

Policy 5: Statewide Connections



Summary

Enhance the movement of people and freight between regional trade centers (RTC) within Minnesota by providing efficient, multimodal transportation connections. Travel between regional trade centers is important for citizens and businesses throughout the state. Strong transportation connections link workers with jobs, raw materials with manufacturers, and recreational users with parks and natural resource areas. In 2000, Mn/DOT created the Interregional Corridor (IRC) System with the goal of enhancing the economic vitality of the state by providing safe, timely, and efficient highway connections between key economic centers throughout the state. Mn/DOT will continue to work with its partners to maintain safety and mobility on these interregional corridors and will identify strategic, cost-effective modal options for statewide travel such as intercity bus service, high-speed passenger rail, regional freight rail, and air service for both passengers and freight.

Travel between regional trade centers is important for citizens and businesses throughout the state.

- 5A. The IRC System:** Mn/DOT will work with transportation partners to maintain and enhance mobility on the IRC System.
- 5B. Supplemental Truck Routes:** Mn/DOT will work with local transportation stakeholders and freight industries to define a supplementary freight system in Greater Minnesota.
- 5C. Regional Corridors:** Mn/DOT will work with transportation partners to maintain mobility on Minnesota's Regional Corridors.
- 5D. Intercity Bus Services:** Mn/DOT will work with intercity bus providers and communities to maximize coverage for cost-effective intercity bus services.
- 5E. Intercity Passenger Rail Services:** Mn/DOT will evaluate issues, opportunities, and constraints for intercity passenger rail services and define state roles and responsibilities as part of the future state rail plan.
- 5F. Greater Minnesota Air Service:** Mn/DOT will work with local communities and airport officials to maintain and/or enhance scheduled air service, as well as to maintain and/or enhance local aviation facilities.

Background and Context

Where Policy 4: National and Global Connections focuses on Minnesota's connections to the world, Policy 5: Statewide Connections focuses on connections between regional trade centers (RTCs) within the state. The RTC concept was established in the early 1960s by University of Minnesota professors as a way to describe and rank communities based on levels of activity and business.¹ The eight-level hierarchy of RTCs ranges from metropolitan areas, which have the highest level of economic activity, to hamlets having the lowest levels.

Because all trade centers do not support the same level of economic activity, transportation between centers is essential to obtain needed goods and services. Statewide transportation connects people with jobs and services; distributors with manufacturers, producers, and exporters; shoppers with retailers; and tourists with recreational opportunities. These connections support the majority of economic activity in the state.

The following modes presently provide transportation connections for large numbers of people and large volumes of freight between RTCs:

Highways – IRCs and Regional Corridors

In 2000, Mn/DOT designated a primary set of highways for moving goods and people between RTCs. This set, called the IRC system, is comprised of 2,939 miles of highways. It represents only two percent of all roadway miles in the state, but it carries approximately 27 percent of all vehicle miles traveled and the majority of freight traffic. The intent of the IRC System is to support a high level of mobility for longer trips and travel between trade centers. Figure 7.5.1 shows that IRCs include I-94, I-35, US 2, US 10, US 52, US 169 and MN 23.

Mn/DOT also designated a set of highways called Regional Corridors that complement the IRC System. Regional Corridors play significant roles by connecting smaller trade centers with larger ones or with IRCs. The system consists of approximately 2,600 miles of principal and minor arterial highways. Many Regional Corridor routes serve as the primary transportation linkage into and out of entire regions, especially in Greater Minnesota, providing critical support to the region's ability to move people and freight in a cost-effective way.

Other Modes

Air and buses are the primary modes that move people between trade centers other than highways, with growing interest in passenger rail. Air services provide quick connections through both scheduled and unscheduled flights. Most of the scheduled flights connect to the Minneapolis-St. Paul International Airport (MSP) where passengers can transfer flights to other destinations. Intercity bus services are provided by Greyhound and Jefferson Lines. These private, for-profit carriers provide service to approximately 65 cities in Minnesota. These services, and the growing interest in passenger rail, are important travel options for an aging population.

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The share of freight presently moved by rail, water, and air between Minnesota RTCs is currently very small because market conditions have made these services cost-effective over longer distances. With few exceptions, most of this local non-highway freight is moved by rail. There are 19 regional and short-line railroads that presently move materials over shorter distances; they function as tributaries, funneling freight to the larger Class 1 railroads and national or international origins/destinations. For this reason, policy issues regarding railroads hauling freight are dealt with in Policy 4: National and Global Connections.

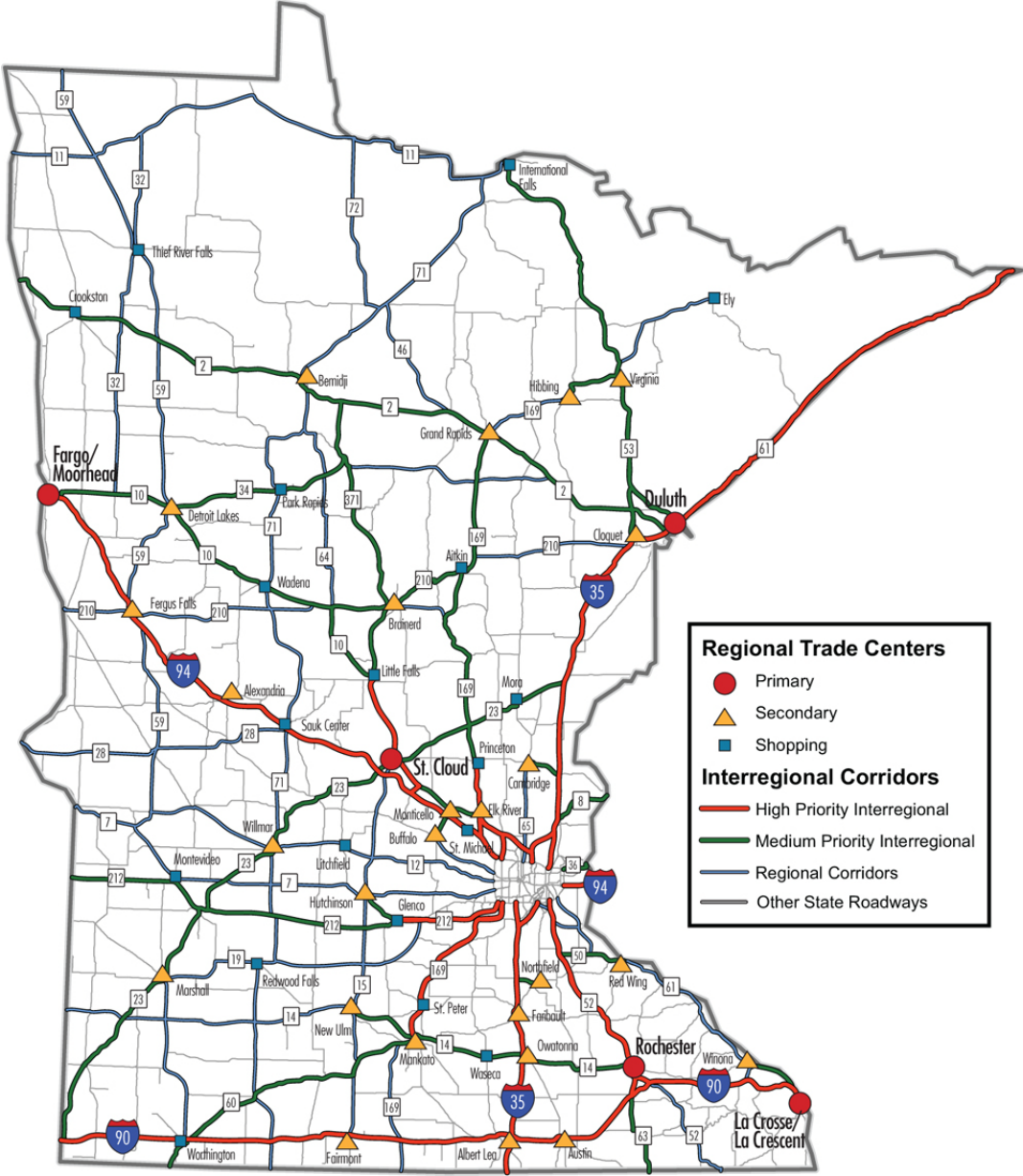


Figure 7.5.1 Interregional and Regional Corridors
Source: Mn/DOT Office of Investment Management

Strategies

Maintaining safe and efficient connections between RTCs will continue to be one of Mn/DOT's most important goals. To achieve this goal, the following strategies have been identified:

5A. The IRC System

Mn/DOT will work with transportation partners to maintain and enhance mobility on the IRC System.

The state highway system is a critical network that supports both urban and rural centers throughout Minnesota. This system moves goods to markets and puts products on store shelves. In fact, truck movements on Minnesota highways recently accounted for 59 percent of all freight moved by weight and 79 percent moved by value. A third of this truck traffic is intrastate, moving between Minnesota locations. The importance of truck movements is expected to increase as the weight of freight moved by truck in Minnesota is projected to grow from 59 to 66 percent by 2020.²



Mn/DOT has made a number of improvements to the IRC System, including TH 212 through Chaska.

The IRC System is the backbone of the Minnesota's highway system. It provides high-level connections between regions and major trade centers throughout the state. Traffic volumes on IRCs have risen by 50 percent in the last 10 years causing congestion and safety concerns especially near large RTCs. As such, Mn/DOT and its local transportation partners have made significant investments in many corridors including improvements to TH 212, TH 52, TH 169, and TH 101. However, mobility challenges continue to exist, especially on corridors approaching the Twin Cities Metropolitan Area (TCMA) and on key corridors in central Minnesota. Maintaining and/or improving mobility on these and other IRCs is important to the state. Mn/DOT will work with local transportation partners to:

- a. Evaluate performance on IRCs and develop IRC improvements using context appropriate solutions; re-examine current corridor visions, and where appropriate and feasible, consider cost-effective solutions such as super-twos, High Occupancy Vehicle and Toll (HOV/HOT) lanes and/or dynamic shoulders to improve safety and mobility.

Increased instrumentation of IRCs entering the TCMA will provide improved corridor management and user communication.

- b. Review and plan appropriate access modifications in urbanizing areas to address growth and safety needs.
- c. Guide future growth and planning where long-term corridor visions have been developed (improvements that go beyond performance targets). Improvements associated with these visions will be considered as priorities beyond the 2028 planning horizon.
- d. Coordinate IRC management strategies to ensure consistency between Mn/DOT districts, including the development of the future mobility vision for the TCMA.
- e. Evaluate radial IRCs entering the TCMA to identify multimodal and Intelligent Transportation Systems (ITS) improvements with potential to enhance transit, carpool use, and real-time traveler information, maximize mobility and person throughput, and improve safety over the long-term. For example, an increased level of instrumentation on the corridors would provide for the ability to manage and respond to incidents more quickly and for improved communication with users. Mn/DOT will work with the Metropolitan Council, affected counties in the TCMA, and the counties surrounding the TCMA to reexamine and update the management strategies for radial IRCs.
- f. Assess truck parking supply and demand along IRC radial routes approaching the TCMA and identify potential strategies to reduce peak hour truck usage; provide real-time parking strategies for potential freight users in IRC corridors.
- g. Enhance existing, isolated, signalized intersections to provide “truck priority” for mainline movements, thereby improving safety, and minimizing delays and user costs.³
- h. Review and evaluate turn lane length on high-speed expressways (65 mph), high-speed two lane facilities (60 mph), and freeway ramp lengths to ensure safe operations. Mn/DOT will also review its policy for cross-street approach signing for interchanges to provide better advanced notice of interchange configuration.

5B. Supplemental Truck Routes

To supplement the IRC System, Mn/DOT will work with its partners to identify candidates for truck routes.

Mn/DOT will work with local transportation stakeholders and freight industries to define a supplementary freight system in Greater Minnesota.

The IRC System provides the main connections between RTCs and carries the majority of truck volumes; however, there are a number of areas within the state where IRC coverage is limited. In these areas, there is concern about inadequate support for the movement of freight on highways. The identification and designation of supplemental truck routes and development of corresponding performance measures could enhance the safety and reliability of freight movements. Mn/DOT will work with its transportation partners to identify candidates for truck routes to supplement the IRC System and develop performance measures.

5C. Regional Corridors

Mn/DOT will work with its transportation partners to maintain mobility on Regional Corridors.

Regional Corridors complement the IRC System and provide connectivity between RTCs and other transportation systems. Mn/DOT will continue to evaluate performance on the Regional Corridor system and work with its partners to prioritize needed improvements.

5D. Intercity Bus Services

Mn/DOT will work with intercity bus providers and communities to maximize coverage for cost-effective intercity bus services.

Limited service between trade centers is currently provided by Greyhound and Jefferson Lines. More recent trends suggest that bus service is in greater demand as fuel costs have increased and as the population has aged. The issues and demands for intercity transit services and the state's role and responsibility for enhancing this service will be further defined with the Intercity Bus Study that is currently being done by Mn/DOT. This study will be completed in 2009. Among other things, the study will explore opportunities for enhanced coordination with other local transit providers in an effort to create a more seamless transit system. In addition, this study will look at developing a system performance measurement for this service area.

5E. Intercity Passenger Rail Services

Mn/DOT will evaluate issues, opportunities, and constraints for intercity passenger rail services and define state roles and responsibilities as part of the future state rail plan.

Increasing fuel costs, highway congestion, and security issues at major airports are driving increased public interest in passenger rail services. Currently, Amtrak service is available through Minnesota, but service is limited. Potential benefits and costs of passenger rail need to be assessed, including potential service conflicts on existing high-volume, freight rail lines where passenger rail may be proposed. These issues will be addressed in the Statewide Freight and Passenger Rail Plan as referenced in Policy 4: National and Global Connections and further described in Chapter 8: Future Plans and Studies.

5F. Greater Minnesota Air Service

Mn/DOT will work with local communities and airport officials to maintain and/or enhance scheduled air service as well as maintain and/or enhance local aviation facilities.

Scheduled commercial air service presently exists in the nine RTCs shown in Figure 7.5.2. – Thief River Falls, Bemidji, Brainerd, International Falls, Chisholm-Hibbing, Duluth, St. Cloud, Rochester and Minneapolis-St. Paul. Commercial airports located just beyond Minnesota's borders in Fargo and Grand Forks, North Dakota; Sioux Falls, South Dakota; Mason City, Iowa; and La Crosse, Wisconsin, also serve Minnesota residents and businesses in their respective geographic areas.

Scheduled air services from these airports provide an important role in connecting Greater Minnesota cities and regions to the Minneapolis-Saint Paul International Airport. Maintaining scheduled flights to these communities is an ongoing challenge given increasing operating costs. While these services are important to local communities, Mn/DOT has little control over the large market forces and economics that drive service decisions.

In addition to these airports, Minnesota has 95 paved and lighted airports that are used for unscheduled flights. Many of these airports are used by private businesses. For example, Marvin Windows in Warroad uses the Warroad airport to shuttle staff from its headquarters and manufacturing center to other offices and plants around the country and to bring in prospective customers. These airports are critical to maintaining and growing many businesses in rural areas of the state.

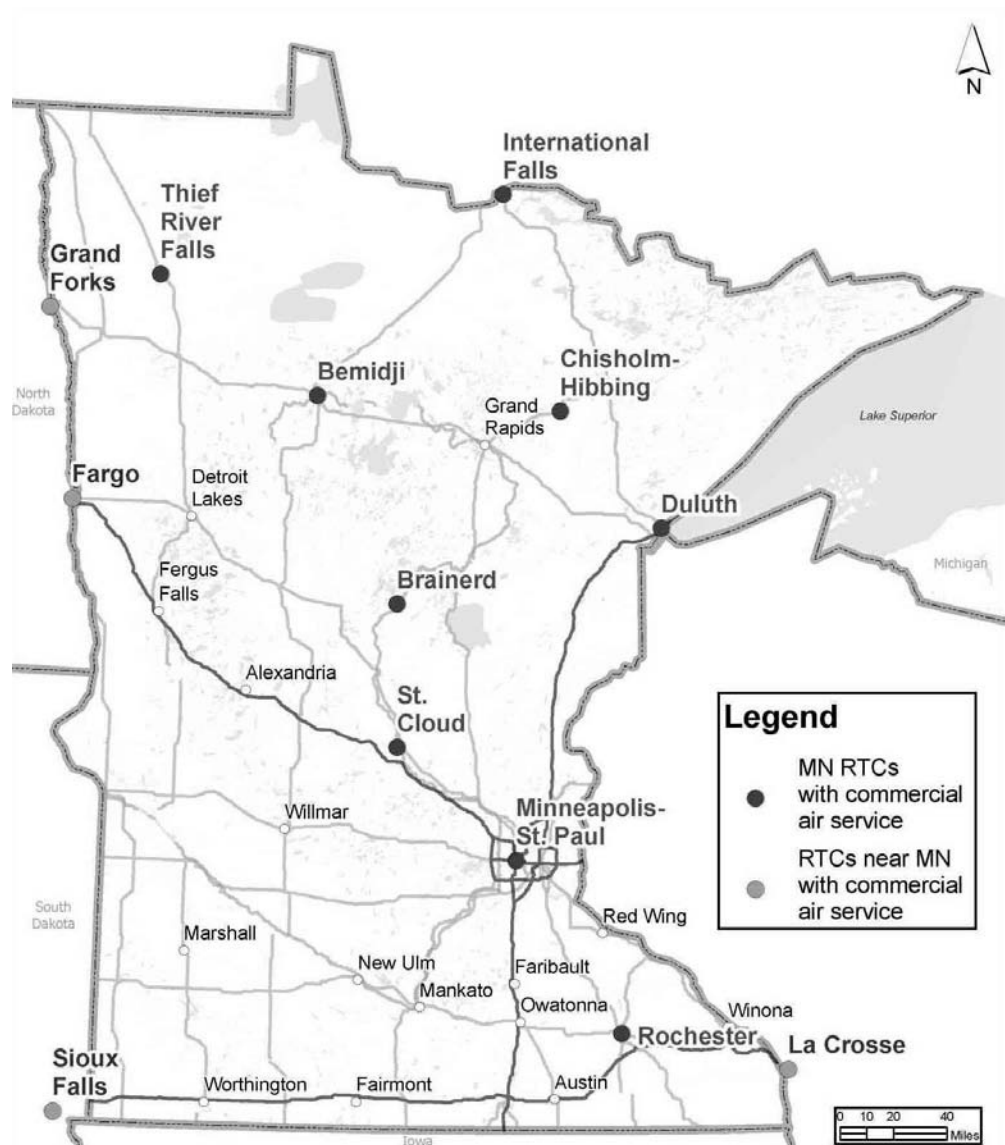


Figure 7.5.2 Regional Trade Centers with Commercial Air Service

Source: Mn/DOT Office of Aeronautics

Performance Measures and Indicators

Performance measures and/or indicators provide quantitative information to managers and/or decision makers. This information will be tracked over time to monitor yearly performance levels. Numerous performance measures and indicators have been either developed or identified for this policy area. A number of these measures and/or indicators are selected for representation and discussion within this policy and are **bolded** below. A full description of all performance measures and indicators associated with this plan is provided in Appendix D.

- **Travel Speed on Greater Minnesota Interregional Corridors (IRC)**
- Access to Intercity Bus Service
- **Access to Scheduled Air Service**
- Access to Airports with a Paved and Lighted Runway
- Airports with Reported Cargo Service

Developmental Measures

- Access to Intercity Rail Service

Travel Speed on Greater Minnesota IRCs

This measure was developed in 2000 as part of the Interregional Corridor Study and was refined in 2008 to address overlapping mobility performance measures within the Twin Cities Metropolitan Area (IRC's within the metro area will now be tracked as part of the metro network, using metro mobility measures). The IRC measure tracks changes in estimated travel speeds on IRC corridors. Speed estimates are based on posted speed limits, and also take into account delays caused by signals, stop signs, and congestion. Currently, 98 percent of the Greater Minnesota IRC System performs near or above identified speed targets as illustrated in Figure 7.5.3. Figure 7.5.4 shows that IRC performance is expected to decline by 2028, to 91 percent performing, as traffic volumes increase and taking into account projects in the 2009-2012 STIP but none thereafter. The expectation is that all Greater Minnesota IRCs perform near or above speed performance targets.

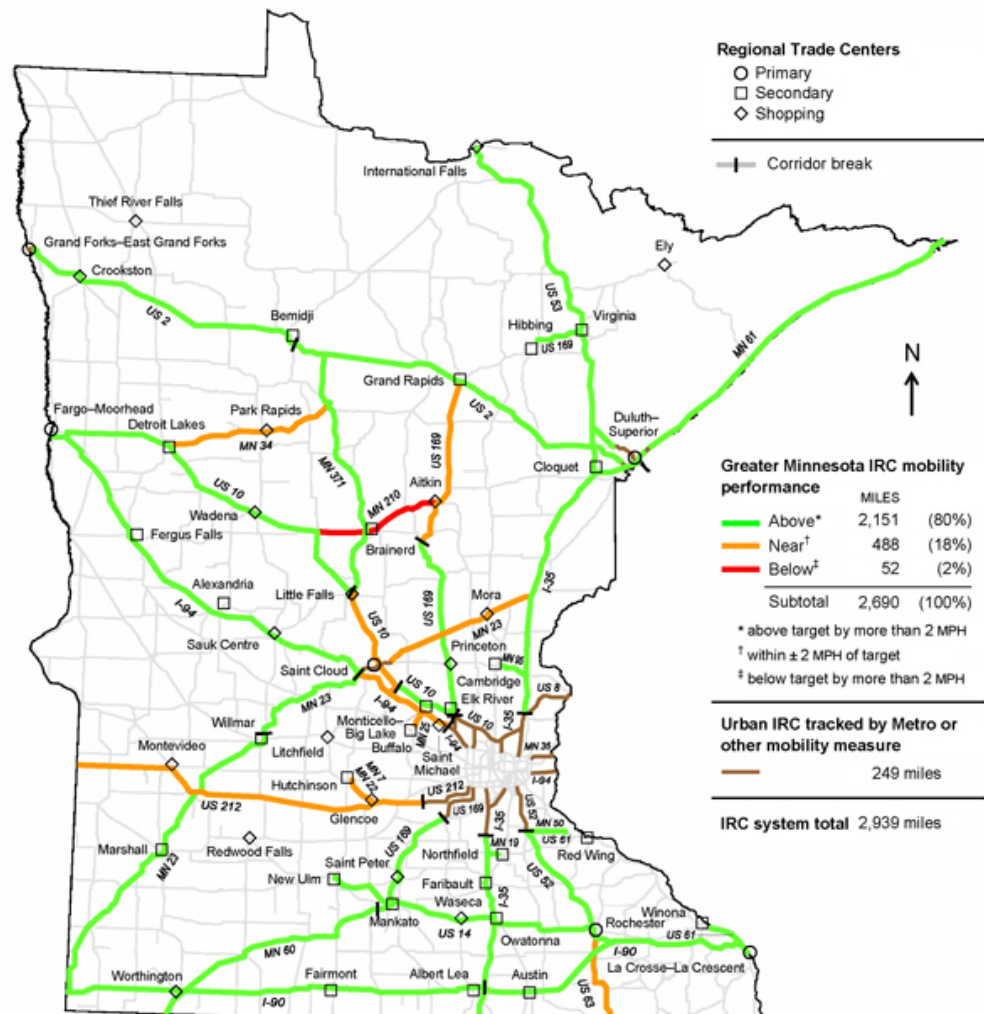


Figure 7.5.3 IRC Performance in 2008

Source: Mn/DOT Office of Investment Management

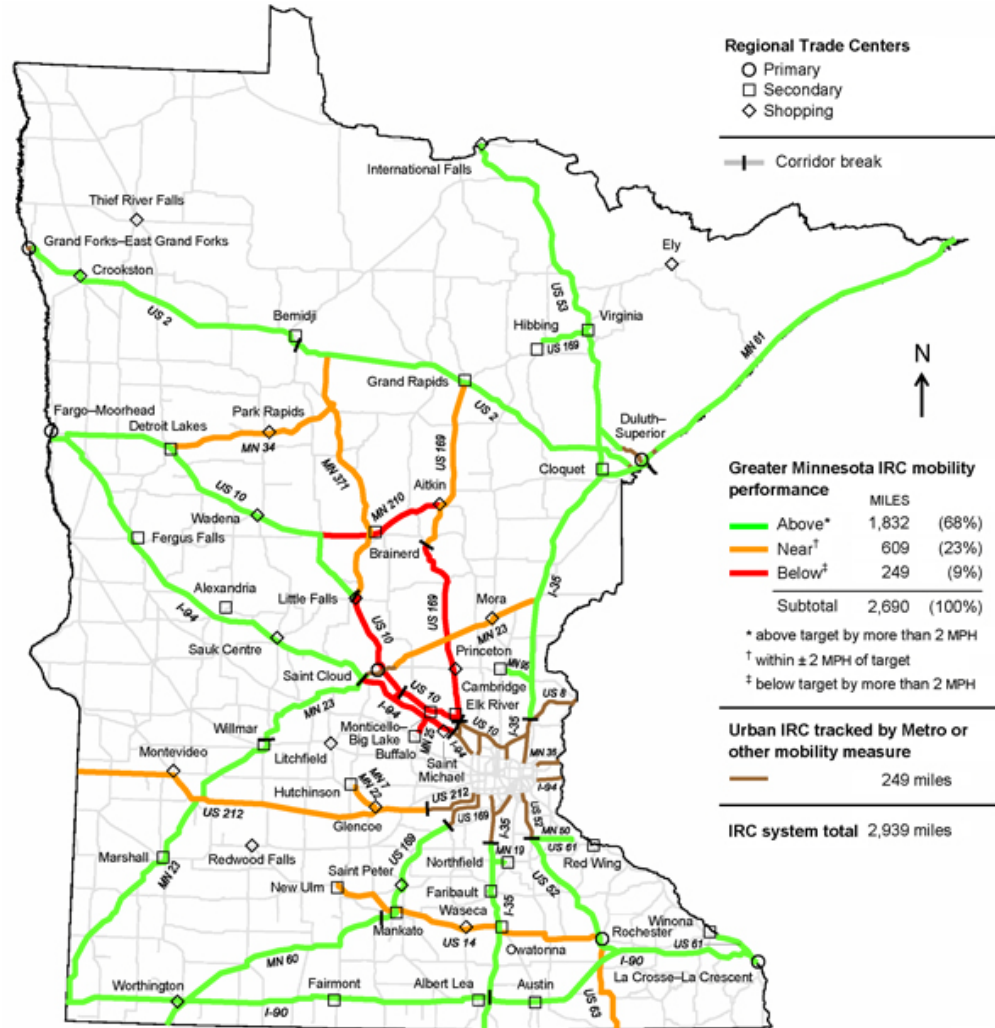


Figure 7.5.4 Forecast IRC Performance in 2028

Source: Mn/DOT Office of Investment Management

Access to Scheduled Air Service

Nine Minnesota airports including Bemidji (BJI), Brainerd (BRD), Duluth (DLH); Hibbing (HIB); International Falls (INL); Minneapolis - Saint Paul (MSP); Rochester (RST), St. Cloud (STC), and Thief River Falls (TVF) have scheduled airline service. Airports in neighboring states such as Grand Forks and Fargo, North Dakota; Sioux Falls, South Dakota; Mason City, Iowa; and La Crosse, Wisconsin, will help to meet Minnesota's commercial air service travel needs. Figure 7.5.5 shows these 14 commercial airports are within a one hour travel time for 86 percent of Minnesota's population. The target performance level is to have 90 percent of the population within 60 minutes of a commercial service airport.

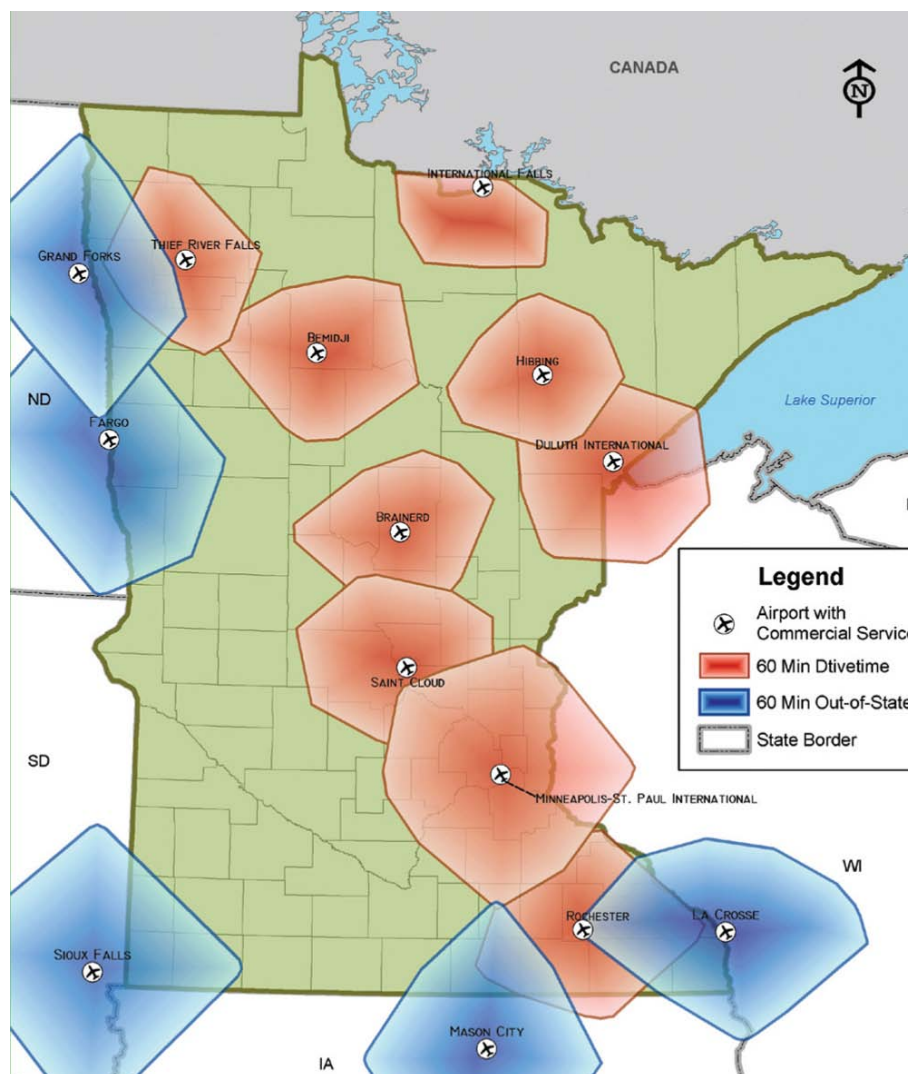


Figure 7.5.5 Areas within 60 Minutes of Airports with Scheduled Airline Service

Source: Mn/DOT Office of Aeronautics

Mn/DOT and Minnesota communities and airports have limited influence on how and where commercial air service is provided. Therefore, there are no recommendations for improving performance for this measure. It does not appear that any additional airports in Minnesota will secure scheduled commercial air service in the near term. However, as the percentage of population increases in urban areas, it is expected that performance levels will increase over time.

¹ John R. Borchert and Russell B. Adams, *Trade Centers and Trade Areas of the Upper Midwest: Upper Midwest Economic Study*, Urban Report No. 3 CURA, University of Minnesota, 1963.

² *Minnesota Statewide Freight Plan*, Minnesota Department of Transportation, Office of Freight and Commercial Vehicles, 2005.

³ S.R. Sunkari, H.A. Charara, and T. Urbanik, *Reducing Truck Stops at High-Speed Isolated Traffic Signals*, Texas Transportation Institute Report 1439-8, 2000.