

CHAPTER 2

TRANSPORTATION POLICY PLAN STRATEGIES

As discussed in Chapter 1, the current federal transportation law, Fixing America’s Surface Transportation Act (FAST Act), mandates a streamlined and performance-based process for transportation planning,

This Transportation Policy Plan responds to this mandate by identifying regional transportation system goals and objectives that address and also go beyond federal requirements to align with the region’s metropolitan development guide, Thrive MSP 2040. Regional transportation goals and objectives are summarized in Chapter 1, “Transportation System Vision and Performance-Based Planning.”

Chapter 1 defines strategies as actions that can or will be taken to help the region accomplish and meet the identified transportation system goals and objectives. Strategies describe the role of regional programs, policies, and priorities in determining a list of projects and services for investment. Strategies can also address guiding principles for how implementing partners will act to progress toward goals and objectives. This chapter identifies and elaborates on strategies that the region will use to make progress toward achieving the transportation goals and objectives. The strategies identify specific actions, along with responsible actors, that will be taken to help achieve the region’s transportation goals. Chapter 13, “Performance Outcomes,” identifies specific performance measures and how well the region is working towards the regional transportation goals and objectives since the last plan.

A large number of the strategies have existed in previous versions of the Transportation Policy Plan, many as far back as the original plan in the 1970s, and often called policies rather than strategies. As a result, the Metropolitan Council and its regional transportation partners have been advancing the work described in the strategies for years. The strategies are organized and discussed under a specific transportation goal, but in many instances, a strategy works toward achieving multiple or even all of the transportation goals. In these instances, the strategy is listed under the goal that seems to best fit with the main emphasis of the strategy. The strategies used to achieve the broad goals in the plan may at times need to balance potential outcomes against one another to maximize benefits to the region while minimizing any negative impacts.

The term “regional transportation partners” is frequently used in the strategies to broadly include all public entities within the region with responsibility for planning, implementing or maintaining the transportation system including the Metropolitan Council, the Minnesota Department of Transportation (MnDOT), counties, cities, townships, transit providers, airport sponsors and others.

Supportive local actions indicate how local governments, primarily cities, might have a role in supporting the strategy at the local level. Generally, the supportive local actions are meant to be advisory – indicating best practices or implementation methods that might be used to support the strategy at the local level.

The actions in these strategies reflect statutory requirements, positive actions, and best practices that advance the transportation system goals and objectives of the Transportation Policy Plan and help meet the federal requirements for a regional performance-based plan. Some of the strategies state that actors “will” do something, and others suggest that actors “should” do something. “Will” statements are positive actions that support the work of the Metropolitan Council and its partners in developing and implementing an effective regional transportation system. “Should” statements are recommendations directed primarily to local governments regarding their own investment and land use decisions. These strategies are provided as best practices or suggestions to guide local planning priorities and considerations. Only one strategy (F1) is a “must” statement, reflecting the statutory authority of the Metropolitan Council to review the transportation elements of local comprehensive plans.

A. Transportation System Stewardship

Goal:

Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.

Objectives:

- A. Efficiently preserve and maintain the regional transportation system in a state of good repair.
- B. Operate the regional transportation system to efficiently and cost-effectively move people and freight.

Strategies:

A1. Regional transportation partners will place the highest priority for transportation investments on strategically preserving, maintaining, and operating the transportation system.

The regional transportation system represents an enormous public investment that is essential to our economy and quality of life. Protecting this investment means maintaining the entire system in a state of good repair. Doing so ensures that infrastructure and all facilities and equipment function well for their entire design life and minimize costs over their life cycle.

Federal transportation legislation is increasingly emphasizing the importance of maintaining the existing transportation system. The USDOT requires performance measures for states to assess the condition of pavements and bridges on the Interstate Highways and National Highway System. USDOT also requires performance measures and asset management plans for transit assets. Collecting data is important to the efficient preservation, maintenance and operation of all modes and allows for making strategic and timely investments.

Preserving and maintaining the roadway system applies to bridges and roadway pavement, on-street bicycle facilities, sidewalks and adjacent trails within roadway rights-of-way, as well as all roadside infrastructure such as lighting, traffic signals, noise walls, and drainage systems.

Preserving and maintaining the transit system includes maintaining and replacing vehicles and equipment at consistent intervals, preserving the function and positive customer experience at customer facilities, and maintaining efficient support facilities and rail infrastructure.

Supportive local actions:

- Cooperate with MnDOT, regional transit providers, and regional parks implementing agencies in maintaining and operating shared and multimodal transportation facilities, including setting priorities for snow, ice and debris removal.

A2. Regional transportation partners should regularly review planned maintenance preservation and reconstruction projects to identify cost-effective opportunities to incorporate improvements for safety, lower-cost congestion management and mitigation, MnPASS, strategic capacity, transit, bicycle, and pedestrian facilities.

MnDOT should continue to regularly review highway preservation, maintenance, and reconstruction projects to identify opportunities to modernize the roadway and integrate safety and lower-cost congestion management improvements. and to determine if MnPASS lane and regionally prioritized strategic capacity projects implementation can be advanced with such coordination. A similar approach should be used by cities and counties as they undertake local highway projects.

Chapter 5, “The Highway Investment Direction and Plan,” includes a map of planned pavement, bridge, and roadside infrastructure projects

Regional transit providers should review preservation and maintenance projects to identify opportunities to modernize and improve the transit system and its integration with other systems. In addition, technology and design improvements in transit systems can be incorporated into maintenance, preservation, or replacement projects to provide a better customer experience or more efficient system.

Airport sponsors and air-service providers should establish airport business plans and agreements to deliver high-quality services at affordable prices to users. Airport sponsors should operate within a long-term financial plan that stresses maximizing non-regional funding sources to avoid or minimize financial impacts on regional taxpayers and maintaining a high bond rating for aviation improvements.

Supportive local actions:

- Plan and implement bicycle and pedestrian improvements and consider traffic calming techniques as part of roadway projects. Where these travel options are needed and can be safely provided, this approach can take advantage of cost-effective opportunities to provide for improved pedestrian crossings and walkways, on-street bicycle facilities, signage and other improvements.
- Coordinate preservation and maintenance projects with MnDOT, regional transit providers and other affected local governments when locally planned projects affect their systems.

A3. The Metropolitan Council and regional transit providers will use regional transit design guidelines and performance standards, as appropriate based on Transit Market Areas, to manage the transit network, to respond to demand, and balance performance and geographic coverage.

The Metropolitan Council and regional transit providers will look for opportunities to manage services and reinvest resources from underperforming services to services that can support regional transit performance standards. When managing the transit system, the Metropolitan Council and regional transit providers will consider input from local communities, existing and potential riders, and the business community. They will also consider the impacts and benefits to low-income groups and people of color.

As the transit system continues to expand, new and improved routes and services will also be evaluated against regional transit performance standards.

Supportive local actions:

- Work with transit providers to identify route changes that will better suit community needs.

Chapter 6, “Transit Investment Direction and Plan” includes a description of Transit Market Areas.

Transit design guidelines and performance standards are included in Appendix G.

A4. Airport sponsors will prepare a long-term comprehensive plan (LTCP) for each airport every five years and submit it to the Metropolitan Council for review to ensure that plans for preservation, management and improvement of infrastructure at each airport are consistent with the regional aviation system plan.

Airport-related investments by public and private sectors in the region should focus on continued development of Minneapolis-Saint Paul International Airport as a major national and international hub. Investments should maximize the operational effectiveness and value of aviation services and airport infrastructure. For regional airports, airport sponsors should maintain and enhance existing facilities to their maximum capability before investing in new facilities.

Regional aviation facilities are under various types of public and private ownership. If a substantial change to the approved plan is deemed necessary and cannot be addressed as part of the regular update, the long-term comprehensive plan should be amended.

The scope, application and content of a long-term comprehensive plan is defined for different airport sponsors in Appendix K.

B. Safety and Security

Goal:

The regional transportation system is safe and secure for all users.

Objectives:

- A. Reduce fatal and serious injury crashes and improve safety and security for all modes of passenger travel and freight transport.
- B. Reduce the transportation system's vulnerability to natural and man-made incidents and threats.

Strategies:

B1. Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the processes of planning, funding, construction, and operation.

Crashes resulting in fatal and serious injury are the major safety concern on all highways and streets. The state and counties have done much work on this issue in recent years, producing the Minnesota Strategic Highway Safety Plan (MSHSP) and county highway safety plans. MnDOT's Congestion Management and Safety Plan uses both safety and mobility measures to develop low-cost high-benefit, targeted projects. Some cities have also developed safety plans. These resources should be considered in developing roadway improvements.

The Highway Safety Improvement Program funds proactive and reactive safety projects by MnDOT, counties and cities in the region.

The major transit safety concerns include addressing crashes involving transit vehicles, especially light rail and commuter rail trains. Providing safe crossing of rail transit facilities is important in designing rail systems. Regional transit providers will emphasize improvements to areas with high vehicle crash rates. Additional details on transit security are discussed in Strategy B5.

As the most vulnerable users of the transportation system, pedestrians and bicyclists should be included in roadway and transit planning and project development. Additional information on improving safety for pedestrians and bicyclists is included in Strategy B6.

Safety is the number one priority in planning and developing aviation facilities and services. While the Federal Aviation Administration is responsible for safety of the airspace, all levels of government should work together to ensure that only appropriate land uses are allowed in runway approach areas.

Supportive local actions:

- Address safety and security considerations in planning and implementing the local transportation system.

- Adopt local ordinances controlling all tall structures 250 feet or more to minimize potential general airspace hazards.

B2. Regional transportation partners should work with local, state, and federal public safety officials, including emergency responders, to protect and strengthen the role of the regional transportation system in providing security and effective emergency response to serious incidents and threats.

Regional transportation partners should consider security needs as contained in federal directives when planning, constructing and operating facilities for all modes of transportation.

The region’s highways are crucial when responding to emergencies involving fire, ambulance, disaster, and evacuation. Principal and minor arterials provide valuable alternate routes as essential redundancy for responding to emergencies.

I-94, I-694 and Minnesota Highways 280 and 100 provided critical highway and bus transit capacity during the 2007 I-35W bridge collapse and reconstruction. (photo)

Regional transit providers can also play an important role in emergency response, such as moving people away from a dangerous situation or area and providing safe shelter in transit vehicles or major customer facilities.

Supportive local actions:

- Participate in multi-agency efforts to plan and prepare for transportation emergency response.

B3. Regional transportation partners should monitor and routinely analyze safety and security data by mode, severity, and location to identify priorities and progress.

The State of Minnesota – MnDOT, Department of Public Safety, and Department of Health – regional transit providers, counties, and cities are doing important work in identifying, prioritizing, and addressing traffic and transit safety issues. The Metropolitan Council will continue to support these traffic and transit safety efforts, including direction provided in the Minnesota Strategic Highway Safety Plan, county highway safety plans, county transportation plans, local comprehensive plans, and regional transit provider operations. Transit providers will monitor the state of good repair for facilities and other investments to ensure safety for passengers, operators, and other staff.

Supportive local actions:

- Maintain, monitor, and routinely analyze local safety and security data to identify priorities for investment and coordinate this data with regional efforts.

B4. Regional transportation partners will support the state’s vision of moving toward zero traffic fatalities and serious injuries, which includes supporting educational and enforcement programs to increase awareness of regional safety issues, shared responsibility, and safe behavior.

While engineering and emergency response are important for highway safety, other important areas include education, enforcement and legislation. Efforts in these areas are typically led by agencies whose jurisdiction extends beyond transportation, but transportation entities can be important partners in these efforts. Collaborative interdisciplinary efforts to eliminate traffic

The Regional Solicitation awards significant points for crash reduction for highway, bike and pedestrian improvements.

fatalities and serious injuries currently include the state’s Toward Zero Deaths program, which also includes coalitions at the county level, and local Vision Zero programs at the city level. The Department of Public Safety leads state education efforts focused on giving drivers information they need to avoid hazardous driving practices and choose responsible behavior. Enforcement efforts focus on ensuring compliance with traffic

laws to change driver behavior and reduce unsafe driving practices. In recent years, key highway safety education, enforcement, and legislative efforts have focused on aggressive driving, distracted driving, speeding, impaired driving, reducing the number of people traveling without seatbelts or appropriate car seats, and motorcycle driver training.

In addition to general traffic safety, local and state agencies are encouraged to coordinate with state safety efforts to educate the public in the proper use of sidewalks and crosswalks by pedestrians and proper use of shared lanes, bicycle lanes and trails by bicyclists. These safety programs include the “Safe Routes to School” programs that promote bicycling and walking safety for school students. Programs should educate motorists regarding bicycle and pedestrian roadway and trail crossing laws (including intersection and mid-block crossings), how to safely interact with bicyclists riding legally in the roadway, and to be aware of pedestrians and bicyclists.

Supportive local actions:

- Identify and implement local programs and strategies to support the state’s vision of moving toward zero traffic fatalities and serious injuries.

B5. The Metropolitan Council and regional transit providers will provide transit police services and coordinate with public safety agencies to provide a collaborative approach to safety and security.

The transit system employs and carries large numbers of people and can be both an important system in responding to threats, and a target for serious threats. An important emphasis for the transit system is responding to safety and security concerns in a timely manner. The transit system covers a large geographic area, and many jurisdictions and incidents often occur on moving vehicles. This requires significant coordination between transit providers and public safety agencies. Most of the transit system is supported by Metro Transit Police, which is

dedicated to providing police services to transit safety and security. In addition to Metro Transit Police, all regional transit providers coordinate with local public safety agencies, ensuring a safe and secure environment in and around the transit system.

The transit system also has security systems to monitor possible threats to people on and around transit vehicles and facilities. This system will continue to play an important role in improving the real and the perceived safety and security for transit employees and customers.

Supportive local actions:

- Coordinate local public safety agencies with regional transit providers to respond to incidents on the regional transit system.
- Use local public events as an opportunity to educate residents about potential security threats and natural disaster response procedures.

B6. Regional transportation partners will use best practices to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system.

Many best practice guidelines for planning and design are available for improving bicycling and walking safety and general experience. Some of the more pertinent guides include:

- *Minnesota's Best Practices for Pedestrian/Bicycle Safety* (MnDOT, 2013)
- *Best Practices Synthesis and Guidance in At-Grade Trail-Crossing Treatments* (MnDOT, 2013)
- *Guide for the Development of Bicycle Facilities, 4th ed.* (American Association of State Highway Transportation Officials, 2012)
- *Urban Street Design Guide* (National Association of City Transportation Officials, 2013)

Intersections and pedestrian crossings (including intersection crossings, mid-block crossings, and trail crossings) pose key issues for drivers, bicyclists, and pedestrians. Safe rail crossings are particularly important for transit customers at light rail and commuter rail stops, since these are some of the busiest crossing points in the region. Transit providers and local governments should work together to design and provide effective and safe crossings in order to discourage bike and pedestrian crossings at unsafe locations.

Supportive local actions:

- Coordinate with Metro Transit and other rail providers to improve safe crossings of rail facilities.
- Incorporate bicycle and pedestrian facilities in local plans.
- Use best practices to enhance bicycle and pedestrian safety.

B7. Airport sponsors and air service providers will provide facilities that are safe, secure and technologically current.

The regional aviation system is essential to the regional economy and should be developed, operated, and maintained to appropriate standards, to include making necessary improvements to the air traffic control system. Airport sponsors should provide facilities that are safe and secure, affordable, and technologically current for all facets of the aviation industry.

B8. The Council and its regional transportation partners will ensure that police and public safety agency enforcement programs and actions on the region's transportation system do not create or perpetuate racial inequities.

It is important to note that not everyone has the same experience using the region's transportation system. Analyses of enforcement data show that people of color experience disproportionate traffic stops or enforcement on transit. The 2003 Minnesota Statewide Racial Profiling Study, done by the University of Minnesota Law School at the request of the state legislature, found that "drivers of color are over-represented among those stopped; over-represented among those searched; and under-represented among those found to have contraband on their person or in their vehicle as a result of being searched." Because Minnesota does not require local police departments to collect traffic stop data including race, there is currently no consistent database to use for routine analysis on potential racial disparities across jurisdictions, although individual cities may track their traffic stop data. The 2003 report is the most recent analysis available at a statewide or regional level. A 2011 U.S. Department of Justice national report on traffic and street stops found that more black drivers were stopped. In 2015, Metro Transit analyzed its police incident data by race and found disparities in its treatment of people of color. Recent Metro Transit data indicates these disparities have been reduced after changes to training and procedures. Over the past several years, work has been done to address community concerns about policing, including national and statewide task forces that identified best practices and recommendations for policing practices and building public trust, and work to implement changes continues at the local level.

Supportive local actions:

- Collect demographic data, including but not limited to race, for all stops in accordance with industry best practices.
- Implement required state training for peace officers on crisis intervention and mental illness crises; conflict management and mediation; and recognizing and valuing community diversity and cultural differences to include implicit bias training, and other relevant training as recommended by industry best practices.

C. Access to Destinations

Goal:

A reliable, affordable, and efficient multimodal transportation system supports the prosperity of people and businesses by connecting them to destinations throughout the region and beyond.

Objectives:

- A. Increase the availability of multimodal travel options, especially in congested highway corridors.
- B. Increase travel time reliability and predictability for travel on highway and transit systems.
- C. Ensure access to freight terminals such as river ports, airports, and intermodal rail yards.
- D. Increase the number and share of trips taken using transit, carpools, bicycling, and walking.
- E. Improve the availability of and quality of multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically under-represented populations.

Strategies:

C1. Regional transportation partners will continue to work together to plan and implement transportation systems that are multimodal and provide connections between modes. The Metropolitan Council will prioritize regional projects that are multimodal and cost-effective and encourage investments to include appropriate provisions for bicycle and pedestrian travel.

Planning and design of highway and street corridors must continue to incorporate and improve the safety and mobility needs of all users, including trucks, buses, trains, pedestrians and people riding bicycles. The region and state have been pioneers in highway system management to increase multimodal efficiency. These efforts must be continued and expanded in the future. MnDOT, counties, and cities should provide advantages for transit on highways and streets, including bus-only shoulders, transit stations, curb extensions, transit signal priority, and ramp meter bypasses. MnDOT, counties, cities, and transit providers should provide facilities for people to safely walk or bike across highways, streets, and other major barriers in urban, suburban, and rural areas, especially on bridges.

MnDOT, counties, cities, and transit providers should also provide for people of all ages and levels of mobility to safely walk or bike on most highways and streets in the region (see Strategy C2 below). The needs of bicyclists and pedestrians must be addressed when roadway bridges are built or rebuilt.

A strong bicycle and pedestrian system is essential to provide valuable connections to the regional transit system and improve mobility for people with disabilities. Since the experience of transit customers generally starts with walking, improvements to the pedestrian environment are essential to transit. This includes providing facilities but also considering the other elements of design and urban form that contribute to a good pedestrian experience.

The Metropolitan Council works with regional transportation partners to identify priority projects for use of federal transportation funds through the Regional Solicitation process. All Regional Solicitation funding categories include scoring criteria that assess multimodal elements, and a strong focus is placed on bicycle and pedestrian elements.

Supportive local actions:

- In local comprehensive plans, coordinate the local transportation element for streets, pedestrian and bicycle facilities with county, regional, state agencies and adjacent communities.
- Continue to implement universal accessibility in all new construction and rehabilitation of transportation infrastructure including sidewalks and other pedestrian infrastructure to comply with the federal Americans with Disabilities Act.

C2. Local units of government should provide a network of interconnected roadways, bicycle facilities, and pedestrian facilities to meet local travel needs using Complete Streets principles.

An interconnected, multimodal local transportation system provides access to land uses, expands travel options, and helps reduce highway congestion. Local and county governments should plan a system of multimodal interconnected collector roads and minor arterials to serve short and medium-length trips.

A local transportation system should serve the full range of types of trips. Minor arterials serve more and longer trips, sometimes at faster speeds, to help reduce demand on the metropolitan highway system – also called Principal arterials – and ensure that traffic does not spill over to local streets. Local streets provide a basic level of access to land, including homes and businesses.

The functional classification system in Appendix D identifies roads by the function they serve. The needs of transit, pedestrians, bicyclists, trucks and autos should be addressed in the planning of all local roadway networks.

“Complete Streets” is a term used to describe an approach to transportation planning, design, and construction that considers the needs of all potential users –pedestrians, transit vehicles and users, bicyclists, commercial freight trucks, emergency vehicles and motorists – moving along and across roads and through intersections. For pedestrians, bicyclists, and transit users this should include users of all ages and abilities. The concept of complete streets typically includes these principles:

- Developing transportation projects through planning and design using a context-sensitive approach that varies by location and is customized to the specific corridor’s characteristics.
- Improving the safety and functionality of the transportation system for all users so people can move safely from point A to point B via their selected travel mode or modes.

- Consideration through planning and design of the overall, multimodal transportation network and connections that go beyond the specific project corridor.
- Planning to accommodate all users that travel within, along and across the project corridor.

The implementation of Complete Streets principles ensures that the accessibility and safety of all travelers be appropriately considered and incorporated throughout any road project’s planning, design, and construction.

More specific discussion of how bicycle facilities might be provided on arterials and local roadways is provided in Chapter 7, “The Bicycle and Pedestrian Investment Direction.”

MnDOT, counties, and cities should continue to work together to provide facilities for people to bike or walk along most streets and highways in urban and in some rural areas, with the exception of freeways. A well-connected collector road network is important to support non-motorized modes parallel to major highways and within neighborhoods and activity centers. Local streets, especially where traffic calming measures have been implemented and traffic signals are provided at major intersections, can provide better bicycle and pedestrian comfort, air quality, and safety than highways with higher traffic volumes and speeds.

Major transit investments like transitways and transit centers need to be highly accessible for pedestrians and bicyclists. It is important that transit facilities are designed to integrate with existing local transportation systems (including bicycle and pedestrian facilities) and local land use plans that support high-density development.

Local governments should also consider the implications of emerging transportation modes, such as transportation network companies, low-powered vehicles like electric scooters, and other shared mobility options. These modes are not typically implemented directly by local governments but they are often regulated, at least in part, by local governments. It’s important for local governments to consider the role of these emerging services in their network and the regional transportation system. The Council can support local governments by convening conversations or gathering best practices about these services.

Supportive local actions:

- In local comprehensive plans, develop and adopt local transportation plan elements for streets and pedestrian and bicycle facilities that serve the community and encourage active living, provide direct connections to job concentrations, create an integrated system with adjacent communities, and implement and connect to the Regional Bicycle Transportation Network.
- Adopt a Complete Streets policy and identify roads that should be emphasized for different uses (for example, transit, bicyclists, pedestrians and freight). All roads should be designed to accommodate emergency vehicles.

C3. The Metropolitan Council, working with MnDOT through their efforts, and other relevant jurisdictions, will continue to maintain a Congestion Management Process for the region's Principal and A-minor arterials to meet federal requirements. The Congestion Management Process will incorporate and coordinate the various activities of MnDOT, transit providers, counties, cities and transportation management organizations to increase the multimodal efficiency and people-moving capacity of the regional roadway network.

The region has a well-developed and managed freeway system. In past long-range transportation plans, the emphasis was to meet forecast demand by adding highway capacity. However, no region in the country has successfully “solved” highway congestion. Current trends also suggest that the transportation system is experiencing new resource, policy, technology, and local and global economic conditions that differ from those of the past.

This plan, including the Congestion Management Process, emphasizes that the impacts of congestion should and can be eased by increasing the people-moving capacity of the multimodal transportation system, while minimizing future demand on the highway system. Mitigating the impacts of congestion will be achieved by:

- Implementing supportive land use policy.
- Improving traffic management and more efficient use of existing highway system capacity, pavement, and right-of-way.
- Implementing a MnPASS system and limited strategic highway capacity enhancements.
- Implementing alternatives to driving alone.

Through the Congestion Management Process, the Metropolitan Council, MnDOT and other relevant jurisdictions will work to monitor and evaluate congestion mitigation strategies and projects being implemented and modify the approach in the future as needed.

This plan emphasizes that limited resources must be focused on providing the most system-wide transportation benefit. Where strategic enhancements to highway capacity are considered, MnDOT and local governments will design highway projects with the intent to manage congestion. Highway system performance will be measured by people-carrying capacity and travel time reliability instead of more traditional measures such as level of service. Chapter 12, “Congestion Management Process,” of the Transportation Policy Plan includes a description of this process.

C4. Regional transportation partners will promote multimodal travel options and alternatives to single occupant vehicle travel and highway congestion through a variety of travel demand management initiatives, with a focus on major job, activity, and industrial and manufacturing concentrations on congested highway corridors and corridors served by regional transit service.

Travel demand management (TDM) strategies emphasize reducing vehicle miles traveled and trips made driving alone. These strategies should be directed at increasing the use of travel options, easing congestion, reducing pollution, and encouraging transportation-efficient land development.

TDM strategies are most successful in areas with high travel demand and high potential for using travel options. Thus, the Metropolitan Council and its TDM partners will focus local and regional TDM efforts on employment centers and corridors with significant investments in travel options. Travel options include transit service, transit and ridesharing advantages like MnPASS lanes, high-occupancy vehicle lanes that bypass freeway ramp meters, bus-only shoulders, and biking and walking facilities for users of all ages and levels of mobility.

The Metropolitan Council will provide TDM technical assistance and financial incentives to transportation management organizations (TMOs) other TDM partners and local units of government to implement TDM strategies and programs. The Regional Solicitation has an application category that specifically provides funding to implement innovative TDM strategies. The Metropolitan Council will also explore innovative travel demand management strategies that emerge as technology changes and travel patterns adapt. The emergence of shared mobility transportation options like bicycle share, car share, and electric scooter share are examples of innovative strategies that can support additional multimodal travel. Examples of other TDM strategies include the development of TDM plans for specific sites or new developments, telework and flexible work schedule programs, avoiding the oversupply of parking and pricing strategies for parking, and employee training programs.

Supportive local actions:

- Support, collaborate, and implement travel demand management policies, programs, and land use regulations in collaboration with other government agencies, transit providers, travel management organizations, businesses, employees, and property owners.
- Facilitate the fair and equitable implementation of new mobility options that require local regulation and/or sponsoring.

C5. The Metropolitan Council will work with MnDOT and local governments to implement a system of MnPASS lanes and transit advantages that support fast, reliable alternatives to single-occupant vehicle travel in congested highway corridors and in local corridors.

MnPASS is an integral part of a multimodal transportation system, and helps people reach job concentrations faster and more efficiently. MnPASS lanes provide a reliable, congestion-free

travel option for people who ride bus transit, people who ride in carpools and solo drivers who are willing to pay a fee during peak rush-hour periods. MnPASS can improve efficiency by moving more people through highway corridors during congested periods in fewer vehicles. MnPASS lanes provide commuters and small commercial vehicles with greater travel-time reliability and choice. It encourages greater park-and-ride use and increases car and vanpooling. By addressing capacity, MnPASS lanes also improve travel conditions for all highway users. MnPASS also improves transit service and increases ridership, particularly on express bus service.

The Metropolitan Council and MnDOT will continue to implement transit advantages on the freeway system that allow transit vehicles to bypass congestion and provide a faster, more reliable travel time. The primary system of transit advantages in the region includes bus-only shoulders, ramp-meter bypass ramps, and MnPASS lanes. MnDOT will continue to analyze the need for new transit advantages and maintain existing transit advantages to the greatest extent possible.

Transit advantages are also used to improve local transit circulation. Examples include exclusive bus lanes, traffic signal timing and signal priority, and queue jumps. The Metropolitan Council and transit providers will work with local governments to determine where these improvements may be needed and identify possible implementation solutions.

The MnPASS system vision is included in Chapter 5, “Highway Investment Direction and Plan.” Other transit advantages are discussed in Chapter 6, “Transit Investment Direction and Plan.” The Regional Solicitation also provides funding opportunities for transit advantages that improve the customer experience, primarily through the transit modernization category.

Supportive local actions:

- Identify opportunities for transit advantages on the local road system that improve the attractiveness of the transit system and coordinate their implementation with regional transit providers.

C6. The Metropolitan Council will support an interagency approach to preserving right-of-way for future transportation projects that are consistent with the Transportation Policy Plan.

Rights-of-way for future transportation infrastructure are difficult to obtain. Consequently, right-of-way should be preserved for public use as project locations become certain and property becomes available. The Metropolitan Council’s Right-of-way Acquisition Loan Fund (RALF) will be used to preserve needed right-of-way for projects on Principal arterials and other state highways consistent with the Transportation Policy Plan.

Railroad right-of-way that is proposed to be abandoned provides an opportunity to use these linear corridors for transit, trails, parks, or other systems that could serve a variety of roles. The appropriate agencies that could be involved in preserving rail rights-of-way may vary depending

on the short- or long-term intended role. An interagency approach to determining that role will be valuable in ensuring that all possible uses are considered.

Supportive local actions:

- Identify future transportation right-of-way needs through comprehensive planning and coordinate with other transportation providers.

C7. Regional transportation partners will manage and optimize the performance of the Principal Arterial system as measured by person throughput.

MnDOT will work to address capacity problems across the region's entire Principal Arterial system. MnDOT and local units of government with jurisdiction over Principal Arterials will:

- First, address capacity issues by working to apply management improvements such as access management, improved or expanded traffic management technologies.
- Second, seek spot mobility improvements identified through processes such as MnDOT's Congestion Management and Safety Plan.
- Third, identify and prioritize MnPASS lanes that address capacity problems and provide alternatives to congestion for transit, those willing to carpool or to pay.

These strategies are further discussed in Chapter 5, "Highway Investment Direction and Plan." Access management on Principal arterials is discussed in Strategy C10.

MnPASS lanes serve people who carpool or ride transit, key strategies for increasing person throughput since a bus can move as many as 90 passengers on just one vehicle. Added capacity provided by MnPASS lanes can be permanent or actively managed to be open only during certain hours, conditions, or for certain vehicles. All projects for expanding Principal arterial capacity will implement the lower-cost/high-return approach to investments by maximizing use of available highway capacity, pavement, and right-of-way.

Traffic management technologies, spot mobility improvements identified through the Congestion Management and Safety Plan, MnPASS, and strategic capacity enhancements, and regional highway access improvements to job, activity, industrial, and manufacturing centers are discussed further in the highway investment section. Access to Principal arterials is discussed in Strategy C11.

C8. Regional transportation partners will prioritize all regional highway capital investments based on a project's expected contributions to achieving the outcomes, goals, and objectives identified in Thrive MSP 2040 and the Transportation Policy Plan.

All regional highway projects must address the plan goals of safety and security, transportation system stewardship, and healthy environment. After meeting these requirements, the following factors will be used to prioritize highway capital projects, including MnPASS, strategic highway capacity enhancements and access improvements:

- Improves regional economic vitality.
- Improves critical regional highway system connectivity.

- Increases regional highway system travel time reliability.
- Supports regional population, household, and job forecasts and local comprehensive plans.
- Supports regional balance of investments.

When addressing highway capacity issues, regional transportation partners should work to first apply traffic management technologies to improve traffic flow without adding physical highway capacity. The next category of investment should be to investigate implementing the lower-cost/high-return approach to investments in spot mobility improvements. If traffic management technologies and spot mobility improvements do not address the highway capacity issue identified, only then should adding larger physical capacity – sometimes called expansion improvements – be explored. Expansion improvements include MnPASS lanes, prioritized strategic capacity enhancements, and highway access improvements.

Providing a congestion-free, reliable option for transit users, carpoolers and solo drivers willing to pay a fee to use MnPASS lanes is the region’s priority for expansion improvements. If MnPASS lanes cannot address the existing capacity problems, strategic capacity enhancements that have been regionally prioritized (such as interchange improvements or conversions or addressing important freight bottlenecks) should be evaluated. Strategic capacity should be approached using the philosophy of lower-cost/high-return on investment.

C9. The Metropolitan Council will support investments in A-minor arterials that build, manage, or improve the system’s ability to supplement the capacity of the Principal Arterial system and support access to the region’s job, activity, and industrial and manufacturing concentrations.

MnDOT, counties, and cities within the seven-county region have identified the roads in the Minor Arterial system, called A-minor arterials, that supplement and support the Principal Arterial system and provide access to regional job, activity, industrial, and manufacturing centers. The Metropolitan Council and its Transportation Advisory Board have chosen to focus some of the region’s flexible federal funds distributed through the Regional Solicitation on highway improvements on A-minor and non-freeway Principal arterials. The region recognizes four types of A-minor arterials to ensure the system is flexible and responsive to different policies and situations throughout the urban and rural parts of the seven-county region.

These roadways are classified into the following four categories:

- **Reliever** routes provide direct relief for traffic on Principal arterial highways. These roads typically are the closest routes parallel to the Principal arterials within the core, urban reserve and urban staging areas. These roadways are proposed to accommodate medium-length trips and high traffic volumes as well as providing relief to congested Principal arterials. Improvements focus on providing additional capacity and limiting congestion for through traffic.

- **Expander** routes provide a way to make connections between developing urban and suburban areas outside the interstate ring or beltway serving existing and new development.
- **Connector** routes are roads that provide good, safe connections among town centers in the urban reserve, urban staging and rural areas within and near the seven counties. Improvements to Connectors should focus on safety and load-bearing ability.
- **Augmenter** routes are roads that augment the Principal Arterial system within the interstate ring or beltway. The Principal arterial network in this area is in place. However, the network of Principal arterials is not sufficient relative to the density of development it needs to serve. In these situations, these key minor arterials serve many long-range trips and provide access to various activity centers within the beltway. Improvements focus on providing additional capacity.

The functional classification system in Appendix D defines four types of A-minor arterial roads – augmenters, expanders, relievers, and connectors – by the function they serve. Cars, bicyclists, pedestrians, transit, and trucks need to be considered in the planning for all of these roads.

A-minor arterials should provide reliable travel times at reasonable travel speeds. They are important parts of the multimodal transportation system serving people in trucks, personal vehicles, buses, walking, and on bicycles. Within the urban service area, sidewalks or multi-use non-motorized facilities should be provided along A-minor arterials. Bicycle facilities on A-minor arterials should be designed to ensure that the road's multimodal function, safety and person-throughput are maintained or enhanced. Separated multimodal facilities are preferable if there is sufficient right-of-way available, to improve safety for all users.

Supportive local actions:

- Many A-minor arterials are owned and operated by counties and cities. Local units of government should plan and maintain a system of A-minor arterials that provide for local, multimodal trips.

C10. Regional transportation partners will manage access to Principal and A-minor arterials to preserve and enhance their safety and capacity. The Metropolitan Council will work with MnDOT to review interchange requests for the Principal Arterial system. The Metropolitan Council, MnDOT and regional partners will invest in prioritized non-freeway Principal arterial intersections in accordance with the [Principal Arterial Intersection Conversion Study](#).

Interchanges and intersections on the Principal Arterial system provide important access to regional job, activity, industrial, and manufacturing centers. But the safety, capacity, and utility of Principal and A-minor arterials are affected in large part by how street and driveway access to these roadways is provided and managed. Adding additional interchanges to existing freeways

generally makes freeway performance worse, while improving intersections on non-freeways can increase highway capacity.

Decisions about access on the Principal Arterial system need to be thoroughly analyzed and carefully considered in coordination with MnDOT and the Metropolitan Council. Access spacing and the MnDOT-Metropolitan Council interchange review process is discussed in Appendix F. Federal (FHWA) approval is also required for Interstate highway access changes. Appendix D (Functional Class) and Appendix F (Highway Interchanges) emphasize the importance of improvements on non-freeway highways in providing benefits for regional travel. As local units of government work with MnDOT and the Metropolitan Council to improve intersections on non-freeway Principal arterials and A-minor arterial highways, the following requirements are particularly important to achieve regional objectives:

- The appropriate local units of government exercising land use authority along non-freeway Principal and A-minor arterial highways will be expected to incorporate access standards into their subdivision and zoning ordinances and apply the standards during their development review process.
- In most cases, conversion of an at-grade intersection to an interchange should occur in sequence along the corridor as part of an incremental freeway conversion. Conversion of an at-grade intersection to an interchange must provide safety and mobility improvements to both the mainline and cross-street. The new interchange should be adjacent to an existing interchange unless MnDOT and the Metropolitan Council determine that the intermediate access points can be modified or managed to address safety and mobility concerns.
- Principal arterials should have interchanges only with other Principal or A-minor arterials. Minor arterials should have intersections with Principal arterials, other minor arterials, or major collectors. Only concentrations of commercial, industrial, or residential land uses should have direct access to minor arterials.
- Interchange spacing should be one mile or more.

MnDOT and the counties control access on freeways and some expressways through the outright purchase of the access rights from abutting land owners. However, access to other Principal and A-minor arterials is most effectively managed through local land use planning and development regulation. If considered early in the process of land development or redevelopment, the appropriate location and design of access and the supporting road network can be worked into the plans. If access is not considered until late in the design of development, it may be difficult to accommodate properly without added expense and potential disruption to the community.

Supportive local actions:

- Cities, counties and townships exercising land use authority along Principal arterials and A-minor arterials will be expected to incorporate access standards in their

subdivision and zoning ordinances and apply them during their development review process.

- Local access standards should be consistent with MnDOT’s Access Management Manual or the appropriate county’s access guidelines. Cities and townships should also consult with MnDOT or the county whenever reviewing development plans adjacent to Principal arterials and A-minor arterials. For those arterials where the existing access does not conform to the standards, cities should work with MnDOT and/or the county to develop a long-term corridor plan to adjust and improve the access arrangements as opportunities arise through development or redevelopment of an adjacent property. MnDOT has developed a model access management ordinance to serve as a guide for local partners in updating their land use regulations to fully address access considerations.

C11. The Metropolitan Council and regional transit providers will expand and modernize transit service, facilities, systems, and technology, to meet growing demand, improve the customer experience, improve access to destinations, and maximize the efficiency of investments.

The transit system will need to continue to grow and improve to remain a competitive travel option for the region. A significant part of that growth will be expanding and improving the bus system that serves the majority of transit demand in the region. This includes both expanding geographic coverage and “thickening” the transit system by adding

More specific discussion on the processes that guide transit expansion are included in Chapter 6, “Transit Investment Direction and Plan.”

new routes and service frequency in areas already served by transit, including connections to transitways. There are several needs that will be addressed by expanding the bus system:

- **Meet growing demand.** The region will add over 800,000 people and over 600,000 jobs by 2040, with a large portion of these in already developed communities. The region will need to invest in a bus system that serves this growing demand and supports more regional growth along transit routes.
- **Improve access to destinations.** Existing unmet needs and changing lifestyle preferences will lead to demand for better transit access to more destinations. The region will need to provide better access by improving existing service – speed, frequency, span, and connections – and expanding service to new areas. Two areas of high importance will be improving access to job concentrations and improving access to opportunities for people who rely on transit, including under-represented and low-income households and persons with disabilities. The design of the transit system will be guided by Regional Transit Design Guidelines in Appendix G.
- **Improve the customer experience.** Many transit users choose to ride because of the quality of the experience. Those who rely on transit deserve a great customer

experience as well. The region will need to invest to modernize the transit customer experience in order to address factors such as transfers, customer information, comfort, technology, real and perceived safety and security, and amenities.

- **Maximize the efficiency of investments.** Providing regional transit service is not cheap but investments and policies can often make transit more efficient and cost-effective. The region will need to seize these opportunities to maximize the return on investments in the bus system.

Regional transit providers will address these needs by applying a variety of types and designs of transit services and facilities. This work will be guided by a number of processes and plans designed to link transit improvements to specific needs and opportunities in the community. Some improvements may also address needs on the transitway system after the initial construction of lines, including adding stations or amenities at stations. The Regional Solicitation provides some funding for transit through expansion and modernization categories, though primarily available for capital improvements or demonstration (up to three years) operating funding. The Regional Solicitation measures for these categories assess a project's ability to address the above-mentioned needs.

Supportive local actions:

- Work with regional transit providers to identify potential improvements to the transit system that will suit community needs.
- Focus forecasted growth at transit-supportive densities in job concentrations or nodes along corridors, supported by additional land use strategies discussed in Land Use and Local Planning.

C12. 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. Transitway investments will be prioritized based on factors that measure a project's expected contributions to achieving the outcomes, goals, and objectives identified in Thrive MSP 2040 and the Transportation Policy Plan.

Transitways will play an important role in serving the growing region and supporting the economic competitiveness of the region. The region will build an expanded system of transitways that includes bus rapid transit, light rail, and commuter rail. The region also needs to address policies related to modern streetcars, an emerging mode in corridor planning around the region.

Transitways represent a substantial investment for the region and will require extensive planning and coordination to determine the appropriate mix of transitway modes and corridors. There are a number of considerations when exploring transit options in a corridor and when determining the priorities for a long-range transitway system.

Chapter 6, "Transit Investment Direction and Plan," includes technical investment factors intended to measure the expected contributions of a project against the outcomes, goals, and

objectives identified in Thrive MSP 2040 and the Transportation Policy Plan. The list of factors includes ridership, access to jobs and activity, cost-effectiveness, existing land use, future land use and economic development, equity, and environment. Overall system planning will also need to consider policy investments factors such as regional balance, funding viability, community support, and technical readiness and risk when determining priorities in the plan.

Supportive local actions:

- Lead local corridor studies for potential transitway investments in coordination with regional transit providers and other agencies.
- Proactively plan land use around potential transitways that is consistent with the requirements described in Chapter 3, “Land Use and Local Planning,” and supported by additional land use strategies.

C13. The Metropolitan Council will provide paratransit service complementary to the region’s regular route transit system for individuals who are certified by the Metropolitan Council under the Americans with Disabilities Act (ADA).

The Metropolitan Council and regional transit providers will provide an option for those who are not able to use the regular-route transit system due to a disability. Complementary ADA service will be provided consistent with the requirements established in state and federal law. The Metropolitan Council will maintain the eligibility program for this service.

C14. The Metropolitan Council and regional transit providers will provide coordinated transit options, including general public dial-a-ride and vanpool subsidies, in areas of the region not served by regular-route transit. Service levels for these options will be based on available resources and needs.

The Metropolitan Council and regional transit providers will provide dial-a-ride service in areas of the region where transit demand is not strong enough to support regular-route service. These services will be coordinated with the rest of the transit system to facilitate greater access from these parts of the region and to avoid duplication of services.

For trips where transit is not a viable option for travelers, the Metropolitan Council will make subsidies available for the formation of vanpools with volunteer drivers.

C15. Regional transportation partners should focus investments on completing Regional Bicycle Transportation Network alignments and their direct connections with local bicycle networks.

A regional bicycle transportation network with priority bicycle corridors was developed through the Regional Bicycle System Study completed in 2014. The Metropolitan Council works with regional transportation partners to identify priority multiuse trail and bikeway projects for use of federal transportation funds through the Regional Solicitation process. Priority is given to projects on the Regional Bicycle Transportation Network.

Supportive local actions:

- Adopt local transportation bikeway elements that encourage community connectivity and connections to existing or planned regional bikeways.
- Work with adjacent counties and cities and other transportation agencies to plan and implement new or improved regional barrier crossings at high-ranked locations identified in the Regional Bicycle Barriers Study.

The Regional Bicycle Transportation Network establishes the region's priorities for planning and investing in bicycle facilities. It is described in more detail in Chapter 7, "Bicycle and Pedestrian Investment Direction."

C16. Regional transportation partners should fund projects that improve key regional bicycle barrier crossing locations, provide for pedestrian travel across physical barriers, and/or improve continuity of bicycle and pedestrian facilities between jurisdictions.

The natural and built environment in general and the region's transportation infrastructure in particular can create unintended physical barriers to a more prominent walking and biking culture. Freeways can be major barriers to safe and comfortable walking and cycling for transportation. The region's freight rail lines also often create formidable barriers to continuous travel, similar to rivers and streams. Bicycle and pedestrian-accessible bridges are an important element for the region to provide a friendly and safe environment for non-motorized transportation.

A definition for regional-critical links is proposed in Chapter 7, "Bicycle and Pedestrian Investment Direction," that would give regional priority to planning and funding bike and pedestrian projects that eliminate regional barriers or improve connections between jurisdictions.

Local bike networks can also be interrupted by high-traffic arterials that are difficult to cross or ride along. Overcoming many of these arterial barriers to walking and biking in the region requires interjurisdictional coordination, since many of these arterials form the boundaries between jurisdictions. The Metropolitan Council supports interjurisdictional coordination to improve planning for better connections across boundaries.

Supportive local actions:

- Identify gaps or barriers in bicycle and pedestrian systems in the comprehensive planning process.
- Work with Metropolitan Council, adjacent counties and cities and other transportation agencies to plan and implement new or improved regional barrier crossings at high-ranked locations identified in the Regional Bicycle Barriers Study.

C17. Regional transportation partners will provide or encourage reliable, cost-effective, and accessible transportation choices that provide and enhance access to employment, housing, education, and social connections for pedestrians and people with disabilities.

Local agencies should use best practices in designing pedestrian facilities. Such facilities must be accessible to people of all levels of functional ability so they meet the requirements of the Americans with Disabilities Act.

Supportive local actions:

- In comprehensive plans, adopt local transportation pedestrian and bikeway elements with accessibility guidelines and planned facilities for pedestrians and accessibility for people with disabilities. Improvements should be considered in areas with any level of bicycle and pedestrian activity.
- Local agencies should ensure they have an updated self-evaluation or ADA transition plan for the public rights of way as required in Title II of the ADA and continue work to implement any needed changes.

C18. The Metropolitan Council, MnDOT, regional railroad authorities, and railroad companies will pursue short- and long-term improvements to accommodate future freight and passenger rail demand.

Where rail congestion has been identified and/or future capacity constraints are anticipated on the metropolitan rail system, regional partners should conduct additional rail corridor studies to facilitate the planning and implementation of needed system improvements that will accommodate future freight and passenger rail demand.

C19. The Metropolitan Council and MnDOT should work together with cities and counties to provide more reliable last mile connections between the regional highway system (which includes the federally designated Primary Freight Network) and major freight intermodal terminals and truck-dependent facilities.

The Metropolitan Airports Commission should pursue provisions for air cargo infrastructure and air service for the region with direct air freight connections to import/export markets that provide trade opportunities for the region's economy.

City and county roadways provide the "last mile" connections between intermodal freight terminals and the metropolitan highway system, including the National Highway System (NHS) and its subset Primary Freight Network. Coordination with local planning efforts to preserve the condition and capacity of these connector roadways will be essential to maintaining the efficient flow of freight in the region.

Supportive local actions:

- Identify and classify freight corridors in the comprehensive planning process.

C20. The Metropolitan Council and airport sponsors will continue to maintain a system of reliever airports to augment the Minneapolis-Saint Paul International Airport that are accessible within reasonable travel times from all parts of the metropolitan area.

State-of-the-art facilities should be made available by airport sponsors at the region's airports, commensurate with their system role, to induce additional aviation services to use the reliever system.

D. Competitive Economy

Goal:

The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state.

Objectives:

- A. Improve multimodal access to regional job concentrations identified in Thrive MSP 2040.
- B. Invest in a multimodal transportation system to attract and retain businesses and residents.
- C. Support the region's economic competitiveness through the efficient movement of freight.

Strategies:

D1. The Metropolitan Council and its transportation partners will identify and pursue the level of increased funding needed to create a multimodal transportation system that is safe, well maintained, offers modal choices, manages and eases congestion, provides reliable access to jobs and opportunities, facilitates the shipping of freight, connects and enhances communities, and shares benefits and impacts equitably among all communities and users.

The Current Revenue Scenario in this plan generally allows for investments to operate, maintain, and preserve the existing highway and transit systems, supported by some funding for MnPASS lanes, other strategic highway capacity enhancements, and transitway expansion. However, the Current Revenue Scenario does not allow the region to fully address highway operations, maintenance, and rebuilding needs, make the level of expansion and improvement investments needed to accommodate the expected growth in population and jobs, keep our region competitive, and provide improved choices and experiences for all users of the system.

The Increased Revenue Scenario for highways and transit provides a vision for the additional investments that could be made if a higher level of funding is achieved and that would move the region closer towards accomplishing the goals and objectives identified in this plan.

The Metropolitan Council will continue to work with regional partners to identify additional funding for the region's transportation system needs that would bridge the gap between the Current Revenue Scenario and the additional resources the region might reasonably expect under the Increased Revenue Scenario. If additional resources do become available, that funding would be prioritized and allocated based on the policies in this plan.

Supportive local actions:

- Identify funding needs on the local transportation system and local priorities for funding on the regional transportation system.

D2. The Metropolitan Council will coordinate with other agencies planning and pursuing transportation investments that strengthen connections to other regions in Minnesota and the Upper Midwest, the nation, and world including intercity bus and passenger rail, highway corridors, air service, and freight infrastructure.

Other agencies and private companies are largely responsible for planning and implementing the transportation investments that connect the region to the rest of Minnesota, the Upper Midwest, the nation, and the world. For example, MnDOT and counties are responsible for the major highway corridors that connect the Twin Cities to other regions within the state and to other states, and support cars, trucks, and private intercity bus providers such as Greyhound and Jefferson Lines. Amtrak provides intercity passenger rail, and MnDOT is responsible for planning additional intercity passenger rail services. The Metropolitan Airports Commission works with the airlines provide the region's air service connections. MnDOT works with the private freight railroads that are responsible for freight rail service and infrastructure, and also with barge companies, port authorities and the Army Corps of Engineers, which provide infrastructure and serve freight service along the Mississippi. The Metropolitan Council will work closely with these partners to ensure that their planned improvements are coordinated with regional investments and that regional needs are considered in the prioritization of these investments.

D3. The Metropolitan Council and its partners will invest in regional transit and bicycle and pedestrian facilities that improve connections to jobs and opportunity, promote economic development, and attract and retain businesses and workers in the region on the established transit corridors.

The transit system plays a vital role in getting people to and from jobs and education opportunities and centers of activity. An expanded and improved transit system will continue to strengthen the attractiveness of regional centers of business and activity. Transit will also promote economic development and enhance the region's livability and prosperity, keeping the region competitive nationally and globally and helping to attract and retain businesses and workers. Investments in transit will be prioritized with access to jobs and activity and supporting economic development and future growth as important factors.

The increasing suburbanization of job growth in the region has impacted the transit system's ability to connect people with new job opportunities; new advances in transit technology can be leveraged to increase the effectiveness of the transit system. Microtransit services allow users to order transit service on demand via their smartphones to travel within designated zones, as seen in Southwest Transit's Southwest Prime service. On demand, microtransit services have been piloted throughout the country to serve as first/last mile connects to suburban employment locations that are difficult to serve cost effectively with traditional fixed route transit. Microtransit pilot projects should be developed to determine how effective these services are in addressing regional first/last mile issues. If successful, these technologies can serve as one of the region's tools in improving job accessibility in the region.

The Regional Bicycle Transportation Network was developed to emphasize connections to regional job concentrations and the regional transit system, to prioritize investment where there is high demand (or the potential for high demand) for bicycle travel, and to provide opportunities to enhance local economic development and business retention. The RBTN is discussed in detail in Chapter 7, “Bicycle and Pedestrian Investment Direction.”

Supportive local actions:

- Give priority to projects that integrate pedestrian facilities into regional job concentrations and connect local bikeways with the Regional Bicycle Transportation Network.

D4. The Metropolitan Council, MnDOT, and local governments will invest in a transportation system that provides travel conditions that compete well with peer metropolitan areas.

The Twin Cities region competes with metropolitan areas throughout the nation and the world. The transportation systems in all regions are a critical factor in determining how well they function economically, socially, and environmentally. These systems include airports, water ports, railroads, highways – Principal and minor arterials – local streets, sidewalks, and trails. Travel in the Twin Cities region will continue to grow as the region grows. Travel will also evolve as demographics, technology, and other external factors change. Transportation planning has little influence on these changes, but it must adapt in a way that allows the Twin Cities region to keep pace with other metropolitan regions. The Metropolitan Council will continue to measure the performance of its transportation system in terms of access and mobility, and its impacts compared to select peer regions nationally and internationally. The Metropolitan Council will also work with MnDOT and other transportation partners to seek the latest techniques to improve transportation service in the most cost-effective and context-sensitive ways for all modes, including highways.

As emerging technologies continue to shape the future of transportation, regional transportation partners should explore how new technologies can be piloted, tested, evaluated, and possibly integrated into the transportation system. Shared mobility options like transportation network companies, bike share, and scooter share are recent examples of emerging transportation options that have changed the expectations of worldwide travelers. For the region to sustain a competitive economy, it must support new transportation options as they emerge throughout the world.

D5. The Metropolitan Council and MnDOT will work with transportation partners to identify the impacts of highway congestion on freight and identify cost-effective mitigation.

The Metropolitan Council in 2017 conducted a Regional Truck Freight Corridor Study that identified the most important truck freight corridors in the region and also identified the corridors with the largest truck mobility and safety issues. Future planning work will develop operationally focused solutions for improving travel time reliability for trucks and for implementing low-cost high benefit solutions related to truck mobility and safety.

Traffic management technologies such as ramp metering, variable speed control, and traveler information systems can help ease congestion on the highway system. The Metropolitan Council will work with MnDOT, counties, and cities to explore implementing additional strategies in corridors with high truck volumes to further reduce the impact of highway congestion on freight mobility, such as redirecting trucks in real time to avoid congestion caused by crashes.

Supportive local actions:

- Plan for and provide “first and last mile” highway connections to regional job concentrations and manufacturing and distribution areas.
- Collect truck classification counts on regional truck corridors identified in the Regional Truck Freight Study.

D6. The Metropolitan Council, Metropolitan Airports Commission, MnDOT, and other agencies will work together to maintain a strong regional airport system, including maintaining the Minneapolis-Saint Paul International Airport as a major national and international passenger hub and reliever airports that serve business travel.

Availability of good air transportation connections is critical to maintaining a competitive state and regional economy. Public and private sector efforts in the region should focus on continued development of Minneapolis-Saint Paul International Airport as a major international hub. Maintaining a system of minor reliever airports to provide adequate alternative facilities for general aviation traffic is essential to the effective operations of Minneapolis-Saint Paul International Airport.

Supportive local actions:

- Participate in land use safety studies around airports.

D7. The Metropolitan Airports Commission should periodically update its airport economic impact studies and commercial air-service competition plan to determine facility and service improvements needed at the region’s airports to foster a competitive regional economy.

Decisions by aviation partners on providing facilities and services to improve regional economic capabilities should be based on periodic updating and refinement of airport economic impact studies and surveys, a commercial air-service competition plan, and annual airport marketing programs.

Although the actual provision of air service is a business decision made by privately owned airlines, the Metropolitan Airports Commission should continue its efforts to attract more air service carriers to the region to provide competition and affordable fares for residents and businesses. Since adoption of the last Transportation Policy Plan in 2014, the Metropolitan Airports Commission has pursued several airlines to add both domestic and international service at Minneapolis-Saint Paul International Airport.

E. Healthy and Equitable Communities

Goal:

The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.

Objectives:

- A. Reduce transportation-related air emissions.
- B. Reduce impacts of transportation construction, operations, and use on the natural, cultural, and developed environments.
- C. Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options.
- D. Provide a transportation system that promotes community cohesion and connectivity for people of all ages and abilities, particularly for historically under-represented populations.

Strategies:

E1. Regional transportation partners recognize the role of transportation choices in reducing emissions and will support the state's Next Generation Energy Act and Statewide Multimodal Transportation goals for reducing greenhouse gas and air pollutant emissions. The Metropolitan Council will provide information and technical assistance to local governments in measuring and reducing transportation-related emissions.

State and regional goals are to reduce greenhouse gas emissions by 15% below 2005 levels by 2015, 30% by 2025 and 80% by 2050. The Statewide Multimodal Transportation Plan sets a statewide target of greenhouse gas emissions from the transportation sector to be less than 29.5 million tons carbon dioxide equivalent by 2025. By 2014 the state's actual emission reduction was only 4% from 2005 levels, and currently Minnesota is not on track to meet 2025 goals. Since one quarter of statewide greenhouse gas emissions come from the transportation sector, reductions in transportation emissions will have to be part of the solution.

The Metropolitan Council will support efforts to reduce emissions through reductions in auto trip making and public education about the effects of transportation choices. An example of this education is Metro Transit's "Go Greener" campaign and its Trip Planner tool, which allows customers to see the greenhouse gas impact of their trip.

Many of the most effective strategies for reducing greenhouse gas emissions are accomplished through local land use decisions that reduce the number of auto trips, or by federal and auto industry action to control fuel efficiency of the vehicle fleet. The Metropolitan Council will use its technical expertise to identify and encourage adoption of the most effective measures to reduce air emissions. The Metropolitan Council will also develop a regional greenhouse gas emissions inventory.

Transportation also contributes significantly to elevated levels of regulated air pollutants such as carbon monoxide, nitrogen dioxide, ozone, and fine particulate matter and to other hazardous air toxics, all of which have negative effects on human health and quality of life throughout the region. The Metropolitan Council and MnDOT, in cooperation with MPCA, will continue efforts to improve air quality, reduce emissions from mobile sources, and maintain compliance with federal air quality standards.

The MAC should periodically evaluate the air quality impacts of aviation operations and report to the Metropolitan Council on air quality problems or issues through the MAC annual environmental review of the capital improvement program.

E2. The Metropolitan Council and MnDOT will consider reductions in transportation-related emissions of air pollutants and greenhouse gases when prioritizing transportation investments.

Reducing transportation-related emissions have been a consideration in selecting projects for many Metropolitan Council and MnDOT programs for years. The Regional Solicitation uses emissions reduction as one of its criteria for prioritizing projects. Emissions reduction has also become a prioritizing criterion for other transportation programs, including travel demand management, transitway expansion, highway expansion and highway system management. Opportunities to use federal funds for efficient emissions-reduction programs such as diesel retrofits should continue to be implemented. Consideration should be given to all types of transportation emissions and generators, including bus and truck fleets, construction vehicles, and electricity generation for light rail transit operations and electric cars. The region should not fund projects that will have a substantial negative effect on local or regional air quality.

E3. Regional transportation partners will plan and implement a transportation system that considers the needs of all potential users, including children, senior citizens, and persons with disabilities, and that promotes active lifestyles and cohesive communities. A special emphasis should be placed on promoting the environmental and health benefits of alternatives to single-occupant vehicle travel.

The transportation system needs to meet the needs of all potential users, from the youngest to the oldest. This includes people with a broad range of abilities and backgrounds.

In recent years, elements of community design have gained attention for the way that they can encourage or discourage physical activity. Public health policy discussions have identified opportunities for bicycling and walking as one element in the fight against obesity and other health problems related to the lack of physical activity. As a result, several counties in the Twin Cities metropolitan area have incorporated active living principles into their community and health planning programs. These efforts communicate to the traveling public the individual and collective benefits to personal health and the environment of walking and biking in performing daily errands.

As regional transportation partners preserve and modernize the transportation system, they should design facilities, including signs, to accommodate older travelers with changing vision and slower reaction times. All transit vehicles in the region have been accessible for many years and transit providers should adapt as technologies in this area continue to improve. Metro Mobility provides service that complies with ADA requirements to complement regular-route transit. Public transit providers can also work with schools to identify opportunities to coordinate services, such as the Student Pass fare card. On roadways, partners should also continue to implement their ADA transition plans, especially at highway interchanges, intersections, and near transit access locations.

E4. Regional transportation partners will protect, enhance and mitigate impacts on natural resources when planning, constructing, and operating transportation systems. This will include management of air and water quality and identification of priority natural resources through the Natural Resources Inventory developed by the Metropolitan Council and Minnesota Department of Natural Resources.

Thrive MSP 2040 emphasizes the protection and enhancement of environmental quality through its outcomes of stewardship, livability, and sustainability. The Metropolitan Council supports work toward this end through the Natural Resource Inventory, which provides comprehensive information about environmental resources throughout the seven-county metropolitan area.

Planning and development should follow all requirements under the National Environmental Policy Act and Minnesota Environmental Policy Act for the disclosure of environmental impacts. Planning for federally funded projects also should involve consultation with federal resource protection agencies. During all phases of transportation project development, construction, and operation, regional partners and local governments should seek opportunities to not only avoid harming but also enhance the natural environment, including air quality, water quality, natural area preservation, and wildlife preservation.

Airport long-term comprehensive plans shall include a management strategy to protect groundwater quality that includes proposed policies, criteria and procedures for preventing, detecting and responding to a spill or release of contaminants on the site. The plans should identify the location, design and age of individual/group/central sewer systems on site and all well location sites, and evaluate system deficiencies and pollution problems. Airport long-term comprehensive plans shall also include detailed proposals for providing sanitary sewer services. Reliever airports should be connected to the sewer system when service is available near the airport. When connection is not practical, the airport owner and local governmental agencies must adopt and implement ordinances, including administrative and enforcement procedures that will adequately meet the need for trouble-free, on-site sewage disposal in accordance with the Metropolitan Council's guidelines in its Water Resources Policy Plan.

Airport long-term comprehensive plans should also include a plan for surface-water management that contains provisions to protect surface and groundwater. In addition to including information that must be consistent with plans of watershed management

organizations and the state wetland regulations, the water management plan should include provisions to mitigate impacts from construction, restore or retain natural functions of remaining wetlands and water bodies, and include the pretreatment of runoff prior to being discharged to surface waters.

E5. Transportation partners will protect, enhance and mitigate impacts on the cultural and built environments when planning, constructing, and operating transportation systems.

Thrive MSP 2040 emphasizes the protection and enhancement of the cultural and built environment and quality of life (including air quality and its impacts on a community's residents) through its outcomes of stewardship, livability, and sustainability. Transportation partners should plan and implement proposed highway and street design and transit routes and facilities with sensitivity to a community's vision and quality of life, including using context-sensitive design methods.

Context-sensitive design acknowledges local attributes by balancing economic, social, aesthetic and environmental objectives in addition to mobility objectives. Highway projects can often provide opportunities to incorporate many community objectives for livability and enhanced environmental quality. In addition, local A-minors should be planned and implemented in a manner compatible with a road's functional classification and surrounding land uses. Functional classification is discussed in Appendix D.

In addition, during construction and implementation of projects, transportation partners need to be aware of and plan for the access needs of the local businesses and residents, including well communicated and safe detour routes for all modes.

Supportive local actions:

- Allow the market to determine necessary parking ratios (remove requirements) and support shared parking.
- Support employer travel-demand management plans and programs.
- Support the development of local ride sharing and bike sharing programs.
- Accommodate higher-density development near transit stations.
- Develop plans to improve conditions for walking and bicycling.
- Adopt development requirements and Complete Streets policies that improve circulation and access for bicyclists and pedestrians.
- Provide safe and reasonably direct detour routes for all public construction projects that impact any transportation system mode.
- Adopt development standards that increase vegetative cover and increase the reflective quality of surfaces.

E6. Regional transportation partners will use a variety of communication methods and eliminate barriers to foster public engagement in transportation planning that will include special efforts to engage members of historically underrepresented communities, including communities of color, low-income communities, and those with disabilities to ensure that their concerns and issues are considered in regional and local transportation decision making.

Transportation projects can affect people's daily lives in very tangible and immediate ways. Historically, some transportation projects, have disproportionately affected underrepresented communities, often with little or no input, participation or consent from these communities.

Regional transportation partners will seek public participation using a variety of communication methods to formulate transportation policy, develop transportation plans and make transportation investment decisions. Useful communication methods include websites and social media, print media, radio, direct mailing, and public meetings and hearings. These methods should include opportunities for broad participation, comment, review, and debate of proposed plans and actions.

Regional transportation partners should also recruit representatives of groups traditionally underrepresented in regional policymaking and provide enhanced participation opportunities to encourage members of those groups to share their unique perspectives, comments and suggestions. Enhanced participation could include such steps as foreign language and sign language interpreters, focus groups, and meetings in places familiar to the groups such as their community centers and places of worship.

E7. Regional transportation partners will avoid, minimize and mitigate disproportionately high and adverse impacts of transportation projects to the region's historically underrepresented communities, including communities of color, low-income communities, and those with disabilities.

Several federal laws and regulations, including Title VI of the Civil Rights Act and the Executive Order on Environmental Justice, require federally funded transportation investments to avoid disproportionately high and adverse impacts of transportation projects to the region's minority and low-income populations. The region will not only follow those requirements to avoid adverse impacts, but also ensure future transportation investments provide positive benefits for the region's historically underrepresented communities, including communities of color and low-income communities, and those with disabilities.

Supportive local actions:

- Use appropriate data analysis in relation to proposed local projects to identify impacts on underrepresented populations.
- Ensure public engagement is effective in reaching historically underrepresented populations and involve them in determining benefits and impacts.

F. Leveraging Transportation Investments to Guide Land Use

Goal:

The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

Objectives:

- A. Focus regional growth in areas that support the full range of multimodal travel.
- B. Maintain adequate highway-, riverfront-, and rail-accessible land to meet existing and future demand for freight movement.
- C. Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.
- D. Encourage communities, businesses and aviation interests to collaborate on limiting incompatible land uses that would limit the use of the region's airports.

Strategies:

All strategies in this section should be viewed as supportive local actions and local governments will be the primary implementers of these actions. However, regional transportation partners, including the Metropolitan Council, will support the efforts of local governments through a number of the strategies.

F1. Local governments within the seven-county metropolitan area must prepare comprehensive plans that conform to the Transportation Policy Plan and should recognize the land use and transportation opportunities and challenges that correspond to Thrive MSP 2040 planning areas.

- Local governments within the Metropolitan Urban Service Area should plan for their projected growth and stage their transportation infrastructure to accommodate the needs of that growth.
- Local governments in the Rural Service Area should plan for transportation systems and land use patterns that are compatible with the protection of agricultural uses and the need for future sewer development.

The specific considerations related to the Transportation Policy Plan that should be included in local comprehensive plans are summarized by community designation in Chapter 3, "Land Use and Local Planning."

The partnership between regional and local planning and investment is established in the Metropolitan Land Planning Act to guide growth and change in the seven-county region. Long-range forecasts for population, households and employment are used by the Metropolitan Council, MnDOT, and local governments to plan for orderly and economical growth and the land use and system changes – transportation, water resources, housing, and parks – needed to support that growth.

Local governments have the responsibility to guide and regulate land use and provide local infrastructure. What form this takes will depend on the type of development that can be supported by regional infrastructure and other considerations described in Thrive MSP 2040's Community Designations, Land Use Policy, and Policy Plans, including the special features. Local governments should refer to these coordinated documents along with the Transportation Policy Plan when preparing their comprehensive plans.

The opportunities and challenges associated with growth vary across the region. The community designations in Thrive MSP 2040 establish some common strategy considerations for communities of a similar type.

F2. Local governments should plan for increased density and a diversification of uses in job concentrations, nodes along corridors, and local centers to maximize the effectiveness of the transportation system.

Job concentrations are critically important to the regional economy. Although most of these are located along regional highways, roadways alone cannot continue to provide the access needed as highway congestion continues to increase. Employment densities are an important factor influencing how people travel and how the transportation system supports their travel.

The region's transportation system and economy will be more effective if jobs are concentrated and density is focused in nodes along corridors. Planning for density in nodes also needs to provide for a high-quality, walkable local street network, a mix of land uses, and amenities to support denser development. These coordinated efforts will support more effective transportation by reducing short auto trips or replacing them with walking and biking, increasing transit potential, and allowing for more flexible parking.

Local governments can support the regional economy and the transportation system by guiding more density and a mix of uses to job concentrations, nodes along transportation corridors, and local centers. While market conditions play a primary role in economic development, local governments set the necessary groundwork through land use regulations, the design of local transportation networks, and community development incentives.

F3. Local governments will identify opportunities for and adopt guiding land use policies that support future growth around transit stations and near high-frequency transit service. The Metropolitan Council will work with local governments in this effort by providing technical assistance and coordinating the implementation of transit-oriented development. The Metropolitan Council will also prioritize investments in transit expansion in areas where infrastructure and development patterns support a successful transit system and are either in place or committed to in the planning or development process.

Local land use and development patterns greatly impact the need for and use of transit. This plan provides for significant investments in the expansion of transit stations along transitways and potential expansion along existing and future high-frequency transit corridors. The plan acknowledges the growing demand for transit services and transit-oriented development in the region. However, for the region to be good stewards of transit investments, local governments need to be partners in addressing the challenges of planning for and supporting denser development along transit corridors.

Transit service requires medium- to high-density housing to be successful and needs to be combined with a mix of uses along a transit line or route. Transit-oriented development should be focused on nodes along corridors – such as stations – to support the success of transit service and create livable, sustainable communities. The Metropolitan Council will support communities planning for higher densities by providing technical guidance on how to plan for higher density, transit-oriented development.

More details about what makes a community supportive of transit are available in Chapter 3, Land Use and Local Planning.”

When making transit investments, the Metropolitan Council will prioritize investments in communities that have infrastructure and development patterns that are supportive of a successful transit system or are committed to them in planning or implementation.

F4. Local governments should lead planning efforts for land use in transit-oriented station areas, small-areas, or corridors, with the support of the Metropolitan Council and other stakeholders.

Local governments should take the lead in developing plans and implementation strategies that support more effective transit investments in their communities. They are in the best position to understand the needs and desires of neighborhoods and the local business community and to set long-range plans that guide land use changes necessary to support transit investments. Local plans are the means to demonstrate local commitment to land use that is needed to support regional investments in transit infrastructure and service.

F5. Local governments should adopt policies, develop partnerships, identify resources, and apply regulatory tools to support and specifically address the opportunities and challenges of creating walkable, bikeable, and transit-friendly places.

As the Metropolitan Council works with communities to promote centers of development and redevelopment along transit corridors, walking and bicycling will become increasingly important and desirable ways of traveling within and between compact, mixed-use neighborhoods. Systems of safe, continuous, barrier-free bicycle and pedestrian facilities for people of all ages and levels of mobility are essential to the success of transit-oriented developments.

Most of the region has evolved to meet the needs of the private automobile. As preferences are shifting toward more transportation options, communities will have to adapt their regulatory tools

to accommodate these preferences. There will be opportunities to change the built environment and improve local transportation networks for pedestrians, bicyclists and transit users. Cities are encouraged to identify and market redevelopment areas that may leverage investment in bicycle and pedestrian improvements. These opportunities may exist in transit station areas, along transit routes, in suburban mixed-use town centers, or in rural centers, but should also include other areas with low rates of auto ownership.

Not all local communities will need to address these concerns in the same way. The important consideration for local governments is ensuring that there are processes in place to address opportunities now and into the future.

F6. Local governments should include bicycle and pedestrian elements in local comprehensive plans. Bicycle elements should reference and plan for implementation of the Regional Bicycle Transportation Network within the community, and its connections to the local and adjacent community networks.

Pedestrian and bicycle elements of local comprehensive plans should:

- Promote safety of pedestrians and bicyclists for people of all ages and mobility levels
- Provide connections to adjacent cities and counties and their pedestrian and bicycle systems
- Address gaps and remove barriers in the existing local, county or regional systems
- Provide local connections between the Regional Bicycle Transportation Network and major regional destinations, including regional job concentrations, as identified in the Bicycle-Pedestrian Investment Direction section
- Provide pedestrian and bicycle facilities within regional job concentrations, including commercial, retail, entertainment, and recreation centers

The extent to which local government plans should address bicycle and pedestrian systems depends on the community's needs for these modes. For instance, rural communities with a low density of origins and destinations within biking or walking distance may be able to meet these modal needs adequately on existing streets. Local streets and collectors are important elements of transportation because they generally have low volumes and lower speeds where bicycles and motor vehicles can co-exist safely. However, each community should also consider other options for safe bicycle and pedestrian travel to the extent appropriate for their community.

Local governments should ensure they meet Title II requirements of the Americans with Disabilities Act of 1990 for doing a self-evaluation or transition plan, as appropriate, and that public rights of way for pedestrians are included in such an evaluation.

F7. Local governments should adopt comprehensive plans that include policies emphasizing identifying and improving roads best suited for carrying trucks while minimizing impacts such as noise and traffic to sensitive land uses.

Planning activities for land use and freight need to be closely coordinated, and they require communities to work with the trucking industry and regional, state, and federal transportation

agencies. While freight access is vital to the region's economy and the economical viability of industrial and commercial land, truck traffic is often regarded as a nuisance to other land uses, such as residential areas and parks. Much of the region's freight traffic travels in trucks on regional highways and arterials, but local roads provide an important link to freight generators and destinations.

As a part of the comprehensive planning process, local governments should identify and analyze truck routes, review their comprehensive plans to ensure land set aside for industrial uses is adequate and appropriate, and address zoning and code regulations that consider the needs of freight users and surrounding land uses. The Metropolitan Council in its 2017 Regional Truck Freight Corridor Study identified the most important truck corridors on the Principal and A-minor Arterial system within the region. Local governments should utilize this information to assure that local planning considers these important truck routes. Roadway designs should recognize contemporary truck length so there is adequate turning radius and sufficient delivery areas, especially when rebuilding roads in the older parts of the region where original road designs assumed shorter trucks, or when introducing innovative traffic intersections such as roundabouts.

F8. Local governments should balance the needs of industrial, residential and recreational users when planning and implementing land uses along the navigable portions of the Mississippi River system to ensure sufficient access for existing and future barge transportation needs.

The Mississippi River system (which includes parts of the Minnesota and St. Croix rivers) is important for the economical movement of bulk commodities. The region's rivers are also important natural features and recreational areas. These differing uses can lead to conflicts and competing community and/or regional priorities that require balancing and coordinating uses.

The amount of land adjacent to rivers that is suitable for barge terminal uses is limited by a number of variables, including topography and good highway access for truck-to-barge transfers. Local governments bordering the river should address the potential for freight use along the Mississippi River system in their comprehensive plans and balance that with other potential demands for use.

To aid local governments in planning for an appropriate balance of uses along the Mississippi River system, the Metropolitan Council will analyze existing land uses and zoning to determine:

- The land and transportation needs of river-dependent industries.
- The extent to which land for industrial/manufacturing uses on the river is threatened by non-industrial development.

F9. Local governments should consider the role of railroads in promoting economic activity and identify an adequate supply of land in their comprehensive plans to meet existing and future demand for industrial uses requiring rail access.

Railroads are also important to the region's economy, providing valuable connections from the Twin Cities to national and global markets. While passenger service is one role of the rail system, movement of commodities is their main function. Commodity shipments by rail have been growing. While intermodal transfer terminals service the efficient transfer of containers between truck and rail, the demand for direct access to rail from adjacent warehouses and industries is also likely to increase.

Railroads often occupy central and important urban locations where redevelopment of adjacent industrial land use is driven by the real estate market for non-industrial or commercial uses. In comprehensive plans, local governments need to balance these potential changes with the economic and transportation benefits afforded by rail service, especially as long-distance freight movement on trucks is facing the higher fuel costs and highway congestion.

To aid local governments in planning for an adequate supply of land to meet existing and future demand for industrial rail access, the Metropolitan Council will analyze existing land uses and zoning to determine:

- The region's land and transportation needs for rail corridor-dependent industries.
- The extent to which land for industrial/manufacturing uses with access to rail is threatened by non-industrial development.

F10. Local governments located near all of the region's airports should address land use compatibility and air safety requirements in their comprehensive plans.

The nature of local land use development varies around airports. Only Lake Elmo and Airlake airports remain adjacent to rural land uses, while Anoka County, Eden Prairie, and Forest Lake airports are located in suburban areas. Minneapolis-Saint Paul International Airport, Saint Paul Downtown, Crystal and South Saint Paul are in the Urban and Urban Center areas, as designated in Thrive MSP 2040.

Joint airport and community zoning boards should be established at each of the system airports to develop and adopt an airport safety zoning ordinance to maintain effective land use and clear zones at the ends of runways. Both the Federal Aviation Administration and the state have regulations regarding appropriate land uses for varying distances at the ends of runways, both on and off the airport property.

The Metropolitan Council also reviews local comprehensive plan updates and plan amendments for airport and community compatibility regarding height and safety zoning, land transportation access to the airport, sewer and water service, and safety and security services.

F11. Communities affected by aircraft noise should incorporate the Land Use Compatibility Guidelines for Aircraft Noise into their local comprehensive plans and ordinances.

In addition to safety, aircraft noise is an issue near airports, often extending farther into the community than safety zoning. The Metropolitan Council has adopted land use compatibility guidelines for aircraft noise as a preventative measure to help communities control noise sensitive land uses around airports. The definition and application of the guidelines is found in Appendix L along with the most recent noise contours for each airport.

In addition, the Metropolitan Council reviews the long-term comprehensive plans for each airport, including whether the airport plan is compatible with land use and environmental evaluation requirements concerning metro systems, and consistency with regional policies.

F12. Local governments should minimize potential general airspace hazards by adopting federal and state regulations regarding airspace and notifying potential developers of the need to submit FAA form 7460-1 regarding structure height near an airport.

Safety is the number one priority in the planning and providing aviation facilities and services. Local ordinances for all communities should control all proposed structures 250 feet or more above ground level to minimize potential general airspace hazards. Structures over 500 feet tall should be clustered, and no new structures over 1,000 feet tall should be built in the region unless they are replacements or provide for a function that cannot otherwise be accommodated. Local governments should notify the Federal Aviation Administration before approving permits for proposed tall structures.