

1 Purpose and Need

This chapter describes the Southwest Light Rail Transit (LRT) (METRO Green Line Extension) Project's Purpose and Need.¹ It provides a description of the context of the Project by providing background to the key factors that make the Southwest LRT Project important for people who live and work in the southwest metropolitan area. The Southwest LRT (METRO Green Line Extension) is approximately 14.5-miles of new double-track proposed as an extension of the METRO Green Line (Central Corridor LRT), which will operate from downtown Minneapolis through the communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to Edina (see Exhibit 2.1-1). See Chapter 2 for a detailed description of the Project and the processes that lead to this Final EIS.

This chapter includes the following sections:²

- 1.1 Project Need
- 1.2 Project Purpose
- 1.3 Project Context
- 1.4 Declining Mobility
- 1.5 Limited Competitive, Reliable Transit Options for Choice Riders and Transit Dependent Populations including Reverse Commute Riders
- 1.6 Need to Maintain a Balanced and Economically Competitive Multimodal Freight System
- 1.7 Regional and Local Planning and Light Rail Expansion

1.1 Project Need

The transportation issues facing the Southwest LRT Project Corridor illustrate the need for improved mobility, accessibility, and system linkages to key activity centers (Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and downtown Minneapolis) through high-capacity transit service. The Southwest LRT Project is one of several transit corridors identified in the Council's 2040 Transportation Policy Plan as being in need of enhanced transit service. The Southwest LRT Project Corridor continues to experience increases in population and employment with limited additional traffic capacity on existing streets and highways, resulting in increased travel time, delays, and air pollution. Portions of the Southwest LRT Project Corridor are already densely developed. New development and redevelopment in areas of the corridor are expected to generate increases in travel demand.

Four primary need factors make the Southwest LRT Project important for people who live and work in the southwest metropolitan area: (1) declining mobility; (2) limited competitive, reliable transit options for choice riders and people who rely on public transportation, including reverse-commute riders; (3) need to maintain a balanced and economically competitive multimodal freight system; and (4) regional/local plans calling for investment in additional light rail transit projects in the region. The four need factors are discussed in Sections 1.4 through 1.7, respectively.

1.2 Project Purpose

The purposes for enhancing transit service in the Southwest LRT Project Corridor (which is defined and illustrated in Section 1.3) are summarized below.

¹ The United States Army Corps of Engineers has adopted the following overall project purpose for the Southwest LRT Project that it will use to direct the range of reasonable alternatives to be considered in the Clean Water Act Section 404 permit application process: The overall project purpose is to provide high-capacity transit service in the Southwest LRT Project study area.

² A discussion of goals and objectives was included in the Draft EIS and is not included in this Final EIS chapter. Consideration of the goals and objectives were primarily used and presented in the Alternatives Analysis and the Draft EIS to support the identification of the Locally Preferred Alternative (LPA) and to compare the LPA with other alternatives being evaluated.

- The Southwest LRT Project will improve access and mobility to the jobs and activity centers in the Minneapolis central business district, as well as along the entire length of the corridor for reverse-commute trips to the expanding suburban employment centers.
- The Southwest LRT Project will provide a competitive, cost-effective travel option that will attract choice riders to the transit system. The competitive and reliable travel time for the Southwest LRT Project is attributed to the diagonal nature of the line compared to the north-south/east-west orientation of the roadway network and to the increasing levels of congestion of the roadway network.
- The Southwest LRT Project will be part of the region's system of transitways integrated to support regional transportation efficiency. Since the late 1990s, the Southwest LRT Project has been identified by the Metropolitan Council (Council) as warranting a high level of transit investment to respond to increasing travel demand in a highly congested area of the region. Due to congestion levels on the roadway network, speed and use limitations of the shoulder bus operations, and capacity constraints in downtown Minneapolis, a bus option is limited in its ability to adequately serve the travel demand and to provide reliable travel times.

1.3 Project Context

The Southwest LRT Project Corridor (the Corridor) is shown on Exhibit 1.3-1.³ Some or all of 19 communities and three counties southwest of downtown Minneapolis are within the Corridor, including the major activity centers of Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and southwestern and downtown Minneapolis. The Corridor represents the general area where the proposed project would have its greatest effect on travel demand⁴.

The lakes and streams shown on Exhibit 1.3-1 are the most prominent natural features that constitute constraints on the existing and planned transportation infrastructure in the Corridor, including the proposed light rail alignment. Cedar Lake, Lake of the Isles, and Nine Mile Creek are among the most prominent water bodies in the Corridor adjacent to the proposed light rail alignment.

1.3.1 Corridor Highway System

Major highways and segments of the Interstate in the Project Corridor are listed below and shown on Exhibit 1.3-2.

East-West Highway Facilities

- Minnesota 55
- Highway 12
- Highway 7
- Highway 212
- Highway 62
- Highway 5/I-494
- Highway 282/Highway 13

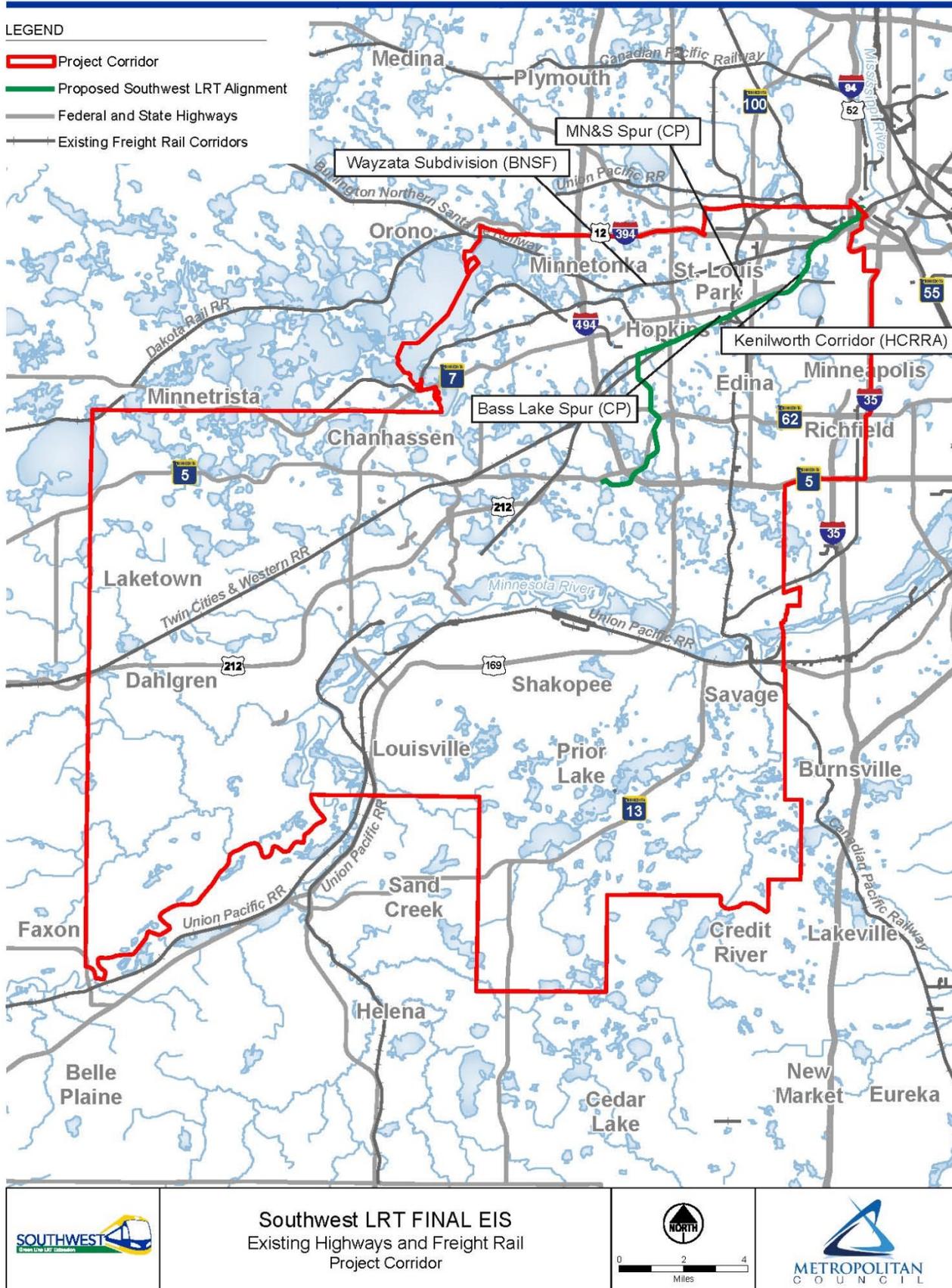
North-South Highway Facilities

- Highway 100
- Highway 169
- I-35W

³ The Southwest LRT Project Corridor, illustrated on Exhibit 1.3-1, is the general travel shed that encompasses a geographic area where transit travel patterns are most likely to be affected by the alternatives under consideration throughout the Project's planning and environmental process. Its broad area reflects the ability of transit patrons to access the proposed project directly through walk access to stations, as well as through connecting and feeder bus lines and park-and-ride and drop-off facilities. This definition of the corridor is used to assess transportation impacts in Chapter 4.

⁴ Travel demand is the estimated person trips that would be taken on a transportation system, including highways, transit facilities, and bike and pedestrian facilities. See Sections 4.1 and 4.2 for additional information.

EXHIBIT 1.3-1
Southwest LRT Project Corridor



1.3.2 Transit

Transit service in the Corridor is limited to bus service and is primarily provided by Metro Transit, the largest transit provider in the region, SouthWest Metro Transit, and Minnesota Valley Transit Authority. A total of 49 bus routes, including 27 express, three limited stop, and 18 local routes, serve the Corridor. On an average weekday, nearly 28,000 commuters from the cities in the Corridor use bus transit to travel to downtown Minneapolis. Existing park-and-ride lots in the Project Corridor are shown on Exhibit 1.3-2.

The Project (METRO Green Line Extension) will connect southwest Minneapolis and the region's southwest suburbs with the region's system of transitways, which consist of existing light rail transit on the Blue Line and Green Line, bus rapid transit on the Red Line (Cedar Avenue) and Orange Line (I-35W South), the Northstar Commuter Rail, and express bus routes (Exhibit 1.3-3). Development of the Project will also include local bus service revisions focused on maintaining and enhancing overall transit service in the corridor. See Section 2.1.1.4 for more information.

Planned future transit projects in or near the Project Corridor include the following:

- **METRO Orange Line.** Approximately 16-mile highway bus rapid transit improvement with plans for six new stations along I-35W south from Minneapolis to Burnsville
- **METRO Blue Line Extension.** Approximately 13-mile light rail extension of the existing Blue Line with plans for up to 11 new stations from Minneapolis (Target Field Station) to Brooklyn Park
- **METRO Gold Line.** Approximately 12-mile dedicated bus rapid transit line with plans to include up to 11 new stations from Saint Paul to Woodbury
- **METRO Red Line Extension.** Approximately three-mile extension of the Red Line with plans to include three new stations from Apple Valley to Lakeville
- **Penn Avenue Arterial Bus Rapid Transit.** Bus rapid transit improvements in an arterial bus corridor running primarily along Penn Avenue and Highway 55 in Minneapolis from downtown Minneapolis to Brooklyn Center Transit Center
- **Chicago Emerson-Fremont Arterial Bus Rapid Transit.** Bus rapid transit improvements in an arterial bus corridor running primarily along Chicago/Portland Avenues, American Boulevard, and Emerson and Fremont Avenues from Mall of America Transit Station in Bloomington to Brooklyn Center Transit Center

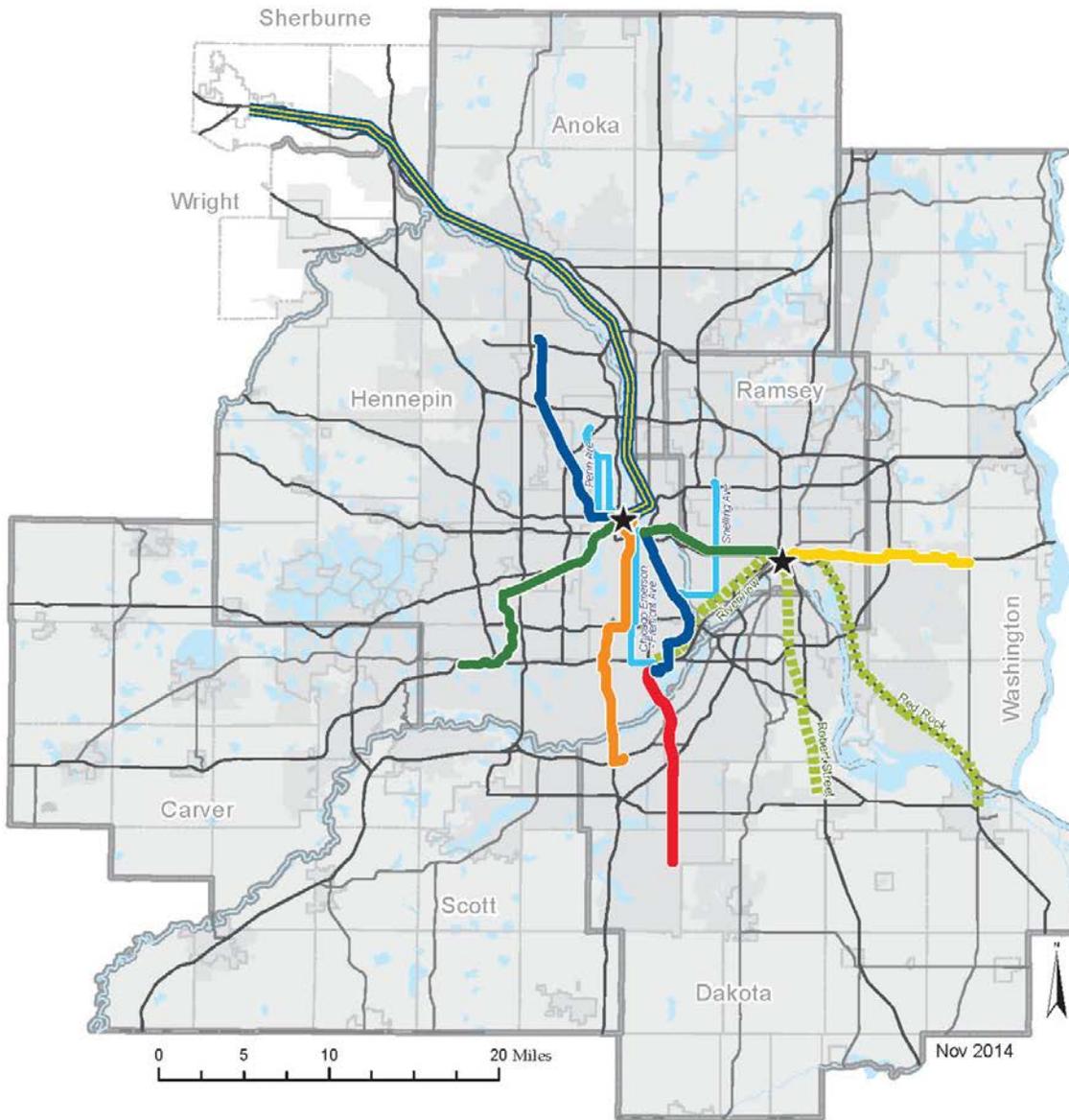
1.3.3 Freight Rail

There are currently four active freight rail lines within the Project Corridor: the Canadian Pacific- (CP-) owned Bass Lake Spur, the CP-owned Minneapolis, Northfield, and Southern Railway (MN&S) Spur, the Hennepin County Regional Railroad Authority (HCRRA) Cedar Lake Junction (locally referred to as the Kenilworth Corridor), and a short segment of the BNSF-owned Wayzata Subdivision from downtown Minneapolis to the MN&S Spur in St. Louis Park (Exhibit 1.3-1). More information about freight rail can be found in Section 4.4.

EXHIBIT 1.3-3
Regional Transitway System

LEGEND

- Principal Arterial Highways
- Lakes and Rivers
- - - City Boundary
- ▭ County Boundary
- ▭ 2040 Urban Service Area
- ▭ MPO Area
- ▬ Northstar Line
- ▬ Blue Line
- ▬ Green Line
- ▬ Red Line
- ▬ Orange Line
- ▬ Gold Line
- ▬ Arterial BRT
- ▬ CTIB Phase I Program of Projects under study mode and alignment not yet specified
- ★ Regional Multimodal Hub



Source: Metropolitan Council, 2040 TRANSPORTATION POLICY PLAN | Version 1.00

	<p>Southwest LRT FINAL EIS Regional Transitway System Southwest LRT Project</p>	
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1.3.4 Land Use

Land use in the Corridor is diverse, with single-family residential as the predominant land use category (20 percent) and industrial is the second highest land use category (15 percent).⁵ Retail and other commercial uses (9 percent) and institutional (5 percent) are other notable land uses. A more detailed description of existing land uses in these communities is found in Section 3.1.2.1. Section 3.1.2.1 also describes planned land uses within each of the 16 proposed light rail station areas, some of which are located in the major employment centers noted below. It also identifies the local plans that support light rail in the transit corridor and transit supportive uses and densities surrounding the station areas.

1.3.5 Population and Employment

The 2010 (existing) population of the Project Corridor is 547,510 (229,974 households). In 2040, the population of the Corridor is expected to increase to 722,420, an increase of 32 percent from 2010. Exhibit 1.3-4 shows areas within the Project Corridor that are projected to have population increases of 25 and 50 percent between 2010 and 2040. Population in 2010 (actual), 2014 (estimate), and 2040 (forecast) for Eden Prairie, Minnetonka, Hopkins, Edina, St. Louis Park, and Minneapolis are reported in Table 1.3-1.

TABLE 1.3-1
Population – 2010 Actual, 2014 Estimate, and 2040 Forecast

Municipality	2010 Population (actual)	2014 Population (estimate)	2040 Population (forecast)
Eden Prairie	60,797	62,593	82,400
Minnetonka	49,734	51,144	61,500
Hopkins	17,591	18,971	19,900
Edina	47,941	50,261	53,000
St. Louis Park	45,250	47,933	51,300
Minneapolis	382,578	411,273	459,200

Source: <http://www.metrocouncil.org/Data-and-Maps/Data/Census-Forecasts-Estimates.aspx>

Employment in the Project Corridor is forecast to increase from 314,904 jobs in 2010 to 427,950 jobs in 2040, a 36 percent increase. Exhibit 1.3-5 shows areas within the Project Corridor that are projected to have employment increases of 25 and 50 percent between 2010 and 2040. The areas of predicted employment growth in the Corridor are similar to areas of predicted population increases; however, there are fewer areas with a predicted 50 percent employment growth rate than with a predicted 50 percent population growth rate. The west edge of the Project Corridor near the Hennepin County/Carver County line is the largest area in the Project Corridor that is expected to experience a 50 percent increase in population and employment.

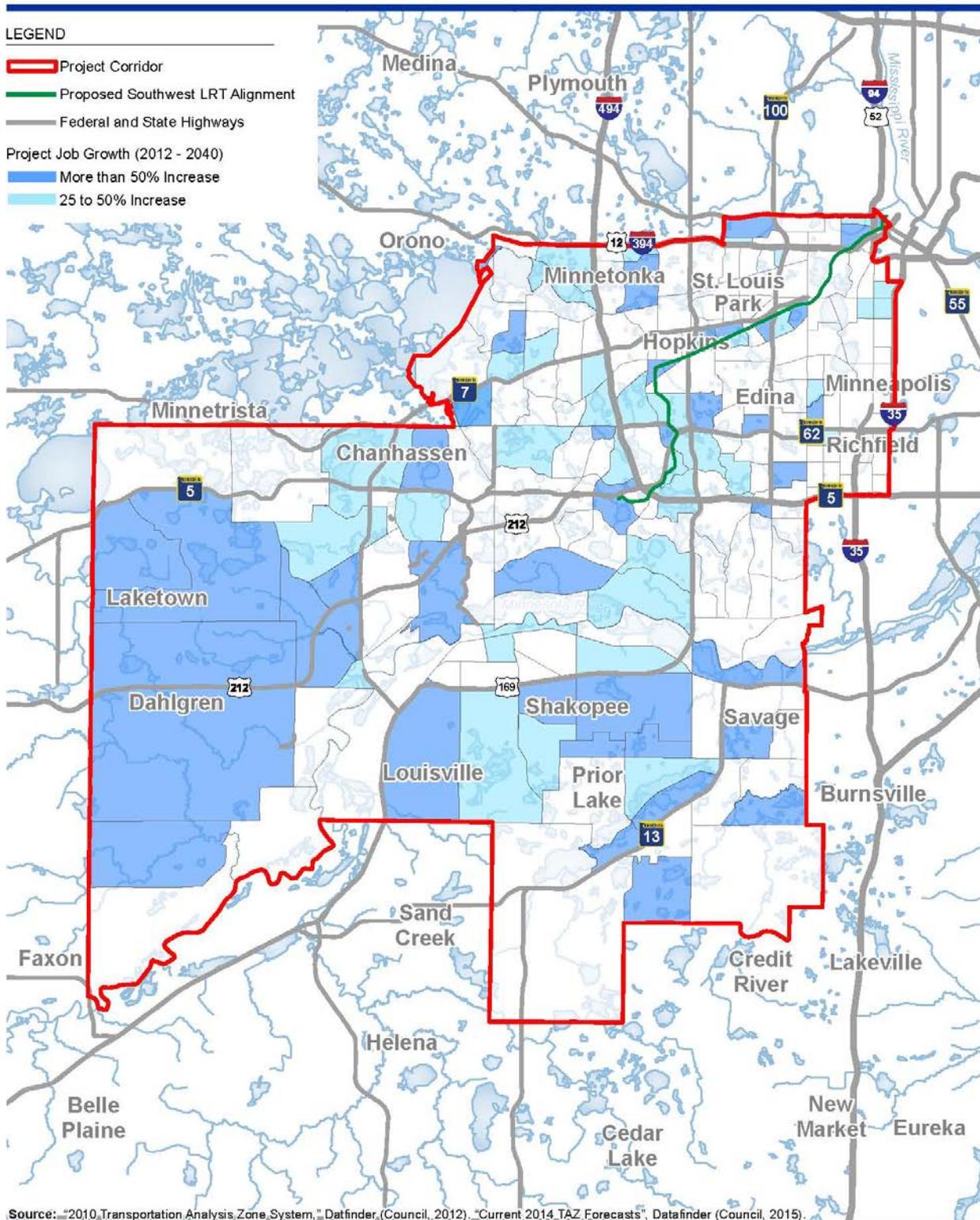
Employment in 2010 (actual) and 2040 (forecast) for Eden Prairie, Minnetonka, Hopkins, Edina, St. Louis Park, and Minneapolis are reported in Table 1.3-2. The percent increase in employment for those cities varies from 15 percent in St. Louis Park to 47 percent in Hopkins.⁶ Minneapolis is and will continue to be the employment center in the region. It is home to 19 percent of the region's jobs, and suburban Hennepin County has another 34 percent of the region's jobs, for a total of approximately 850,000 jobs (Callaghan, 2015). Existing employment density (i.e., jobs per acre) in the vicinity of the existing METRO Green Line and METRO Blue Line and the proposed project (METRO Green Line Extension) is illustrated in Exhibit 1.3-6.

⁵ Land use percentages are from within the land use analysis study area, which is within a half-mile of the proposed stations.

⁶ Employment increases based on existing and future employment data provided by Metropolitan Council
<http://www.metrocouncil.org/Data-and-Maps/Data/Census-Forecasts-Estimates.aspx>.

EXHIBIT 1.3-5

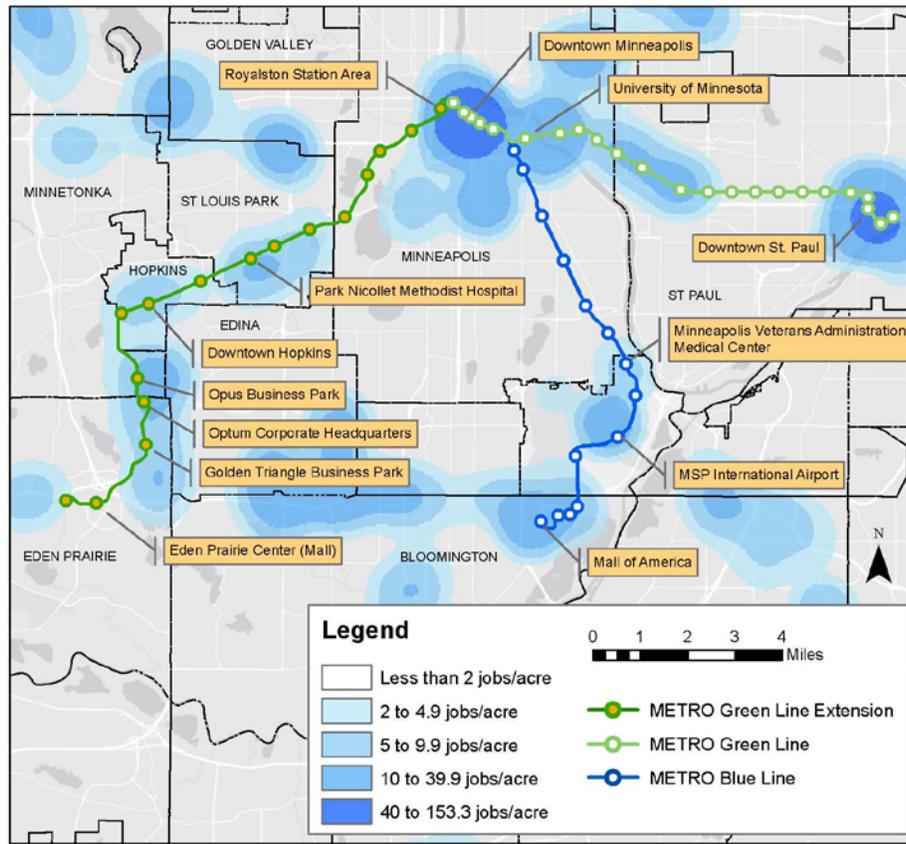
Project Corridor Areas with Projected Employment Growth of 25 and 50 Percent (2010 and 2040)



	<p>Southwest LRT FINAL EIS Projected Job Growth Project Corridor</p>		
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EXHIBIT 1.3-6

Existing Employment Density – Existing METRO Green Line and METRO Blue Line and the Project



	<p>Southwest LRT FINAL EIS Access to Employment</p>	
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TABLE 1.3-2
Employment – 2010 Actual and 2040 Forecast

Municipality	2010 Employment (actual)	2040 Employment (forecast)
Eden Prairie	48,775	66,600
Minnnetonka	44,228	63,200
Hopkins	11,009	16,200
Edina	47,457	56,100
St. Louis Park	40,485	46,700
Minneapolis	281,732	350,000

Source: <http://www.metrocouncil.org/Data-and-Maps/Data/Census-Forecasts-Estimates.aspx>.

1.4 Declining Mobility

Within this section, declining mobility is defined as increased travel times and reduced travel time reliability. The Southwest LRT Corridor is and will continue to experience increasing levels of traffic congestion, as a result of strong residential and employment growth and limited funding for continued expansion of the region’s principal arterial highway system. Future travel demand increases will not be adequately met by capacity improvements for either roadway or the current transit system. For example, the *Minnesota 20-Year State Highway Investment Plan (2013-2033)* (Minnesota Department of Transportation [MnDOT], 2013) shows that there is an unmet need for approximately \$12 billion in highway infrastructure projects between

2014 and 2022. In particular, no state transportation funding is available for highway mobility improvements after 2023 (Council, 2014b).

At the regional level, the Twin Cities metropolitan area has experienced population growth for several decades. While growth slowed between 2000 and 2010, largely due to national economic forces, the region gained 207,500 residents (Council, 2011). Between 2010 and 2040, the seven-county metropolitan area is projected to grow by 824,000 residents, a gain of 29 percent more than in 2010 (Council, 2014b). The regional growth is distributed across communities in the Project Corridor. According to *QuickFacts* by the U.S. Census Bureau, between 2010 and 2013, St. Louis Park, Hopkins, and Eden Prairie increased their populations between 2.5 and nearly 5 percent.⁷ Looking out to 2040, *Thrive MSP 2040* forecasts the region's urban center area will add 162,000 residents, a 19 percent increase over 2010 levels. The region's suburban area will add 159,000 residents, a 22 percent increase over 2010 levels.

With 1.6 million jobs, the seven-county Minneapolis-St. Paul region is the predominant economic center for Minnesota, western Wisconsin, the Dakotas, and Montana. Between 2010 and 2040, the region is projected to add 550,000 new jobs, an increase of 36 percent. Having surpassed one million jobs by 1980, the region is projected to surpass two million jobs by 2040 (Council, 2014b). The Council forecasts that the urban center area will add 142,000 jobs between 2010 and 2040 (a 25 percent increase over the three decades), and that the suburban area will add 161,000 jobs (a 43 percent increase).

As shown in Table 1.3.1, by 2040 the populations of Eden Prairie, Minnetonka, Hopkins, Edina, and St. Louis Park are forecast to grow by approximately 46,800 and the City of Minneapolis is forecast to grow by approximately 76,600 (Council, 2015a). As shown in Table 1.3.2, by 2040 the Cities of Eden Prairie, Minnetonka, Hopkins, Edina, and St. Louis Park are forecast to add approximately 53,200 jobs and the City of Minneapolis is forecast to add approximately 68,650 jobs (Council, 2015a).

Population and employment growth in Minneapolis and the Southwest Project Corridor and beyond is expected to result in growing travel demand and congestion. According to the 2040 Transportation Policy Plan (TPP) (Council, 2015e), between 2010 and 2040, daily vehicle trips are predicted to increase 28 percent to 9.8 million trips, and daily vehicle miles traveled are expected to increase 23 percent to about 90 million miles. According to the *Metropolitan Freeway System 2013 Congestion Report* (Metro District Office of Operations and Maintenance, 2014), approximately 20 percent of the miles of the Twin Cities urban freeway system experienced recurring congestion in 2013. MnDOT defines congestion as traffic flowing at speeds less than or equal to 45 miles per hour. Of the 302 miles of the freeway system that experienced congestion in the morning and evening peak travel periods, 189 miles are considered to experience severe (99 miles) and moderate (90 miles) congestion.

Congestion is forecasted to worsen by 2040. With the expected traffic increases caused by population and employment growth, the 2040 TPP states the result will be more intense and more extensive congestion on the region's trunk highways, county highways, and city streets by 2040. According to the Metropolitan Council Transportation Division, travel times from Eden Prairie to Minneapolis or St. Paul for cars are expected to increase by over 10 percent, from 30 minutes in 2000 to 34 minutes in 2040 during peak periods. According to the Institute of Transportation Engineers, the number and frequency of accidents increase with growing congestion, which would lead to continued degradation of highway travel time reliability. For example, an automobile trip during the p.m. peak hour from downtown Minneapolis or St. Paul to Eden Prairie is estimated to increase by approximately 9 percent and 15 percent by 2040, respectively, compared to existing conditions (changing from approximately 27.0 minutes to 29.5 minutes and from 35.3 to 40.7 minutes, respectively). Further, a reverse commute from Opus and Eden Prairie to North Minneapolis during the p.m. peak hour in 2040 is projected to increase by approximately 15 percent and 18 percent, respectively (changing from 25.7 minutes to 29.7 minutes and from 32.3 minutes to 38.3 minutes, respectively).

Average weekday transit ridership in the Corridor is projected to increase from approximately 56,900 in 2010 to approximately 94,300 in 2040 (under the No Build Alternative), a 66 percent increase. Over the

⁷ <http://www.census.gov/quickfacts>

same period, transit vehicle miles and hours traveled is projected to increase by 48 percent and 33 percent, respectively, which can result in increased crowding during peak periods. Higher-capacity transit vehicles, such as light rail vehicles, can more efficiently provide increased transit capacity, compared to buses. For example, the typical capacity of a bus is 42 passengers (seated and standing), compared to the capacity of a three-car light rail train, which typically has a capacity of approximately 558 passengers (seated and standing).

1.5 Limited Competitive, Reliable Transit Options for Choice Riders and Transit Dependent Populations including Reverse Commute Riders

Transit service between Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and Minneapolis is provided by Metro Transit, the largest transit provider in the region, and SouthWest Metro Transit. Metro Transit provides express, limited-stop, and local bus service to Minneapolis, St. Louis Park, Hopkins and Minnetonka. SouthWest Metro Transit provides express bus service between downtown Minneapolis and Eden Prairie.

Critical issues that affect the competitiveness and reliability of bus service connecting Eden Prairie, Minnetonka, Hopkins, and St. Louis Park with each other and Minneapolis are the characteristics of bus operations (e.g., orientation toward peak direction travel), congestion and a circuitous local road network. Despite the advantages of bus service in terms of flexibility and low capital cost, conventional urban bus operations often experience increased travel times and reduced reliability as they operate on congested streets. Buses operating in general purpose roadway lanes may be delayed not only by other vehicles and traffic signals, but also by frequent and time-consuming stops to pick up (passenger boarding time and fare collection) and discharge passengers. Illegal parking and delays caused when buses are traveling in the curb lane and a queue of right-turning vehicles can block buses from moving forward and are additional impediments to efficient bus service. On average, buses travel at only around 60 percent of the speeds of automobiles and other private vehicles using the same streets due to the cumulative effects of traffic congestion, traffic signals, and passenger boarding (Federal Transit Administration [FTA], 2011).

As described in Section 1.3, the geography of the Corridor and the Corridor’s local freight rail and roadway network, particularly near downtown Minneapolis, makes it difficult to provide competitive bus travel times. Much of the roadway network through this area is circuitous due to geographic constraints, such as lakes and freight rail alignments, and there are several one-way street operations. Unlike streets on a standard grid, circuitous streets tend to require buses to frequently turn at intersections. Turning buses require slightly more intersection capacity. One-way street networks cannot only make it difficult for bus riders to locate stops for a return trip, but also traveling through one-way street systems often means taking a circuitous route, which adds distance to every trip (Jaffe, 2013).

Existing and future travel times for trips connecting Eden Prairie, Minnetonka, Hopkins, and St. Louis Park with each other and Minneapolis confirm the adverse effects of congestion and circuitous travel on reliable bus service as compared to private vehicle travel. Examples of existing (2010) and future (2040 No Build Alternative) average weekday bus and automobile travel times in the peak evening travel hour are found in Table 1.5-1.

TABLE 1.5-1
Peak Evening Total Automobile and Transit Travel Times in the Project Corridor (2010 and 2040)

Route	2010 Travel Times (minutes)		2040 Travel Times (minutes)	
	Automobile	Transit	Automobile	Transit
From Opus to North Minneapolis	25.7	91.0	29.7	97.3
From Eden Prairie to North Minneapolis	32.3	74.2	38.3	81.0
From Opus to Downtown Minneapolis	23.4	65.4	26.5	76.8
From Eden Prairie to Downtown Minneapolis	30.7	48.6	35.8	60.4
From Eden Prairie to West Lake Calhoun	20.0	73.1	23.6	83.8
From Downtown St. Paul to Eden Prairie	35.3	106.6	40.7	123.0
From Downtown Minneapolis to Eden Prairie	27.0	64.9	29.5	58.8

Source: Draft Travel Demand Methodology & Forecast, September 2015, Revision 4, Southwest LRT Project Technical Report. Minutes reported are in-vehicle time, plus transfer times for transit trips.

The frequency and direction of bus service also can affect the reliability and competitiveness of bus service that uses general purpose roadways. The current bus service between the Corridor's major activity centers and downtown Minneapolis is inbound (eastbound) from suburban areas during the morning peak period and westbound to the suburban areas during the evening peak period. Eastbound service to downtown Minneapolis is more frequent than the reverse commute service. For example, in Eden Prairie, which is served by SouthWest Transit, there are 35 express buses that provide service to downtown Minneapolis between 5:45 a.m. and 11:25 a.m. For reverse commuters, there are 10 westbound express buses leaving downtown Minneapolis for SouthWest Station between approximately 6 a.m. and 12:45 p.m. Bus service during the evening commute presents a similar situation; there are 39 express buses between downtown Minneapolis and Eden Prairie between 12:40 p.m. and about 10 p.m. However, there are only six eastbound express buses from Eden Prairie to downtown Minneapolis between 3:30 p.m. and 6 p.m.⁸

The people most affected by the limited bus service are those that do not own a vehicle for a variety of reasons, such as cost, environmental, health, or age. A notable number of people who depend on transit to meet their transportation needs reside in the Project Corridor's major activity centers. As noted in Table 1.5-2, 14 percent of households in the major activity centers do not own a vehicle. This is nearly double the metropolitan area average of eight percent. While Minneapolis drives up the percentage of households without a vehicle available, it is worth noting that Hopkins' percentage of households without a vehicle available is slightly higher than the metropolitan area average. The notable percentage of households without a vehicle available that live within the jurisdictions that will be served by the Project underscores the need for access to light rail transit.

In addition to households without vehicles available, seniors represent an important market segment for public transportation. In St. Louis Park, Hopkins, and Minnetonka, seniors make up a larger share of the population compared to the metropolitan area (Table 1.5-2). Further, senior populations are expected to grow in the metro area. The senior population in the Project's major activity centers supports the need for light rail transit.

TABLE 1.5-2
Transit-Dependent Population as a Share of Community Population

	Total Households	Zero Vehicles Available	Percent Zero-Vehicle	Total Population	Population 65 and over	Percent aged 65 and over
Corridor Communities	241,399	34,500	14%	564,896	54,026	10%
Minneapolis	165,438	30,064	18%	389,112	32,106	8%
St. Louis Park	21,716	1,541	7%	45,960	5,811	13%
Hopkins	8,124	1,248	15%	17,785	1,970	11%
Minnetonka	22,037	1,007	5%	50,523	8,656	17%
Eden Prairie	24,084	640	3%	61,516	5,483	9%
Metro Area	1,267,380	95,611	8%	3,265,409	365,733	11%

Source: 2009-2013 ACS five-year estimates; Table B08201 for zero-vehicle households; Table S0103 for 65 and older.

The problems that congestion poses for the competitiveness and reliability of bus transit can be seen in the Southwest Transitway Alternatives Analysis conducted by HCRRA (see *Southwest Transitway Scoping Summary Report*; HCRRA, 2009). The Southwest Transitway Alternatives Analysis compared the benefits, costs, and impacts of a range of transit alternatives (modes and routes) in the Corridor to identify the alternative that would best serve the needs of the communities. The alternatives analysis evaluated an enhanced bus alternative that includes two new limited-stop bus routes that would provide bi-directional service between Eden Prairie, Minnetonka, Hopkins, St. Louis Park, and downtown Minneapolis. The limited-stop routes that were studied would have been aligned along existing Metro Transit and SouthWest Transit express bus routes using I-394, I-35W, Highway 169, and Highway 100 from Eden Prairie to downtown Minneapolis. This alternative also included minor modifications to the existing express bus service,

⁸ <http://swtransit.org/current-schedules/>

increased service frequencies, and restructured local bus service to provide better access along the limited-stop routes to key areas, including Golden Triangle and downtown Minneapolis.

The Enhanced Bus Alternative in the Alternatives Analysis was designed to be the “best that can be done” to improve transit service and mobility without modifications to the existing highway or roadway infrastructure in the corridor. The Enhanced Bus Alternative’s reliance on the regional road network, with its forecasted congestion levels, would have adversely affected the efficiency of this alternative. Travel demand modeling used to compare the light rail alternatives and the enhanced bus alternative found that the light rail alternatives had higher transit ridership and significant transit travel time benefits over the Enhanced Bus Alternative.

The Southwest Transitway Alternatives Analysis also evaluated two bus rapid transit alternatives that had alignments similar to the enhanced bus alternative. The bus rapid transit alternatives were eliminated from consideration because they did not meet the Project goals of improving mobility and providing a cost-effective, efficient travel option. The inability to improve mobility and be an efficient travel option speaks, in part, to the effects of congestion on the bus rapid transit alternatives. See Section 2.2 for additional information about the Project’s Alternatives Analysis process.

1.6 Need to Maintain a Balanced and Economically Competitive Multimodal Freight System

The Minneapolis-St. Paul Metropolitan Area is a focal point of the freight railroad system in the state and north central United States. Four of the country’s seven Class I railroads provide service to the Twin Cities, BNSF Railway, Union Pacific Railroad, CP Railway, and Canadian National. The Surface Transportation Board defines a Class I railroad as having annual carrier operating revenues of \$433.2 million or more as of 2011 after adjusting for inflation. Also operating in the metropolitan area are TC&W and Progressive Rail.

Minnesota has the eighth highest rail miles in the nation. Rail accounts for 25 percent of freight tonnage moving in the state, compared to trucks that move 63 percent of the freight tonnage. Moving freight via rail is especially important in moving bulk commodities, such as the minerals and agricultural products that help drive Minnesota’s economy (MnDOT, 2015c). Freight rail takes pressure off the state’s highway network and provides environmental benefits through fuel efficiency. Many of the state’s major industries rely on the rail system as a cost competitive way to deliver goods. For Minnesota, a strong rail system supports economic development, enhances environmental sustainability, helps to preserve the publicly owned roadway infrastructure, and increases the business marketability of the state.

Moving goods by freight rail rather than by truck can also have a positive effect on the region’s mobility. Twin Cities and Western Railway Company (TC&W) reports that an average train load equates to 40 trucks on the roadway system. As congestion increases on the roadway system, moving commodities by freight rail will become more competitive.

Beyond the importance of the freight rail system to industry, mining, and agriculture, it also has an important connection to passenger rail service and the state’s goal to increase service. The *2010 Minnesota Statewide Freight and Passenger Rail Plan* laid out a comprehensive plan for priority passenger rail corridors that overlap with, and would in part share, key freight rail tracks in the state. Demand for freight rail service across and within Minnesota has been increasing and, as a result, the ability for freight rail tracks to be used for passenger rail service may be adversely effected.

MnDOT developed the 2015 update to the *Comprehensive Statewide Freight and Passenger Rail Plan* (Minnesota State Rail Plan, 2015c) to guide the future of freight and passenger (intercity) rail systems and rail services in the state. The 2015 update builds upon the technical analyses and findings of the 2010 State Rail Plan, incorporates information between 2010 and 2015, and reflects the most current state of the system. Concerning freight rail, the 2015 update notes that a successful, viable rail industry that meets the future needs of the Minnesota economy requires continued investment and improvement to its infrastructure. It also notes that without rail, Minnesota businesses and consumers would not be able to access the products they need for everyday work and life.

The State Rail Plan's freight rail goals include:

- Continue to make improvements to the condition and capacity of Minnesota's primary railroad assets
- Address critical network bottlenecks
- Upgrade main line track (all Class I-III railroads) to 25 miles per hour minimum speed, as warranted
- Improve the network (all Class I-III railroads) to support the use of 286,000 pound railcars throughout
- Implement state of the art traffic control and safety systems
- Expand intermodal service access options throughout the state
- Continue to develop programs promoting safety of freight rail and hazardous material transportation

The State Rail Plan states that to meet current and future demand, improvements are needed in the freight rail network. It goes on to note that issues emerged during the development of the 2015 Minnesota State Rail Plan that will influence the Minnesota freight rail networks and services, including infrastructure constraints, rail facility and line relocation, intermodal services, positive train control, and hazard material transport.

Within the issue of rail facility and line relocation, the State Rail Plan states that, "In Hennepin County, the Twin Cities and Western Railroad currently operates freight rail service along the Kenilworth Corridor through the city of St. Louis Park and the city of Minneapolis, providing a connection into downtown Minneapolis. This alignment was chosen as the locally preferred alternative for the METRO Green Line Extension Project. After several years of discussion and public engagement, full municipal consent was provided by all municipalities for a plan to build a tunnel for the METRO Green Line tracks in the Kenilworth Corridor." It is important that any freight rail modifications to be included in the Project be done in a way that helps to maintain the state's balanced and economically-competitive freight rail system.

1.7 Regional and Local Planning for Light Rail Expansion

The long-range comprehensive plan for the Twin Cities region, *Thrive MSP 2040*, and region's long-range transportation plan, the *2040 Transportation Policy Plan (2040 TPP)* call for continued investment in a system of regional transitways, including the Southwest LRT Project and other light rail transit, bus rapid transit, and arterial bus rapid transit projects. In particular, the Southwest LRT Project is included within the current revenue assumptions of the plans. As described in the 2040 TPP, the region's investment policy includes land use development expectations to leverage and support transit investments, identifying cost-effective means of improving multi-modal access to regional destinations, and improving mobility and reliability on the regional highway system, especially when it benefits movement and accessibility for freight, transit, carpools, and MnPASS users.

Also as noted in the 2040 TPP, the existing regional growth pattern and funding limitations do not make it possible to expand the highway system in a sustainable way to address such issues as congestion, climate change, equity, and livability. Within the last decade, a marked increase in the value of locations in proximity to job concentrations and high-quality transitways has elevated the pace of private investment in the already-developed parts of the region. The evidence is visible along the METRO Blue Line LRT, which has been operating since 2004, the Northstar Commuter Rail (2009), the METRO Red Line BRT (mid-2013), and the METRO Green Line LRT (mid-2014). Development interest and higher-intensity land use are also showing up along proposed transit investments. On the local level, higher-intensity development and redevelopment is occurring throughout the region's already developed areas and requires support with a multimodal network of local and collector streets, sidewalks, and bicycle paths. Development can best support multimodal travel when communities plan their land use with knowledge of travel behavior and transportation infrastructure. Consistent with the land use policies identified in *Thrive MSP 2040*, this means supporting growth, particularly job growth, where job concentrations exist or in nodes along regional transportation corridors, either highway or transit.

Beyond Metropolitan Council documents, *Hennepin County's 2030 Transportation Systems Plan* and the *Hennepin County 2030 Comprehensive Plan* include the Southwest LRT Project as a transitway recommendation, and the five cities the proposed light rail alignment will pass through have land use and infrastructure plans for the proposed light rail stations to be located in their communities. See Section 3.1.2.2

for a summary of the state, regional, and local planning documents that support light rail transit in the Project Corridor. Section 3.1.3.1 evaluates the degree to which light rail transit would be compatible with or supportive of a wide range of land use, development, and transportation plans in the region.