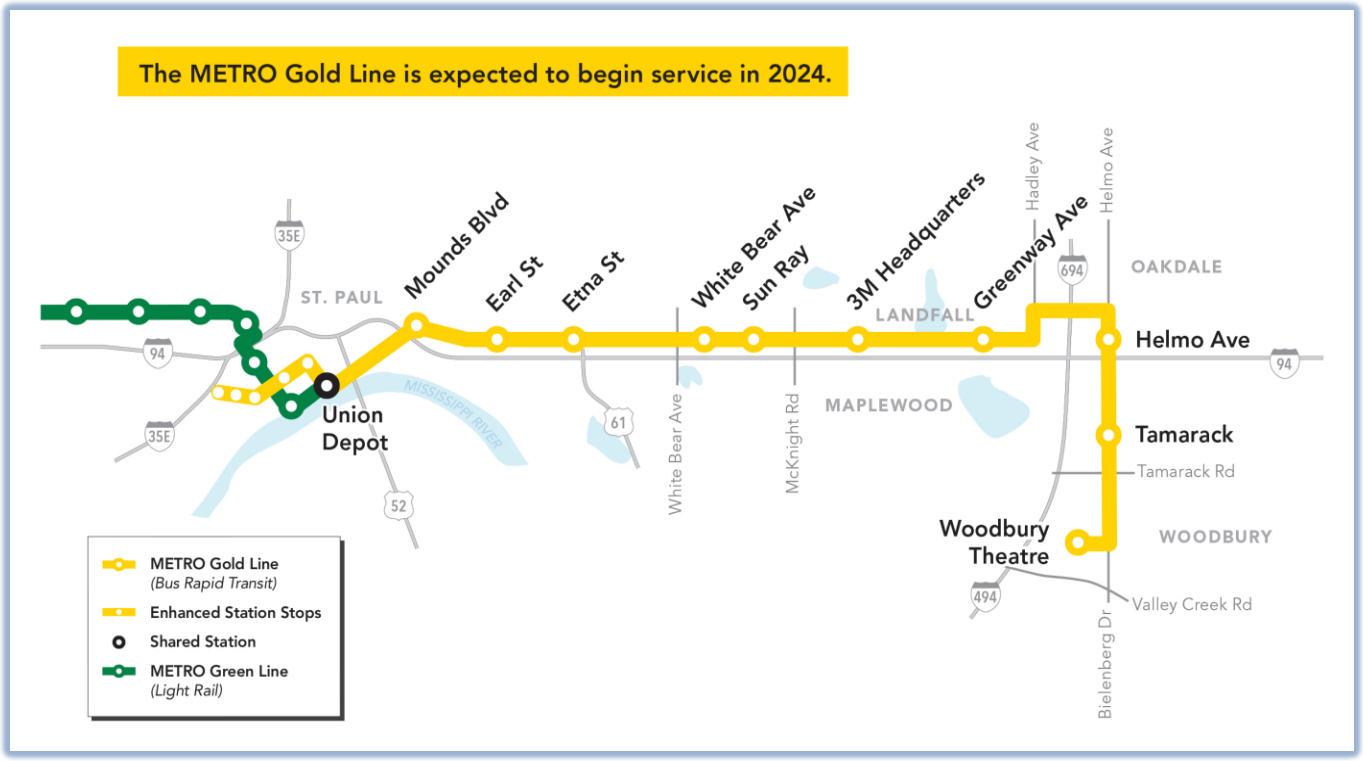
Figure 9: Proposed Gold Line / Gateway Route Map



Corridors in Planning or Analysis Phases

Highway 169 Mobility Study

Corridor Description

The Highway 169 Mobility Study is evaluating the potential for bus rapid transit along Highway 169 between Shakopee and downtown Minneapolis. The study initially screened several BRT alternatives and is currently conducting detailed analysis on the following two alternatives:

- Highway BRT between Marschall Road in Shakopee and downtown Minneapolis via I-394
- Highway BRT between Marschall Road in Shakopee and downtown Minneapolis via Highway 55

Preliminary station locations were identified for each alternative and will be refined through further evaluation efforts.

The study is being led through a partnership between MnDOT, the Metropolitan Council and Scott County. In addition to the transit analysis, MnPASS Express Lanes are also being evaluated. Numerous stakeholders are engaged in the study including Hennepin County; the cities of Shakopee, Prior Lake, Savage, Bloomington, Eden Prairie, Edina, Minnetonka, Hopkins, St. Louis Park, Golden Valley, Plymouth and Minneapolis; SouthWest Transit; Minnesota Valley Transit Authority; Metro Transit; the Federal Highway Administration; the Shakopee Mdewakanton Sioux Community; and the Highway 169 Corridor Coalition.

The Highway 169 corridor rated "high" for potential all-day station-to-station BRT service in the Met Council's 2014 Highway Transitway Corridor Study. The Met Council initiated the Highway Transitway Corridor Study to examine the potential for all-day, frequent, station-to-station, highway bus rapid transit along nine Twin Cities corridors. The Highway 169 Mobility Study is looking at the corridor in more detail.

Table 30: Projected Ridership by 2030

	Alternative 1: I-394	Alternative 2: TH 55
Station-to-Station BRT Service	7,400	6,600
Existing Express Bus Service	1,000	1,000
Total Corridor Service	8,400	7,600

Project Status and Timeline

Table 31: Hwy 169 BRT Project Status and Timeline

Milestone	Date(s)
Prioritized concept in regional Highway Transitway Corridor Study	May-14
Highway 169 Mobility Study complete with implementation plan recommendations	Late 2017
Draft Environmental Review	2018-2019

Progress Update

More detailed alignment and station location analysis has occurred through the Highway 169 Mobility Study, which will result in a preferred alignment and preliminary station locations at the completion of the study in late 2017.

Summary Financial Plan-Hwy 169 BRT

Table 32: Hwy 169 BRT Project Costs (Preliminary Estimates from Highway 169 Mobility Study, 2017)

	Alternative 1: I-394	Alternative 2: TH 55
BRT Capital Cost (2016$)	$67.4 Million	$69.0 Million
BRT Operating and Maintenance Cost (Annual)	$16.5 Million	$17.1 Million

Other Project Information

Lead Agency

MnDOT Metro District

Project Contact

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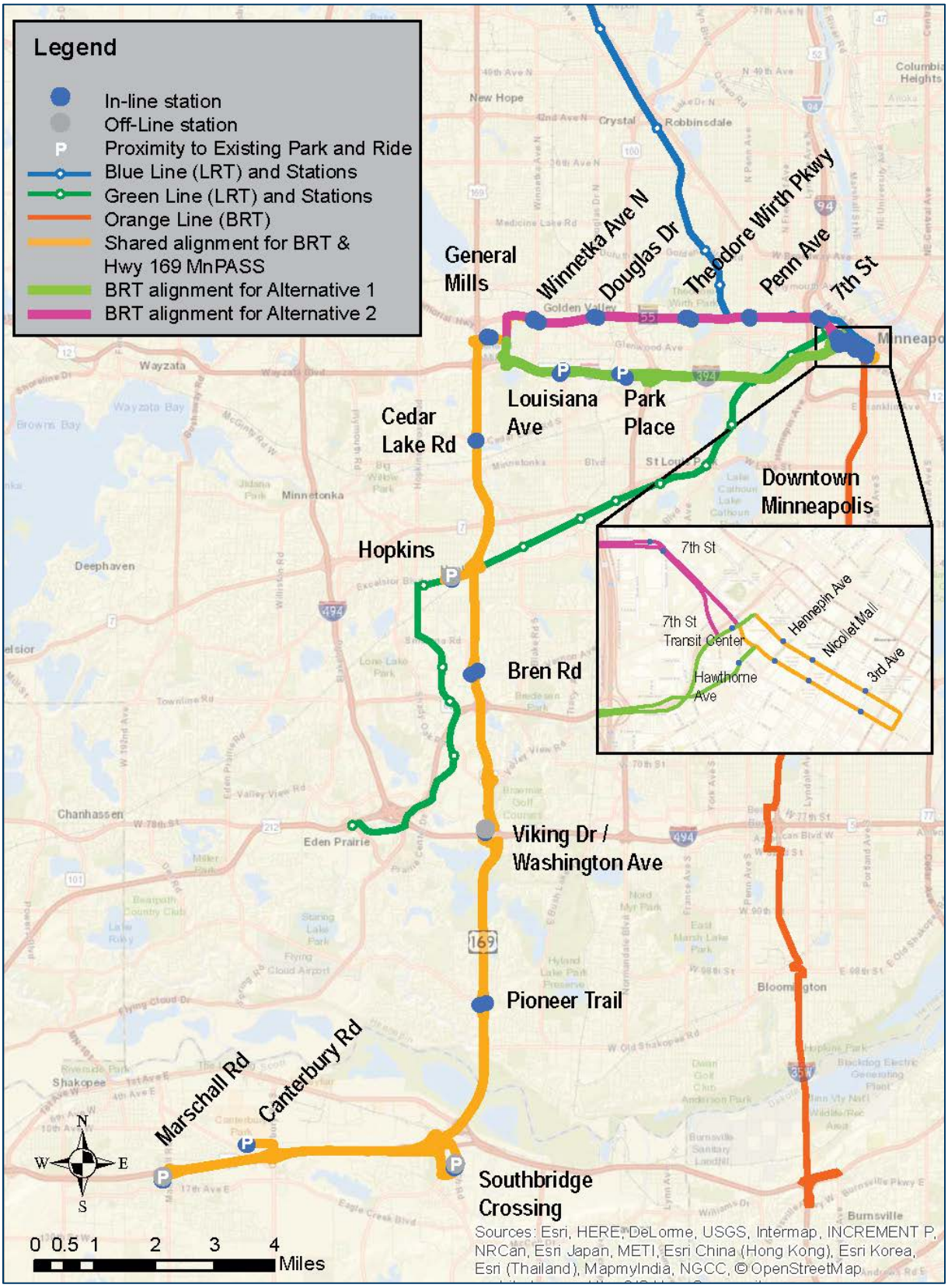
Figure 10: Highway 169 Corridor Map



I-35W North

Corridor Description

The I-35W North Corridor extends from downtown Minneapolis to Forest Lake. Travel in the 26-mile corridor is primarily commuter-oriented during peak hours, with highway volumes of 100,000 vehicles per day north of I-694 and more than 120,000 vehicles per day from Highway 36 to downtown Minneapolis. The corridor includes the communities of Columbus, Forest Lake, Lino Lakes, Blaine, Circle Pines, Lexington, Shoreview, Mounds View, New Brighton, Arden Hills, Roseville, St. Anthony and Minneapolis.

The corridor includes a bus-only shoulder lane between downtown Minneapolis and 95th Avenue in Blaine. There are more than 5,000 daily riders on nearly 170 transit trips connecting downtown Minneapolis via I-35W North, and Forest Lake. Approximately half of these riders come from the vicinity of 95th Avenue and Forest Lake. The other half come from the direction of Roseville and Maplewood and access the corridor where I-35W and Highway 36 meet.

Project Status and Timeline

The I-35W North Managed Lanes Corridor Study concluded that BRT is not currently cost effective in this corridor. However, this could change based on future need and development along the corridor.

Other Project Information

Lead Agency

Minnesota Department of Transportation and Metropolitan Council

Project Contact

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Midtown Corridor

Corridor Description

The Midtown Corridor travels 4.4 miles through the heart of south Minneapolis along the Lake Street and Midtown Greenway alignments. The corridor features dense residential neighborhoods, a thriving commercial district, several major employers and multiple connections to the regional transit network.

While the corridor is currently served by high frequency local and limited-stop bus routes, traffic congestion and high ridership make transit service very slow. An alternatives analysis completed in 2014 explored a broad range of options for transit improvements in the corridor. A combination of bus and rail improvements is recommended to meet the travel needs of the Midtown corridor.

The project Alternatives Analysis concluded with a recommended Locally Preferred Alternative for arterial BRT improvements along Lake Street from West Lake Station (Green Line Extension) to Snelling Station (Green Line), and double/single track rail along the Midtown Greenway. The combined ridership of these improvements is 26,000 per weekday, with corridor ridership of 32,000 rides per weekday.

The study is complete, with future corridor progress including adoption of a Locally Preferred Alternative dependent on additional transit funding.

Project Status and Timeline

Table 33: Midtown Corridor Project Status and Timeline

Milestone	Date(s)
Alternatives Analysis Study	Complete April 2014
Adopt Locally Preferred Alternative	TBD- not within the Met Council's Transportation Policy Plan Current Revenue Scenario
Environmental and Engineering	
Full Funding Grant Agreement	
Construction	
Revenue Service	

Progress Update

The Midtown Alternatives Analysis study is complete, with future corridor progress including adoption of a Locally Preferred Alternative dependent on the following:

- Resolutions of local support for the recommended LPA
- Additional transit funding to enable additional projects to be funded
- Increased definition of Midtown rail vehicle as streetcar or single-vehicle LRT

Summary Financial Plan-Midtown Corridor

Planning-phase cost estimates were generated for the Midtown Corridor Alternatives Analysis for the recommended improvements. These preliminary assessments estimated the costs for this project at approximately $215-250 million for the combined BRT ($50 million) and rail improvements ($185-200 million). Potential sources of funding and greater definition of uses will be defined in future project phases.

Capital Cost, Funding Sources, and Budget Activities

Table 34: Midtown Corridor Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Unknown Future Sources		250.0	250.0	100
TOTAL	0	250.0	250.0	100

Table 35: Midtown Corridor Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
Bus Improvements		50.0	50.0
Rail Improvements		200.0	200.0
TOTAL	0	250.0	250.0

Alternatives Analysis study was funded with federal planning assistance ($600,000) matched by Met Council funding ($150,000). These activities are considered pre-project development and are not included in capital budget activities or previous expenditures above.

Annual Operating and Maintenance Costs

The project's Alternatives Analysis estimated annual operating and maintenance costs are in 2012 dollars. Bus operations were estimated at $7 million annually, with rail operations at $8 million annually. The combined alternative (recommended LPA) annual operating cost is $15 million.

Table 36: Midtown Corridor Estimated Operating and Maintenance Costs (2012$)

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Unknown Sources		15.0	15.0	100
TOTAL	0	15.0	15.0	100

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

Project Contact

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Nicollet-Central Modern Streetcar

Corridor Description

The Nicollet-Central Modern Streetcar is a 3.7-mile modern streetcar line running between Lake Street and 8th Street SE on Nicollet Avenue, Nicollet Mall, Hennepin Avenue and 1st Avenue NE. The streetcar is planned to operate as a high-frequency service, serving short trips with stops approximately every quarter mile, running in mixed traffic with cars and buses, and using modern streetcar vehicles. It will improve transit connectivity between downtown and neighborhoods north of the Mississippi River and south of I-94, while also providing improved circulation along Nicollet Mall for employees, visitors and shoppers. The 3.7-mile modern streetcar starter line is projected to generate over 10,000 regular weekday riders.

Project Status and Timeline

An alternatives analysis for a 9-mile study corridor was completed in September 2013. The 3.7-mile Nicollet-Central Modern Streetcar was recommended by the Minneapolis City Council as the Locally Preferred Alternative, with the support of an interagency policy advisory committee in October 2013. In late 2013, Minneapolis initiated the preparation of an Environmental Analysis report for the corridor in accordance with FTA regulations and requirements of the National Environmental Policy Act. The report centers on a slightly modified LPA, and will document the short-term and long-term effects of the project including social and economic factors, physical factors, and indirect and cumulative effects. A majority of the EA technical studies and documentation are completed, with the historical and archaeological resource (Section 106) analysis nearing completion.

Table 37: Nicollet-Central Modern Streetcar Project Status and Timeline

Milestone	Date(s)
Corridor-related transit studies	2005 - 2012
Alternatives Analysis	2012 - 2013
Locally Preferred Alternative	13-Oct
Environmental Analysis	Fall 2013 –Spring 2018
Engineering	2018-2019
Construction	2020-2021
Revenue Service	2022-2023

Progress Update

Since the 2015 Guideway Status Report, three additional Operations and Maintenance Facility sites were analyzed. A draft Section 106 Assessment of Effects report was prepared. Work is currently underway to provide further information on station design, traffic and travel times in the along the corridor. The EA will be updated for submittal to FTA as soon as this additional analysis is completed.

Summary Financial Plan-Nicollet Central

Capital Cost, Funding Sources, and Budget Activities

Capital costs to complete the 3.7-mile Nicollet-Central Modern Streetcar are estimated at $260 million (in 2022 dollars). Professional services for the work initiated to date (the alternatives analysis and environmental assessment) are funded through a $900,000 grant through the FTA Alternatives Analysis program and $1.6 million from Minneapolis.

Funding for the remaining $258 million in capital costs is not secured; however, Minneapolis is working with regional partners to pursue the following funding sources: federal sources appropriate for streetcar projects, such as FTA Small Starts and/or the discretionary TIGER grant program; Minneapolis funds, such as the value capture district established for the Nicollet-Central streetcar project; and regional sources, such as revenue from a possible expansion of the transit sales tax.

Table 38: Nicollet Central Capital Funding Sources

Source	Existing ($M)	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
City of Minneapolis-Value Capture District	1.6	25.0-75.0		25.0-75.0	10-30
Federal Grant Alternatives Analysis	0.9			1.7	<1
FTA New Starts and/or TIGER Grant			100.0	75.0-100.0	35
Regional Sources			75.0-125.0	85.0-135.0	30-50
TOTAL	2.5	26.0-75.0	175.0-225.0	186.7-311.7	75-100

Table 39 Nicollet Central Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)**	TOTAL ($M)
Guideway		25.0	25.0
Stations/stops		7.0	7.0
Support facilities		19.0	19.0
Site work and special conditions		45.0	45.0
Systems		29.0	29.0
Right-of-way		6.0	6.0
Vehicles		70.0	70.0
Professional Services	1.7	35.3	37.0
Contingency		22.0	22.0
TOTAL	1.7	258.3	260.0

*Spent as of June 2017

**Projected costs are estimated in 2016 dollars inflated to 2022 dollars

Annual Operating and Maintenance Costs

The estimated annual operating and maintenance cost for the 3.7-mile streetcar is $13.5 million in 2022 dollars, excluding an estimated $2.9 million reduction in corridor bus operating costs; thus, the net increase in estimated operating and maintenance costs is $10.6 million in 2022 dollars.

Other Project Information

Lead Agency

City of Minneapolis

Project Contact

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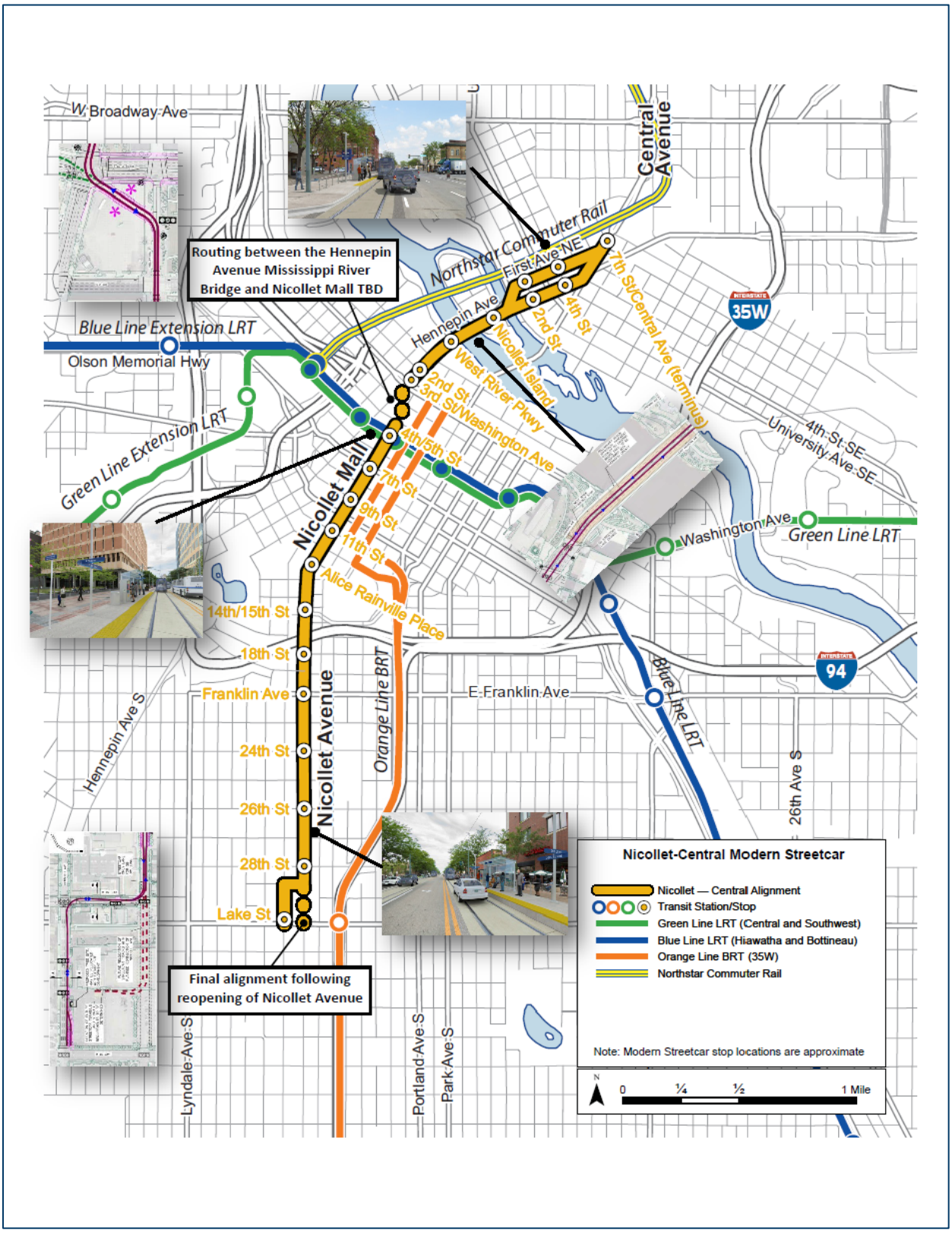
Figure 11: Nicollet-Central Modern Streetcar Map



Red Rock Corridor

Corridor Description

The Red Rock Corridor is a 30-mile corridor connecting Hastings, Union Depot in downtown St. Paul and downtown Minneapolis. The corridor generally follows the alignments of U.S. Highway 61 and Interstate 94 and the Burlington Northern Santa Fe and Canadian Pacific railways. The corridor runs through the communities of Cottage Grove, Denmark Township, Hastings, Newport, St. Paul Park, St. Paul and Minneapolis.

The Met Council projections for 2030 show a growing level of congestion in the corridor. With the projected traffic growth and no planned improvements, key locations on Highway 61, including ramps and intersections, are forecast to operate at Level of Service F during both peak periods in year 2030.

The existing bus service is equally affected by congestion on Highway 61 and I-94. No transit alternative is currently available from Hastings to downtown St. Paul or downtown Minneapolis. As population and employment increase, demand for transportation also increases. Because of job growth in Minneapolis and St. Paul, increased mobility and greater access to employment is needed for both downtowns. The project would also provide system connectivity to increase transit destinations for persons using existing and planned transit systems in the Twin Cities area.

A preliminary alternatives analysis completed in 2007 recommended expanding bus service, increasing bus frequency and providing additional park and ride facilities as the first steps toward building a stronger transit base in the corridor. A commuter rail line was identified as the long-term transit option. The alternatives analysis was updated in 2014 and it was identified that commuter rail is no longer a valid option because of high cost and because the all-day transit market is becoming increasingly important. All the communities in the corridor shifted focus to bus rapid transit. An Implementation Plan to determine the timeline for implementation, the costs and funding sources was completed in 2016.

Project Status and Timeline

An alternative analysis was competed in 2016 and it was determined that while bus rapid transit was the preferred option, a dedicated right of way was not cost effective at this time. Local communities are pursuing other transportation options.

Other Project Information

Lead Agency

Washington County Regional Railroad Authority on behalf of the Red Rock Corridor Commission

Project Contract

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Washington County
651-430-4314
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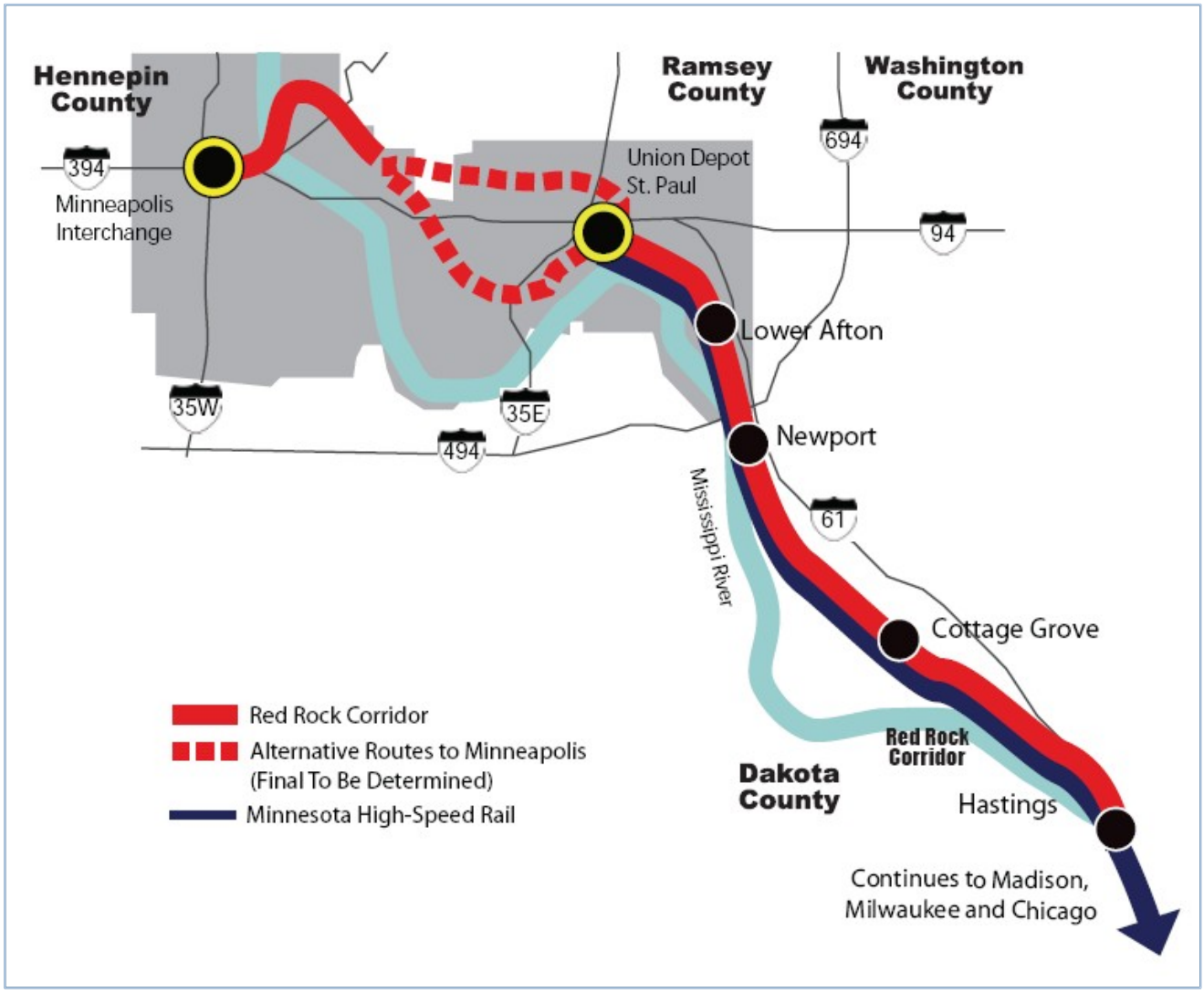
Figure 12: Red Rock Corridor Map



Robert Street Corridor

Corridor Description

The Robert Street Transitway, as defined by the 2040 Transportation Policy Plan, extends from downtown St. Paul, generally along the alignment of Robert Street. However, the transitway study area included areas bounded on the north by downtown St. Paul/I-94, the Mississippi River to the east, I-35E to the west and County Road 42 to the south. The transitway study area included St. Paul, West St. Paul, South St. Paul, Sunfish Lake, Mendota, Lilydale, Mendota Heights, Inver Grove Heights, Eagan and Rosemount. The Robert Street Transitway Alternatives Analysis narrowed the potential projects to two alternatives that would operate along Robert Street.

Project Status and Timeline

The Dakota County Regional Railroad Authority completed a transit feasibility study in November 2008. In April 2012, the DCRRA and the Ramsey County Regional Railroad Authority began an Alternatives Analysis. The Alternatives Analysis defined two alternatives- arterial bus rapid transit on Robert Street between downtown St. Paul and Mendota Road in West St. Paul or streetcar lines on Robert Street between downtown St. Paul and Mendota Road in West St. Paul-as the most able to achieve the goals defined through the AA process. In April 2015, this process concluded without the selection of a Locally Preferred Alternative. This decision was made to allow time for cities on the route to consider a transitway in their comprehensive plans and allow for a more informed LPA decision at a later time.

Robert St. Arterial Bus Rapid Transit

Table 40: Robert St. Arterial BRT Project Status and Timeline

Milestone	Date(s)
LPA Process, Preliminary Engineering, Environmental Documentation	2019-2021
Final Design and Letter of No Prejudice	2022
Construction	2023-2024
Opening Year	2025

Robert St. Streetcar

Table 41: Robert St. Streetcar Project Status and Timeline

Milestone	Date(s)
LPA Process, EA, Preliminary Engineering	2022-2023
Final Design and Letter of No Prejudice	2024-2025
Construction	2026-2028
Opening Year	2029

Progress Update

In April 2015, the Alternatives Analysis process concluded without the selection of a Locally Preferred Alternative. This decision was made to allow time for cities on the route to consider a transitway in their comprehensive plans and allow for a more informed LPA decision at a later time.

Summary Financial Plan-Robert Street

Capital Cost, Funding Sources, and Budget Activities

Table 42: Robert St. BRT Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Other Federal		15.4	15.4	49
State of Minnesota		3.1	3.1	10
Counties Transit Improvement Board				
Local (Counties/RRAs)		11.3	11.3	36
Local (Other)		1.6	1.6	5
TOTAL	0	31.4	31.4	100

Table 43: Robert St. BRT Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)**	TOTAL ($M)
Construction		18.2	18.2
ROW, Land, Existing Improvements		0.1	0.1
Vehicles		3.7	3.7
Professional Services		4.7	4.7
Unallocated Contingency		4.7	4.7
TOTAL	0	31.4	31.4

Table 44: Robert St. Streetcar Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
FTA New Starts		208.2	208.2	49
State of Minnesota		42.5	42.5	10
Counties Transit Improvement Board				
Local (Counties/RRAs)		153.0	153.0	36
Local (Other)		21.2	21.2	5
TOTAL	0	424.9	424.9	100

Table 45: Robert St. Streetcar Capital Funding Uses

Budget Activity	Spent to date ($M)*	Projected ($M)	TOTAL ($M)
Construction		260.6	260.6
ROW, Land, Existing Improvements		3.5	3.5
Vehicles		32.0	32.0
Professional Services		66.8	66.8
Unallocated. Contingency		62.1	62.1
TOTAL	0	425	425

Annual Operating and Maintenance Costs

Table 46: Robert St. Arterial Bus Rapid Transit Estimated Operating Costs

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	1.1		1.1	23
Federal (CMAQ)				
State (general fund, MVST)		3.6	3.6	77
CTIB				
Other (counties)				
TOTAL	1.1	3.6	4.7	100

Table 47: Robert St. Streetcar Estimated Operating Costs

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	1.1		1.0	10
Federal (CMAQ)				
State (general fund)		3.8	3.8	40
CTIB				
Other (counties)		4.8	4.8	50
TOTAL	1.1	8.6	9.6	100

Other Project Information

Lead Agency

Dakota County Regional Railroad Authority
Ramsey County Regional Railroad Authority

Project Contact

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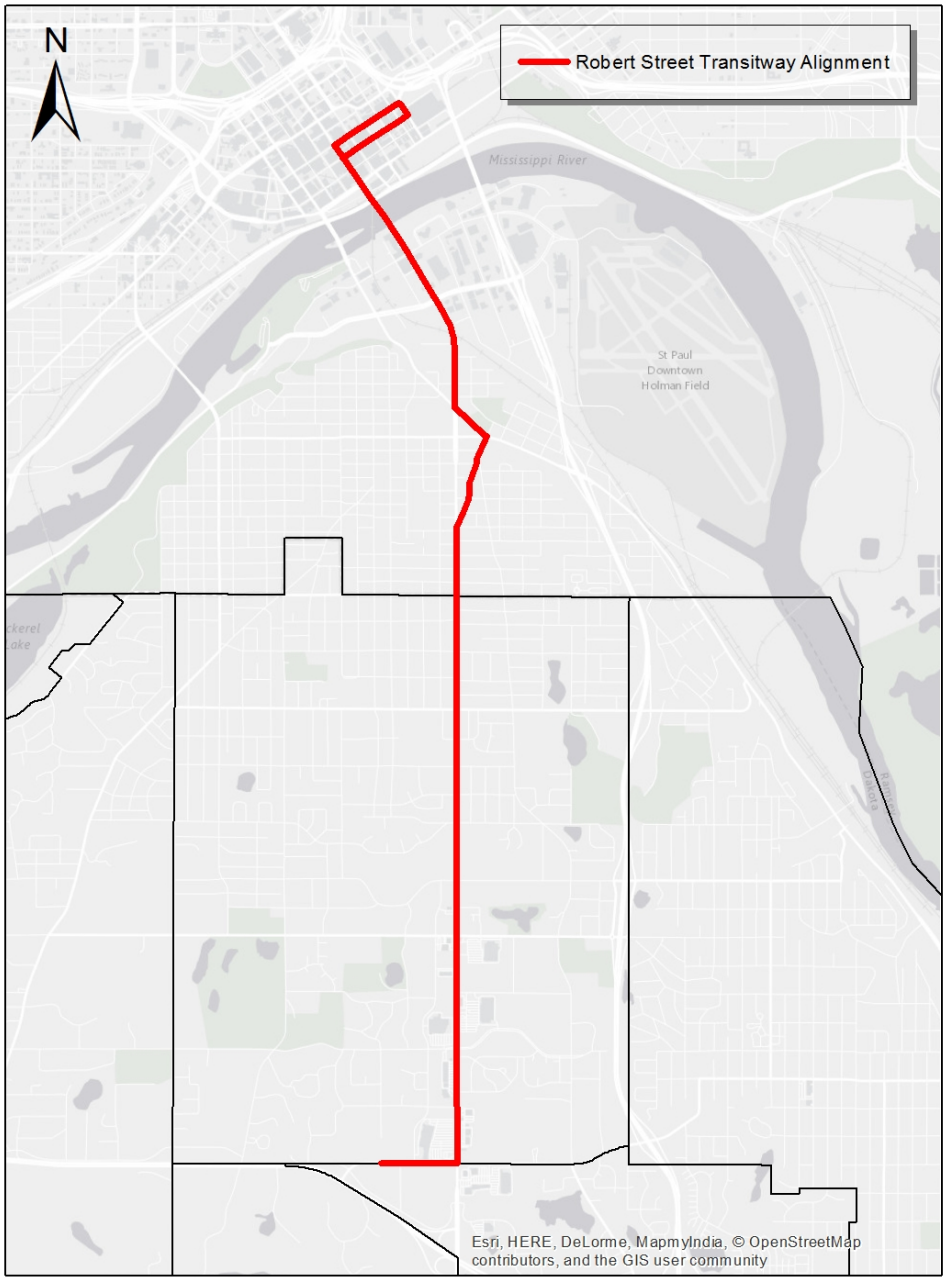
Figure 13: Robert Street Corridor Map



Rush Line Corridor

Corridor Description

The Rush Line Corridor is a transportation corridor extending 80 miles from Hinckley to Union Depot in downtown St. Paul, roughly following I-35 and I-35E and Highway 61. This corridor was identified for transportation improvements by the Met Council/Metro Transit, the Minnesota Department of Transportation, the Rush Line Corridor Task Force and the counties that encompass the corridor based on current and future population, employment and travel demand.

To give guidance in the process, the Rush Line Corridor Policy Advisory Committees was formed to provide policy input, direction and approval of study work efforts and make a recommendation on the locally preferred alternative. The Rush Line Corridor PAC includes Rush Line Corridor Task Force members, business organizations, Met Council, Minnesota Department of Transportation and other key stakeholders in the corridor.

Based on the findings and recommendations of the 2001 Rush Line Transit Study and the 2009 Rush Line Corridor Alternatives Analysis, a Pre-Project Development Study began in March 2014 and was completed Aug. 2017. The PPD Study was a joint local and regional planning effort conducted by the Rush Line Corridor Task Force and led by the Ramsey County Regional Railroad Authority. The PPD Study focused on analyzing bus and rail alternatives within the 30-mile study area between Forest Lake and Union Depot.

After a thorough technical analysis of 55 potential route segments and seven transit modes and extensive public engagement throughout the PPD Study, Alternative 1 was identified as the Locally Preferred Alternative. The LPA includes the definition of the mode, conceptual alignment and general station locations that can be refined through further environmental and engineering efforts.

Alternative 1 is defined as bus rapid transit within a dedicated guideway generally along Phalen Boulevard, Ramsey County Regional Railroad right of way and Trunk Highway 61, extending approximately 14 miles, and connecting Union Depot in downtown St. Paul to the east side neighborhoods of St. Paul and the Cities of Maplewood, Vadnais Heights, Gem Lake and White Bear Lake (see attached map).

Alternative 1 best meets the project's purpose and need and would likely qualify for Federal Transit Administration New Starts funding. Alternative 1 would be co-located with the Bruce Vento Trail through the portion of the route that uses the Ramsey County Regional Railroad Authority right of way. A connector bus from White Bear Lake to Forest Lake and other bus service improvements will continue to be explored during the environmental analysis phase of the project.

Project Status and Timeline

Table 48: Rush Line Corridor Project Status and Timeline

Milestone	Date(s)
Transit feasibility study	2001
Alternatives analysis study	Nov. 2009
Demonstration commuter bus	Oct. 2010 – Dec. 2012
Pre-project Development Study	March 2014 – Aug. 2017
Locally Preferred Alternative	May 2017
Environmental Analysis	Jan. 2018 - Dec. 2019
Project Development	Jan. 2020 – Dec. 2021

Progress Update

On May 26, 2017, the Rush Line Corridor Task Force acted upon the recommendations of the PAC and approved Alternative 1 as the LPA. The cities along the line including St. Paul, Maplewood, White Bear Lake, Vadnais Heights and Gem Lake and the Ramsey County Regional Railroad Authority were asked to support the locally preferred alternative during the summer of 2017. All letters of supporting the LPA were submitted to the Met Council for inclusion in the Transportation Policy Plan.

The next phase of the project is anticipated to begin January 2018 and will include environmental analysis under the federal and state environmental review processes to avoid, minimize and mitigate potential impacts while maximizing mobility, accessibility and surrounding economic development opportunities. The public will continue to be engaged throughout the environmental review process and subsequent design, engineering and construction phases to ensure that the project is reflective of the needs of the diverse communities within the Rush Line Corridor.

Summary Financial Plan-Rush Line

Capital Cost, Funding Sources, and Budget Activities

The Rush Line Corridor PPD study budget is $1,787,125. As of November 2017, all the PPD budget amount has been spent. The estimated capital cost for the design, engineering and construction of the Rush Line LPA is between $420 and $475 million inflated to year 2021. The chart below reflects the high end of the cost range.

Table 49: Rush Line Capital Funding Sources

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Other Federal		233.0	233.0	49
State of Minnesota				
CTIB				
Local (Counties/RRAs)		242.0	242.0	51
Local (Other)				
TOTAL	0	475.0	475.0	100

Annual Operating and Maintenance Costs

The estimated operating cost for the Rush Line LPA is between $7.8 and $8.0 million per year in current year dollars. The chart below reflects the high end of the cost range.

Table 50: Rush Line Estimated Operating Costs

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
Fare revenue	TBD	TBD	TBD	TBD
Federal (CMAQ)				0
State (general fund)		4.0	4.0	50
CTIB				0
Other (counties)		4.0	4.0	50
TOTAL	0	8.0	8.0	100

Other Project Information

Lead Agency

Ramsey County Regional Railroad Authority

Project Contact

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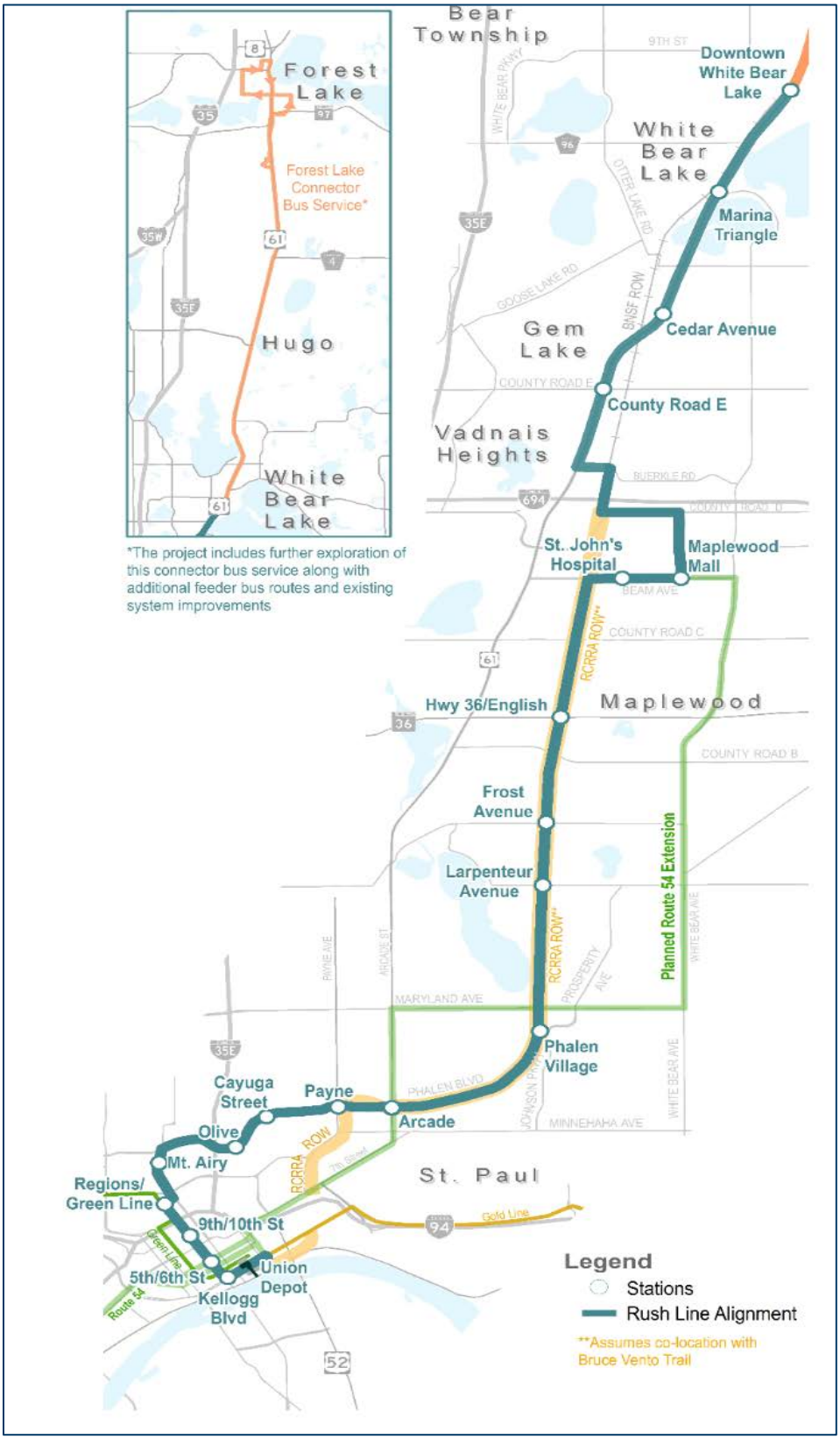
Figure 14: Rush Line Corridor Study Map



Riverview Corridor

Corridor Description

The Riverview Corridor connects downtown St. Paul to Minneapolis-St. Paul International Airport, Mall of America and the neighborhoods in between. It is defined by the Mississippi River on the south, I-35E and the river valley bluff on the north, with termini at Union Depot and the Mall of America. The corridor is analyzing multiple routes that generally follow W. 7th Street and then use either Hwy 5 or Ford Parkway to cross the Mississippi River. Routes crossing at Ford Parkway directly serve the Ford Site. The corridor is analyzing both bus and rail vehicle options.

The Riverview Corridor Major Investment Study (MIS) that concluded in July 2000 was sponsored by Ramsey County Regional Railroad Authority and the Federal Transit Administration. The MIS did not recommend an alternative but instead provided a focused analysis and evaluation of the mobility needs in the corridor and possible solutions.

Due to significant planned and completed redevelopment, as well as increasing employment along the corridor, in 2013 corridor partners determined it was appropriate to pursue additional analysis of transitway alternatives for the corridor.

Project Status and Timeline

Table 51: Riverview Corridor Project Status and Timeline

Milestone	Date(s)
Major Investment study	2000
Pre-project development study/LPA	Feb. 2014 - Dec. 2017
Draft Environmental Impact Statement	2018 - 2020

Progress Update

The Riverview Corridor is nearing completion of its pre-project development study. The study began in February 2014 and is scheduled for completion in December 2017. It is funded by RCRRA ($2,500,000). Following completion of the pre-project development study, a Locally Preferred Alternative will be selected and advanced into a draft environmental impact statement.

Summary Financial Plan-Riverview Corridor

Capital Cost

Capital costs depend on potential transit routes and vehicles in the transitway, as determined by the pre-project development study. The Riverview corridor is currently analyzing multiple routes and both bus and rail vehicles. The capital costs range from $75 million to $1.2 billion in 2015 dollars.

Annual Operating and Maintenance Costs

Operating and maintenance costs depend on potential transit routes and alignments in the transitway, as determined by the pre-project development study. The estimated annual operating costs for modes identified in the transit feasibility study range from $10 million to $28 million (2015 dollars). Potential funding sources include counties, cities, regional railroad authorities and Met Council transit operating funds.

Other Project Information

Lead Agency

Ramsey County Regional Railroad Authority

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Figure 15: Riverview Corridor Map

West Broadway Corridor

Corridor Description

Metro Transit, in partnership with Hennepin County and the City of Minneapolis, completed a transit study of West Broadway Avenue in Minneapolis and Robbinsdale. The West Broadway Transit Study engaged corridor businesses and community members, evaluated transit improvements including bus rapid transit and modern streetcar and evaluated the corridor's market potential for transit-oriented development.

The project resulted in Locally Preferred Alternative recommendation in February 2017 for transit service improvements in the corridor. The locally preferred alternative recommendation was for modern streetcar along the corridor from downtown Minneapolis to North Memorial Medical Center and improved bus transit service and facilities along the study corridor.

Incorporating the recommendation will require additional funding capacity, recommendations supporting the LPA from corridor cities and county and further technical evaluation of the corridor.

Project Status and Timeline

Table 52: West Broadway Corridor Project Status and Timeline

Milestone	Date(s)
West Broadway Transit Study	2015-Completed February 2017
Adopt Locally Preferred Alternative	Unknown - dependent on future funding availability and further evaluation
Environmental and Engineering	Unknown
Full Funding Grant Agreement	Unknown
Construction	Unknown
Revenue Service	Unknown

Progress Update

The West Broadway corridor was included in the previous guideway report, but had just begun the study phase in 2015. The study concluded in early 2017 with a locally preferred alternative recommendation. No further work is currently planned to develop or implement the project.

Summary Financial Plan-West Broadway

The study phase contract of $615,000 was funded by the Met Council, City of Minneapolis, and Hennepin County. The table below summarizes the estimated capital and operating costs of the transit alternatives studied in the project.

Table 53: Estimated Capital & Operating Costs Comparison

	Modern Streetcar (LPA Recommendation)	Arterial Bus Rapid Transit
Length	5 miles	7 miles
Capital Cost (2015$)	$239 million	$40 million
Annual Operating Cost (2015$)	$9.6 million/year	$5.5 million/year
Average weekday ridership (2040)	3,900	4,800

Other Project Information

Lead Agency

Metropolitan Council (Metro Transit)

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Intercity Passenger Rail Corridors

Northern Lights Express - Minneapolis to Duluth High Speed Passenger Rail

Corridor Description

The Northern Lights Express, otherwise known as NLX, is a proposed higher speed intercity passenger rail service that would operate between Minneapolis and Duluth. Terminal stations would be located in Minneapolis at Target Field Station and in Duluth at the historic downtown station known as the Depot. In Minnesota, intermediate stations are planned in Coon Rapids, Cambridge and Hinckley. There is one station proposed in Superior, WI.

The NLX Project includes planning, environmental review, engineering design and construction of the infrastructure required to implement daily intercity passenger train service at speeds up to 90 mph along a 152-mile corridor on track owned by the BNSF Railway. Also included in the project will be procurement of intercity passenger rail equipment, construction of layover and maintenance facilities, selection of an operator, development of a system safety plan and completion of all agreements necessary to operate over BNSF tracks.

The 2015 Minnesota Comprehensive Statewide Freight and Passenger Rail Plan identifies this corridor as a 'Phase I Project in Advanced Planning' for high-speed intercity passenger rail service. The NLX corridor meets the definition of 'emerging HSR' as defined in the FRA HSR Strategic Plan.

Project Status and Timeline

The NLX Service Development Plan and Tier 1 Service Level Environmental Assessment were completed in March 2013. A Finding of No Significant Impact and state Negative Declaration were issued in August 2013. The NLX Project is now in the Preliminary Engineering/NEPA phase, which includes preliminary engineering, ridership forecasts, identification of station and facility locations, a financial plan and completion of the Tier 2 Environmental Assessment. The PE/NEPA phase was completed as of June 30, 2017. A FONSI is anticipated by the end of 2017.The following table summarizes the actual and projected timelines of key milestones.

Table 54: Northern Lights Express (NLX) Project Status and Timeline

Milestone	Date(s)
Earlier Project Phases	
Feasibility Studies	2000 - 2007
Preferred Route Concurrence (FRA)	July 2011
Final Tier 1 EA	March 2013
Service Development Plan (SDP)	March 2013
FRA Tier 1 EA Determination / Minnesota Negative Declaration	Aug. 2013

Milestone	Date(s)
Current PE/NEPA Phase	
Preliminary Engineering/Tier 2 NEPA	Aug. 2013 - June 2017
Ridership Analysis/Forecast/BCA/Financial Plan	Aug. 2013 - Dec. 2015
Station and Layover Facility Selection and Concept Design	Dec. 2013 - Aug. 2015
Tier 2 Project Level NEPA	Aug. 2015 - June 2017
FRA Tier 2 EA Determination	Sept. 2017

Note: If sufficient funding is secured, final design, construction and vehicle procurement would take place upon completion of preliminary engineering and Tier 2 project level environmental review. Operations could begin in 2020

Progress Update

As part of the current PE/NEPA phase, MnDOT examined several alternative operating plans to optimize ridership, revenue and benefit-cost. Variables included the number of round trips (four, five, six and eight), maximum speed (90 or 110 mph), station locations and facility locations. Each alternative operating plan was associated with a set of infrastructure improvements necessary to ensure schedule reliability and minimize the impact on freight operations. MnDOT determined that an operating plan of four round trips per day at speeds up to 90 mph is the most cost-effective operating plan.

Capital cost estimates, operating costs estimates, ridership forecasts and revenue projections have been prepared for the preferred alternative of four round trips at 90 mph maximum speed. Capital cost estimates include station and facility construction, vehicle procurement and track improvements that are related to upgrade from Class 4 to Class 5 or 6 to accommodate higher speeds, extension of sidings to allow freight trains to pull off the main track for passenger trains, special track work such as crossovers to improve operational flexibility and in some locations new track. In addition, all grade crossings would be provided with warning devices including flashers, gates and medians. Operating cost estimates include labor, fuel, maintenance, access fees and cyclic capital costs. Benefit cost and economic impact analyses were prepared for the recommended operating plan.

Concept designs were completed for modifications to the existing Target Field Station and Union Depot in Duluth as well as for new stations in intermediate cities and layover/maintenance facilities. MnDOT completed all preliminary engineering and environmental analysis associated with the NLX Project by June 30, 2017. The Federal Railroad Administration is expected to issue a FONSI for the Tier 2 EA by Sept. 30, 2017.

Summary Financial Plan-NLX

The PE/NEPA phase of the NLX project is being funded by a federal grant administered by the Federal Railroad Administration. A related study, called the Hinckley Loop, was funded by an earlier federal earmark. The table below includes federal and state shares of these two grants along with supplemental funding provided through the Passenger Rail Office.

Table 55: NLX Funding

Source	Committed ($M)	Proposed ($M)	TOTAL ($M)	Share (%)
FRA	5.5		5.5	59
State of Minnesota	3.9		3.9	41
TOTAL	9.4	0	9.4	100

Funding for previous project phases, including the feasibility studies, the Tier 1 EA and the Service Development Plan is not included in the above table. Funding for final design, construction and vehicle procurement was not identified.

Other Project Information

Partnering Agencies

Minnesota Department of Transportation
Federal Railroad Administration
Minneapolis/Duluth Passenger Rail Alliance
Wisconsin Department of Transportation

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Figure 16: Northern Lights Express Corridor Map

Twin Cities-Milwaukee-Chicago Intercity Passenger Rail Service Phase 1 Study

Corridor Description

The Minnesota Department of Transportation, Wisconsin Department of Transportation and their partners initiated the Twin Cities - Milwaukee - Chicago Intercity Passenger Rail Service Phase 1 Study, formerly known as the Second Daily Passenger Rail Trip, to improve passenger rail service between the Twin Cities and Chicago, Illinois and station communities in between. The project seeks to implement a second daily round trip passenger train on the Empire Builder route to improve mobility and increase reliable travel options, while minimizing capital investment. The proposed service would follow Amtrak's existing long-distance Empire Builder route with termini at Chicago Union Station and Union Depot in Saint Paul. This project is based on recommendations of Amtrak's 2015 feasibility report on the proposed service.

The favorable ridership and revenue projections identified in the feasibility report supported a more detailed study of the proposed service. MnDOT and its partners are completing the detailed study of the service in two phases. The Phase 1 study will evaluate alternatives for track and other infrastructure improvements required for a second-round trip, along with anticipated costs. Phase 2 will complete environmental analysis and generate a service development plan.

Project Status and Timeline

The TCMC Phase 1 Study started in summer 2016. Primary funding for Phase 1 study is being provided by WisDOT and Ramsey County Regional Railroad Authority. In addition, Minnesota High Speed Rail Commission and La Crosse Area Planning Committee are providing contingency funding for the study.

When Congress passed the Passenger Rail Improvement and Investment Act of 2008 it changed the way that passenger rail service is funded. Services that are not "long distance" trains (500 plus miles and not part of Amtrak's core network) are the states' responsibility to capitalize and to provide operating subsidies. Minnesota, Wisconsin and Illinois will be responsible for a portion of capital costs and operations costs not generated by revenue.

Table 56: TCMC Intercity Passenger Rail Service Phase 1 Study

Project Phase	Date(s)
Amtrak completed feasibility study	2015
Phase 1 Study started	Summer 2016
Phase 1 Study completion date	Fall 2017

Progress Update

The scope of work for the TCMC Phase 1 Study is provided below:

- Pre-NEPA tasks to prepare a Purpose and Need Statement and an Alternatives Analysis that fulfills state and federal environmental requirements

- An operations analysis to evaluate and determine how the TCMC frequency can be operated most efficiently with freight trains on the Saint Paul to Chicago corridor and integrate with the Hiawatha schedule between Milwaukee and Chicago
- Evaluation of railroad infrastructure improvements needs and conceptual engineering of those improvements to ensure the states become eligible for federal funding and allowing the project to advance toward implementation
- Development of capital cost estimates for approved infrastructure improvements based on the conceptual designs
- Stakeholder and public agency involvement

Summary Financial Plan-TCMC

Below is a breakdown of funding sources used for the TCMC Phase 1 Study. The funding for Phase 2 study has not been identified yet.

Table 57: TCMC Intercity Passenger Rail Service Phase 1 Study Funding Sources

Source	Committed ($M)	Total ($M)
Minnesota – Ramsey County RRA	0.30	0.30
Wisconsin - WisDOT	0.30	0.30
MnHSR Commission (Contingency Funds)	0.05	0.05
La Crosse Area APO	0.01	0.01
TOTAL	0.66	0.66

Other Project Information

Partnering Agencies

Minnesota Department of Transportation
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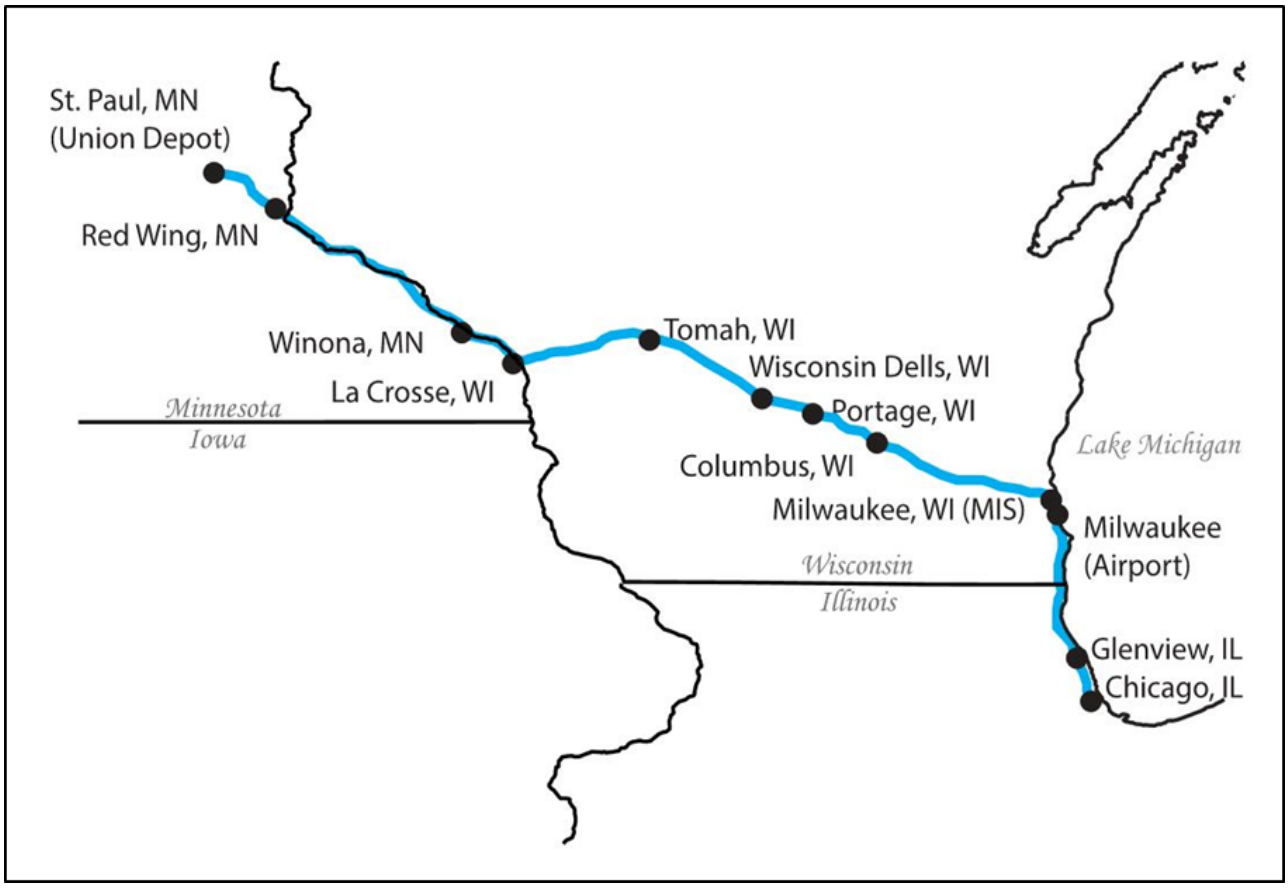
Figure 17: Map of the Route from the Twin Cities to Chicago with Possible Stations



Zip Rail - Twin Cities to Rochester High Speed Rail Corridor

Corridor Description

Zip Rail refers to the proposed high-speed passenger rail service between Rochester and the Twin Cities. Traveling speeds were proposed to be 150-220 mph to provide true high-speed rail service between the Twin Cities and Rochester, the state's third largest city. Currently, there is no existing railroad in this corridor, so the project will require construction of a new "greenfield" rail line. The 2010 Minnesota Statewide Freight and Passenger Rail Plan identified the Rochester Corridor as a Phase 1 corridor.

Project Status and Timeline

Feasibility studies for this corridor were conducted from 1990 to 2010 as part of the Tri-State Studies done in cooperation with Illinois and Wisconsin. These studies were forwarded to the Federal Railroad Administration in 2011 for review and approval. A statement of work for Alternatives Analysis, Tier 1 environmental analysis and Service Development Plan were developed by Olmsted County in cooperation with MnDOT and received the FRA's approval. The study began in fall 2012 and was completed in early 2016. It was determined that the route was not cost effective and MnDOT suspended work on the Zip Rail project in January 2016. No future work on this project is anticipated at this point.

Table 58: HSR: Zip Rail-Twin Cities to Rochester Corridor Project Status and Timeline

MILESTONE	DATE
Feasibility Studies	1990 - 2010
Alternatives Analysis and Tier 1 EIS	Oct. 2012 – Jan. 2016

Progress Update

Analysis of the information gathered for Zip Rail indicated that future development of this corridor was not cost effective at this time.

Other Project Information

Partnering Agencies

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Twin Cities to Milwaukee Portion - High Speed Rail Corridor to Chicago

Corridor Description

The Twin Cities to Milwaukee corridor is a segment of the approximately 435-mile high-speed passenger rail corridor between Minneapolis-St. Paul and Chicago, which in turn is part of the Chicago Hub Network. The Twin Cities to Chicago corridor is one of several major branches in the hub-and-spoke passenger rail system centered in Chicago as identified in the Midwest Regional Rail Initiative plan.

Project Status and Timeline

As part of broader MWRRI studies, the Twin Cities to Milwaukee project completed an Alternatives Analysis in 2012 to identify one route – the existing Amtrak route servicing Minneapolis, St. Paul, Hastings, Red Wing, Winona, La Crosse, Tomah, Portage, Watertown and Milwaukee – as the reasonable and feasible passenger rail alternative. A Tier 1 Environmental Impact Study and Service Development Plan started in October 2012. The study was re-scoped in 2016 to refine the Purpose & Need statement for the study and complete a Service Alternatives Report with updated ridership forecasts, rail capacity modeling and cost estimates for infrastructure improvements. This study is expected to be completed in late 2017. Tier 1 EIS and SDP studies will start when funding becomes available. The following table summarizes actual and projected timing of key project milestones.

Table 59: HSR Corridor to Chicago from the Twin Cities to Milwaukee Project Status and Timeline

Milestone	Date(s)
Alternatives Analysis (MWRRI Phase 7)	2009 – 2011
Reasonable and Feasible Passenger Rail Alternative Concurrence (FRA)	Nov. 2012
Minnesota Scoping and RTC Modeling	June 2012 - Dec. 2015
Union Depot to MTI AA/RTC Modeling	Oct. 2013 - Dec. 2015
Re-Scoping	2016
Updated Ridership Forecasts and RTC Modeling	2016 - 2017
Service Alternatives Analysis & Refine Purpose & Need	2017

Note: If sufficient funding can be secured, final design, construction, and vehicle procurement will take place upon completion of the Tier 1 and Tier 2 EIS. Operations could commence late 2025.

Progress Update

Since the last report, ridership forecasts were updated and Rail Traffic Controller Modeling between Union Depot, St. Paul and Milwaukee are being updated based on requirements by the Federal Railroad Administration. The results of the updated modeling are being discussed with FRA and Canadian Pacific Railroad. Purpose & Need statement for the study will be refined and the Service Alternatives analysis report will be completed by late 2017.

Summary Financial Plan-HSR from Twin Cities to Milwaukee

Below is a breakdown of funding sources being used for the study. Funding for all the phases of Tier 1 EIS, Preliminary Engineering and the Tier 2 EIS has not been identified, and they have an estimated a full cost of $50 million. Work will occur as funding is identified and made available.

Table 60: HSR from Twin Cities to Milwaukee-Funding Sources for EIS and SDP

Source	Committed ($M)	Proposed ($M)	Total ($M)
FRA (Tier 1 EIS Grant)	0.6		0.6
State of Minnesota (Tier 1 EIS Grant match)	0.6		0.6
State of Minnesota (MN Scoping)	0.09		0.09
State of Minnesota (RTC Modeling)	0.22		0.22
State of Minnesota (Union Depot to MTI Alt. Analysis/RTC Modeling)	0.73		0.73
Updated ridership forecasts, RTC modeling, Service Alternatives Analysis*			
TOTAL	2.24	0	2.24

*Remaining budget from the above tasks is being used.

Other Project Information

Partnering Agencies

Minnesota Department of Transportation
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Figure 18: Map of Twin Cities to Milwaukee Portion, High Speed Rail to Chicago

Capacity Analysis

The capacity analysis portion of the report seeks to aggregate and synthesize information about individual project finances, providing an overall view for the guideways that the corridor summaries do not provide alone.

General Approach

The capacity analysis looks at regional guideway funding needs and sources related to capital, operating and capital maintenance costs for the next 10 years. Consequently, the capacity analysis consists of tables of anticipated project expenditures for each of these three categories of costs.

Costs in each category are shown in the anticipated year of expenditure. Since funding requests precede anticipated project expenditures, some of the funds shown in 2017 and future years, while not yet expended, have already been secured through previous funding requests and are "committed" to the project(s). In other instances, funds shown in the future years are anticipated funding requests from the identified funding sources but are not yet committed. The text for each of the cost categories seeks to indicate the level of funding that was previously committed and those funds that have yet to be secured. The individual corridor summaries (in previous sections) also provide information about funds committed to a given project.

As previously noted, due to the high uncertainty and large range of cost estimates for projects still in the planning phase, the capacity analysis section includes only those guideway projects that have an adopted locally preferred alternative and are in preliminary engineering, design, construction or operation. This includes eight corridors:

- Blue Line (Hiawatha LRT)
- Northstar Commuter Rail
- Red Line (Cedar BRT)
- Green Line (Central Corridor LRT)
- Green Line Extension (Southwest LRT)
- Orange Line (I-35W South BRT)
- Blue Line Extension (Bottineau LRT)
- Gold Line (Gateway BRT)

For past expenditures, any figures shown represent actual expenditures; for future expenditures, although the numbers shown are the best estimates currently available, they should still be viewed as estimates that may change over time.

Capital Cost Analysis

Guideway project capital cost estimates are shown in Table 61 at the end of this chapter. The capital cost table is organized by anticipated expenditures. Capital costs include design and construction costs to build a guideway project, as well as costs for subsequent major, one-time capital improvements that are planned to occur after the initial project construction. An example is expanding station platforms or purchasing additional vehicles as demand for service increases. At this time, such subsequent capital cost expenditures are anticipated to occur only for some of the guideway projects currently operating (i.e., Blue Line, Northstar, Red Line, and Green Line).

Total estimated capital cost for the eight guideway projects is about $6.3 billion. This total includes a substantial amount of funding that has already been spent or committed. All capital funding for the initial portions of four of the projects – Blue Line, Northstar commuter rail, Red Line Stage 1 and Green Line– is been identified and is either spent or committed.

Projected sources to complete the Green Line Extension include $928.8 million from the federal New Starts program, $30.4 million from the state and RTC, $226.4 million from CTIB, $185.8 million from the Hennepin County Regional Railroad Authority, $393.6 million from Hennepin County, and $92.7 million from other local sources.

Capital funding needs for the Blue Line Extension project are estimated at $1.536 billion. Projected sources of funds include $752.7 million from the federal New Starts program, $530.9 million from Hennepin County, $149.4 million from the Hennepin County Regional Railroad Authority, $85.5 million from CTIB, $16.4 million from other local sources and $1 million from the state.

Capital funding needs for the Orange Line project are estimated at about $151 million and the funding shares are based on receiving a federal Small Starts grant with about 55 percent from federal sources. The rest breaks down to 10 percent from state sources (a portion of which may be trunk highway bonds for roadway-related project elements), 6 percent from CTIB and 29 percent from Hennepin and Dakota Counties.

Stage II of the Red Line BRT project extends from 2013 to 2020, with capital expenditures of $73.5 million anticipated. Stage III is slated to begin in 2021.

Capital funding needs for the Gold Line project are estimated at about $420 million and the funding shares are estimated based on received a federal New Starts grant with about 45 percent from federal sources. The rest breaks down to 0.5 percent from state sources, 1.5 percent from CTIB and 27 percent each from Washington and Ramsey counties.

Operating Cost Analysis

Operating costs include annual vehicle operator salaries and benefits, fuel, vehicle cleaning and other administrative costs. The estimated operating costs for those guideway projects expected to be in operation by 2027 are shown in Table 61 at the end of this chapter. Operating costs are typically paid first through fares and any operating revenue generated by the guideway project, such as advertising revenue. The remaining operating costs are referred to as the net operating costs or subsidy. Historically, they have been paid from a combination of state, CTIB, Met Council and federal revenues. With the dissolution of CTIB in 2017, going forward operating costs will be paid from a combination of state, county, Met Council and federal revenues.

Minn. Stat. 473.4051, subd. 2(a) states that, “after operating and federal money have been used to pay for light rail operations, 50 percent of the remaining costs must be paid by the state.” In line with state law, this capacity analysis assumes that 2017, net operating costs for Blue Line, Green Line, and Blue Line Extension will be shared 50 percent by the state and 50 percent by the county(ies) In the capacity analysis table, these operating revenues are shown as “state (Minn. Stat. 473.4051 obligation).” Any other expectation of state funding for guideway operations that does not fall under this statutory requirement is shown in the table as “state (additional request).” Minn. Stat. 473.4051, subd. 2(b) requires that operating and maintenance costs for the Green Line Extension be paid for by non-state sources; therefore, the analysis local funders to pay the net operating costs for the Green Line Extension.

This capacity analysis includes an assumption that the state will continue fully funding its 50 percent share of the Blue Line and Green Line, followed by a 50 percent contribution to the net operations of the Blue Line Extension when it opens in 2022. The county will be responsible for covering all of the net operating costs for the Green Line Extension, when it opens in 2022.

The Green Line opened in 2014 and in the first three years of operations the Green Line received a $7.0 million Congestion Mitigation and Air Quality grant that contributed $2.3 million each year in federal funds for 3 years. This reduced the operating cost contributions from both the state and CTIB for half of 2014, 2015 and 2016 and approximately half of 2017. The Green Line Extension is expected to open in 2022, with 2023 its first full year of operation. The state funding share for the Green Line Extension is $0. The Blue Line Extension is expected to open

in 2022, with its first full year of operation in 2023; the state funding share for 2023 is estimated to be $8.9 million.

By the end of 2022, four LRT services will be in full operation, with three anticipating state funds for operations. The 50 percent state share of net operating costs will total approximately $37.3 million.

There is no state statute that addresses how the operating costs for commuter rail are to be funded. The financial analysis section of the Northstar Commuter Rail New Starts application showed that the net costs were assumed to be paid 50 percent from the state and 50 percent from local sources. However, no state appropriation has yet been made for Northstar operations. To date, the assumed 50 percent state share has been funded using motor vehicle sales tax funds contributed from Met Council and MnDOT sources. This capacity analysis assumes these sources will continue to be used to fund a state 50 percent share of Northstar's net operating costs, estimated to be $8.1 million in 2016, growing to $10.5 million for 2025.

The Red Line BRT service has secured federal CMAQ grant funding of $1.1 million per year for 2014 and 2015, decreasing to $0.1 million in the final grant year, 2016, with remaining costs distributed between CTIB and the Met Council. From 2017 forward, net operating costs are presumed to be split equally between the Met Council and the respective counties.

The funding shares for the Orange Line station-to-station BRT service are expected to parallel the LRT cost shares; so, for these services it is expected that the net operating costs will be shared equally between Council/MVST and the counties. Council/MVST costs for the Orange Line's net operating in 2021 are estimated to be $2.1 million.

The funding shares for the Gold Line station-to-station BRT service operating costs are anticipated to be split equally between the Met Council and the counties; these shares are estimated to be $2.6 million for the Council and $2.5 million for the counties starting in 2024. The operating cost split between Ramsey County and Washington County is not yet determined. In 2027, the state share of the seven fully operational LRT and BRT guideway projects will total approximately $46.4 million.

Capital Maintenance Cost Analysis

Capital maintenance includes ongoing capital costs typically included in an annual capital budget, such as track maintenance, periodic vehicle overhauls, signal work and other smaller-scale capital improvements. These maintenance costs can vary significantly from year-to-year depending on the needed maintenance; accordingly, this capacity analysis uses costs averaged over time.

In addition, capital maintenance costs start out low as a new corridor is opened, but grow over time as the line ages and more ongoing maintenance is required. As rail corridors come on-line, the federal transit formula funding allocated to the metropolitan region typically increases due to the added guideway mileage and service. It is expected that this will continue to occur and that additional federal funds will be available to pay 80 percent of the annual capital maintenance costs of the guideways in the future. The Met Council, using its Regional Transit Capital property tax-backed bonds, would be responsible for the remaining 20 percent of capital maintenance costs.

The estimated capital maintenance for the guideway projects, 2017 through 2027, is shown in Table 63. For three corridors, the Red Line, the Orange Line and the Gold Line BRT services, the annual capital maintenance costs are included within those corridors' annual operating costs, estimated in the Table 61.

The Blue Line corridor has been operating for the longest period of time and has the best historical data from which to calculate annual capital maintenance costs. The capital maintenance costs for the Green Line, the Green Line Extension and the Blue Line Extension are modeled after the experience with the Blue Line. Northstar costs are estimated based on the limited experience to-date for that corridor.

In 2017, capital maintenance costs for the Blue Line are estimated at $10.7 million, $1 million for Northstar and $6.5 million for the Green Line. At the end of the analysis period, 2027 capital maintenance costs are estimated to total $31.0 million for the system of four LRTs and Northstar Commuter Rail, but the figure does fluctuate year-to-year based on maintenance schedules.

Other Financial Notes

ROUNDING: As with the corridor summaries, the capacity analysis rounds estimated expenditures to the nearest $100,000. This causes some rows and columns to add imperfectly, but sums should differ by no more than $100,000 ($0.1M).

INFLATION: To facilitate meaningful comparison, the capacity analysis inflates cost estimates to the estimated year of expenditure using a capital cost inflation rate of 3.0 percent and an operating cost inflation rate of 3.15 percent. These rates were approved by the FTA and are used in the financial analysis for the Green Line New Starts full funding grant application.

CASHFLOW: As shown in the capital cost tables for the Green Line, the Green Line Extension and the Blue Line Extension LRT systems (Central Corridor, Southwest and Bottineau, respectively) federal payments for New Starts projects often do not begin until after construction has commenced, and payments typically continue for a few years after the project has been completed. To meet cash flow needs, this requires heavy front-end funding by the state, CTIB, counties and local funding sources along with borrowing by the Met Council against future federal payments once a full funding grant agreement has been issued by the FTA. The financing costs necessary for such borrowing are accounted for in project capital cost estimates, and the associated cash flow adjustments are shown in the capacity analyses for the Green Line and the Green and Blue Line Extensions.

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Blue Line	Total by Source	Pre-2017*	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	414.1	414.1											
Federal (Other)	97.0	97.0											
State (G.O. Bonds)	101.0	101.0											
State (T. H. Bonds)	20.1	20.1											
Metropolitan Airport	87.0	87.0											
Hennepin County	84.2	84.2											
Mall of America (in-kind)	9.9	9.9											
Metropolitan Council (RTC)	29.1	29.1											
Other	0.4	0.4											
Total	842.8	842.8	0	0	0	0	0	0	0	0	0	0	0

*Original Blue Line was complete prior to 2017

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Northstar	Total by Source	Pre-2017*	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	159.7	159.7											
State (G.O. Bonds)	102.6	102.6											
Metropolitan Council (RTC)	5.4	5.4											
Northstar Corridor Dev. Auth.	50.2	50.2											
CTIB	12.9	12.9											
Local	9.4	9.4											
Other	2.6	2.6											
Total	342.8	342.8	0	0	0	0	0	0	0	0	0	0	0

*Northstar was complete prior to 2017

Red Line	Total by Source	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	15.8	15.8											
Federal (Other)	51.4	27.5		6.7	5.7			1.7		7.0		1.7	1.1
State (G.O. Bonds)	47.1	27.7	1.3				1.0	1.5		12.3		1.7	1.6
Metropolitan Council (RTC)	4.1	1.2			1.4	0.1				1.4			
CTIB	34.6	24.2	10.4										
Local	28.4	11.1	1.3	0.7	0.1	0.3	1.1	1.0	2.3	6.2		2.3	2.0
Other	3.4	0		0.7		0.1		0.4		2.1			0.1
Total	184.8	107.5	13.0	8.1	7.2	0.5	2.1	4.6	2.3	29.0	0	5.7	4.8

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Green Line	Total by Source	Pre-2017*	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	478.4	478.4											
Federal (Other)	8.2	8.2											
State (G.O. Bonds)	91.5	91.5											
Hennepin County	28.2	28.2											
Ramsey County	66.4	66.4											
St. Paul	5.2	5.2											
Central Corridor Funders Collaborative	0.5	0.5											
Metropolitan Council (RTC)	4.6	4.6											
CTIB	284.0	284.0											
Local	967.0	967.0	0	0	0	0	0	0	0	0	0	0	0

*Original Green Line was complete prior to 2017

Green Line Extension	Total by Source	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	928.8			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	28.8
State (G.O. Bonds, Appropriations)	14.3	13.8	0.5										
Hennepin County	393.6		55.4	214.9	89.7	33.6							
Metropolitan Council (RTC)	16.1	16.0		0.1									
CTIB	226.4	91.5	134.9										
HCRRA	185.8	32.7	46.3	44.7	45.3	16.8							
Local	23.7			15.0	8.7								
Other	69.0		69.0										
Total	1,857.7	154.0	306.1	374.7	243.7	150.4	100.0	100.0	100.0	100.0	100.0	100.0	28.8

Note: Capital expenditures post 2016 are based on actual completed forecast through year 2027.

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Orange Line	Total by Source	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	74.0				37.0	37.0							
Federal (CMAQ)	7.0				7.0								
Federal (5307 Formula)	1.8	1.0	0.8										
State (G.O. Bonds & Cash Appropriation)	15.2	0.3	2.7	5.7	6.5								
Metropolitan Council (RTC)	0.4	0.4											
CTIB	7.9	2.4	5.5										
Local-HCRRA	12.8		2.6	6.1	4.1								
Local-Hennepin County	25.8		2.6	9.0	5.9	8.3							
Local-DCRRA	2.1		0.4	1.0	0.7								
Local-Dakota County	3.8		0.4	1.0	1.0	1.4							
Total	150.8	4.1	15.0	22.8	62.2	46.7	0	0	0	0	0	0	0

Blue Line Extension	Total by Source	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	752.7			100.0	100.0	100.0	100.0	100.0	100.0	100.0	52.7		
State (G.O. Bonds)	1.0	1.0											
Hennepin County	530.9			84.1	243.1	203.7							
CTIB	85.5	36.0	39.7	9.8									
HCRRA	149.4	23.0	26.4	55.6	25.4	19.0							
Local	16.4			3.3	8.4	4.7							
Total	1,535.9	60.0	66.1	252.8	376.9	327.4	100.0	100.0	100.0	100.0	52.7	0	0

Note: Capital expenditures post 2016 are based on an actual completed forecast through year 2025.

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Gold Line	Total by Source	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5309 New Starts)	189.0						45.0	67.5	67.5	9.0			
Federal (Other)													
State	2.0		0.2	1.8									
Metropolitan Council (RTC)													
CTIB	6.0			3.0	3.0								
Local (Counties/RRAs)	223.0			3.8	13.0	15.0	45.0	82.5	52.5	11.2			
Total	420.0		0.2	8.6	16.0	15.0	90.0	150.0	120.0	20.2	0	0	0

Gold Line pre-project development costs are excluded

Note: Capital expenditures post 2016 are based on an actual completed forecast through year 2027.

Table 61: Estimated Guideway Capital Expenditures ($ millions)

Total Capital	Total	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5307 Formula)	1.8	1.0	0.8										
Federal (5309 New Starts)	3012.5	1068.0		200.0	237.0	237.0	245.0	267.5	267.5	209.0	152.7	100.0	28.8
Federal (CMAQ)	7.0				7.0								
Federal (Other)	156.6	132.7		6.7	5.7			1.7		7.0		1.7	1.1
Hennepin County	1062.7	112.4	58.0	308.0	338.7	245.6							
Dakota County	3.8		0.4	1.0	1.0	1.4							
Ramsey County	66.4	66.4											
DCRRA	2.1		0.4	1.0	0.7								
HCRRA	348.0	55.7	75.3	106.3	74.8	35.8							
Metropolitan Council (RTC)	59.7	56.7		0.1	1.4	0.1				1.4			
Mall of America (in-kind)	9.9	9.9											
Metropolitan Airport	87.0	87.0											
Northstar Corridor Dev. Auth.	50.2	50.2											
CTIB	657.3	451.0	190.5	12.8	3.0								
State (T.H. Bonds, G.O. Bonds and/or Appropriations)	394.8	357.9	4.7	7.5	6.5		1.0	1.5		12.3		1.7	1.6
Local (Counties/RRAs)	223.0			3.8	13.0	15.0	45.0	82.5	52.5	11.2			
Local	83.1	25.7	1.3	19.0	17.2	5.0	1.1	1.0	2.3	6.2		2.3	2.0
Other	75.9	3.5	69.0	0.7		0.1		0.4		2.1			0.1
Total	6301.8	2478.1	400.3	667.0	706.0	540.0	292.1	354.6	322.3	249.2	152.7	105.7	33.6

Table 62: Estimated Guideway Operating Expenditures ($ millions)

Blue Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox	10.6	11.7	11.8	11.9	13.1	13.2	13.3	13.5	14.8	15.0	15.1
State	12.4	12.4	13.0	13.5	13.5	14.1	14.7	15.3	15.3	16.0	16.7
CTIB/Counties	12.4	12.4	13.0	13.5	13.5	14.1	14.7	15.3	15.3	16.0	16.7
Other	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Total	36.1	37.2	38.5	39.6	40.8	42.1	43.4	44.9	46.2	47.8	49.3

Northstar	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox	2.4	2.6	2.7	2.7	3.0	3.0	3.0	3.1	3.4	3.4	3.4
Metropolitan Council (MVST)	7.0	7.1	7.4	7.6	7.8	8.1	8.3	8.6	8.8	9.1	9.4
CTIB/Counties	7.0	7.1	7.4	7.6	7.8	8.1	8.3	8.6	8.8	9.1	9.4
Greater MN MnDOT	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Local (Sherburne County)	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Total	19.0	19.6	20.3	20.9	21.6	22.4	22.8	23.7	24.4	25.2	25.8

Red Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Metropolitan Council	1.6	2.8	2.9	3.0	3.2	3.3	3.5	3.6	3.7	3.8	3.9
Farebox	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Other	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CTIB	1.6										
Total	3.5	3.1	3.2	3.3	3.5	3.7	3.9	4.0	4.1	4.2	4.3

Green Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox	11.8	13	13.1	13.2	14.6	14.7	14.9	15	16.5	16.7	16.8
Federal (Other)	1.2										
State	12.2	12.8	13.4	13.9	13.9	14.5	15.2	15.8	15.8	16.5	17.2
CTIB/Counties	12.2	12.8	13.4	13.9	13.9	14.5	15.2	15.8	15.8	16.5	17.2
Local	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
Total	38.2	39.4	40.7	41.8	43.2	44.5	46.2	47.5	49.0	50.6	52.1

Green Line Extension*	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox						2.1	8.7	8.9	9.9	10.1	10.3
Hennepin County						2.7	20.9	21.7	21.6	22.4	23.3
Other						0.8	0.8	0.8	0.8	0.8	0.8
Total	0	0	0	0	0	5.6	30.4	31.4	32.3	33.3	34.4

*As reported to the FTA in the annual New Starts Update submitted in Sept. 2017; will be updated with the annual New Starts update in 2018.

Table 62: Estimated Guideway Operating Expenditures ($ millions)

Orange Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox				3.9	3.9	4.3	4.4	4.4	4.5	4.7	4.8
Counties				2.0	2.1	2.0	2.1	2.2	2.3	2.4	2.5
State				2.0	2.1	2.0	2.1	2.2	2.3	2.4	2.5
Total	0	0	0	7.9	8.1	8.3	8.6	8.8	9.1	9.5	9.8

Blue Line Extension*	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox						3.7	9.0	9.1	10.0	10.2	10.3
State						3.3	8.9	9.2	9.2	9.6	10.0
Local						3.3	8.9	9.2	9.2	9.6	10.0
Other						0.8	0.8	0.8	0.8	0.8	0.8
Total	0	0	0	0	0	11.1	27.6	28.3	29.2	30.2	31.1

*As reported to the FTA in the annual New Starts Update submitted in Sept. 2017; will be updated when revenue service date is determined.

Gold Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox (TBD in 2019+)								TBD	TBD	TBD	TBD
Metropolitan Council (MVST)								2.6	2.6	2.6	2.6
Counties								2.6	2.6	2.6	2.6
Other											
Total	0	0	0	0	0	0	0	5.2	5.2	5.2	5.2

Table 62: Estimated Guideway Operating Expenditures ($ millions)

Total For All Routes	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farebox	25.0	27.5	27.7	31.9	34.7	41.3	53.7	54.2	59.4	60.4	61.1
Federal (Other)	1.2										
Greater MN MnDOT	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Local	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
Local (Hennepin County)						6.0	29.8	30.9	30.8	32.0	33.3
Local (Sherburne County)	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Local Counties				2.0	2.1	2.0	2.1	4.8	4.9	5.0	5.1
Metropolitan Council	1.6	2.8	2.9	3.0	3.2	3.3	3.5	3.6	3.7	3.8	3.9
Metropolitan Council (MVST)	7.0	7.1	7.4	7.6	7.8	8.1	8.3	11.2	11.4	11.7	12.0
CTIB/Counties	33.2	32.3	33.8	35.0	35.2	36.7	38.2	39.7	39.9	41.6	43.3
State	24.6	25.2	26.4	29.4	29.5	33.9	40.9	42.5	42.6	44.5	46.4
Other	0.8	0.8	0.8	0.8	0.8	2.4	2.4	2.45	2.45	2.45	2.5
Total	96.8	99.3	102.6	113.5	117.1	137.7	183.0	193.7	199.5	206.0	212.1

Table 63: Estimated Guideway Capital Maintenance Expenditures ($millions)

Blue Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (Other)	8.5	13.0	9.0	8.2	5.9	9.6	9.9	10.3	10.6	11.0	11.4
Metropolitan Council (RTC)	2.1	0.5	2.3	2.1	1.5	2.4	2.5	2.6	2.7	2.8	2.9
Total	10.6	13.5	11.3	10.3	7.4	12.0	12.4	12.9	13.3	13.8	14.3

Table 63: Estimated Guideway Capital Maintenance Expenditures ($ millions)

Northstar	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (Other)	0.9	1.6	2.3	2.4	2.5	3.7	3.8	7.8	4.1	4.2	4.4
Metropolitan Council (RTC)	0.2	0.4	0.6	0.6	0.6	0.9	1.0	2.0	1.0	1.1	1.1
Total	1.1	2.0	2.9	3.0	3.1	4.6	4.8	9.8	5.1	5.3	5.5

Note: Years 2019 and 2024 include Northstar Vehicle Overhaul Programs

Green Line	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (Other)	5.2	1.9	1.7	6.6	6.4	3.8	3.6	4.6	2.5	3.8	9.0
Metropolitan Council (RTC)	1.3	0.5	0.4	1.7	1.6	0.9	0.9	1.1	0.6	1.0	2.3
Total	6.5	2.4	2.1	8.3	8.0	4.7	4.5	5.7	3.1	4.8	11.3

Total Capital Maintenance	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (Other)	14.6	16.5	13.0	17.2	14.8	17.1	17.3	22.7	17.2	19.0	24.7
Metropolitan Council (RTC)	3.6	1.4	3.3	4.4	3.7	4.2	4.3	5.7	4.3	4.8	6.2
Total	18.2	17.9	16.3	21.6	18.5	21.3	21.6	28.4	21.5	23.8	30.9

Table 64: Overall Totals ($ millions)

	Pre-2017	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal (5307 Formula)	1.0	0.8										
Federal (5309 New Starts)	1068.0		200.0	237.0	237.0	245.0	267.5	267.5	209.0	152.7	100.0	28.8
Federal (CMAQ)				7.0								
Federal (Other)	132.7	15.8	23.2	18.7	17.2	14.8	18.8	17.3	29.7	17.2	20.7	25.8
Hennepin County	112.4	58.0	308.0	338.7	245.6		6.0	29.8	30.9	30.8	32.0	33.3
Dakota County		0.4	1.0	1.0	1.4							
Ramsey County	66.4											
DCRRA		0.4	1.0	0.7								
HCRRA	55.7	75.3	106.4	74.8	35.8							
Metropolitan Council	56.7	1.6	2.9	4.3	3.1	3.2	3.3	3.5	5.0	3.7	3.8	3.9
Metropolitan Council (MVST)		7.0	7.1	7.4	7.6	7.8	8.1	8.3	11.2	11.4	11.7	12.0
Metropolitan Council (RTC)		3.6	1.4	3.3	4.4	3.7	4.2	4.3	5.7	4.3	4.8	6.2
Mall of America (in-kind)	9.9											
Metropolitan Airport	87.0											
Northstar Corridor Development Authority	50.2											
CTIB	451.0	223.7	45.1	36.8	35.0	35.2	36.7	38.2	39.7	39.9	41.6	43.3
State (T.H. Bonds, G.O. Bonds and/or Approp.)	358.0	29.3	32.7	32.9	29.4	30.5	35.4	40.9	54.8	42.6	46.2	48.0
Local (Counties/RRAs)			3.8	13.0	17.0	47.1	84.5	54.6	16.0	4.9	5.0	5.1
Local (Sherburne County)		1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Local	25.7	1.3	19.0	17.2	5.0	1.1	1.0	2.3	6.2		2.3	2.0
Other	3.5	69.8	1.5	0.8	0.9	0.8	2.8	2.4	4.6	2.5	2.5	2.6
Greater MN MnDOT		1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
Farebox		25.0	27.5	27.7	31.9	34.7	41.3	53.7	54.2	59.4	60.4	61.1
Total	2478.2	514.6	783.4	824.1	674.3	426.9	512.8	526.0	470.5	372.8	334.6	275.7

Appendix A: Transit Funding Sources

Excerpt from Regional Transitway Guidelines Technical Report, May 2011, updated for this report October 2015.

Transit Funding Sources and Programs

The following section highlights transit and transitway funding programs available under existing federal and state laws. The table at the end of this section provides a summary of the information, including a listing of the potential funding sources, the approximate amounts available annually, a summary of how the funds are made available and requirements governing how funds may be used.

Federal Transit Funding

New Starts (5309) – New Starts funding may be used for new or extended fixed-guideway transit system projects. A project is only eligible for New Starts funding once it has entered the project development phase. The funding may only be used on projects approved through the New Starts application and approval process. A minimum local match of 20 percent is required for all New Starts funding. Current federal practice typically limits annual individual project funding from the New Starts program to about $100 million.

Small Starts (5309) – Small Starts funding may be used on new or extended transit system projects where the total project cost is $300 million or less. Eligible transit system projects include those with fixed guideway for at least 50 percent or bus projects with 10 to 15 minute headways. A project is only eligible for Small Starts funding once it has completed project development activities and received at least a medium overall project rating from the FTA. The funding may only be used on projects approved through the Small Starts application and approval process. A minimum local match of 20 percent is required and the maximum federal grant award for Small Starts is currently $100 million.

Urbanized Area Formula (5307 and 5340) – Urban Area Formula funding may be used for transit system replacement and expansion, capital purposes, preventative maintenance and the capital costs of contracting. Non-transit capital projects are not eligible for this funding. The Metropolitan Council is allocated 5307 funds through a federal formula and allocates funds to specific projects in the region through the annual development of the Council's six-year Capital Improvement Plan. The Twin Cities region typically receives an estimated $50 million annually in 5307 funding (2014 data). A minimum local match of 20 percent is required.

State of Good Repair Formula (5337) – State of Good Repair funding is a program under federal transportation law MAP-21 that is dedicated to repairing and upgrading rail transit systems along with high-intensity bus systems that use high-occupancy vehicle lanes, including bus rapid transit. These funds may be used to maintain a state of good repair on fixed guideway and high-intensity bus projects, including activities that replace or rehabilitate: rolling stock; track; line equipment and structures; signals and communications; power equipment and substations; passenger stations and terminals; security equipment and systems; maintenance facilities and equipment; and operational support equipment, including computer hardware and software. BRT on exclusive or high-occupancy vehicle lanes and bus-only shoulders replacement and rehabilitation are also included in this definition. The Metropolitan Council is allocated 5337 funds through a federal formula and allocates these funds to specific fixed-guideway and high-intensity bus facilities through annual development of the six-year CIP. The Twin Cities region typically receives an estimated $12 million annually in State of Good Repair funding (2014 data). A minimum local match of 20 percent is required.

Bus and Bus Facilities Formula (5339) – The Bus and Bus Facilities funding is a formula program under federal transportation law MAP-21 that allocates funding based on the size of the motor bus system. This program is very similar to Urbanized Area Formula (5307 and 5340) but is limited to capital investments and limited to bus fleets and facilities. The Twin Cities region typically receives an estimated $5 million annually in Bus and Bus Facilities formula funding (2014 data). A minimum local match of 20 percent is required.

Congestion Mitigation and Air Quality – Congestion Mitigation and Air Quality funding may be used on transit capital and operating expansion. Existing transit operations and capital are not eligible for CMAQ funding. CMAQ funding is distributed in the region through a regional solicitation process led by the Transportation Advisory Board and its Technical Advisory Committee. The Twin Cities region typically receives an estimated $27 million annually in CMAQ funding (2013 data). The regional solicitation process limits projects to a maximum of $7 million and allocates these funds four years in advance of expected expenditure (i.e., 2011 solicitation is for funds in 2015 and 2016), although recipients can choose to advance construct projects and be reimbursed in the award year. A minimum local match of 20 percent is required.

Surface Transportation Urban Program – Surface Transportation Urban Program funding is primarily used for road construction purposes in the Twin Cities region, up to $7 million per project, although most transportation-related activities in urban areas are eligible under federal law. STP-Urban funding is distributed in the region through a regional solicitation process led by the Transportation Advisory Board and its Technical Advisory Committee. To be eligible for funding, a project must meet the regional solicitation category requirements, which were recently revisited for the 2015 regional solicitation. The Twin Cities region typically receives an estimated $40 million annually in STP-Urban funding (per 2013 data). A minimum local match of 20 percent is required. Currently, solicitation categories do not include a category specifically for transit projects, but elements of a road project that benefit transit are eligible and typically given extra points on the project ranking.

Transportation Alternative Program – Transportation Alternative Program (formerly known as Transportation Enhancements) funding is used primarily for bicycle, pedestrian and trail projects. To be eligible for funding, a project must meet the regional solicitation category requirements. TAP funding is distributed in the region through a regional solicitation process led by the TAB and its TAC. The Twin Cities region typically receives an estimated $7 million annually in TAP funding (2013 data). A minimum local match of 20 percent is required.

Federal Railroad Administration – Federal Railroad Administration funding may be used on intercity passenger rail facilities. FRA funding is provided through congressional appropriations and varies in amount from year to year.

Unified Planning Work Program (5303) – Unified Planning Work Program funding may be used for transportation planning activities, but may not be used on design, engineering, construction or capital related expenditures. As the regional Metropolitan Planning Organization UPWP funding is allocated to the Metropolitan Council's Metropolitan Transportation Services. MTS produces an annual work program specifying how the planning funds will be used, with the majority of the funding used to support MTS planning staff work. The Twin Cities region typically receives an estimated $3.5 million annually in UPWP funding (2013 data). A minimum local match of 20 percent is required.

Special Grant Programs – There are many special grant programs that may provide funding for transitway projects, past programs include the Urban Partnership Agreement, the American Recovery and Reinvestment Act, Transportation Investment Generating Economic Recovery and Transit Investments for Greenhouse Gas and Energy Reduction. The specifics for these competitive programs - eligible/ineligible uses, estimated annual amount, and local match – vary by grant type. Funding is allocated through FTA and FHWA grant processes, with some grants requiring submittal through the Metropolitan Council or MnDOT.

State Transit Funding

State General Fund – Funding from the state general fund is made available for transitway projects through appropriations by the state legislature and varies in amount from year to year. General funds are rarely used for capital investments and may include additional restrictions as specified in the appropriation language. General funds may be used for transitway operations. Currently the Blue Line and Green Line receive an annual general fund appropriation to cover 50 percent of the net cost of operations.

General Obligation Bonds – General obligation bonds can provide funding for transitway capital and are allocated through state legislative appropriations in varying amounts. The specific use of the funds is dictated by the appropriation language. Any capital expenditure funded by GO bonds must be for a specific capital project that will have a 20-year life and the asset must be owned by the public entity specified in the appropriation. GO bonds may not be used for planning studies, alternatives analysis, technology, vehicles or operations expenditures. Minnesota Management and Budget has directed that state GO bonds appropriated to the Council are not to be passed through to sub-recipients unless the bond appropriation language permits a pass-through.

MnDOT Trunk Highway Funds and Bonds – MnDOT trunk highway funds and bonds may be used on transitway projects that further a trunk highway purpose. Trunk highway funding can only be used for trunk highway purposes and cannot be used for transit operations. Capital assets that use trunk highway bonds must have a 20-year life, be owned by MnDOT and are considered part of the trunk highway system. Trunk highway funding and bonds are allocated through the state legislative process or a MnDOT grant program in varying amounts.

State Laws Related to Transit Funding – Minn. Stat. 473.4051 subd. 3, prohibits state money from being used to pay more than 10 percent of the total capital cost of an LRT project. In addition, Minn. Stat. 473.4051, subd. 2, states that "after operating and federal money have been used to pay for light rail transit operations, 50 percent of the remaining costs must be paid by the state."

Metropolitan Council Funding

Motor Vehicle Sales Tax – Minn. Stat. 297B.09 allocates 36 percent of state MVST funding to the metropolitan area transit fund for transit assistance in the metropolitan area. The Metropolitan Council is responsible for allocating the funds, which are primarily used to pay for existing transit operations, both rail and bus. The funds may be used on transitway projects for existing operations or capital and operating expansion.

MVST funding is allocated annually by the Council through the adopted Regional Transit Operating Revenue Allocation Procedure and Regional Transit Capital Revenue Allocation Procedure.

Regional Transit Capital Bonds – Regional transit capital funds are bond funds where the debt service is paid using the Council's transit capital levy. The legislature is responsible for authorizing the amount of RTC bonds that may be sold and the Council is responsible for setting the annual levy to pay the debt. RTC funds are used for transit capital expenditures including assets with shorter than a 20-year life, including transit vehicles and technology. RTC funds may not be used for transit operations or planning activities. RTC funds are allocated by the Council through annual development of the six- year CIP. There is typically $35 million in RTC funding available annually in the Twin Cities region.

Fares and Other Self-Generated Funds – Fares and other self-generated funds are typically used for transit operations. Fares from a transitway project are allocated specifically to the operations of that transitway. This allows for calculation of a net subsidy which represents the public cost after accounting for the fare revenue. The transit operator is responsible for allocating fare revenues through the budgeting process. Other self-generated revenue may include advertising revenue or interest income. These revenues are typically used for operating purposes but could be allocated to a capital expenditure.

Counties Transit Improvement Board Funding

Metro Counties Sales Tax – In April 2008, under authorizing legislation contained in Minn. Stat. 297A.99, five counties – Anoka, Dakota, Hennepin, Ramsey and Washington – formed a joint powers board known as the Counties Transit Improvement Board and implemented a quarter-cent sales tax and a $20 motor vehicle sales tax to fund transitway projects within these counties. The sales tax raised over $100 million annually and was used for transitway capital and operating costs.

CTIB adopted a Transitway Investment Framework, which established principles and rules for how the CTIB invested in transitway development. In 2014, CTIB adopted a Program of Project Investment Strategy that was updated annually and established the Board's priorities for upcoming grant requests. The Investment Strategy served as the Board's 5-year financial plan and tracked the long-term funding potential of the sales tax against projects expected to request funding for the next 30 years or so.

Additionally, metro counties sales tax revenues were not allowed to fund more than 30 percent of the total transitway costs, though an individual component of the overall project may receive more than 30 percent if approved by CTIB. The funding was allocated through the CTIB grant application process. A minimum ten percent local (non-state) match was required for CTIB funding.

The CTIB joint powers agreement terminated on September 30, 2017 by voluntary agreement of the five member counties. Combined with wind-down payments to certain member counties, CTIB provided over $1 billion in funding for investments in transit service throughout the region. Funding for future transit projects will be done by each individual county using a portion of the sales tax that is dedicated to transportation improvements.

As part of the dissolution of CTIB, each county is now administering a local sales tax independently at ¼-cent or ½-cent to be used for transportation purposes, not exclusively for transitway development. In most cases, this new sales tax source replaces the funding previously assumed from CTIB.

Local Funding

Regional Railroad Authority – Minn. Stat. 398A.04 provides RRAs with the power to impose a property tax levy not to exceed 0.04835 percent of the market value of all taxable property within the RRA boundary. Minn. Stat. 398A.07 states that a regional railroad authority may issue bonds as necessary to fulfill its purpose and to exercise any of its powers to provide funds for operating expenses in anticipation of revenues or for capital expenditures in anticipation of other funds.

RRA funds may be available for transitway projects. Typically, these funds are used for the alternative analysis phase of development, environmental processes, right of way acquisition, or for the local match in rail projects, with the exception of the Cedar Avenue BRT project in Dakota County.

RRA funds must be no more than ten percent of the total capital project cost and cannot be used for rail operations in the counties that have enacted the metro counties sales tax (see Minn. Stat. 398A.10). The amount of funding available is tied to the levy limit and is allocated through the RRA budgeting process.

County General Fund – County general funds may be used on transitway projects as allocated. General funds are allocated through the county budget process and vary in amount from year to year.

County Highway Funds –County highway funds may be used for highway-related transit improvements, but may not be used for non-highway transitway purposes. Highway funds are allocated through the county budget process and vary from year to year.

City General Fund – City general funds may be used on transitway projects as allocated. General funds are allocated through the city budget process and vary in amount from year to year.

Municipal Highway Funds – Municipal highway funds may be used for highway related transit improvements, but may not be used for non-highway transitway purposes. Highway funds are allocated through the city budget process and vary in amount from year to year.

Table 65: Summary of Transit Funding Sources and Programs-Federal

Name (by Source)	Estimated Annual Amount for Region ($M)	Minimum Match (%)	Eligible Uses	Ineligible Uses	Policy/Process for Allocating Funds
Federal					
New Starts (5309)	95.0M	20	Approved new or extended fixed-guideway systems	Funding begins in PE, available only for approved projects	New Starts application / approval process
Small Starts (5309)	TBD	20	New or extended systems that are fixed-guideway or bus corridor projects with specific components	Funding begins in PE, available only for approved projects	Small Starts application process
Urbanized Area Formula (5307)	50.0M	20	Transit system replacement and expansion capital purposes, preventative maintenance, capital cost of contracting	Non-transit capital	Federal formula allocation to Council, allocated through Council CIP development
Fixed Guideway Modernization (5309)	13.6M	20	Fixed-guideway projects (including BRT on exclusive or HOV lanes) capital and preventative maintenance	Non-fixed guideway projects	Federal formula allocation to Council, allocated through Council CIP development
Alternatives Analysis (AA) Funding (5339)	Earmarks	20	AA activities (pre-LPA)	Spending complete by entry into PE	Annual Congressional requests / appropriations
Unified Planning Work Program (5303)	3.5 M	20	Planning activities	Construction / capital purposes	MTS annual work program planning
CMAQ	7.0 M	20	Transit capital and operating expansion (up to $7 M per project)	Existing transit operations / capital	TAC/TAB Regional Solicitation Process
STP (Urban Guarantee)	40.0 M	20	Primarily road construction purposes (up to $7M per project)	Must meet solicitation category requirements	TAC/TAB Regional Solicitation Process
Transportation Alternatives Program	7.0 M	20	Primarily bicycle, pedestrian, and trail projects	Must meet solicitation category requirements	TAC/TAB Regional Solicitation Process
Federal Railroad Administration	Varies		Intercity passenger rail facilities		Congressional appropriations, special grant programs
Special grant programs (e.g., UPA, ARRA, TIGER, TIGGER)	Varies	Varies	Varies	Varies	Federal grant application process, some grant programs require submittal through Council or MnDOT

Table 66: Summary of Transit Funding Sources and Programs- State, Metropolitan Council and Counties Transit Improvement Board

Name (by Source)	Estimated Annual Amount for Region ($M)	Minimum Match (%)	Eligible Uses	Ineligible Uses	Policy/Process for Allocating Funds
State					
General Funds	Varies	N/A	Specified in appropriation language	Rarely used for capital	State legislative process
General Obligation Bonds	Varies	N/A	Must meet public purpose requirement, use as specified in appropriation language. Capital must have a 20-year life, asset owned by organization specified in appropriation	Planning studies, AA, technology, vehicles, non- capital uses	State legislative process
MnDOT Trunk Highway Funds or Bonds	Varies	N/A	Must have a trunk highway purpose	Transit operations	State legislative process or MnDOT grant program
Metropolitan Council					
MVST (Regionally Allocated MVST)	Varies	N/A	Existing transit operations and expansion, capital is allowed	Non-transit purposes	Regional Revenue Allocation Policy / Procedures
Regional Transit Capital (RTC)	$35.0 M	N/A	Transit capital including vehicles	Transit operations	Council CIP development
Fares / other self-generated	Varies	N/A	Primarily service operations		Transit operator budget process
Counties Transit Improvement Board (CTIB)					
Metro counties sales tax	Raises about 88.0M per year	10 non-state	Transitways capital and operating	General transit operations, arterial BRT	CTIB grant application process

Table 67: Summary of Transit Funding Sources and Programs-Local

Name (by Source)	Estimated Annual Amount for Region ($M)	Minimum Match (%)	Eligible Uses	Ineligible Uses	Policy/Process for Allocating Funds
Local					
Regional Railroad Authority (RRA)	Levy limit	N/A	Typically used for planning, AA, environmental, ROW, local match for rail projects with exception of Dakota County	Not more than 10% of capital costs. For metro counties with CTIB sales tax, cannot be used for rail operations	RRA budget process
County general fund	Varies	N/A			County budget process
County Sales Tax	Varies	N/A	Transportation purposes		County grant process
County highway funds	Varies	N/A	Highway-related transit improvements	Non-highway purpose	County budget process
City general fund	Varies	N/A			City budget process
Municipal highway funds	Varies	N/A	Highway-related transit improvements	Non-highway purpose	City budget process

Appendix B: Acronyms used in Report

Acronym	Meaning
AA	Alternatives analysis
AAU	Alternatives analysis update
BNSF	Burlington Northern Santa Fe Railroad Company
BRT	Bus rapid transit
CMAQ	Congestion Mitigation Air Quality
CTIB	Counties Transit Improvement Board
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HOT	High occupancy toll
HOV	High occupancy vehicle
LOS	Level of service
LPA	Locally preferred alternative
LRT	Light-rail transit
MIS	Major Investment Study
MnDOT	Minnesota Department of Transportation
MVST	Motor vehicle sales tax
MWRRI	Midwest Regional Rail Initiative
NCDA	Northstar Corridor Development Authority
PD	Project Development
PE	Preliminary Engineering
ROW	Right of way
RRA	Regional railroad authority
RTC	Regional transit capital
RTC	Rail Traffic Controller
SDP	Service Development Plan
TFAC	Transportation Finance Advisory Committee
TH	Trunk Highway
TIGER	Transportation Investment Generating Economic Recovery
TPP	Transportation Policy Plan
UPA	Urban Partnership Agreement