Thrive MSP 2040

TRANSPORTATION POLICY PLAN

2040

Connecting Communities, Fostering Regional Prosperity.

Thrive MSP 2040

ONE VISION, ONE METROPOLITAN REGION

2040

TRANSPORTATION POLICY PLAN

The *2040 Transportation Policy Plan* presents the region's policies and plans to guide the development of the region's transportation system. It carries forward the vision of *Thrive MSP 2040* for growth and development of the Twin Cities region toward economic success and vibrancy in the decades to come.

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TRANSPORTATION POLICY PLAN

Connecting Communities, Fostering Regional Prosperity

SUMMARY

In the Twin Cities metro area, people are on the move – to work, school, shop, relax and a thousand other destinations. The highways, transit lines, walkways, and biking paths that connect our transportation system provide us access to those places and the important commercial routes that service our businesses, commuters, and the wider economy.

These networks are indispensible to our lives, our quality of life, and our future. Transportation is the engine of our prosperity, and the next 30 years call us to maintain and enhance our existing facilities, better connect people and communities, and provide more transportation choices that make our region stronger and a better place to live.

This *2040 Transportation Policy Plan* lays out a course of action to achieve that goal. It carries forward the vision of the Council's *Thrive MSP 2040* for growth and development of the region toward greater economic success and vibrancy in the decades to come.

Advancing a bold regional vision

Residents say they envision a region with more connected communities, more transportation choices, and more investments across the transportation network, as well as a transportation system that is maintained and managed effectively.

Thrive MSP 2040 calls for both greater correlation between regional transportation investments and community development and land use, and greater investment in our transportation system to provide the choices the region's residents need for the next 30 years. Specifically, *Thrive MSP 2040* calls for the Council to work with municipalities to align development patterns and transportation investments by focusing growth and investment along corridors with strong potential for job and population growth.

To advance that vision, our region needs to take these important steps:

- Invest in a way that the region can sustain over the long term to preserve, maintain and operate the existing parts of our transportation system.
- Ensure a safe and secure transportation system for all the region's users.
- Provide effective, reliable, and affordable connections among the various types of transportation within our region and beyond.
- Strengthen the performance of the region's transportation system to support the vitality and prosperity of the Twin Cities region and the State of Minnesota into the future.
- Protect the natural, cultural and built environment when planning, building and operating transportation facilities to include advancing equity for people who have been historically underserved and underrepresented in our communities, while also contributing to livable and sustainable communities.
- Use transit investments to shape development, and to respond to influences of land use on travel.
- Advance prosperity by balancing transportation planning, investment decisions, and operations across the region.

A growing, changing region

With nearly 3 million people, diverse industries and businesses, and outstanding natural and cultural amenities, the Twin Cities metropolitan area is a thriving place to live, learn, work, and do business. The area consistently ranks as one of the top-rated places in the nation, and includes a wide range of communities – small towns and rural areas, growing communities, suburban neighborhoods, and active urban districts.

And our region is growing. By 2040, the metropolitan area will add 824,000 new residents and 550,000 new jobs. Our region's population is changing as well. In 2040, the percentage of residents age 65 or older will nearly double what it is today. People of color will make up 40% of the region's population, compared with about a quarter today. As the region evolves, it will need a mix of transportation choices – driving, transit, bicycling, and walking – providing access to jobs, communities, and commercial activity to meet the demands of a growing and changing population and economy.

An analysis of local forecasts and the growth projected to occur by 2040 is included in *Thrive MSP 2040.*

By 2040, the metropolitan area will add 824,000 new residents and 550,000 new jobs.

Today, transportation continues to play a crucial role in the region's quality of life and its economic success. Reliable, efficient, safe, and affordable transportation connects the region's residents with jobs, schools, community amenities, families, and businesses. And it supports the movement of goods and services both within the region and beyond.

Our transportation system provides a strong foundation for the future. Our extensive and well-managed roads and highways move most of the region's people and goods. But the region's highways need major investments to make necessary improvements and to keep them in good repair, and to improve mobility and support the performance of the region's transportation system. Additional investments in transit, as well as bicycling and walking connections, will be necessary to enable people greater access to opportunities and the region to grow in a sustainable way.

Given the growth anticipated by 2040, this region will need more resources for transportation. The Council will continue to work with regional partners to identify additional sources of revenue to support the level of funding needed to realize the vision for a vibrant, prosperous region.

Local planning is important

For the first time, both *Thrive MSP 2040* and the *2040 Transportation Policy Plan* elevate the important role of land use and development planning in support of the regional transit system. Both plans advance the outcome of guiding investments to shape the region we want in 2040 and to guide local community development.

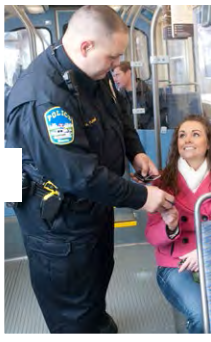
Transit investment shapes and is shaped by local development decisions. The effectiveness of both transit and local development is as dependent on local actions as it is on the transit investment. Leveraging transportation investments to guide land use requires a long-term collaborative partnership between the Council and local governments. This partnership will assure transportation investments guide development patterns that respond to community plans for transportation, to set the stage for market response that is leveraged to do more in response to that transportation investment.

The transportation plan provides guidance to local communities on development density and local infrastructure necessary to assure the success of certain types of transportation investment.

The Transportation Policy Plan also highlights the regional bicycle system by identifying key, existing corridors and opportunities for connection to regional destinations and job concentrations. Connecting the existing local and regional bicycle network, followed by additional investment in those networks, supports the regional livability and prosperity outcomes in *Thrive MSP 2040.*

Connecting local biking and walking networks to the regional system will foster livable, prosperous communities.



Investing in the Future

As we look ahead, we will need to invest sufficiently in our transportation system to ensure our region's livability and prosperity. The Transportation Policy Plan describes two long-term investment scenarios that clarify the funding choices we face for our future transportation system. One describes what we can do with the revenue we currently anticipate through the year 2040, and the other shows what the region can achieve if additional revenue becomes available. It's clear that we cannot build the transportation system our region needs by relying solely on currently identified resources, 97% of which are dedicated to either roadways or transit, and may not be used for other purposes. The Council will continue to work with partners to identify additional funding for the region's transportation system needs.

Under the Current Revenue Scenario, between 2015 and 2040 the region is estimated to receive $84 billion in transportation revenue. Of that total, $42 billion would be designated for local transportation, $11 billion for state highways, and $31 billion for transit.

For state highways, a majority of funding would be dedicated to maintenance, management, and repair of the existing metropolitan highway system. Next, priority will be given to investments that improve mobility on the existing highway system. These would include use of technology, new or extended MnPASS (high-occupancy toll) lanes, and specific enhancements to capacity. Also included would be lower-cost/high-return investments that increase access to areas of significant employment, commerce, and education and cultural activity.

For transit, the $31 billion anticipated through 2040 will be dedicated to supporting the existing transit system – including regular-route buses and trains – and building out a system of transitways. Within that funding, there is some limited funding for expansion and modernization of the bus system and support facilities. It also anticipates that the rapidly growing demand for Metro Mobility service will continue. However, this scenario would not provide any other significant expansion of regular bus service.




Through 2024, four additional METRO lines will be built: the METRO Orange Line, the extensions of both the METRO Blue and Green lines, and the METRO Gold Line dedicated bus rapid transit line in the Gateway Corridor. The expansion also includes three new arterial bus rapid transit lines, with the construction of the first line beginning in 2015.

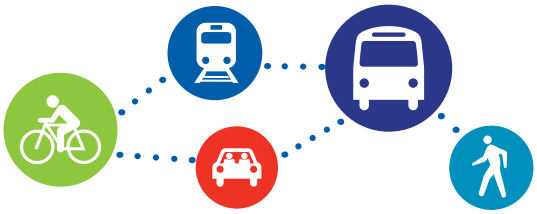
A number of other corridors are currently being studied, but have not yet identified a preferred mode and route. Additional investment of at least $2.4 billion is anticipated to support improvements in these corridors likely in the later years of the plan, which include Red Rock, Riverview, and Robert Street.

The Increased Revenue Scenario accounts for any additional revenue the region might receive as a result of changes in state or federal policy. Under an Increased Revenue Scenario, the region has an unmet funding need totaling in excess of an additional $8-10 billion for state highways and an additional $7-9 billion needed for transit investment.

For highways, any additional revenue would be allocated as follows:

- Up to an additional $1 billion for highway operations and maintenance
- Between $2 billion and $2.5 billion in additional funding for rebuilding the highway system
- An additional $600 million for safety and highway-related bicycle and accessible pedestrian improvements
- Between $4 billion and $5 billion for regional mobility improvements

The broader vision for transit investment beyond the revenue anticipated in the *2040 Transportation Policy Plan* includes an additional $2-3 billion for bus service and facility expansion. This increased revenue would also include an additional $5-6 billion in transitway expansion, which would complete the region's transitway vision and accelerate project development and construction. This includes seven additional transitways, two extensions of transitways, and a system of 11 arterial bus rapid transit projects throughout the region.



A livable, vibrant region for all

Thrive MSP 2040 creates a bold regional vision that elevates equity as a key outcome for the long-term prosperity of the Twin Cities region. The *2040 Transportation Policy Plan* reflects the continued commitment to defining and achieving more equitable outcomes for transportation investment.

Strategies identified in the transportation plan include using equity among criteria for prioritizing transportation funding across the system. Strategies also highlight the importance of healthy and livable communities for investment decision-making.

In addition, the plan moves the region forward in terms of its understanding of the impact the transportation system has on global climate change. The plan calls for additional evaluation of this impact, and convening partners to discuss how the region can prepare to mitigate the effects of climate change, as well as available methods to slow its progress.

Over the next several years, the Council, as the designated planning agency for the Twin Cities region, will review the plan to assess the performance of the system. The plan is updated at least once every four years.

The long-range vision established by *Thrive MSP 2040* and carried forward by the Transportation Policy Plan is the beginning of positioning this region for the next 30 years.

But together, they establish an important foundation for anticipating needs and clarifying outcomes to meet expectations for greater prosperity, choice, and access for all residents in the region.

The long-range vision established by Thrive MSP 2040 and carried forward by the Transportation Policy Plan is the beginning of positioning this region for the next 30 years.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How to Use this Plan

The Transportation Policy Plan is one of the major systems plans under the region's development framework document *Thrive MSP 2040*. While *Thrive MSP 2040* sets a vision for what the region should be in the next 30 years, the systems plans lay out how the detail for achieving this vision. Each of the systems plans—transportation, water resources, and regional parks—establishes policies and develops strategies to move the region towards this vision by 2040.

This plan consists of a summary, overview, 12 chapters and several appendices. Each chapter serves different purposes, as outlined below:

Overview: Transportation for a Thriving Region gives a broad overview of the transportation system in the Twin Cities region, including the challenges and opportunities facing the system today. This section references *Thrive MSP 2040's* outcomes and principles and sets regional transportation goals and objectives based on them. This introductory section summarizes changes in travel behavior seen in the last decade, and anticipates changes in the future based on population and employment forecasts and travel behavior as a result of emerging technologies. Also summarized in this section are new elements that provide the framework for performance-based planning, including goals, objectives and examples of strategies; a summary of planned transportation investments; and state and federal legal requirements – all of which are provided in greater detail in subsequent chapters.

Read the Introduction for:

- A broad overview of the regional transportation system
- The challenges and opportunities facing the transportation system
- A summary of transportation goals, objectives and strategies
- A summary of regional planned investments
- An overview of legal requirements
- A summary of civic engagement activities for the transportation plan

The chapters that follow the introduction provide significantly more detail about each element of the region's transportation system, and its needs and investments. Those chapters are outlined below:

Chapter 1: The Existing Regional Transportation System goes into greater detail than the Overview about the existing transportation system by mode.

Read Chapter 1 to:

- Get a more in-depth explanation of the existing transportation system by mode including:
  - The highway, transit, aviation and bicycle and pedestrian systems
  - The freight system
  - Travel demand management

Chapter 2: Transportation Strategies outlines the strategies or actions that are required to achieve the goals and objectives identified in the Overview. The goals, objectives, and strategies are mandated as part of the federal transportation law, Moving Ahead for Progress in the 21st Century Act (MAP-21), and its performance-based process for transportation planning, implementation, and assessment. Some goals go beyond MAP-21 to align with the region's development guide, *Thrive MSP 2040*. Many of the strategies are not new and are a continuation of the *2030 Transportation Policy Plan*.

Read Chapter 2 to:

- Understand how regional transportation goals will be met by the Council and its transportation partners through required and suggested actions
- Obtain guidance on local comprehensive plan conformance
- Get a quick overview of the goals, objectives, strategies and local supportive actions in the summary matrix

Chapter 3: Land Use and Local Planning discusses how land use and transportation influence each other, and how land use decisions made today are influencing where, how much, and what type of transportation investments can be made.

Read Chapter 3 to:

- Understand how land use decisions are influencing transportation investments
- Obtain guidance on local comprehensive and transportation planning

Chapters 4-9: Regional Transportation Investments discuss transportation finance and investment plans by mode, including two funding scenarios: Current Revenue Scenario and Increased Revenue Scenario. Highways, transit, bicycle and pedestrian, freight, and aviation funding are outlined and described.

Read Chapters 4-9 to:

- Understand how transportation funding works, including sources and allocation
- Understand the two funding scenarios and how they affect each mode

Chapter 10: Equity and Environmental Justice includes information about how the Transportation Policy Plan and regional transportation investments affect equity, as defined by *Thrive MSP 2040*, as well as the analysis of impacts the transportation investments and strategies in this plan has on federal Environmental Justice populations.

Read Chapter 10 to:

- Learn about the *Thrive MSP 2040* equity outcome
- Understand the impacts the transportation investments and strategies in this plan have on people of color in this region.

Chapter 11: Work Program – Proposed Future Studies discusses future plans and studies the Council intends to complete prior to the next large Transportation Policy Plan update.

Read Chapter 11 to:

- See and understand a list of future plans and studies by mode

Chapter 12: Federal Requirements outlines a number of technical and policy requirements mandated by the federal government to qualify for federal funding including Performance Evaluation, Congestion Management Process, and other requirements.

Read Chapter 12 to:

- See and understand a list of federally required analyses and how this plan is addressing them

The Appendices include a glossary of terms, additional state and federal requirements, reference and guidance materials.

Thrive MSP 2040

TRANSPORTATION POLICY PLAN

An Overview of the 2040 Transportation Plan

2040

Transportation for a Thriving Region

An Overview of the *2040 Transportation Policy Plan*

A. Planning for the Twin Cities Region

Thrive MSP 2040

Transportation, housing, land development, wastewater treatment, and other essential services are the foundations of regional economic growth and prosperity. To ensure our future well-being and quality of life, we need to plan thoughtfully to make the best use of our resources and opportunities as we improve and expand our key services and facilities.

Thrive MSP 2040, as the Metropolitan Council's long-term development guide for the seven-county Twin Cities area, provides the vision for our region's future, reflecting concerns and aspirations of residents, anticipating future needs, and meeting the region's responsibility to future generations. It serves as the keystone for coordinated planning among state, regional and local government, and promotes the partnerships and efficiencies that foster the region's prosperity, equity, and livability.

The *2040 Transportation Policy Plan* responds to *Thrive's* policy direction as it identifies transportation investments that will help the region move toward better stewardship of resources, prosperity and equity for our region's residents and more sustainable communities into the future. As it carries out the Transportation Policy Plan, the Council will collaborate with local governments and communities, be accountable for specific outcomes, and coordinate its transit, wastewater, and housing operations.

Together, *Thrive MSP 2040*, the *2040 Transportation Policy Plan*, and the Council's other regional plans will provide guidance to local communities for their comprehensive planning processes and plan updates.

Planning

5 Outcomes for the Twin Cities Region

Thrive MSP 2040 identifies five key outcomes that make up the vision for the Twin Cities region for the next 30 years:

Stewardship advances the Council's longstanding mission of orderly and economical development by responsibly managing the region's natural and financial resources and making strategic investments in our region's future.

Prosperity is fostered by investments in infrastructure and amenities that create regional economic competitiveness, thereby attracting and retaining successful businesses, a talented workforce, and consequently, wealth.

Equity connects all residents to opportunity and creates viable housing, transportation, and recreation options for people of all races, ethnicities, incomes and abilities so that all communities share the opportunities and challenges of growth and change.

Livability focuses on the quality of our residents' lives and experiences in our region, and how places and infrastructure create and enhance the quality of life that makes our region a great place to live.

Sustainability protects our regional vitality for generations to come by preserving our capacity to maintain and support our region's well-being and productivity over the long term.

3 Principles to Guide the Metropolitan Council's Work

Thrive MSP 2040 identifies the following principles to guide the Council's activities toward achieving the plan's outcomes for the region:

Integration is the intentional combining of related activities to achieve more effective results, leveraging multiple policy tools to address complex regional challenges and opportunities.

Collaboration recognizes that shared efforts advance our region most effectively toward shared outcomes.

Accountability includes a commitment to monitor and evaluate the effectiveness of our policies and practices toward achieving shared outcomes and a willingness to adjust course to improve performance.

As one of the four systems plans based on *Thrive MSP 2040*, this Transportation Policy Plan presents the transportation system's response and approach to meeting these principles and outcomes, including:

- Aligning goals and objectives with *Thrive MSP 2040* principles and outcomes
- Establishing measurable strategies that help to achieve goals and objectives
- Establishing procedures for public involvement and engagement as detailed by the Council's agency-wide outreach plan

About the Transportation Policy Plan

This Transportation Policy Plan describes issues and trends facing the region's transportation system, identifies challenges and opportunities facing the region between now and 2040, and establishes specific goals, objectives and strategies for addressing anticipated future conditions.

The Transportation Policy Plan:

- Evaluates the current transportation system in light of forecasted population, employment, and travel data
- Identifies transportation issues and challenges facing the region, including safety, aging infrastructure, and congestion
- Provides criteria for coordinating land use and transportation to maximize the value of both
- Provides guidance to communities to help structure their land use to maximize the benefits of transportation and to plan for future transportation investments
- Sets regional transportation goals and objectives, and establishes strategies to achieve them
- Establishes performance measures and targets to evaluate and monitor whether *Thrive MSP 2040* and transportation system outcomes and goals are being achieved
- Set priorities for transportation project investments based on needs and challenges

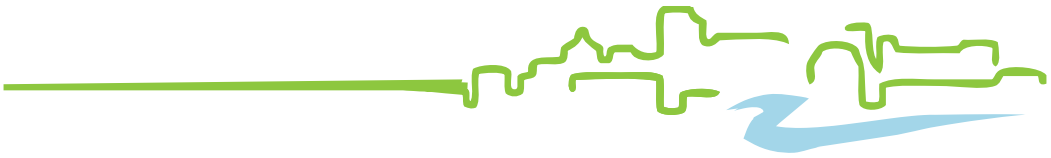
The Transportation Policy Plan includes both the transportation system and aviation system plans for the Twin Cities region as required in state law.

Federal Requirements

In addition to responding to *Thrive MSP 2040*, this transportation plan includes key elements that comply with federal requirements for transportation planning. In particular, this plan contains the first phase of new requirements to use performance standards in transportation planning. It also includes analysis for portions of Sherburne and Wright counties – which the U.S. Census considers part of the metropolitan planning area, though they are not part of the Council's statutory jurisdiction.

This plan also contains specific investment plans for the transportation system. It identifies how resources will be used to achieve the region's transportation goals within revenue levels anticipated through 2040 (under this plan's Current Revenue Scenario) and provides a broader vision of investments that are possible if additional revenue sources become available (Increased Revenue Scenario).

Another federal provision to which this plan responds consists of requirements for Environmental Justice. The plan seeks to not only meet these requirements but also exceed them through the Council's focus on equity for all historically underrepresented communities (including people of color and people with disabilities). However, this plan also moves toward the greater regional aspirations related to equity by focusing on benefits, beginning to incorporate equity into future priority considerations and beginning a critical regional conversation about understanding the role of transportation in achieving equity. See Chapter 10 for more information.

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B. How Transportation Supports the Region's Vision

Thrive MSP 2040: Community Designations

The Metropolitan Council partners with local governments responsible for planning and implementing the land use and local infrastructure needed to support *Thrive MSP 2040*, the Transportation Policy Plan, the Water Resources Policy Plan, and the Regional Parks Policy Plan. Consistent with state law, local governments will prepare comprehensive plans that address the policies in *Thrive MSP 2040* and the regional systems plans for transportation (this plan), wastewater and regional parks.

To help communities in the region plan in an orderly, efficient, and economic way, and plan for transportation infrastructure that serves both local and regional development, the Transportation Policy Plan emphasizes the importance of regional coordination, including large and small commercial areas, job concentrations, manufacturing and distribution areas, and freight terminals. This plan also encourages local governments to plan for more dense development and a diversity of uses across the region, and the development of more livable communities that support stewardship and sustainability in the transportation system.

The land use policies in *Thrive MSP 2040* detail practices appropriate for certain communities. In conjunction with these designations, this Transportation Policy Plan provides guidance on transportation infrastructure, including:

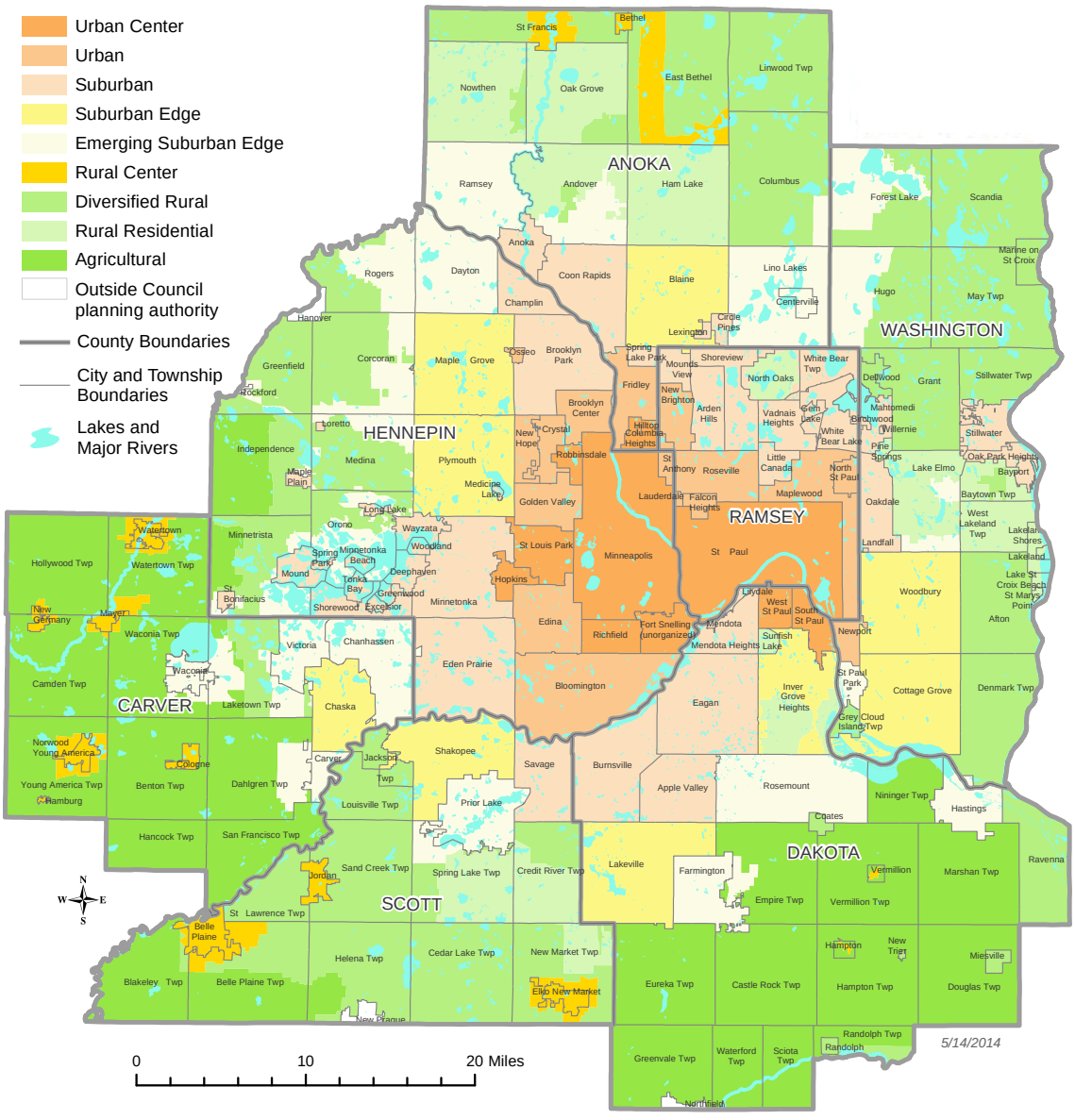
- Supporting or contributing to an appropriately spaced and well-managed highway network
- Managing congestion in an innovative, cost-efficient manner with the goal of providing alternatives to travel in congested corridors
- Implementing increased transit service and a transitway system, and supporting higher expectations for land use around transit stations
- Including bicycle and pedestrian elements in comprehensive plans and the tools necessary to support them
- Planning for the long-term needs of freight modes such as trucks, barges, and railroads
- Balancing the needs of the aviation system with local land use decisions

Thrive MSP 2040 designates planning areas for the region based on the type and intensity of development, as well as future forecasted changes. For example, an agricultural area is anticipated to have little development and no projected growth in population, while an emerging urban center or suburban edge community might be projected to grow in population and jobs and may need development and transportation services to accommodate that growth. Each planning area designation has corresponding recommendations for local planning of land use, transportation, parks, housing and natural resources.

OVERVIEW

The Metropolitan Council has designated the following planning areas to help communities update their local comprehensive plans:

Figure 1: Community Designations Map



Urban Service Areas

Urban Center communities include the largest, most centrally located and economically diverse cities of the region. Anchored by Minneapolis and Saint Paul, the Urban Center also includes adjoining cities that share similar development characteristics such as street grids planned before World War II.

Urban communities developed primarily during the economic prosperity between the end of World War II and the economic recession of 1973-1975. These cities, adjacent to the Urban Center communities, experienced rapid development to house the growing families of the Baby Boom era.

Suburban communities experienced primary development in the 1980s and into the early 1990s as baby boomer families entered their prime earning years. Many of these cities fall along freeway corridors and include growth along Interstates 35W, 35E, 494, 694, and U.S. Highways 10 and 61.

Suburban Edge communities experienced significant residential growth beginning in the 1990s and continuing through the 2010s. At least 40% of the land in these cities is developed, but significant amounts of land remain for future development. These communities generally do not have large-scale agricultural areas.

Emerging Suburban Edge communities include cities and townships in the early stages of transition from rural to urban levels of development. Less than 40% of available land has been developed in the majority of Emerging Suburban Edge communities.

Rural Service Areas

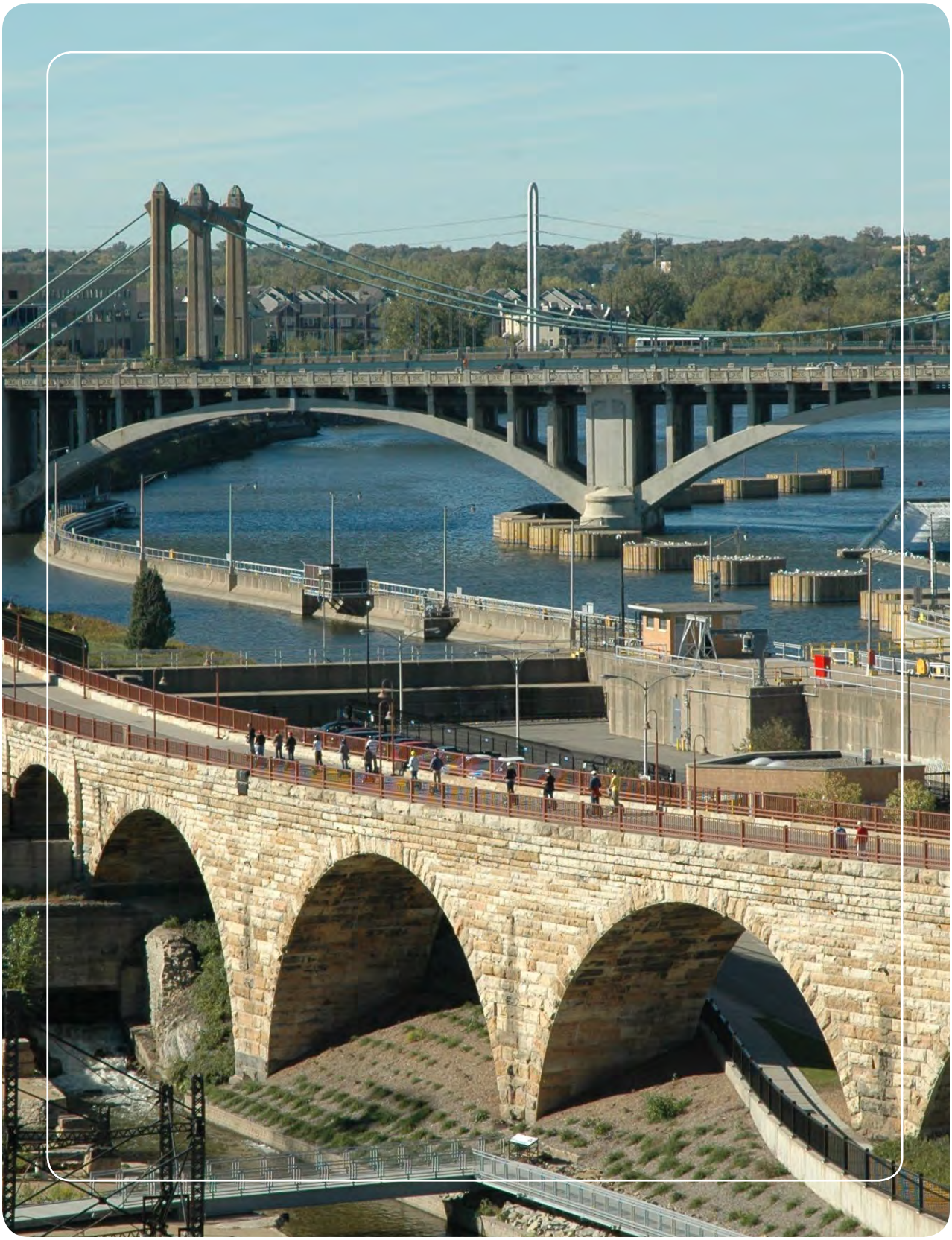
Rural Center communities are local commercial, employment, and residential activity centers serving rural areas in the region. These small towns are surrounded by agricultural lands and serve as centers of commerce to the surrounding agricultural community.

Diversified Rural communities are home to a variety of farm and non-farm land uses including very large-lot residential, clustered housing, hobby farms, and agricultural uses. Located adjacent to Emerging Suburban Edge communities in the Urban Service Area, the Diversified Rural Area protects rural land for rural lifestyles today and potential urbanized levels of development sometime after 2040.

Rural Residential communities have residential patterns characterized by large lots and this development density cannot support cost-effective urban infrastructure, such as centralized wastewater treatment, high capacity highways, or transit service.

Agricultural communities consist of areas with prime agricultural soils that are planned and zoned for long-term agricultural use. These communities are home to the bulk of contiguous lands enrolled in the Metropolitan Agricultural Preserves and Green Acres Programs or cultivated for commercial agricultural purposes.

A note about Aviation: Regional system airports are located in most of the community designations, from urban center to rural. All communities that have an airport or border an airport have the same set of issues involving compatible land use, planning and development. Communities in all designations should plan for compatible land use near airports.



C. Travel in the Region: Yesterday, Today, and Tomorrow

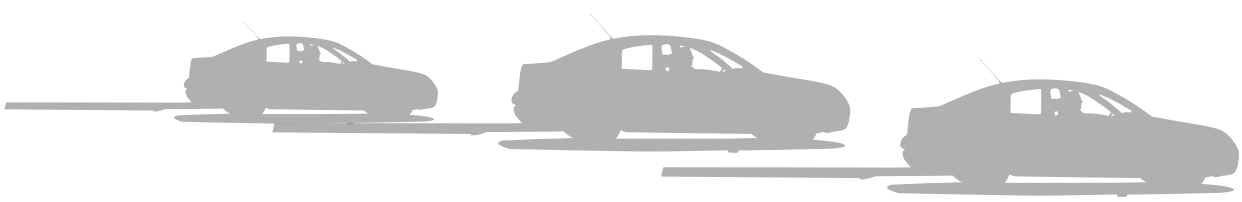
How and why we travel in the region today

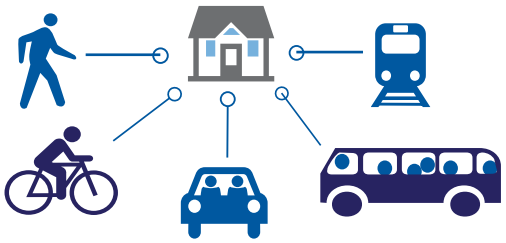
It goes without saying that the choices our region's residents make are dictated by the transportation system we have. Trends and travel patterns have changed as choices have improved, and the most recent data of travel behavior in the Twin Cities region show that more people are choosing alternatives to driving. Though driving is still the dominant choice in our region, population and job projections for the next 30 years indicate the need for continued investment in other modes to assure our region has robust choices to meet those needs.

Driving is clearly the predominant way people get around the region. Of all trips made on weekdays, 84% were made in a car. Most work commute trips are also made by car, 89%, with 76% of those driving alone.

The regional Travel Behavior Inventory – conducted once every 10 years – showed that total trips taken were down slightly from 2000 to 2010. The total number of trips by all modes of transportation, including bicycling and walking, decreased from 11.6 million trips to 9.8 million trips. Car trips decreased from 7.7 million to 6.3 million trips. It is difficult to say if this trend will continue, even with millennials postponing their decisions to obtain driver's licenses, and many opting to live in denser, more connected communities.

Travel





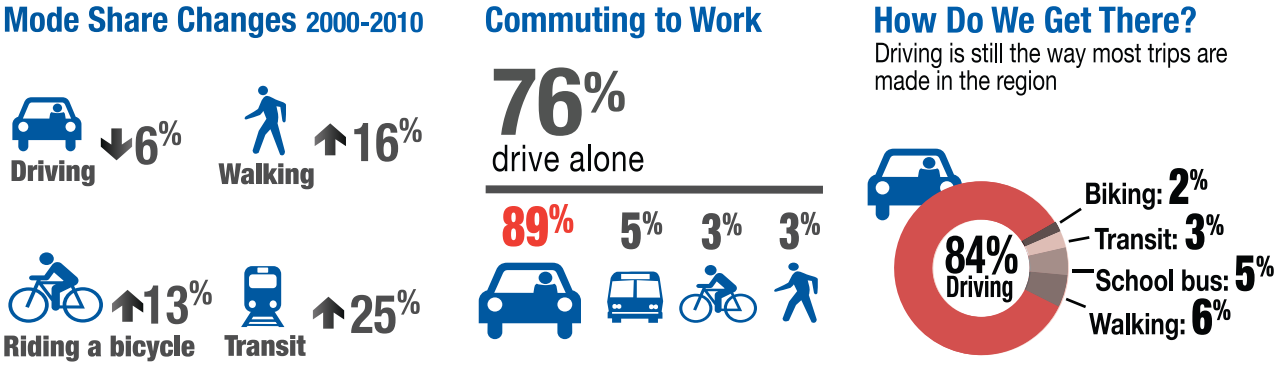
While the total number of trips decreased, a mode-to-mode comparison from 2000 to 2010 shows that all modes other than driving increased. The transit mode share increased the most, 25%, followed by walking, up 16%, and bicycling, up 13%.

Surprisingly, a large number of trips taken in the region, 40%, are not for work commutes but for social and recreational purposes. In fact, work commuting comes in last, accounting for only 18% of trips taken. School trips and trips to and from the workplace make up 22% of driving. Shopping trips and errands constitute 20% of driving.

Figure 2: Mode Share Changes

About mode and mode share

"Mode" means the type of transportation, for example car, but, bicycle, etc. "Mode share" is the share of all trips taken by a particular mode.



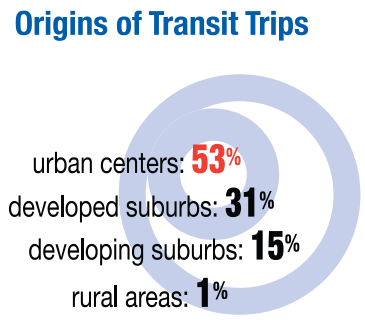
Where we live influences our travel mode choices

The denser the land use, the more likely people are to use transit. The two factors most significantly influencing a person's choice to use transit are income and the convenience of the transit service.

Residents are more likely to ride transit if they can conveniently reach a transit stop with frequent, all-day transit service. Of all transit trips taken, 53% were made by those living in urban centers (Minneapolis and Saint Paul); 31% by those in developed suburbs; 15% were from the suburban edge and emerging suburban edge; and 1% from rural areas.

Besides convenience, the cost associated with car ownership and driving influences transit use. For many who find car ownership cost-prohibitive, who are not able to drive, or otherwise choose not to drive, transit is necessary to get to school, work, and conduct personal business. Thirty-one percent of transit riders, or about 87,600 travelers, in the region do not own a car.

Figure 3: Origins and Destinations



Future technology advancements – progressive and disruptive

Throughout history, advances in technology have been disruptive to society. Transportation examples include transcontinental railroads, streetcars, mass-produced automobiles on assembly lines, freeways, freight logistics management, and all aspects of aviation. Advancements—and the disruptions that come with them—in computers, Internet, and other information technologies are becoming more frequent.

While we know technology will continue to change and result in significant effects, we do not know specifically which changes will broadly affect transportation, how, and when. At this point there are more questions than answers and a lot of technical, legal, and personal concerns need to be addressed before new technologies become widely used. This plan will continue positioning the region to support advancements in transportation technology by responding to their effects as we gain knowledge.

Increased efficiencies, increased mobility

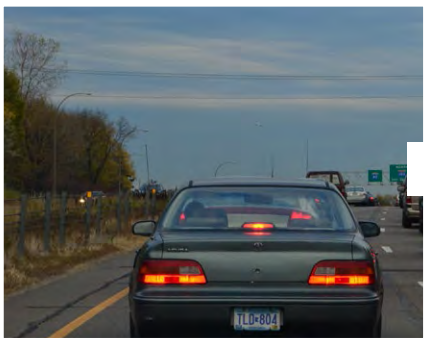
Continued advancements in technology may change how and why people and freight travel in the future. Global positioning system (GPS)-assisted navigation has made the freight industry much more efficient, and has filtered down to consumers and is now enabling mobility-sharing.

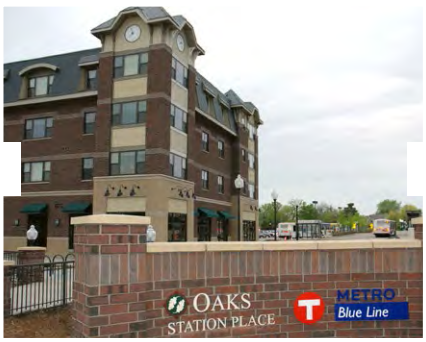
On the one hand, the popularity of social media, streaming technology, online banking, telecommuting (33% of workers telecommute at least once a month in the region) and online shopping, could translate into less travel in the long-term future. But on the other, technology has also enabled car-, bike-, and ride-sharing, increasing mobility for many.

With apps and other online sites and tools, people can connect with others and plan trips via multiple modes, door-to-door. Car- and bike-sharing programs, especially when allowing for one-way trips, are increasing people's mobility especially when making non-routine trips during off-peak hours. Travelers are also able to access real-time highway congestion information, transit information, and directions for traveling by car, transit, bike, or on foot.

Another technology that has the ability to increase mobility in the near-future is driver-assisted and driverless cars. There are significant implications with this technology. Will it increase congestion because more populations who would normally not drive—elderly, young, people with disabilities—now have access to a car? Or, as transportation consultant Denis Eirikis predicts, "Fully automated and connected vehicles will double existing road capacity because transportation planners and engineers can allow for narrower lanes, increased speed, and shorter safe following distances among vehicles." These and related questions still need to be thoroughly examined in the Twin Cities region.

Driverless transit vehicles are also on the horizon with a model being tested now in France for use in college and medical campuses, theme parks, planned communities, office parks, and city centers. These vehicles could help to increase mobility by connecting people to the "last mile" of their destinations. Driverless transit and paratransit vehicles also have the potential to greatly benefit people with disabilities by increasing their mobility.





Fares and User-Fees

Technology has also revolutionized how fares are collected. Many transit users choose a Go-To Cards rather than cash, making fare collection much more efficient. Car transponders automatically collect tolls on roads and can be varied based on congestion such as with MnPASS Express lanes.

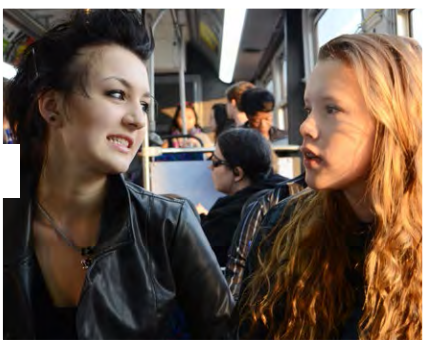
Another possible future use of technology is mileage-based user fees. With gas tax and other revenues projected to decrease (because of hybrid and electric vehicles) a mileage-based user fee could be a way to help collect enough revenue to maintain and rebuild the region's roads and bridges.

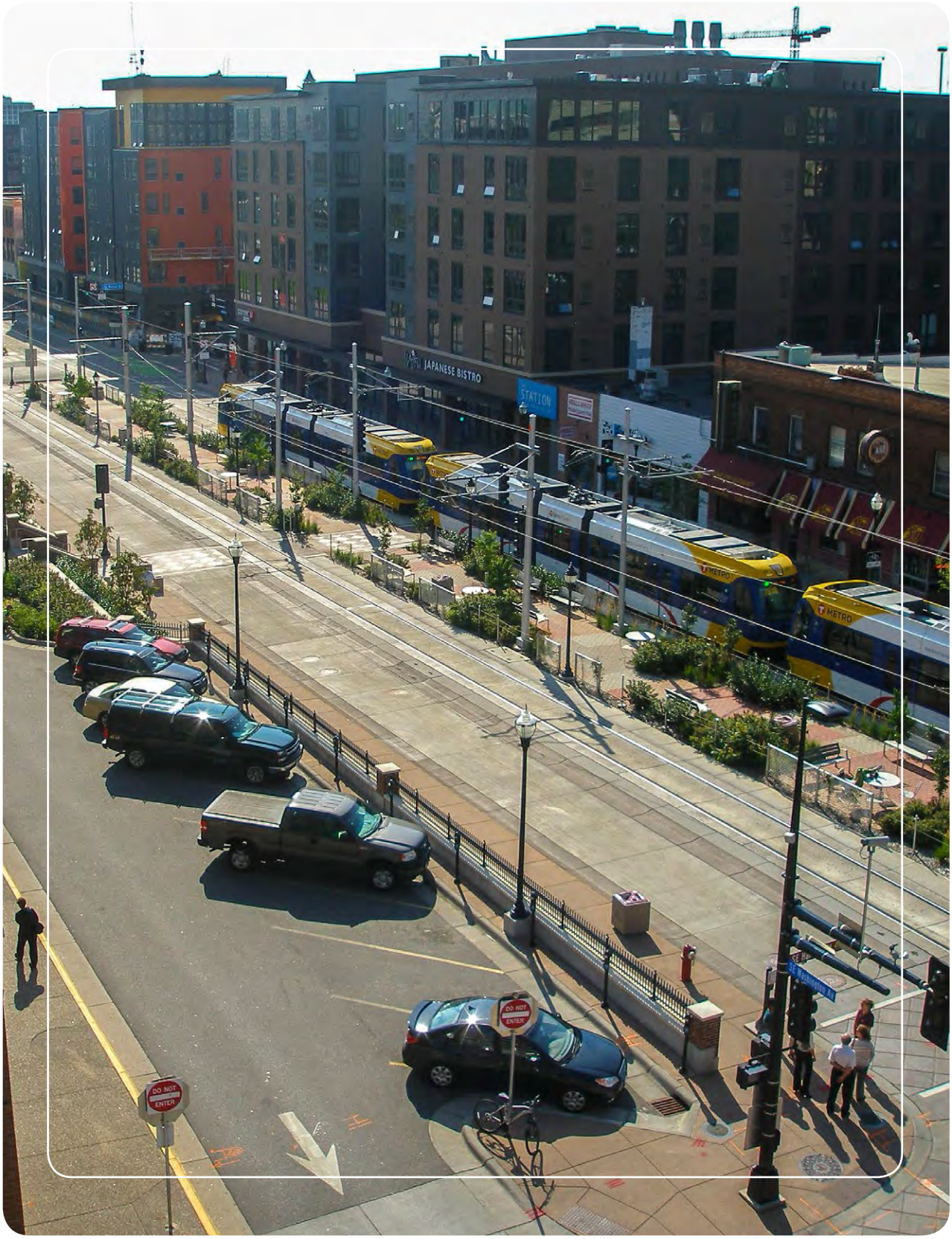
The key with these emerging technologies is to plan a flexible transportation system and consistently revisit the long-range direction so that it accommodates innovation and is responsive to market forces.

Social Networking, Mobility Apps

The power of social networking is being harnessed to increase mobility, especially when it comes to transit trip planning, car-sharing, carpooling (ridesharing) and bike-sharing. With apps and other on-line sites and tools, people can connect with others and plan trips via multiple modes, door-to-door. Car- and bike-sharing programs, especially when allowing for one-way trips, are increasing people's mobility especially when making non-routine trips during off-peak hours. Travelers are also able to access real-time highway congestion information, transit information, and directions for traveling by car, transit, bike, or on foot.






JAPANESE BISTRO
STATION
METRO
METRO
DO NOT ENTER
DO NOT ENTER

D. A Summary of the Existing Regional Transportation System

The regional transportation system helps to advance the *Thrive MSP 2040* vision by continuing to improve operational efficiencies, providing alternatives to highway congestion, and continuing to increase travel choices available to people. The region consistently ranks high when compared to peer regions in areas of quality of life, such as the availability of regional parks and the miles of bike trails and on-street bikeways. But there is always room for improvement, especially when it comes to equitable transportation access for historically underrepresented communities, economic competitiveness, and the effects of transportation on communities and the natural environment.

The Regional Highway System

No other part of the transportation system has increased personal mobility more than the regional highway system. Highways support flexible and independent travel for millions of people every day. Freight transport throughout the supply chain – a critical aspect of our economy – relies predominantly on trucks using highways.

Today's highway system developed over more than 75 years as the nation realized good roads were imperative for commerce, national defense, and communications. Starting as early as 1916 and boosted by investments like the Federal Aid Highway Act of 1956, the nation's highway system was transformed. In the early 1900s roads were mostly unpaved and difficult to travel, especially during bad weather. The 1956 act funded the Interstate system with 90% federal and 10% matching state funds. Nationally, the interstate highway system is more than 46,000 miles, all built according to federal standards for design and safety.

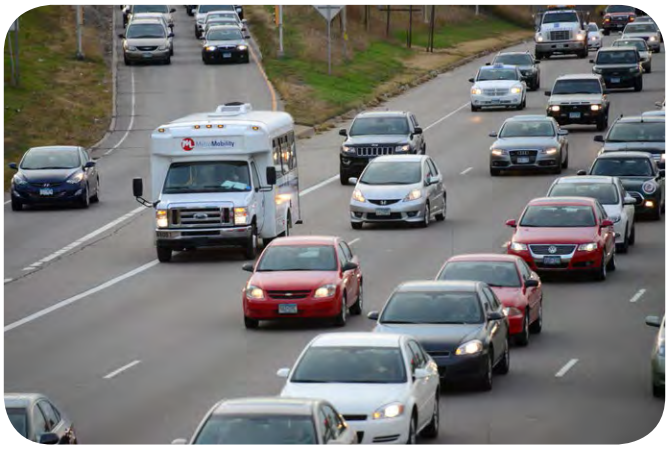
The benefits of this system have been immense and incalculable. Commerce, work commutes, recreational travel, and the everyday business of most people's lives, especially in rural and suburban areas, depend on a good highway system.

The highway system is also integral to moving freight within, through, and beyond the region. A large portion of freight-supporting land uses such as terminals, warehouses, and manufacturing plants are located along highways. Truck freight moves nearly 75% of all freight in and out of the region, with rail, water, and air making up the remaining 25%. The value of truck-hauled freight exceeds 80% of the total value of all freight moved in the region.

The region's highway system is well developed and classified into categories based on function, with principal arterials and A-minor arterials helping people and freight move the longest distances in the region. This plan addresses only these regional highways. Principal arterials are freeways and other limited access highways with the highest posted speed limits, such as Interstates 35 and 94 and U.S. Highway 10. A-minor arterials support principal arterials and access to regional job concentrations, community amenities, manufacturing and distribution areas, and freight terminals. Along with local roads, A-minors are critical to the functioning of the system. Examples of A-minor arterials include State Highway 47/University Avenue in Fridley, Columbia Heights, and Minneapolis; State Highway 5 in Chanhassen, Eden Prairie, Saint Paul, Maplewood, Oakdale, Lake Elmo, and Stillwater; and Dakota County Highway 60 in Prior Lake and Lakeville.

There are 17,500 miles of roads in the region. Principal and A-minor roads make up only 2,600 of those miles (15%) and carry most of the region's motor vehicle traffic (75%), including trucks and buses.

Future investments in the regional highway system will focus on continuing to operate, maintain, and rebuild infrastructure, enhancing safety and security, and implementing affordable and multimodal congestion management strategies including expanded and new traffic management technologies, MnPASS and other advantages for transit, and improving bicycle and accessible pedestrian accommodations on highways.



"I use a car as my primary mode of transportation. I have to drive – locations do not have transit close to them or it's a time issue."

– Chevron Beasley, Twin Cities resident

The Regional Transit System

Public transportation enhances quality of life and the economic competitiveness of the region in ways that support prosperity throughout the region. Whether in urban, suburban, or rural areas, residents want transportation choices including public transit for work, community services and amenities, recreation, shopping and other activities. The current state of our region's public transportation system shows that in urban areas, public transit is becoming increasingly essential to provide access to jobs and opportunity and conduct daily personal business. In suburban areas, public transit's role is primarily to provide a valuable option for commuting to work. And for many in rural areas who do not drive, public transit currently serves as an important life-line that connects residents to jobs and opportunities that they otherwise would not have.

Providing transit service requires considerations of stewardship and sustainability because not all areas of the region can be served equally. Cost-effective regular-route transit serves denser areas or the region, whether density comes in the form of the local land use and development patterns or a park-and-ride facility (which can create density by allowing transit riders to drive to a single location for service). Many people are relocating to more urban areas to take advantage of the more frequent and accessible transit services available there. Students, young professionals, and older populations are choosing to live in areas where they can use their car less or even live without a car at all. About 44% of future population growth is projected to take place in developed portions of the region (urban centers), where transit service can be most effective, have the greatest return on investments, and be financially sustainable.

SUBSTANTIAL RETURNS ON INVESTMENTS (NATIONAL AVERAGES)

- every $10 million of capital invested in public transportation yields $30 million in increased business sales
- for every $1 billion of federal investment in the nation's public transportation infrastucture, 47,500 jobs are created

There are six types of transit service in the region. Regular-route bus service, light rail transit (LRT), bus rapid transit (BRT), commuter rail, dial-a-ride services, and public vanpools. Transit use has increased by about 25% in the last 10 years; and its share of travel has increased by about the same. In 2013, average weekday trips on transit exceeded 315,000, including trips taken with other transit providers such as contracted services or suburban providers. Or put another way, more than 155,000 people use transit every weekday.

Since the Council adopted the previous transportation plan, the first bus rapid transit (BRT) line opened on Cedar Avenue (the METRO Red Line) in Dakota County, park-and-ride capacity has increased, and the METRO Green Line (Central Corridor light rail) opened in June 2014, connecting Minneapolis and Saint Paul. For other improvements see "Existing Regional Transportation System (Chapter 1)."

But the benefits of public transit – felt by people, families, communities, and the region as a whole – go beyond simply having access to specific transit service.

Real estate around transit stations and along transit corridors carries higher value than similar properties without access to transit. Transit-oriented development (TOD) with mixed-use residential and commercial amenities is able to revitalize neighborhoods in a number of ways, including:

- Giving many the option of not owning a car, potentially a considerable savings
- Supporting a mix of housing and commercial uses—apartments, townhomes, retail shops and services—that attracts a wide range of populations and fosters economic activity, social interaction, community cohesion and involvement, and physical activity
- Supporting a denser mix of housing and commercial development that can generate larger financial returns for communities; real estate is not devoted to large parking lots and other auto-oriented infrastructure, but tax-generating uses

TRAVEL DEMAND MANAGEMENT (TDM)

The Council partners with cities and Transportation Management Organizations (TMO) to:

- reduce travel during peak periods and in congested areas
- promote alternatives to driving alone such as carpooling, transit, and bicycling
- promote flexible work schedules and telecommuting
- work with local governments to link TDM strategies and supportive land use policies
- market new transit services like the Northstar Line, METRO Green Line, and METRO Red Line.
- encourage bicycling by promoting new features such as Nice Ride, and new bike lanes

TRANSPORTATION MANAGEMENT ORGANIZATIONS (TMOS)

Transportation Management Organizations:

- are public/private partnerships in highly congested corridors
- consist of employers, building owners, businesses, and local governments
- work on strategies, programs, public education and information to promote alternatives to driving alone during peak travel times, including carpooling, transit, and telecommuting

Regional Bicycle and Pedestrian Infrastructure

Walking and bicycling are essential parts of the regional transportation system and have numerous benefits at the local, regional, and global levels. Walking and bicycling allow people to make trips without adding to roadway congestion and vehicle-related air pollution that is affecting climate change. These choices make it possible to connect with transit while incorporating exercise into daily routines. On a household level, they reduce the cost of transportation and improve health, and at a national level they reduce our dependence on non-renewable energy sources.

Walking and bicycling trips tend to be relatively short in this region, averaging about ¼-to ½-mile for walking and between one and three miles for bicycling. Because of these relatively short trip lengths, local governments lead development of the bicycle and pedestrian systems. Generally, the Metropolitan Council does not operate or maintain bikeways and walkways, but does facilitate the planning, development, and funding. The Council's role is to plan for regional bicycle and pedestrian systems that connect between jurisdictions and travel modes, seek to find solutions to regional barriers to bicycling and walking, and improve access to jobs and opportunities for our growing and changing region.

The Regional Bike System

The region is fortunate to have significant bicycling amenities, including on-street bike lanes, as well as a network of off-road trails. The system includes thousands of miles of bikeways, on-road features, and off-road trails. Twin Cities' residents have and are continuing to advocate for this system, and the federal government, state, and region have made investments that mirror this strong level of advocacy.

Since the previous transportation plan, bicycling activity has increased 78% and walking 16% at 43 benchmark locations in Minneapolis, its surrounding suburbs, and St. Paul as a result of efforts through a federal non-motorized transportation pilot project. In addition, the Council has been improving the inventory of bicycling amenities and how they're used.

However, gaps in the system exist, and additional amenities are planned to address growing needs for the bicycle network.

Pedestrian Infrastructure

Pedestrian infrastructure – sidewalks, trails and other amenities such as trees, lighting, and benches accessible to people of all ages and abilities – is key to making places feel easily reached, inviting, and safe. For people who do not drive, walking or traveling by wheelchair can be essential to meeting daily needs, and walking can be an important part of active living. Many opportunities for walking, such as going to the store for bread or to the nearest transit station, are thwarted by physical barriers such as a lack of sidewalks and wide and busy highway intersections.

Among actions communities can take to better accommodate pedestrians are to plan for Complete Streets to ensure accessibility and safety for all travelers, implement accessible design standards, and coordinate projects with broad input from businesses, residents and adjacent communities.

See Chapter 7 for a detailed discussion of investment direction for the bicycle and pedestrian system.

The Regional Freight System

As stated previously, 75% of all intercity freight is moved by trucks on highways. The remaining 25% is moved by air, water, and rail. Most freight infrastructure is owned by the private sector. Public sector freight-related infrastructure includes highways, navigable rivers, river port terminals, and airports.

There are three river ports in the Twin Cities metro region, including the Ports of Minneapolis and Saint Paul on the Mississippi River and the Port of Savage on the Minnesota River. Freight is hauled by barge more than 1,800 miles downriver from the Twin Cities to the Port of New Orleans where it is loaded onto ocean-going ships for export to global markets. The channels, dams, and locks on navigable rivers are maintained by the U.S. Army Corps of Engineers.

Four Class I railroads operate more than 500 miles of track in the metropolitan area that link the region with major national markets and also carry a large amount of cross-country freight. Four Class III (short line) railroads operate about 160 miles of track in the region. Class III lines predominantly operate local service, generally within 100 miles of the region.

High-value and/or time-sensitive goods are shipped via the air freight system, especially when moving over long distances. The region's high-tech and biomedical companies are major air freight service customers. Minneapolis-Saint Paul International Airport (MSP) handles air

freight, not only for the Twin Cities metropolitan area, but for most of Minnesota and adjacent parts of Wisconsin and the Dakotas via air freight providers such as FedEx and United Parcel Service (UPS), as well as commercial airlines. Goods shipped as "belly freight" on commercial passenger aircraft represent less than 20% on average of the overall air freight volume shipped via MSP; more than 80% is shipped via air freight carriers.

The Regional Airport System

The region has one major airport, the Minneapolis-Saint Paul International Airport (MSP), and 10 smaller airports that serve business and recreational users. The Metropolitan Airports Commission (MAC), formed by state law in 1943, is a public corporation that owns and operates MSP and six smaller regional airports throughout the metropolitan region.

MSP International ranked 16th nationally with 33 million passengers in 2012. It supports 74,800 jobs and generates $9.9 billion in economic activity, and $253 million in state and local taxes. The MAC's operating costs all come from concession revenues, lease agreements, and airline fees.

MSP is important to the region's economy. It is a critical part of the transportation system that brings over 4 million visitors to the region, including 400,000 international visitors who spend $1.9 billion annually during their stay. The regional airport system is an integral part of the freight system with 198,000 metric tons of cargo handled in 2012.

Among the smaller regional, or reliever, airports are Airlake, Anoka County-Blaine, Crystal, Flying Cloud, Lake Elmo and Saint Paul Downtown, South Saint Paul Airport and Forest Lake Airport. Reliever airports are defined by the Federal Aviation Administration (FAA) as airports designated to relieve congestion at commercial service airports and provide improved general aviation access to the overall community. Our regional system of airports generates an estimated $1.4 billion annually for the Twin Cities economy while reducing general aviation operations at MSP. Airport users at the MAC reliever airports include air taxi, business aviation, general aviation, flight training, recreational aviation, and military aviation. Each of the reliever airports is open 24 hours per day, in keeping with federal regulations.

MSP International supports 74,800 jobs and generates $9.9 billion in economic activity, and $253 million in state and local taxes.

Passenger Travel Beyond the Region

Each mode of transportation best serves a specific trip distance, providing its own unique characteristics and values for interstate and international mobility. While the vast majority of intercity passenger movements occur by automobile, Amtrak and a number of intercity bus and airlines companies serve longer-distance travelers who choose not to drive. Air travel is addressed further in the aviation section of this plan.

MnDOT is currently studying several potential new high-speed rail services to link the Twin Cities with other regions such as Rochester, St. Cloud, Duluth, and Chicago. Intercity bus service continues to remain a presence in the region, with recent innovations to attract passengers such as Wi-Fi and express services that rival private automobile travel times. The Council has a minimal role in planning intercity passenger rail or bus service, though significant regional facilities provide access for this service and local transit service in both Minneapolis and St. Paul. MnDOT has the primary role of coordinating with operators of inter-city service and also provides some subsidies to support service in Greater Minnesota.

An Illustrated History of Transportation, Land Development in the Twin Cities

Technology has changed the way we get around, and the way we get around has changed how we have developed the region, including the location of housing, retail, industry, and employment. (Note: the following maps show the major highway system as a reference point, though these highways were primarily developed in the 20th century.)

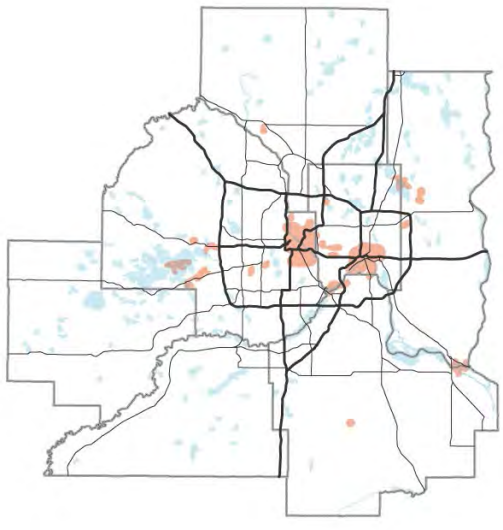
1860

Population: 52,000

Early development in our region was marked by the establishment of Fort Snelling in 1825, and the four major activity centers along the Minnesota, Mississippi, and St. Croix rivers – the region's first highways and power plants: Hastings, St. Anthony-Minneapolis, Saint Paul, and Stillwater.

Personal mobility was by walking, horse and buggy, ox cart, ferry, and train. Freight moved by river barge and train.

1900



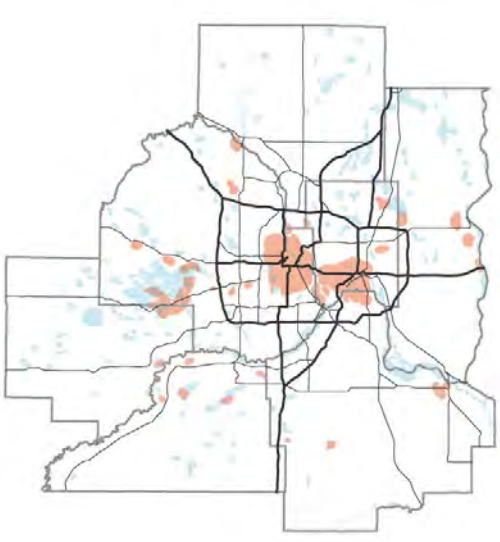
Population: 492,000

In the late 1880s, the region's flour milling industries boomed and by 1900, Minneapolis and Saint Paul were dominant urban centers. Trolleys would eventually replace horse cars, and the popular line between the two major cities, which ran along University Avenue, carried more than 27 million rides in 1890. Annual streetcar ridership was 70 million by 1900, with a 100-square-mile network radiating from the central cities.

The Twin Cities region was also among the top 10 railroad centers – rail yards, warehousing, and manufacturing hubs radiated for 20 square miles outside the central cities.

Personal mobility was by walking, bicycle, horse and buggy, streetcar, ferry, and train. Freight moved by river barge and train.

1920



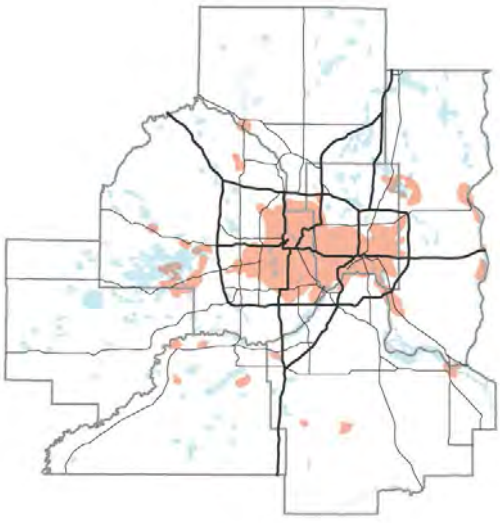
Population: 761,000

By 1914, streetcars provided 100% of all public transit in the United States. But the 1920s era would bring technology advancements with the personal automobile and air travel. In our region, first-ring suburbs with industry would emerge, providing a greater need for community connections beyond the central cities. And White Bear Lake and Lake Minnetonka were connected by streetcar, which helped establish those cities as resort and summer home destinations.

The Minneapolis-Saint Paul International Airport was established in 1920 with its first airstrip. The region boasted 523 miles of streetcars, carrying 292 million riders per year.

Personal mobility expanded; methods included walking, bicycling, streetcars, trains, motorbuses, cars, airplanes. Freight was moved by river barge, train, and truck.

1940



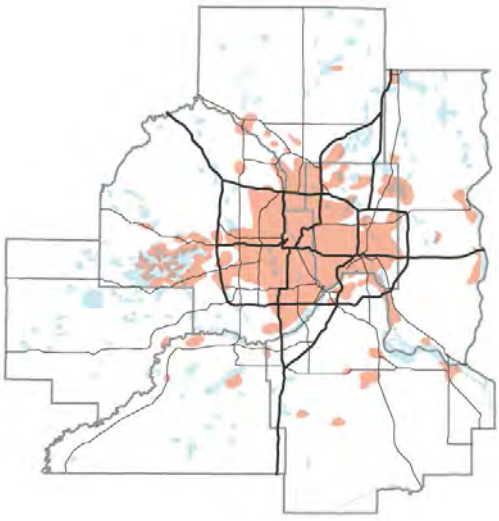
Population: 987,000

By 1940, Minneapolis and Saint Paul have grown into a single urban center, and are beginning to be surrounded by suburban communities. Rural centers, including Anoka, Shakopee, and Stillwater are also beginning to grow.

As automobile use becomes the dominant form of personal transportation, walking, bicycling, and transit use decline. Public transit ridership had dropped to 128 million by 1940.

Personal mobility included walking, bicycling, streetcars, buses, trains, cars, airplanes. Freight moved by river barge, train, truck, and plane.

1960

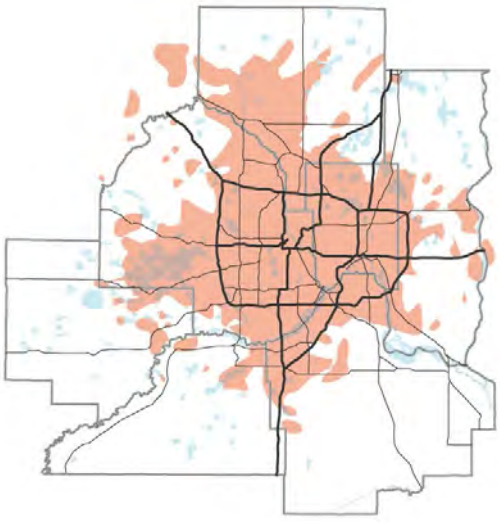


Population: 1,590,000

Following World War II, the region's two-lane roads improve and expand. What began as two-lane roads extending about 10 miles from the urban center expanded, providing access to large tracts of undeveloped land. By 1960, the region had 100 miles of limited-access highways, leading to increased use of cars and continued decreased use of walking, bicycling, and transit. Transit ridership was 86 million annually in 1960.

Personal mobility included walking, bicycling, buses, trains, cars, airplanes. Freight moved by river barge, train, truck, and plane.

1980

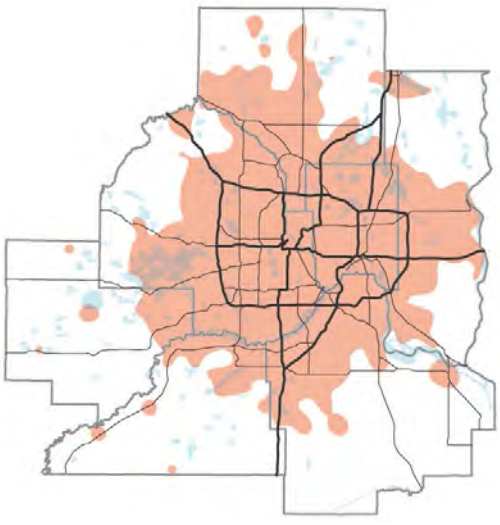


Population: 1,985,000

By 1980, cars and trucks were the dominant form of transportation in the region. The energy crisis in the late 1970s triggered a brief spike in transit use; annual transit ridership was 93 million in 1980. The region's highway system had grown to 460 miles, and travel in the region increased significantly with more women in the workforce and jobs locating along highways outside the central cities.

Personal mobility included walking, bicycling, buses, trains, cars, airplanes. Freight moved by river barge, train, truck, and plane.

2000

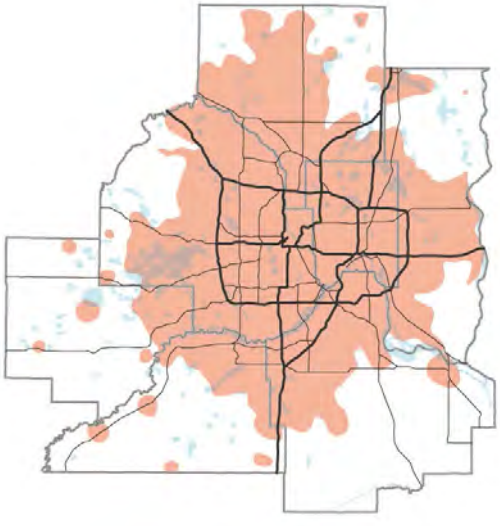


Population: 2,642,000

In the latter part of the 20th century, roads and highways continued to expand and connections improve as the region continues to grow. But those roadways were also congested – congestion grew 500% between 1980 and 2000 on the region's highway system. Transit ridership had dropped to 78 million.

Personal mobility included walking, bicycling, buses, trains, cars, airplanes. Freight moved by river barge, train, truck, and plane.

2010



Population: 2,850,000

By 2010, the region's roadway system had grown to more than 140,000 miles of highway, including city, county and township roads. Recent investments in the transit system helped ridership grow to 91 million annually. Highway investments moved away from new roads to improving the performance of the system and managing congestion.

The Great Recession nearly halted growth in the region, leading to a decrease in personal driving for the first time in decades. Walking, bicycling, and transit use all increased, particularly as a share of overall travel in the region.

Personal mobility included walking, bicycling, buses, light-rail and commuter trains, inter-city passenger trains, cars, airplanes. Freight moved by river barge, train, truck, and plane.

Recent Trends in Transportation and Land Development

The growth of the region stalled temporarily during the 2008 recession and foreclosure rates in housing contributed to a significant downturn in new construction. However, recent estimates indicate that the region has begun growing again, by an estimated 59,000 people in two years since 2010 or about 1% per year. During the same two years, new development added 11,000 new housing units and vacancy rates for rental units and owner-occupied units began declining. Multifamily construction contributed additional new housing units in that time frame. The largest increases in population occurred in Minneapolis and Saint Paul, with about 23% of the total regional growth. This was supported by a substantial increase in development in the central cities. Fully developed suburbs accounted for 35% of the region's population growth. This means that the central cities and other fully developed communities accommodated 58% of the population growth, while developing suburbs accounted for 38% of the growth.

The recent trends in growth illustrate the balance of growth in the region across types of communities. These trends also demonstrate the continued reversal of out-migration from the developed area to the developing area that has occurred in the past.

Transportation and Land Development Conclusions

The evolution of the region's growth over time illustrates several key relationships between transportation and land development:

- Until the late 1940s, the region grew in a compact, traditional neighborhood urban form.
- The introduction of the automobile and freeways greatly increased mobility and access to affordable, developable land.
- The rapid expansion of the region's developed area in an auto-centric manner has resulted in longer average trips and the diminished attractiveness of non-auto modes for regional travel.
- The freeway-building era growth patterns are unsustainable. Congestion and a desire for convenient access to jobs, activities, and amenities are beginning to challenge continued expansion of the urban area through new land development.

Anticipated growth will bring 800,000 additional residents and 391,000 additional households, which present tremendous opportunities for the region. A related challenge is the necessary balance between the needs of those new residents and households and the needs of the 2.9 million residents and 1.1 million households already in this region.

A note about recent trends in regional travel: Studies of travel behavior in the Twin Cities region reflect some impact from the 2008 recession. During the recession, the region lost a decade of job growth, and residents of the region cut their personal travel along with other discretionary spending. While analysts still do not know the full impact of the 2008 recession on the region's economy or travel behavior, trends shown by travel behavior studies for the decade from 2000 to 2010 reflect trends that were already evident in several years prior to the 2008 recession.


METRO

E. Transportation Challenges and Opportunities for the Twin Cities Region

Our region's transportation system provides important connections between communities, jobs and activities, community amenities, and the world beyond the seven-county area. The system has been planned to support the needs of the region's residents and business and will need to provide robust options for people to go where they want to go for generations to come.

While the system is notable for its significant and well-managed highway system, which facilitates movement of most of the region's people and goods, it and other elements of the system are still changing – particularly transit, bicycle, and pedestrian infrastructure. While today's system is connecting the region's travelers and freight to the desired destinations, there is room for growth and improvement.

Ours is a growing region. This presents tremendous opportunities for additional prosperity and innovation. It also creates some challenges within the transportation system. *Thrive MSP 2040* has identified some transportation-related challenges and opportunities in the region:

- Aging infrastructure will not meet the demands of a growing population without significant investment in the near future—including roads, bridges, transit, and wastewater treatment plants.
- Financial resources are inadequate to address the region's infrastructure needs, particularly in transportation and affordable housing.
- Emerging environmental challenges will likely increase, including the consequences of climate change, such as more severe weather events.
- Pressures will increase on our natural resources, including diminishing groundwater supplies, impaired water quality and threats to ecological resources.
- Population and job growth will increase highway congestion within the region.
- Significant racial disparities continue to persist in income, employment, poverty, homeownership, education, and access to opportunities.
- An aging population will grow, with a doubling of those aged 65 and older by 2040.

By meeting these challenges, we create new opportunities to assure prosperity for all residents and businesses of the region. Transportation decisions can directly and indirectly impact and positively influence many of these challenges.

This plan has identified some key issues and challenges, and related goals and objectives to address those challenges. Within each of these challenges there are also opportunities to improve practices, efficiencies, and access for the region. The primary challenges/opportunities include the following:

- Land use and development patterns affect our stewardship of the transportation system.
- Transportation investments can help sustain and strengthen our region's economic competitiveness.The region's population and employment are going to grow, leading to more travel.
- Highway congestion is a reality of our economic growth and can be managed and eased.
- People and businesses are demanding more and better travel options.
- Transportation decisions impact our communities and the environment, and we should make them responsibly.
- Access to jobs and opportunity is an issue of equity.
- Traditional transportation needs are greater than the resources available. We need to innovate and make strategic decisions.

Generally, the region will focus on providing a transportation system that provides affordable options, so that the greatest benefit is felt broadly by all travelers. The first priority will be to maintain existing infrastructure. Additional investments will be focused and deliberate, to maximize the existing system through efficiencies and providing the best user experience the region can afford.

1. Land use and development patterns affect our stewardship of the transportation system

Our region's land use and development patterns have a direct relationship to the development of the transportation system – and that pattern will continue. For example, early urban communities were defined by how far a person could walk or ride a streetcar. The advancement of affordable, private automobiles greatly expanded the distance the average person could travel daily. This resulted in a greater rate of land consumption for urban growth throughout the second half of the 20th century. The region's suburbs primarily developed around automobiles and as a result, private automobiles are now often the only practical travel mode for most of the region's residents.

To be sure, this growth has had its benefits – it's created convenient connections between urban and natural areas, such as the ever-popular regional parks system, and sustained economic development and job creation throughout the metropolitan area. From a household perspective, it has also resulted in a high rate of homeownership for this region when compared to large metro areas across the nation.

However, the benefits of this kind of growth do not come without challenges – challenges that require a different approach to urban development. The region will continue to grow outward on its edges and upward in the redeveloping parts of the region. To the extent the region can seize these opportunities and plan for land use and development patterns that support transit, bicycling, and walking, and allow for multiple modes will determine its long-term success within reasonably available financial resources.

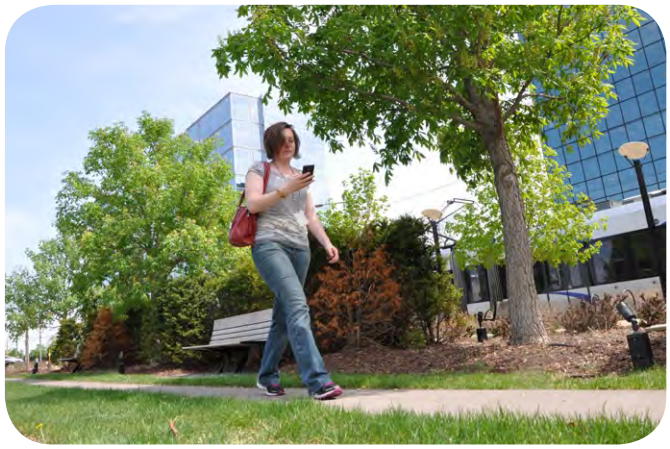
All investments should benefit multiple modes and support the different development patterns needed for the long-term success of the region.

2. Transportation investments can help sustain and strengthen our region's economic competitiveness

The Council's regional planning for sewers, transit, and parks help set the stage for our region's economic competitiveness. The region's industries, businesses, and workforce depend on a transportation system that is efficient, predictable, and reliable. A strong transportation system helps to keep and attract prosperous businesses and a talented workforce, and supports the mobility of all its residents, including the young, people with disabilities, and the elderly. As detailed in *Thrive MSP 2040*, our region needs to invest in a transportation system that serves the generations of today and tomorrow, while attracting talent and businesses looking for a place to prosper.

A mix of dense, compact communities and still developing communities provides important opportunities for moving freight, appropriately locating hubs and industrial areas, and assuring a diverse mix of business, industry, and activity. In addition, our connections to places beyond the region also foster our growth and economic prosperity and will be strengthened by investing in important state and upper Midwest transportation corridors, reducing the impacts of highway congestion on freight, and supporting a regional airport system with a strong national and international hub at the Minneapolis-Saint Paul airport.

A good transportation system is high on the list of employers' needs and requirements. Employers value a good transportation system both for connecting efficiently with customers and suppliers, and also for attracting and retaining a talented workforce that has a safe, pleasant, and reliable commute and high quality of life. And while historically those businesses have located in the central cities, employment has been growing outside the central cities over the past several decades, making the need for transportation choices that much greater. People throughout the region are now advocating for expanded regional transit, bicycle, and pedestrian systems, and efficient, reliable options on the highway system.



3. The region's population and employment are going to grow, leading to more travel

Recent trends show that people in the region are traveling less. In the decade from 2000-2010, the number of trips taken and the number of miles driven per person decreased. There are many reasons for these changes, including:

- Unemployment and economic uncertainty around the 2008 recession
- Fuel price volatility
- Preferences for transit and non-motorized travel among younger demographic groups
- Minimal population growth
- Low employment growth
- Growth in online commerce and communication

The multi-decade trend of employment increases (especially due to women entering the workforce) and corresponding increases in trips taken and number of vehicles per household seems to be flattening out or decreasing. Nevertheless, anticipated population and employment growth means overall travel in the region will increase. Even if people continue to make fewer trips individually (because of lifestyle choices, technology, etc.), total regional travel is expected to increase. This growth will impact those communities that are growing as well as those already established communities where the bulk of the region's population and jobs exist.

In addition, the region will experience a much greater portion of population growth than experienced in the past among the following household groups: people older than 65, households without children, and single-person households. The region will need to prepare for how this phenomenon will change travel demand.

4. Highway congestion is a reality of our economic growth and can be managed and eased

Recent analysis estimates that the forecasted population and job growth will increase highway congestion. While serving as evidence of a vibrant regional economy, congestion also has monetary and social costs: wasted time and fuel that add up to real dollars for people, businesses, and communities, as well as direct impacts on quality of life, air quality, and climate change.

REGIONAL CONGESTION MANAGEMENT STRATEGIES SAVED TWIN CITIES COMMUTERS ALMOST:

- 6 million hours of time in a car in 2011
- $122 million in time and fuel costs

Congestion can't be eliminated, but it can be managed or eased. And the Twin Cities has valuable experience in highway congestion management and mitigation. The primary strategic, economical, and practical approaches to highway congestion in the region will continue to involve the following: buidling on our highway management and congestion mitigation experience, using tactics to integrate advancements in technology, managing and mitigating congestion, encouraging alternative travel options and creating efficiencies in the system.

See Chapter 12 and the Congestion Management Process for more detail and discussion of highway congestion management.

The Twin Cities area, like most metropolitan areas across the country, has a transportation system that is negatively impacting air quality, and contributing to climate change.

5. People and businesses are demanding more and better travel options

In public meetings, workshops, and open houses throughout the region, Twin Cities residents, businesses, and leaders have expressed a desire for more and better choices in housing and transportation – both of which have tremendous impacts on a person's quality of life. They want more connected communities, with more robust transportation choices, including better connections between modes that allow for safe bicycling and walking to and from destinations. And external studies back them up – more compact and connected regions offer residents greater transportation options, safer and healthier communities, and greater and more equitable access to opportunity.

Anticipated growth in the numbers of people older than 65 and younger professionals also suggests additional demand for denser, more compact communities with ample access to amenities and transportation options. Both of these populations are expressing a preference for a less car-dependent lifestyle and for living in well-connected, more urban, walkable neighborhoods that are well served by transit, or transit-supportive development. Other populations that would greatly benefit from living, working, and attending school in more walkable neighborhoods are people with disabilities, with limited incomes, and the young.

See Chapter 2 for more detailed strategies and opportunities to provide options for a growing population and workforce.

6. Transportation decisions impact our communities and the environment, and we should make them responsibly

In the not-too-distant past, transportation projects reflected the rise in access to personal vehicles by focusing on major highway investment, which led to fewer transit options for many, and disproportionally affected communities of color, and people with disabilities and low incomes. Highways sometimes severed communities and created barriers, often failing to provide safe and convenient pedestrian and bicycle infrastructure, and other mitigating design considerations. These disproportionately negative impacts are unacceptable. Federal Environmental Justice regulations and the *Thrive MSP 2040* focus on equity will highlight the protection and enhancement of these historically disadvantaged communities wherever transportation projects are being considered.

The Twin Cities area, like most metropolitan areas across the country, has a transportation system that is negatively impacting air quality, and contributing to climate change. Transportation accounts for 25% of greenhouse house gas emissions in the region.

The Council acknowledges the state's goals for greenhouse gas reduction adopted in 2007's Next Generation Energy Act. By tracking regional greenhouse gas emissions, we will identify opportunities for emissions reduction in the region.

Improvements in technologies that change energy consumption and increase fuel efficiencies – largely relying on car manufacturers and federal regulation – will have the greatest impact on transportation emissions that contribute to climate change. Reducing the number of vehicle miles traveled also has a positive impact on air quality in the region. Alternative transportation options such as transit, bicycling, and walking help to remove cars from the road and also promote a more active lifestyle. Barge and rail freight provide cost-effective global access for heavier products going longer distances.

Many transportation-related air pollutants disproportionately affect people who tend to live near busy and congested highways and other major roadways. The goals and strategies in this plan – particularly the ones related to congestion management – are aimed at increasing access to transit in busy corridors and easing congestion without the construction of additional lanes. These strategies will have positive effects on air quality and their related health impacts including asthma and heart disease.

Many of those actions, where it is possible, are being mitigated. Transit advantages including MnPASS and bus-only shoulder lanes, sidewalks, bicycle and pedestrian bridges, bike

lanes, noise walls, and landscaping are helping to mitigate many impacts and encourage more active lifestyles. The regional bus network provides wide geographic coverage, the light rail and bus rapid transit system is being planned and built, and Minneapolis and Saint Paul are studying the possibility of bringing streetcars back. Transportation projects are now more about providing travel options, enhancing and serving communities, and providing transportation access to populations of all ages, incomes, and abilities.

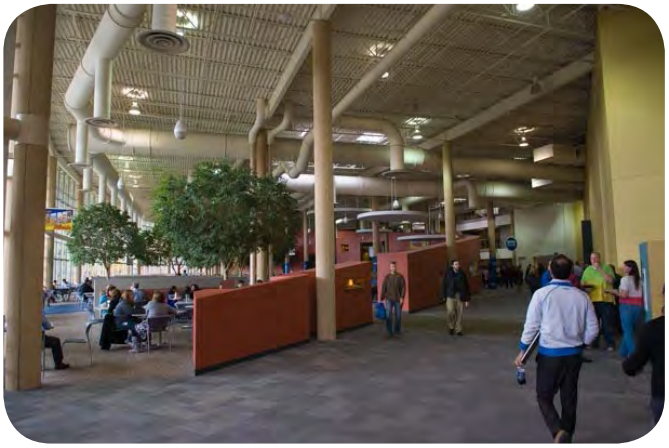
7. Access to jobs and opportunity is an issue of equity

Until the 1970s, the majority of jobs were located in Saint Paul and Minneapolis. Transportation infrastructure was oriented to bring commuters into the downtowns. Starting in the 1970s and 1980s, employment centers began to decentralize, essentially following cheap land resulting from expansion of the highway system, and were less likely to be accessible by multiple transportation modes because suburb-to-suburb transit connections were not well established.

Suburb-to-suburb transit, transit within suburban areas, and local bicycle and pedestrian systems have improved, but the nature of the suburban land form make it impossible to cost-effectively serve every neighborhood, development, or suburban employer with transit. Over the next 30 years, it will become more important to optimize the transit and supporting local pedestrian system and reduce the amount of time each rider spends reaching the desired destination.

More frequent and efficient transit service to suburban job centers supported by local bicycle and pedestrian systems will create greater prosperity for all, particularly benefiting low-income populations who may not be able to afford a personal vehicle or could otherwise spend their limited resources on other expenses, such as housing.

People in compact and connected metropolitan areas spend less of their household income on the combined costs of housing and transportation. Providing greater transportation choices will help provide greater access to opportunity for all the region's residents.



8. Traditional transportation needs are greater than the resources available. We need to innovate and make strategic decisions

There is no shortage of public projects that many would like to see completed to improve the quality of life for residents and businesses – transportation, housing, parks, wastewater treatment, and the list goes on. But the reality is that even in the best times public dollars are limited and projects must be prioritized.

First, some revenue sources are not stable. Gas tax revenues, which are a major source of roadway funding, are forecast to begin falling after 2018, largely because of the continued improvement of fuel-efficient cars, and a continuation of the more recent decline in miles driven per person may further reduce anticipated gas tax revenues. In addition, Minnesotans are keeping their vehicles longer, reducing motor vehicle registration and motor vehicle sales tax receipts, another major source of highway and transit funding.

Second, costs are rising to operate, maintain, and rebuild the transportation system we have – everything from the bus fleet to bridges to airport runways. The region also has an extensive bus transit system that serves the region's urban center relatively well, but has room for improvement – particularly in suburban areas and in the still-emerging light rail and bus rapid transit services. This plan includes an Increased Revenue Scenario that is consistent with the vision established by the Transportation Funding Advisory Committee – which notes the need for more revenue to meet identified needs.

The Council will continue to work with regional partners to identify additional funding for the region's transportation system needs.

While limited financial resources are a fact of life, this plan emphasizes the importance of improving transportation in our region through investments benefitting multiple modes, including highways with MnPASS options, local and express bus service, transitways, a regional bicycle transportation network, and a local pedestrian system with broad benefit to all travelers.

The Council will intentionally consider regional balance when advancing transportation projects - that is, balancing its investments and activities across the region - in its planning, operations, and investment decisions. The Council's intent is that no part of the region is consistently favored or consistent ignored. Because development patterns vary across the region, advancing regional balance does not guarantee that all parts of the region will receive the same level of intensity of investments, activity, or attention. Rather advancing regional balance will be a consideration that helps all parts of the region receive investments that promote prosperity at their stage and level of development.

This plan also places priority on projects that promote flexibility and the region's ability to adapt to change. We know that future advancements in technology will change, how and why people will travel and goods will move in the future. This plan continues positioning the region to support advancements in technology, incorporate them, and respond to their effects as we better understand their impact.


DOWNTOWN
METRO
SATURDAY
NITE

F. Twin Cities Region Transportation Goals, Objectives, Strategies

This plan identifies eight key challenges facing the region's transportation system and how they affect everything from economic success on a national and global scale to our quality of life. The region's transportation system can directly contribute to the vision in *Thrive MSP 2040* of a more equitable, prosperous and sustainable place to live, work, and play.

The Council – with input from businesses, the public, partner agencies, and local elected officials – have identified six broad goals for the regional transportation system, including a framework for how to achieve them. Consistent with federal requirements, the Council is also working to develop performance measures and targets to evaluate the effectiveness of our region's actions on achieving these goals.

Following are the six transportation goals, their corresponding objectives, and a summary of the strategies that will be used to achieve them. Chapter 2 elaborates more specifically on the strategies each mode will use to realize the goals and objectives. Chapter 12 identifies the performance measures that will be used to evaluate the effectiveness of the strategies.

GOALS are broad statements of aspiration that describe a desired future for the region's transportation system.

OBJECTIVES represent achievable outcomes that together help to realize a goal within the timeframe of the plan.

STRATEGIES identify how objectives will be met through specific actions, including who is responsible.

PERFORMANCE MEASURES are things that can be measured to determine if a strategy is working.

Goals

Goal: Transportation System Stewardship

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 connect people and freight to destinations.

KEY TAKEAWAYS:

The transportation system is extensive and represents a significant investment over multiple generations. Most resources in this plan will be dedicated to operating, maintaining, and rebuilding what already exists.

To maximize investments, this plan supports making the system more efficient and effective and providing for the best user-experience the region can afford.

The region needs to focus on investments that have the greatest benefit for all users of the transportation system: residents, businesses, and people of all ages, abilities, and backgrounds.

The public has invested heavily in its transportation system. Its preservation, maintenance, and operation are important to protect this investment for generations to come.

Currently, approximately $275 million to $350 million of the region's state highway funds and $550 million of transit funds are spent annually for maintenance, operation, repair and replacement of the existing system, including major infrastructure such as pavement, bridges, the bus and rail fleet, park-and-rides, transit stations, stops and shelters. Climate-related severe weather events such as flooding and colder winters will continue to have impacts on regional transportation infrastructure. Continued and enhanced system maintenance, repair, and preservation will help to increase resiliency of regional infrastructure.

Maintenance includes activities such as repairing buses, maintaining landscaping, clearing snow, ice, and debris from roadways, and building and maintaining transit facilities, sidewalks and all-season trails. Preservation includes the repair or replacement of pavement, bridges, transit infrastructure and other infrastructure to support the safe and efficient use of these facilities. Operations includes MnDOT's freeway incident response (those bright green trucks that come help when people run out of gas, etc.), traffic signal operations, and operation of the regional traffic management center (including the variable message signs and advisory speeds). Transit operations include the day-to-day service of buses, light rail, commuter rail, Metro Mobility and Transit Link dial-a-ride service.

An important part of stewardship is getting the most out of the investments made in the transportation system. During maintenance and preservation projects, there are often opportunities to integrate other improvements at a lower cost. These improvements can lead to better user experiences – for example, safer roads, less congestion, or better sidewalk connections. Initial capital improvements can also create efficiencies in long-term operations and maintenance. For example, investing in automated card-swipe technology for transit produces cost savings over the long-term by speeding up service and creating a better customer experience that attracts more riders.

System stewardship includes assessing the performance of the system and the level of satisfaction that its users are experiencing, and making adjustments as necessary to continually improve performance and service.

These performance assessments should consider whether an element of the transportation system is needed. Cases may arise where the best overall stewardship of the transportation system may be removal of an element, rather than continuing to expend limited funds in maintaining it.

Measuring Performance

Examples of performance measures that could be used to measure successful stewardship of the transportation system include:

- Highway pavement conditions
- Bridge conditions
- Condition of transit fleet (buses and trains)

Related Thrive Outcome: **Stewardship, Prosperity**

Goal: Safety and Security

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

Objectives:

A. Reduce 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.

KEY TAKEAWAYS:

Safety and security are at the heart of providing a comfortable, trustworthy system and will be a focus in all areas of transportation investments.

Safety and security include identifying and addressing areas with existing safety and security concerns and building a transportation system that avoids future problems.

Increasing the safety and security of people using the region's transportation system is the most fundamental goal of all agencies that deal with the system. Providing a safe and secure transportation system requires considerations at all stages of development from planning to operations. An important part of providing safety and security is understanding which areas are more vulnerable and why. Using data and analysis to identify these areas will help the region give highest priority to the greatest risks and proactively avoid creating new vulnerabilities.

The number of fatal and serious injury traffic crashes in the region has been decreasing, but there is room for improvement. The Council will join its partners, including MnDOT, the Minnesota Department of Public Safety, the Minnesota Department of Health and local jurisdictions to advance the Toward Zero Deaths Program.

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

Safety and security on transit is as much about the perception of safety, including providing environments that feel safer through lighting, design, and technology such as cameras. The region has installed cameras onboard buses and trains, and in some stations, and has its own Metro Transit police force that collaborates with local enforcement agencies to respond to incidents quickly and effectively.

Rail freight incidents occur less frequently than truck freight incidents, but tend to have a high profile, often causing more or having the potential to cause more fatalities, injuries, and damage to property per incident. Of recent concern is the rise in oil freight trains passing through the region. The Federal Railroad Administration has developed a National Rail Safety Action Plan that identifies safety improvements railroad companies need to take, such as improving or eliminating at-grade crossings. Other measures include maintaining sufficient right-of-way in case there is a spill or derailment. Another important rail freight safety and security issue includes trespassing pedestrians and cyclists who are looking for short-cuts. Nationally, over 500 people die each year in trespassing-related incidents. These trespassers also pose a security threat when there are shipments of a hazardous nature such as dangerous chemicals or nuclear materials.

Measuring Performance

Examples of performance measures that could be used to measure improved safety and security include:

- Number and rate of crashes
- Number and rate of serious injuries and fatalities

Related Thrive Outcomes: **Stewardship, Livability, Equity**

Goal: Access to Destinations

People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects 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 transit ridership and the share of trips taken using transit, bicycling and walking.

E. Improve multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically underrepresented populations.

KEY TAKEAWAYS:

The region will focus on providing a transportation system that offers practical and affordable options, so all users, regardless of their social or economic background, can get to the places they need to go.

This plan emphasizes the importance of improving and expanding transportation options through investments in a multimodal system of highways with MnPASS options, local and express bus service, transitways, a regional bicycle system, and a local pedestrian system.

An emphasis of the plan is providing a transportation system that connects people to jobs, activity, and opportunity and supports a regionally balanced approach to investment and prosperity.

Providing access is the fundamental purpose of transportation for people and businesses. There are ways in which access can be better provided and there are barriers to good access that need to be managed or eliminated.

Highway congestion is a reality of all transportation systems. While it is an inconvenience, it is also a sign of economic health. With both population and employment forecast to increase and a highway system that is well developed and managed, congestion management and mitigation for people and freight must include improvements to both state and local

highways and practical options for multimodal travel. Examples of highway improvements include using technology to help manage the flow of traffic during rush hours and to clear incidents quickly, MnPASS lanes, and spot mobility or strategic capacity enhancements to state and local highways.

Multimodal options include a variety of transit services from bus and train service to dial-a-ride or shared ride, as well as bicycling and walking. Heavily traveled corridors will provide advantages to transit through bus-only shoulders, ramp meter bypasses, and park-and-ride lots. MnPASS lanes are free for cars with two or more passengers, and will also be a congestion-free lane for transit. MnPASS will also provide a priced option for single-occupant vehicles and small delivery trucks. Bicycle and pedestrian infrastructure will continue to be improved throughout the region with the aim of increasing access, connectivity, and safety.

The lack of access to more frequent and convenient transit disproportionally affects historically underrepresented populations such as those with low incomes, people with disabilities, and communities of color as well as populations that can't drive or don't have access to a car. Improving transit options and accessibility for these populations increases opportunities for employment, education, and training.

Efficient freight transport through and within the region is vital to economic competitiveness. Freight-related infrastructure such as ports and intermodal rail yards should be protected because it is expensive to relocate and recreate the facilities. Many of these facilities are located near highways for easy access through and beyond the region.

Measuring Performance

Examples of performance measures that could be used to measure improved mobility and access to destinations include:

- Average annual hours of delay per capita
- Transit ridership
- Number of miles of managed lanes (MnPASS)
- Number of miles of bus-only shoulder lanes

Related Thrive Outcomes: Equity, Livability, Prosperity

Goal: Competitive Economy

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.

KEY TAKEAWAYS:

The plan directs investments so the transportation system will serve the generations of today and tomorrow and attract talent and businesses looking for a place to prosper.

This plan expands the regional transit and bicycle systems and provides reliable options on the highway system to keep the region competitive.

Our connections to places beyond the region that foster its growth and economic prosperity will be strengthened by corridors that connect us statewide and beyond, reducing the impacts of congestion on freight corridors and supporting a strong airport system with national and international connections.

A good transportation system is fundamental to a robust and thriving economy. To continue being competitive, the region must shift its focus to operating and maintaining what we have while at the same time creating a more multimodal system that provides all its residents and businesses choices in how they or their freight moves from point A to point B. Providing practical options to the single-occupant car benefits everyone, including those who want to drive and never use another mode. Providing people safe and convenient transportation choices such as walking, bicycling, and transit can remove cars from highways and streets, and increases quality of life for everyone.

An integrated multimodal transportation system helps to retain and grow existing businesses and industries, and attracts new ones. It also retains and attracts talent, which the market shows is increasingly seeking a less car-dependent lifestyle. The region will focus on investing in a multimodal system that builds on its well developed highway system to expand and better integrate transit, bicycling, and walking improvements that support and strengthen the region's economy.

Thrive MSP 2040 has identified 42 job concentrations as of 2011. These job concentrations are contiguous areas that have at least 7,000 jobs at a net density of at least 10 jobs per acre. The Council will continue to monitor employment patterns to identify new concentrations that meet these criteria. Transportation priorities should be geared toward providing good access to these concentrations while still addressing emerging needs in other areas. Freight terminals throughout the region are also key commercial infrastructure.

As mentioned before, efficient freight movement is vital to the region's economy, especially maintaining existing freight infrastructure, which is often difficult and expensive to reproduce. Wherever possible, communities should identify and preserve land near highways for certain freight movement, particularly in existing industrial areas.

Measuring Performance

Examples of performance measures that could be used to measure the state of the regional economy include:

- Average travel time to reach job concentrations during rush hour

Related Thrive Outcomes: Prosperity, Livability, Sustainability

Goal: Healthy Environment

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 and active car-free lifestyles.

D. Provide a transportation system that promotes community cohesion and connectivity for people of all ages and abilities, particularly for historically under represented populations.

KEY TAKEAWAYS:

The plan works toward state and regional goals for greenhouse gas and air pollutant emissions by factoring these considerations into the Council's operations and investment priorities and starting a dialogue on how all the region's partners, including local governments, can contribute to these efforts.

The plan will support a transportation system that considers the needs of all potential users while promoting the environmental and health benefits of transportation options like carpooling, transit, bicycling, and walking.

Investments in the transportation system will protect and enhance the natural, cultural, and developed environments, and will be identified through effective engagement with affected communities.

A special emphasis will be put on avoiding, minimizing and mitigating impacts on people and the environment, especially disproportionately high and adverse impacts to people of color or people with low incomes.

There are a number of ways to define health and environment in ways that are relevant to transportation and the region's development. For example, health can include the physical well-being of people, the quality of the biophysical environment, or the potential for social capital for an entire community. Examples of environment include the natural environment, the air we breathe, the water we drink and play in, the weather we experience, the characteristics of the neighborhood we live in, and the built infrastructure of roads, bridges, buildings and the like. All of these are important and both impact transportation and react to transportation, some more than others. A healthy environment is one where impacts are considered and mitigated in as many ways as we can afford.

Transportation has an enormous impact on air quality. The region's transportation-related pollutant emissions account for:

- 68% of carbon monoxide emissions
- 40% of nitrogen oxide emissions (toxic by itself and an ozone precursor)
- 32% of volatile organic compound emissions
- 5% of particulate matter (small particles of pollution in the air that can be inhaled)

The region has been considered to be in "maintenance" or "attainment" since 1999 for all transportation-related pollutants regulated by the federal government – meaning it meets the Environmental Protection Agency's (EPA) acceptable standards for certain pollutants in the air. While the region has not exceeded the federal standards for fine particulate matter and ozone concentrations, current concentrations of those pollutants in the region reach 80% of standards. This points toward a need to further reduce transportation-related air pollution, most importantly to improve human health but also to avoid violating federal standards. Additionally, transportation accounts for one quarter of statewide greenhouse gas emissions, contributing to global climate change. The region supports state efforts to reduce all greenhouse gas emissions to 80% below 2005 levels by 2050.

The region will consider air pollutant and greenhouse gas emission information as it makes investments with a target of helping to reduce transportation's contribution, particularly by supporting transportation options such as carpooling, transit, bicycling, walking, and shipping freight by rail or barge. The region will also develop more efficient land use and development patterns that contribute to lower pollutant and greenhouse gas emissions. But all of these will be the starting point for a broader conversation with local, regional, state, and federal partners about how the region can be more sustainable in its decision-making and outcomes.

If not appropriately managed, transportation construction and operations can significantly and negatively impact communities, including noise, pollution, and inaccessibility due to lane or sidewalk closures. It is critical for regional transportation providers to coordinate with each other, communities, and other organizations such as Transportation Management Organizations (TMOs) to help mitigate the effects of construction on residents, businesses, pedestrians, bicyclists, and drivers. Some actions include:

- Signage, detours, and maintenance of access for pedestrians and bicyclists
- Incentives to construction companies for off-peak construction times such as at night or on the weekends, where appropriate
- Financial and/or marketing support to affected businesses

Transportation can play a significant role in fostering personal and community health by increasing pedestrian and bicycle infrastructure, including the connectivity of these facilities region-wide. Many residents in the region want the option of walking or bicycling to work, school, errands, and appointments but do not feel they have safe routes. The Council will continue to promote bicycle and pedestrian infrastructure including planning with communities to enhance, close gaps, and make critical connections in the system region-wide. Walkable and bikeable communities also tend to have healthier residents.

During the development of the Interstate system, communities of color and low-income communities were disproportionally affected. Many communities were severed. Streets and walkways that connected different parts of a neighborhood were interrupted by limited-access freeways. The legacy of the Interstate system has been both positive and negative as already discussed in this overview. One of many goals moving forward is to help re-establish neighborhood connections that were lost, and design new transportation projects with an eye toward community cohesion, accessibility, and appropriate size and scale for people inside and outside motor vehicles.

An example in our region was development of I-94 through the Rondo neighborhood in St. Paul. The freeway completely severed a historically vibrant and thriving African-American neighborhood, which both destroyed community connections and eliminated opportunities for financial prosperity, as residents were separated from businesses and services, and those businesses were separated from a key market, necessary to their success. Were the project proposed today, it would probably fail on the grounds that it disproportionately affected a historically underrepresented community.

While some may argue that our institutions don't propose projects like what happened in Rondo anymore, it's important to understand that transportation investments must connect communities and enhance access to opportunities rather than disconnecting them, and making it more difficult to access jobs and opportunities. And it's also important to assure that the people potentially affected by these projects and investments have an opportunity to assess the impact on their own communities to influence the ultimate decision.

Another example of highway infrastructure that provides important connections in this region, but also has an unintended consequence of creating a barrier for area residents is along State Highway 77 in Bloomington. The numerous, good-paying jobs available at the Mall of America are exceedingly difficult for residents just west of the Highway 77/ Interstate 494 interchange to access. A project to create a roadway from that neighborhood to the mall and surrounding businesses provided a safe solution to that barrier - for motorists, transit, bicyclists and pedestrians. This is a great example of an innovative solution that mitigated the impact of the larger transportation system project.

Without these considerations, whether near an area of concentrated poverty or simply involving a portion of a community that could benefit from access to jobs and commerce, our investments may not be achieving equitable outcomes.

Measuring Performance

Examples of performance measures that could be used to measure the state of the environment include:

- Transportation-related emissions such as carbon monoxide and particulate matter
- Vehicle-miles traveled per capita
- Number of crashes involving pedestrians
- Number of crashes involving bicycles

Related Thrive Outcomes: **Stewardship, Equity, Livability, Sustainability**

Goal: Leveraging Transportation Investment to Guide Land Use

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.

KEY TAKEAWAYS:

The Council will partner with local governments responsible for planning and implementing the land use and local infrastructure needed to support *Thrive MSP 2040*. Local governments will prepare comprehensive plans that address the policies in *Thrive MSP 2040* and system plans.

The plan emphasizes the importance of job concentrations and nodes along transportation corridors and the need for local governments to plan for more dense development and diverse uses especially in these areas. The plan also emphasizes the importance of freight terminals and corridors and their relationship to land use planning.

The plan will ensure that local government land use policies allow for the creation of livable communities that support stewardship and sustainability of the transportation system and the prosperity and livability of our region. This includes:

- Planning and implementing an ample system of interconnected local highways and streets
- Supporting higher expectations for land use around transit stations
- Including bicycle and pedestrian elements, and supportive tools in comprehensive plans
- Planning for the long-term needs of freight modes such trucks, barges, and railroads
- Balancing the needs of the aviation system with local land use decisions

This plan describes relationships between land use and transportation, and the importance of coordinating strategic planning for both. This coordination requires strong partnerships between the Council, MnDOT, other regional transportation partners, and local communities that plan for land use, regulate its implementation, and provide the local transportation system. These important relationships impact the sustainability and stewardship of our natural, cultural, and fiscal resources. They impact our choices for where we live, how we travel, and how we ship our freight.

To guide our growth equitably, efficiently, and sustainably, the Council will continue to collaborate with communities on their local plans to support their development and growth in ways that best meet their needs and the needs of the regional *Thrive MSP 2040* vision.

The intersection of land use, urban form, and the transportation system shapes the effectiveness of stewardship of transportation investments. The Council will work with local governments to align development patterns and highway investments by focusing growth and investment along corridors with strong potential for future transit or managed lanes. Areas outside these corridors may continue to develop but will receive only limited investments from federal or state sources for new or expanded highways.

An important emphasis of *Thrive MSP 2040* is encouraging local communities to guide denser and more mixed-use development to job concentrations and nodes along corridors. This will provide greater housing options near jobs and activities that are cost-effectively supported by highways, streets, transit, bicycling, and walking, creating more livable communities where the market demands them. Local communities can also identify local centers to emphasize for this type of development.

"I can't go to the Ordway, a movie, a baseball game, unless it's an afternoon game. Usually those are on weekends and there is no service on the weekends."

– Sean Hade, Twin Cities resident

The region is changing its focus from expanding the highway system to operating and maintaining it and investing in an expanded network of transitways supported by strong bicycle and pedestrian systems. To correspond, local governments should plan for higher intensity land use near transitways, including:

- A mix of housing choices, retail, and other commercial uses around station areas, known as transit-oriented development.
- More walkable and bikeable communities where residents can choose to use their car less (or not at all) to go shopping, get to a transit stop or station, get to work and school, and recreation areas.
- Building housing and commercial developments that are denser to create more successful and efficient transit service areas, including providing more transit service.
- Providing a mix of housing choices, including affordable options near transit to accommodate youth, the elderly, and populations looking for an alternative to driving.

Thrive MSP 2040 also emphasizes the significance, to our region's prosperity, of continuing to move freight efficiently. Our highway, railroad, river, and aviation systems will continue to be the foundation for these important freight movements. Freight infrastructure and land use – particularly riverfront and rail-accessible facilities – are difficult and expensive to re-establish.

Just as with freight-related land uses and infrastructure, the region's airports are important to the flow of commerce and people. Communities, businesses and aviation stakeholders should collaborate to:

- Limit residential and other incompatible land use encroachment near airports
- Limit negative impacts on adjacent communities including noise

Measuring Performance

Examples of performance measures that could be used to measure the alignment of transportation and land use include:

- Change in population and/or employment that are between ¼- to ½-mile of a transit stop (bus, light rail, bus rapid transit, etc.)
- The number of intersections per square mile

Related Thrive Outcomes: **Stewardship, Livability, Sustainability**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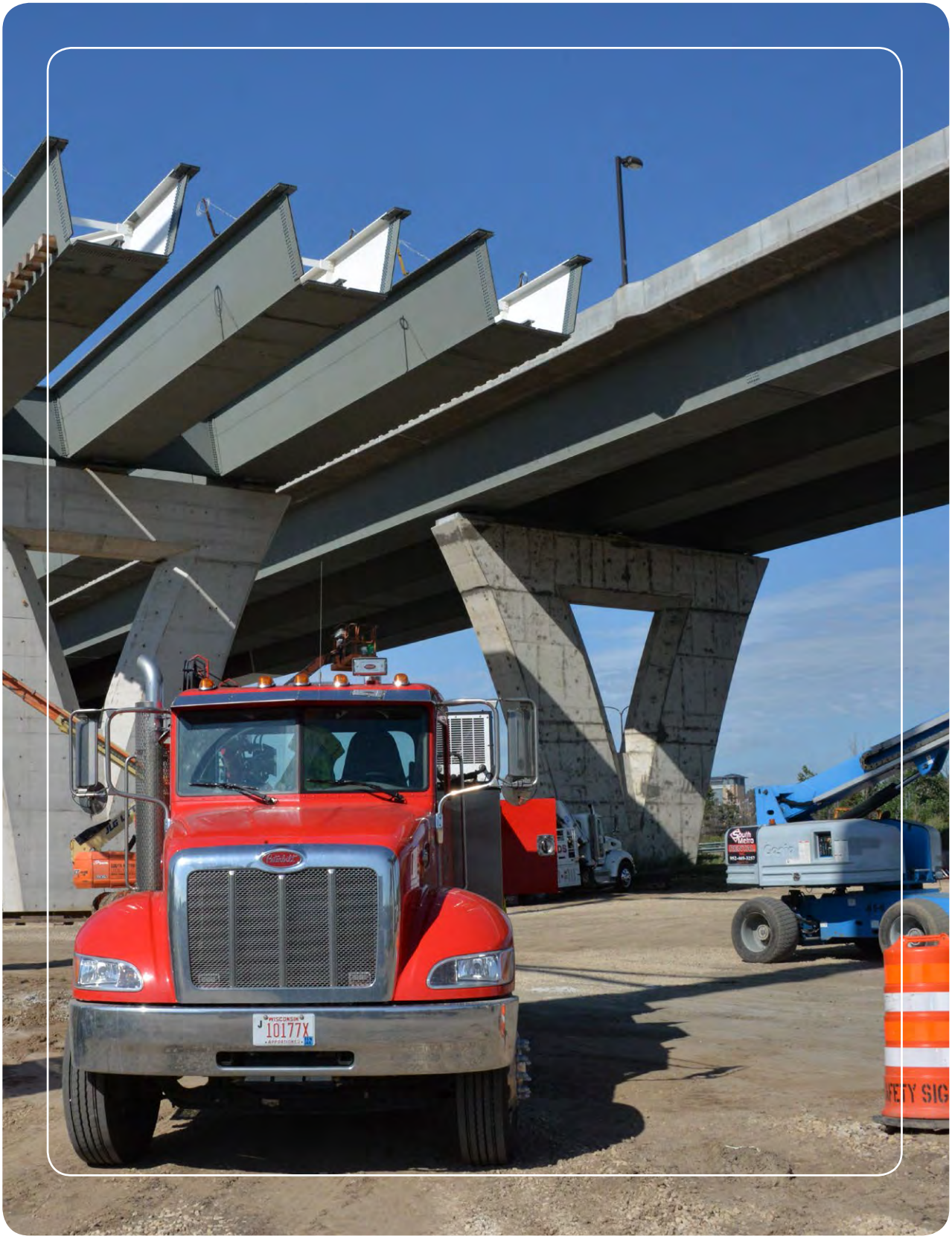
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G. Summary of Planned Investments

As with the Council's previous Transportation Policy Plan, inadequate transportation funding continues to be a major issue facing the region. If current transportation funding levels continue into the future, our state highway system performance will decline as costs continue to grow and available highway revenues increase at a rate significantly below inflation. While available transit revenues will allow for continuing our existing transit services, the region is not able to improve and expand the bus system, and capital and operating funding will only allow the region to slowly grow our transitway system.

With limited transportation dollars, as with any budget, priorities must be identified. During this plan's development process, the Council consulted with regional policymakers, partner agencies and the public to identify a balanced set of investment factors or criteria that could be used to determine priorities for investments in highways, and the bus and transitway systems. These key investment factors relate directly to attaining the regional outcomes established by *Thrive MSP 2040* and the goals and objectives in this plan. Investment factors are discussed in the summary of the highway and transit investments. For more information about the investment factors, see Chapters 5 and 6 later in the plan.

Two Funding Scenarios

This plan considers two funding scenarios:

1. The "Current Revenue Scenario" assumes revenues that can reasonably be expected to be available based on past experience. Under federal regulations this scenario is called "fiscally constrained." If increases in state or local taxes, or the availability of competitive funds, are assumed within the Current Revenue Scenario, the assumptions must be based on the region's past history and experience. The Current Revenue Scenario in this plan assumes only inflationary increases in the revenue sources - no increases in local, state or federal tax rates are assumed.

2. The "Increased Revenue Scenario" assumes revenues that the region might reasonably be able to attain through policy changes and decisions that increase local, state, or federal funding sources. Under federal regulations, the programs or projects in the Increased Revenue Scenario illustrate what might be achieved with additional revenues, but the projects are not considered part of the approved plan.

Figure 4: Regional Transportation Revenue and Spending 2015-2040

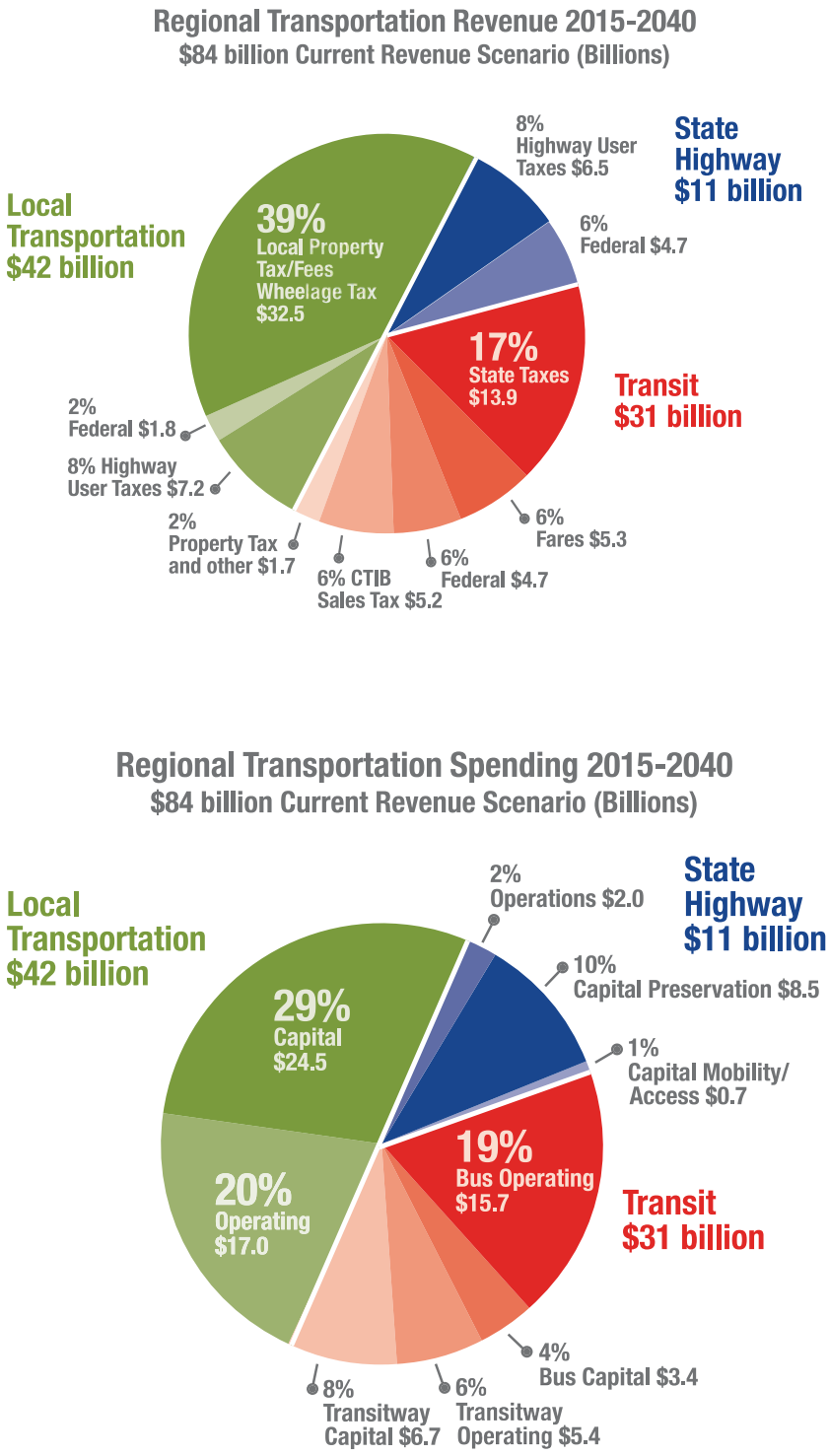


Figure 4 shows the metropolitan area revenues and spending estimated from 2015 to 2040 for all transportation purposes under the plan's Current Revenue Scenario. Over the 26 years of the plan, an estimated $84 billion will be available for transportation purposes region-wide. Regional transportation revenues and spending are categorized into three broad types: local transportation, state highways and transit.

- Local transportation includes revenues and spending by cities and counties on local roads and streets, and the local bicycle and pedestrian systems.
- The state highways category includes revenues and spending on the state highway system implemented and operated by MnDOT in the metropolitan area.
- The transit category includes revenues and expenditures by all regional transit providers, the Counties Transit Improvement Board and local governments for the bus and transitway systems.

Regional Transportation Revenues

Funds for regional transportation come from local, state, and federal sources and are raised through a variety of user taxes and fees, general state and local taxes and federal funding allocations or competitive programs. The general breakdown of regional transportation funding is:

- Local sources (property taxes, CTIB sales tax, fares, other): 52%
- State taxes and fees: 34%
- Federal: 14%

Over the 26 years of this plan, the various funding sources are assumed to grow at varying rates depending on the source and history of the past revenues. The details on the revenue growth assumptions can be found in the "Transportation Finance" section (link here).

- Counties Transit Improvement Board (CTIB): Starting in April 2008, five counties – Anoka, Dakota, Hennepin, Ramsey and Washington – have used a quarter-cent sales tax and a $20 per-motor-vehicle sales tax, permitted by the Legislature, to invest in and advance transit projects by awarding annual capital and operating grants. The board works in collaboration with the Metropolitan Council and Carver and Scott counties.
- MVST- Motor Vehicle Sales Tax: In 2006 voters approved a constitutional amendment to allocate this revenue 60% to highways and 40% to transit statewide.

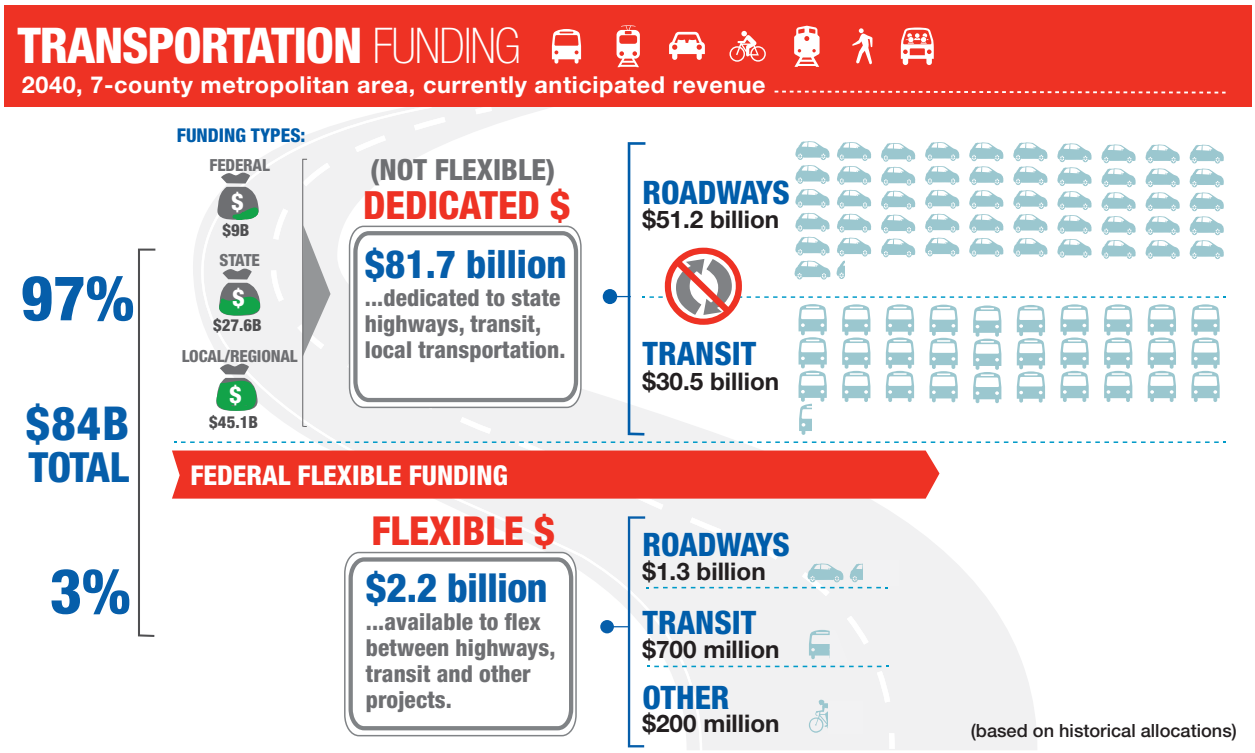
Regional Transportation Spending

Transportation expenditures can be broken generally into capital and operating expenditures for each of the local transportation, state highways and transit spending categories. Capital expenditures include major construction, reconstruction and improvement or replacement of transportation facilities. For highways and local transportation, operations expenditures include ongoing maintenance activities such as snowplowing, mowing, and preservation activities that do not involve major reconstruction.

Operations activities for transit are very different from roadway activities in that transit includes the costs of the daily operations of the transit system and the necessary vehicle, driver and maintenance associated with running the services. For roadways, these types of operational expenses are typically borne by private vehicle drivers and do not appear as public expenditures. Examples of this would include the purchase costs of the private vehicles, gasoline and diesel costs, insurance and vehicle maintenance costs. If accounted for, these private costs would significantly outweigh the public roadway expenditures.

Figure 5 illustrates the sources of transportation funding, and the percentages that are inflexible (97 percent), dedicated to highway and transit projects, and what is flexible (3 percent), through the Regional Solicitation.

Figure 5: Dedicated and Flexible Transporation Funding, 2015-2040



Highway Investment Summary

The "Highway Investment Direction and Plan" will continue to advance the investment direction set in the previous Transportation Policy Plan and the Minnesota State Highway Investment Plan published December 2013, including:

- Placing priority on safely operating, maintaining, and rebuilding the existing state highway system, including improvements to better accommodate bicycle and accessible pedestrian travel on highways, where appropriate
- Implementing mobility improvements such as traffic management technologies, spot mobility improvements, new or extended MnPASS (high-occupancy toll) lanes, and affordable strategic capacity enhancements
- Implementing lower cost/high return on investment projects to increase access to job concentrations, community amenities, and manufacturing and distribution concentrations

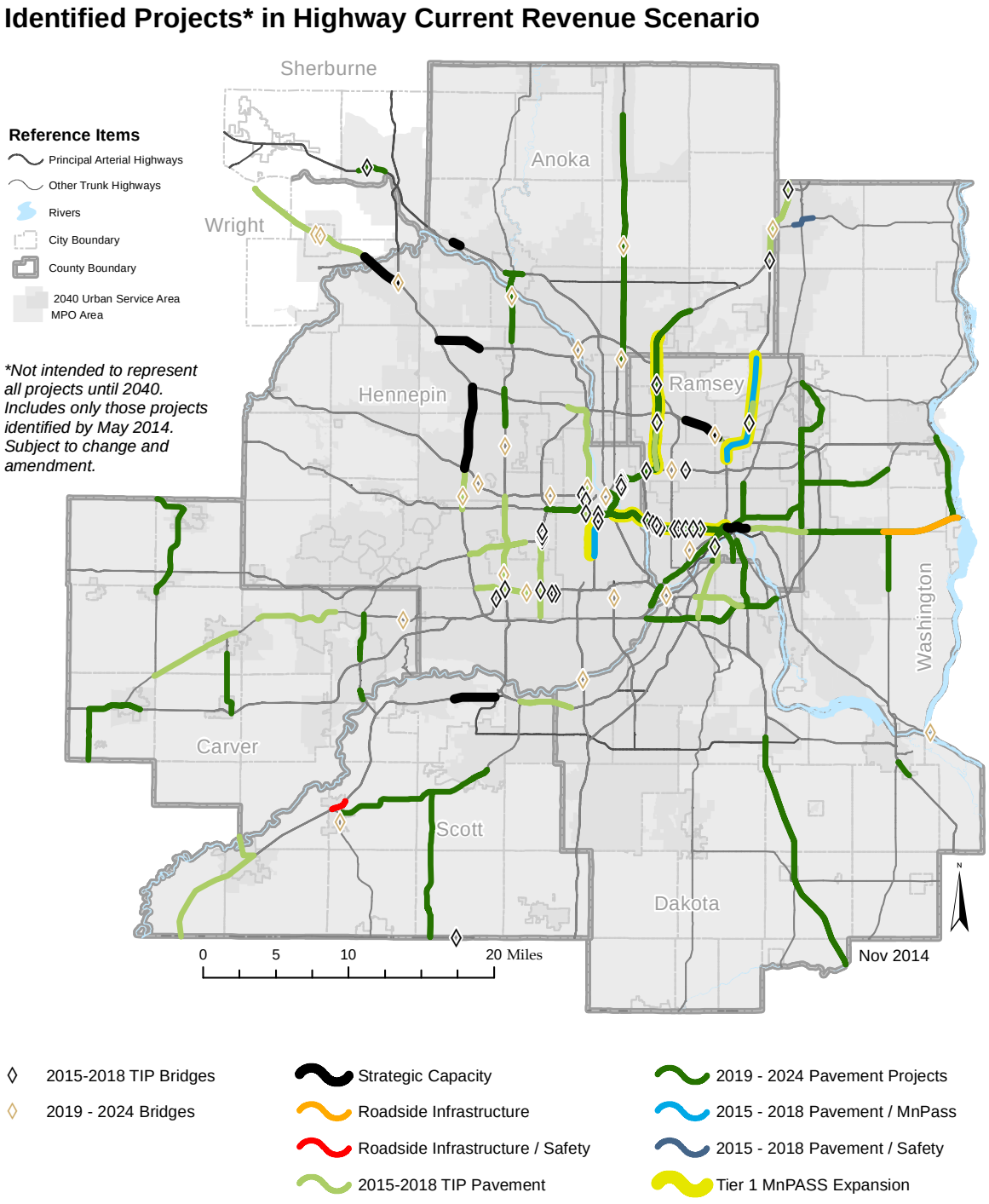
In the Current Revenue Scenario, as shown in Chapter 5 (Highway Investment Direction and Plan), $11 billion (dollars in year of expenditure) is anticipated to be available for state highway projects for the years 2015-2040. While this is a large amount of revenue, the statewide plan concluded it will not be adequate to fully fund the core functions of operating, maintaining and rebuilding the existing state highway system. And while these core functions must be performed, they are not enough to accommodate the growing region's highway needs.

The region must clearly prioritize the investments it makes in highway mobility and access with emphasis on investments that address multiple *Thrive MSP 2040* and Transportation Policy Plan goals and objectives. For more information, see Chapter 5.

Figure 6 illustrates the highway investments that have to date been identified in the 2015-2024 timeframe. This map will be updated as additional specific investments are identified in the future, but because of funding constraints, no state highway mobility projects are anticipated after 2024. This is approximately a 20% reduction in regional mobility funds from the previous transportation plan and is a result of updated estimates for revenue and project costs.

Additional information about the categories identified in Figure 6 can be found in the Highway Investment Direction and Plan section in Chapter 5 of this document.

Figure 6: Identified Highway Projects through 2024



OVERVIEW

Under the Increased Revenue Scenario, an additional $8 billion to $10 billion (in current dollars) above the Current Revenue Scenario spending levels would go toward the investment categories identified and would fund programs such as:

- Additional operations and maintenance funding needs, estimated at approximately $1 billion, about a 50% increase over current funding
- Increases in capital asset management (improving system performance) of approximately $2 billion to $2.5 billion, an approximately 35% increase over current spending levels
- Additional safety and highway-related bicycle and accessible pedestrian improvements at an estimated $600 million or almost a 100% increase over current spending
- Additional improvements for regional mobility and access projects of $4 billion to $5 billion, a very significant increase over current spending levels, considering the lack of mobility and access funding beyond 2024 under the Current Revenue Scenario

Table 1: State Highways Investment Summary

Current Revenue Scenario (Dollars in year of expenditure)					**Increased Revenue Scenario**
Investment category	**2015-2024 (10 years)**	**2025-2034 (10 years)**	**2035-2040 (6 years)**	**2015-2040 (26 years)**	**2015-2040 (26 years)**
Operations & Maintenance	$600 million	$800 million	$600 million	$2 billion	+ $1 billion
Capital Expenditures:					
Program Support	$400 million	$300 million	$200 million	$900 million	+$700 million
Rebuild and Replace Assets*	$1.8 billion	$3 billion	$2.1 billion	$6.9 billion	+ $2 – 2.5 billion
Safety, Bicycle, and Accessible Pedestrian Improvements	$200 million	$300 million	$200 million	$700 million	+ $600 million
Regional Mobility Improvements**	$700 million	$0	$0	$700 million	+ $4–5 billion
Total Highway	**$3.7 billion**	**$4.4 billion**	**$3.1 billion**	**$11.2 billion**	**+ $8 –10 billion**

* Asset management of pavement, bridge, and other roadside infrastructure
** Includes traffic management technologies, spot mobility improvements, MnPASS lanes, strategic capacity enhancements, and highway access investments

Table 1 identifies specific categories for state highway investments from 2015-2040.

Transit Investment Summary

The "Transit Investment Direction and Plan (Chapter 6)" includes about $31 billion (dollars in year of expenditure) of investments under the Current Revenue Scenario. An additional $7-9 billion (dollars in year of expenditure) is identified for potential investments in the Increased Revenue Scenario. The following is a description of the investments in each scenario for the bus and support system and the transitway system. The Transit Investment Plan Summary is shown in Table 2.

Current Revenue Scenario – Bus and Support System

- The region is able to operate and maintain the existing bus and support system.
- No expansion of bus service is available beyond the rapidly growing demand for Metro Mobility.
- There is limited capital expansion and modernization of the bus and support system facilities through preservation efforts and through competitive federal funds.

Current Revenue Scenario – Transitway System

Operating and maintaining the existing transitways, which include METRO Blue Line, METRO Green Line, METRO Red Line, and Northstar Line, is funded within the Current Revenue Scenario. Operational lines and transitway expansion included in the Current Revenue Scenario is depicted in Figure 7.

Specifically, in the first 10 years of the plan, funded transitway expansion will include:

- Building and operating four additional METRO lines and extending a fifth:
  - METRO Orange Line (I-35W South Bus Rapid Transit), opening around 2019
  - METRO Green Line Extension (Southwest Light Rail), opening around 2019
  - METRO Blue Line Extension (Bottineau Light Rail), opening around 2022
  - METRO Gold Line (Gateway dedicated bus rapid transit), opening around 2022
  - Extending METRO Red Line Stage 2, opening around 2019
- Building three arterial bus rapid transit lines every 2-3 years:
  - Snelling Avenue (Saint Paul, Roseville)
  - Penn Avenue (Minneapolis)
  - Chicago Emerson-Fremont avenues (Hennepin County)

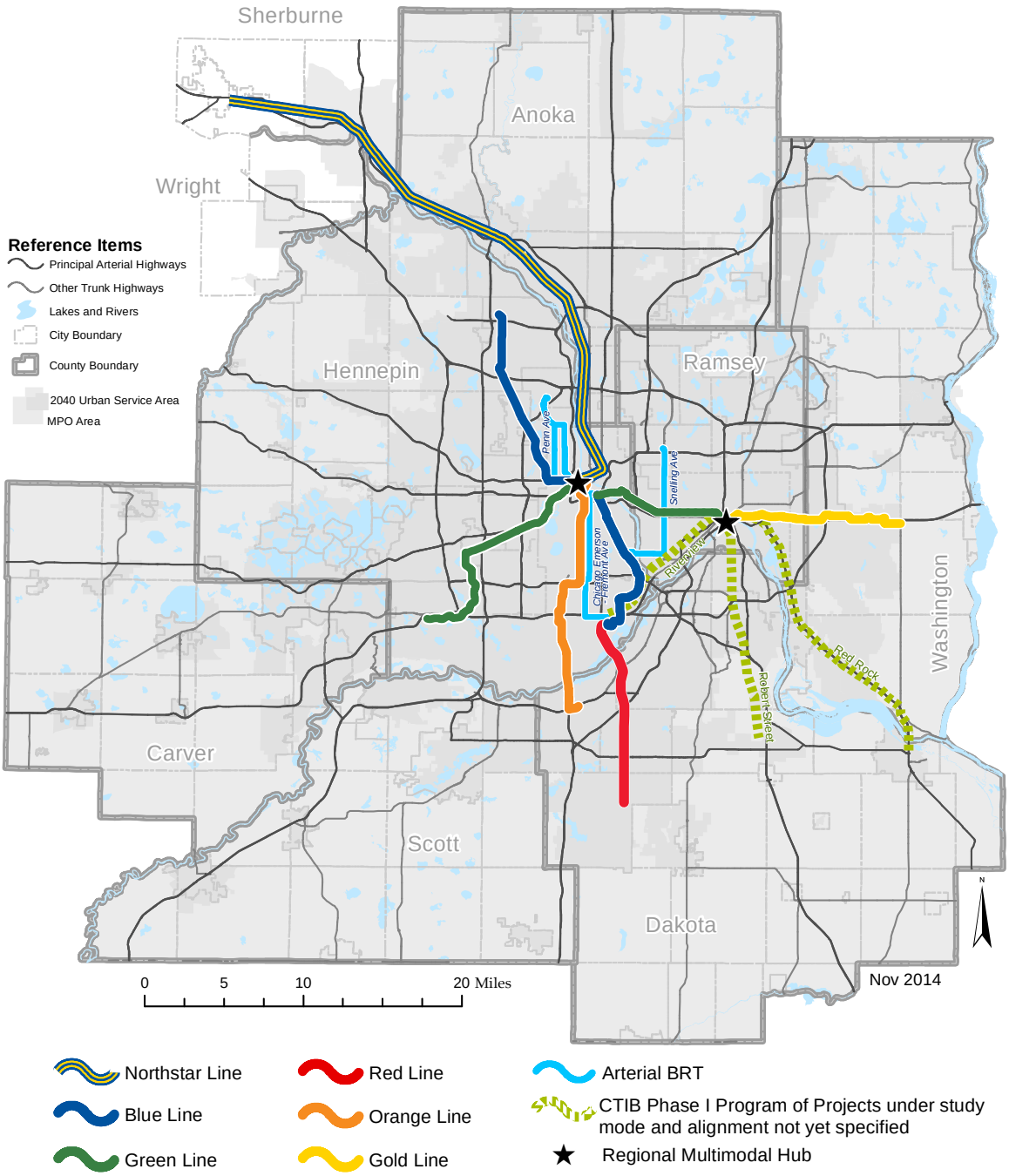
Beyond the first 10 years of the plan, the region expects to have at least $2.4 billion available for additional transitway expansion. The Counties Transit Improvement Board (CTIB) has designated a list of priority corridors in their Phase I Program of Projects that are under study in the corridor planning process. The undesignated revenue is expected to fund these priorities and will likely include additional local funds that will be identified when specific projects are determined. The additional corridors in CTIB's Phase I Program of Projects are:

- Red Rock
- Riverview
- Robert Street

These projects are under study locally and will be considered in the plan when a recommendation is made through the local process. Additional acceleration options may also be possible for arterial bus rapid transit projects and modern streetcar projects within the Current Revenue Scenario. While this plan acknowledges the broader discussion on modern streetcars needs to occur at the regional level, there are opportunities for projects to move forward on a case-by-case basis.

Figure 7: Current Revenue Scenario for Transitways

Current Revenue Scenario Transitways and CTIB Phase I Program of Projects



Increased Revenue Scenario - Bus and Support System

The Increased Revenue Scenario includes a reasonable expansion of approximately $2-3 billion in additional revenue between 2015 and 2040. This represents an average of 1% increase per year in bus service. The needs for bus service likely exceed this estimate – the latest estimates available in the Regional Service Improvement Plan (described in Chapter 6) will be the basis for these needs. The capital costs associated with bus service expansion are also included and this level of funding would also provide for opportunities to modernize the existing bus system and provide for an improved overall customer experience. The improvements in bus service under the Increased Revenue Scenario would provide for:

- Improved frequencies and hours of service on existing bus routes for more reliable, attractive service to more destinations
- Expanded bus route coverage to new areas, with an emphasis on connecting medium- and high-density residential areas with jobs and transitways
- Expanded commuter and express bus routes to new markets and improved routes where capacity is needed

Bus service expansion would be prioritized based on investment factors in the “Transit Investment Direction and Plan” and would identify opportunities for all regional transit providers.

Modernization and expansion improvements would provide for:

- Improved or expanded customer facilities including more shelters, better customer information, improved multimodal connections, and more amenities
- New and expanded park-and-rides
- Expanded bus garages, layover facilities, and operations support facilities associated with the expansion of the system

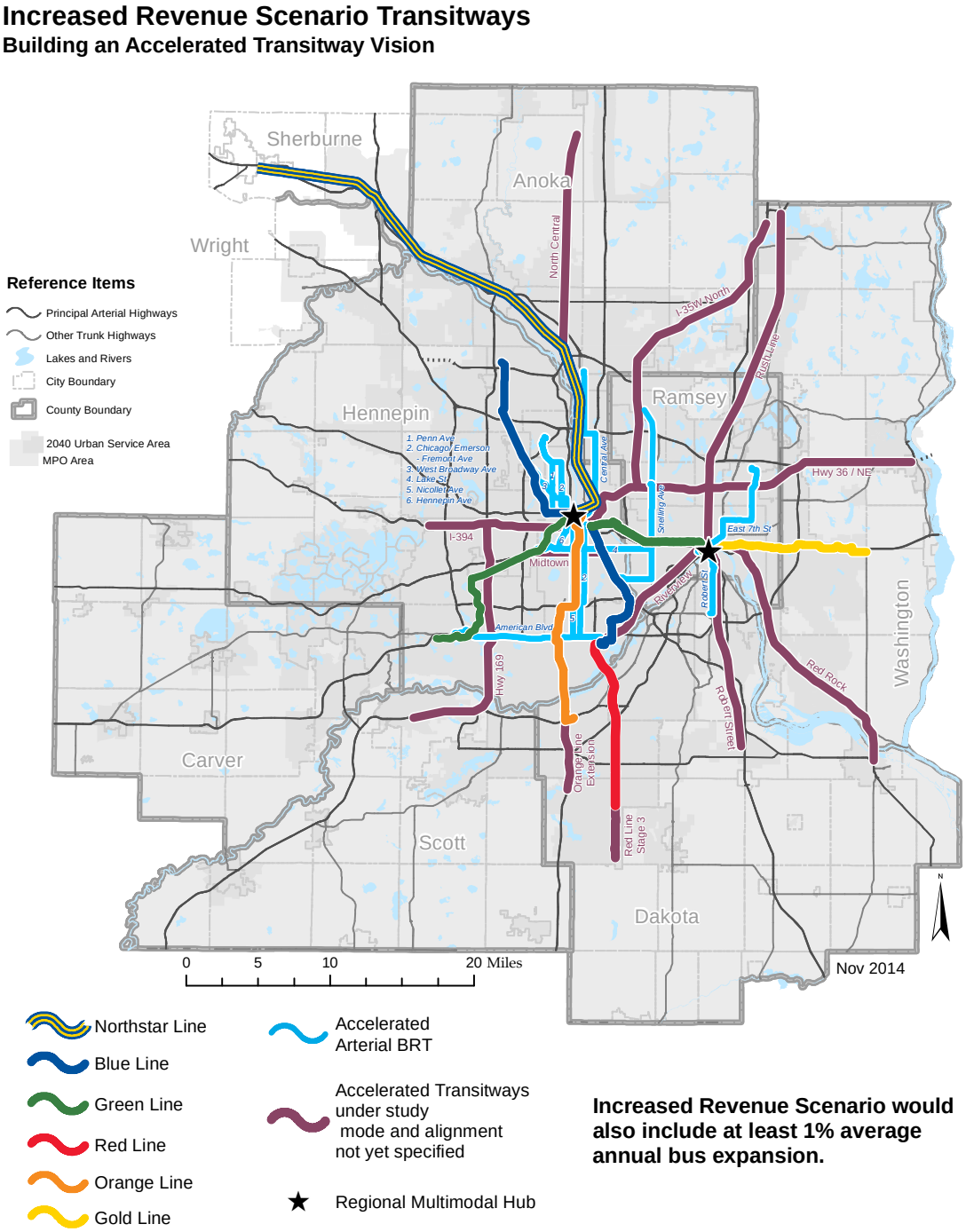
Increased Revenue Scenario – Transitway System

The Increased Revenue Scenario includes a reasonable expansion of approximately $5 – 6 billion in additional revenue for the transitway system between 2015 and 2040. This would likely allow the region to complete the vision of a transitway system and do it on an accelerated timeline. There is a level of uncertainty in the funding estimate because many transitway projects are still in planning and because the need for operating revenue for transitways depends on the timing and type of projects that are implemented. This scenario would include:

- Accelerating the build-out of the transitways in the Current Revenue Scenario
- Afford the transitways in CTIB's Transit Investment Framework beyond the Phase I Program of Projects and additional transitways that are under study or needing to be studied:
  - Highway 169
  - Highway 36
  - I-35W North
  - I-394
  - METRO Orange Line Extension
  - METRO Red Line Stage 3
  - Midtown
  - North Central
  - Rush Line
- Implementing a system of 11 arterial bus rapid transit projects including the three in the Current Revenue Scenario:
  - American Boulevard (Bloomington)
  - Central Avenue NE (Hennepin County)
  - East Seventh Street (Saint Paul)
  - Hennepin Avenue (Minneapolis)
  - Lake Street (Minneapolis)
  - Nicollet Avenue (Minneapolis)
  - Robert Street (Saint Paul, West Saint Paul)
  - West Broadway Avenue (Minneapolis)

The technical and policy investment factors for setting transitway priorities would also be considered in an Increased Revenue Scenario, depicted in Figure 8. For more information, see "Transit Investment Direction and Plan."

Figure 8: Increased Revenue Scenario for Transitways



Under the $7 billion to $9 billion Increased Revenue Scenario, the funding need is approximately 25% for bus and support system expansion and 75% for transitway system expansion. This is an average funding level over the 26-year period of the plan with the expectation that spending in any given year will be dependent on the identified expansion needs and costs of proposed projects.

Table 2: Transit Investment Plan Financial Summary

Current Revenue Scenario (Dollars in year of expenditure)					**Increased Revenue Scenario**
Investment Category	**2015-2024 (10 years)**	**2025-2034 (10 years)**	**2035-2040 (6 years)**	**Total 2015-2040 (26 yrs)**	**2015-2040 (26 years)**
Bus and Support System					
Operations - Existing	$4.7 billion	$6.3 billion	$4.7 billion	**$15.7 billion**	-
Capital - Maintenance and Preservation	$960 million	$1.1 billion	$770 million	**$2.8 billion**	-
Capital – Modernization and Expansion	$210 million	$230 million	$160 million	**$600 million**	-
Subtotal Bus and Support System	$5.9 billion	$7.6 billion	$5.6 billion	**$19.1 billion**	+ $2 – 3 billion
Transitway System					
Operations - Existing	$980 million	$1.3 billion	$920 million	**$3.2 billion**	-
Operations – Expansion	$400 million	$1.1 billion	$790 million	**$2.3 billion**	-
Capital – Existing	$110 million	$200 million	$140 million	**$450 million**	-
Capital – Expansion	$3.7 billion	$80 million	-	**$3.9 billion**	-
Undesignated - Expansion	-	$1.2 billion	$1.2 billion	**$2.4 billion**	-
Subtotal Transitway System	$5.2 billion	$3.9 billion	$3.0 billion	**$12.2 billion**	+ $5 – 6 billion
Total Transit Investment	**$11.1 billion**	**$11.1 billion**	**$8.6 billion**	**$31.2 billion**	**+ $7 – 9 billion**

Local Transportation Investment Summary

Local transportation includes all projects that are implemented or operated by cities and counties on the local transportation system. This primarily includes local road and street operating and capital expenditures and also spending on bicycle and pedestrian facilities either as part of the local road projects or as standalone projects. The summary is included in Table 3.

Local transportation operations and capital expenditures are funded by three primary revenue sources— local property taxes and assessments, highway user taxes and federal revenues. The highway user taxes are allocated to cities and counties based upon constitutional and statutory formulas that provide state-aid for the county and municipal state-aid systems. According to MnDOT's long range estimates, highway user revenues will grow over the period of the plan by 1.2% annually.

Federal revenues are allocated to cities and counties through the biennial Regional Solicitation process which allocates federal funding available to the region from the Surface Transportation Program (STP), Transportation Alternatives Program (TAP), Congestion Mitigation Air Quality (CMAQ) and Highway Safety Improvement Program (HSIP). Because these revenues are allocated through a competitive process every two years, it is difficult to know how much will be available to local governments. Based upon past allocations of the federal funds along with moderate inflationary assumptions of 1.4% annually for the federal revenues, this plan estimates that approximately $1.8 billion of federal revenues will be available to local governments over the period of the plan.

It is also difficult to know how local transportation spending will grow over the period of the plan. This plan assumes local transportation expenditures will grow at the rate of inflation or approximately 2.5% annually. Because two of the three sources of local revenues are growing at a rate less than inflation, the third major source of local revenue, local property taxes and fees, will be required to grow at a rate that exceeds inflation to maintain current levels of local transportation spending.

Table 3: Local Transporation Investment Summary

Current Revenue Scenario (year of expenditure dollars)				
Investment Category	**2015-2024 (10 years)**	**2025-2034 (10 years)**	**2035-2040 (6 years)**	**2015-2040 (26 years)**
Operating	$5.3 billion	$6.8 billion	$4.9 billion	$17 billion
Capital	$7.6 million	$9.7 million	$7.2 million	$24.5 million
Total Local Transportation	**$12.9 billion**	**$16.5 billion**	**$12.1 billion**	**$41.5 billion**

Table 4 includes the full summary of planned transportation investments under the Current Revenue Scenario and also the estimated level of need under the Increased Revenue Scenario, as identified in this transportation plan.

Table 4: Regional Transportation Planned Investments Summary

Current Revenue Scenario (Dollars in year of expenditure)					**Increased Revenue Scenario**
Investment Category	2015-2024 (10 years)	2025-2034 (10 years)	2035-2040 (6 years)	2015-2040 (26 years)	2015-2040 (26 years)
Subtotal State Highways*	$3.7 billion	$4.4 billion	$3.1 billion	$11.2 billion	+ $8 – 10 billion
Subtotal Transit	$11.1 billion	$11.5 billion	$8.6 billion	$31.2 billion	+ $7 – 9 billion
Subtotal Local Transportation	$12.9 billion	$16.5 billion	$12.1 billion	$41.5 billion	NA*
Total Regional Transportation Spending	**$27.7 billion**	**$32.4 billion**	**$23.8 billion**	**$84 billion**	**+ $15 – 19 billion**

* Local transportation increased revenue needs have not been determined as part of the analysis for this plan. It is known that the needs are significant. If state highway needs are addressed through increases in highway user taxes it will provide benefit to local transportation funding needs.

Regional Bicycle Transportation Network

For the first time a Regional Bicycle Transportation Network is proposed as a designated component in this plan (See Regional Bicycle Transportation Network in the Bicycle and Pedestrian Investment Direction). The proposed network was developed through an extensive Regional Bicycle System Study conducted by the Council from 2013-2014. The network consists of a combination of on-street bicycle facilities and off-road trails, including some designated regional trails. For a more detailed description of how the Regional Bicycle Transportation Network and regional trail system interrelate, see the Bicycle and Pedestrian Investment Direction (Chapter 7) later in this document.

This network is envisioned to serve as the "backbone" arterial system to accommodate bicycle trips at a regional level.

The intent of the proposed Regional Bicycle Transportation Network is to encourage cities, counties, and parks agencies to plan and implement an integrated and seamless network of on-street bikeways and off-road trails to most effectively improve conditions for bicycle transportation at the regional level. Because there is generally limited funding for bikeway facilities at all levels,

this regional network has been developed to have the greatest potential to attract new riders. Specific facility treatments to improve attractiveness of the regional network to potential bicyclists are suggested in the Bicycle and Pedestrian Investment Direction (Chapter 7) later in this document. Cities, counties, and parks agencies are also encouraged to plan and implement local bicycle facilities that connect their local bikeway networks to the regional network.

The Bicycle and Pedestrian Investment Direction section provides a definition for Critical Bicycle Transportation Links which lists several criteria for identifying specific improvements that may be considered a regional priority even if located off the regional network.

Aviation

Aviation investments will continue to prioritize maintenance of existing facilities. Enhancements for the safety and security of air operations, many of which are driven by and funded by Homeland Security or the Federal Aviation Administration, and continued implementation of MSP airport development plan objectives are also anticipated.

Planned investments in the aviation system are demand driven, and reviewed every five years in the Long Term Comprehensive Plan Updates prepared for each airport. Larger projects beyond maintenance are demand driven and will not be built unless needs warrant implementation, so investments may change.

Large scale airside projects are not anticipated for the Minneapolis-Saint Paul International Airport at this time; projects over the next five to 10 years will include landside projects, especially those to balance operations between the two terminals. An Environmental Assessment has been completed for all of the projects through the year 2020. Planned investments include a potential Terminal 2 expansion, since existing terminals are not capable of handling the passenger numbers forecasted. Additional parking is proposed along with new gates to meet the demand and balance airside and landside operations between both terminals.

Maintenance of existing facilities is also a priority at the general aviation airports, although the most recent long-term comprehensive plans also recommend runway extensions or runway relocations at Airlake Airport, Lake Elmo Airport and South Saint Paul Airport. Before the projects can be completed at these airports, an Environmental Assessment and Environmental Assessment Worksheet will need to be completed.


MnPASS RATE
TO 494
$0.25
TO DOWNTOWN
$0.50
HWY 62
4 MIN
94
16 MIN
WHITE LINE
494
5
1 MILE
EXIT ONLY
4731
bus2.0
MVTA

H. Performance Outcomes

Building on the desired outcomes for our region as identified in *Thrive MSP 2040* and discussed in the Goals and Objectives section – stewardship, prosperity, equity, livability, and sustainability – this plan also addresses federal transportation planning requirements including Environmental Justice and the development of a performance-based transportation planning and programming process as required by the Moving Ahead for Progress in the 21st century (MAP-21) law. Key performance outcomes are summarized here. See Chapter 12, "Federal Requirement" for more detail and discussion

Equity and Environmental Justice

An important consideration for the Transportation Policy Plan is its impact on all populations in this region, particularly those who have been historically underrepresented, including communities of color, low-income populations, people with disabilities, and people with limited English proficiency. Past plans were required to adhere to federal requirements for Environmental Justice; this plan further responds to additional aspirations for equity set forth in *Thrive MSP 2040*. In this plan, the terms "people of color" and "low-income households" are used to address the federal Environmental Justice requirements for "minority and low-income." Where regional approaches to pursuing equity are discussed, broader language is used, such as "all races, ethnicities, incomes and abilities."

Specific strategies and investments identified in the Transportation Policy Plan serve to create benefits or mitigate impacts to historically underrepresented populations, including communities of color, low-income populations, people with disabilities, and people with limited English proficiency. The following summarizes these key strategies and investments. See Chapter 10, "Equity and Environmental Justice" for additional detail and discussion.

- Public Engagement: The Council prepared the *2040 Transportation Policy Plan* under its Public Participation Plan for Transportation Planning and has built on the extensive outreach and engagement completed for *Thrive MSP 2040*, including targeted community engagement with historically underrepresented communities.
- Healthy and Cohesive Communities: Historically, transportation investment decisions that encroached upon, divided, or displaced neighborhoods, cut off access to the regional transportation system or blocked multimodal options have done great harm to communities of color and low-income populations. The *2040 Transportation Policy Plan* seeks to reverse this direction by promoting the development and enhancement of healthy, connected communities.
- Transit and Pedestrian Safety: People of color, low-income residents, and people with disabilities currently use the regional transit and pedestrian systems at higher rates than the general population and are more likely to be vulnerable when they are traveling.
- Provision of Options: Key to the philosophy of the Transportation Policy Plan is the provision of options. The expansion of options to travel and to access employment and other opportunities without requiring an automobile is especially important to low-income populations, who are less likely to own or have access to a vehicle.

Performance

- Focus on Preservation: While an equity assessment of historical preservation and maintenance investments and system condition has not been performed, higher concentrations of low-income populations and people of color can be found in older areas of the region that would benefit from an increased focus on preservation.
- Transit Service Planning: Many of the Transportation Policy Plan's strategies are aimed at improving the preservation of the transportation system in the urban center communities, where the highest concentrations of low-income populations and communities of color are currently located.
- Spatial Analysis of Investments: The spatial analysis of investments planned in the Current Revenue Scenario does not result in disproportionately high and adverse impacts to historically underrepresented populations.
- Accessibility Analysis of Investments: An analysis of changes in highway and transit accessibility to jobs under the Current Revenue Scenario revealed larger improvements to accessibility for people of color as compared to the general population and people with low incomes.

Considering the distribution of programs, strategies, and projects identified in the Transportation Policy Plan and the location of historically underrepresented populations in the region, it can be concluded that implementing the plan does not distribute benefits or adverse effects to these populations in a significantly different manner from that affecting the region's population as a whole.

"Two challenges (on the bus): patrons not wanting to move to the back of the bus and the weather. When there is so much snow, it's dangerous because a lot of times they haven't shoveled, and that's discouraging, as well."

– Rosalind Sampson, Twin Cities resident

Air Quality

The federal Environmental Protection Agency has designated the Twin Cities region as a limited maintenance area for carbon monoxide. For air quality conformity analysis, this area includes the seven-county Metropolitan Council jurisdiction plus Wright County and the City of New Prague. A map of the area, is included in Appendix D. Pursuant to the Air Quality Conformity Rule, the Council certifies that this plan conforms to the State Implementation Plan and does not conflict with its implementation.

Transportation System Performance Measurement and Monitoring

The federal transportation funding reauthorization law passed in July 2012, called Moving Ahead for Progress in the 21st century (MAP-21), requires that the metropolitan planning process establish and use a performance-based approach to transportation decision-making to support identified national goals for safety, condition of transportation infrastructure, reduction in highway congestion, reliability of the surface transportation system, environmental sustainability, and reduced delays in federal transportation projects.

The *2040 Transportation Policy Plan* represents the region's first steps toward documenting the performance-based planning approach that this region has been implementing for decades. The required federal process to identify and develop performance measures is anticipated to be complete in early 2017. Key findings from the initial performance measurement are summarized below. See Chapter 12, "Transportation System Performance Evaluation," for more detail and discussion.

By implementing the transportation projects identified in the Current Revenue Scenario, the region is forecast to experience the following outcomes by 2040. The point of comparison is the transportation system that includes the projects in the 2014-2017 Transportation Improvement Program and no additional investments.

- Forecast vehicle miles traveled drops almost 444,000 miles (-0.5%).
- Transit ridership increases 20,750 (+5.7% (linked trips) with boardings increasing +7.2%).
- Average trip travel time drops .2 minutes (-1.6%).
- Daily total hours of delay due to congestion drops by more than 44,000 vehicle-hours (-3.2%)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I. Regional Transportation Planning: Mandates and Requirements

State Mandated Comprehensive Guide and Related Systems Plans

The Transportation Policy Plan is based on the regional comprehensive development guide plan that the Council is required by state law (Minn. Stat. 473.145 and 146) to prepare every 10 years for Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties. This comprehensive guide, called *Thrive MSP 2040*, provides a policy framework for regional systems plans for water resources, regional parks, housing, and transportation. The Transportation Policy Plan also fulfills state requirements for land transportation and aviation plans, and incorporates and supports state goals from the Next Generation Energy Act (Minn. Stat., sec 216H.02) to reduce greenhouse gas emissions.

Mandated Federal Metropolitan Transportation Plans

The Transportation Policy Plan fulfills all requirements in federal law (23 USC §134 and 49 USC §5303) for a Metropolitan Planning Organization for a region in air quality maintenance status to prepare and update a metropolitan transportation plan at least every four years. The plan also conforms to all air quality-related requirements for metropolitan transportation plan content and development in the Clean Air Act (42 USC §85)

In addition, the 2010 Census identified urbanized (developed) areas of Wright and Sherburne counties (primarily along the I-94 and U.S. Highway 10 corridors) to be included in this plan, though these areas are not otherwise a part of the Metropolitan Council's jurisdiction, which includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties.

J. The Metropolitan Council

Metropolitan Planning Organization

The 1962 Federal-Aid Highway Act required the formation of a Metropolitan Planning Organization (MPO) in areas of the country with a population greater than 50,000. These MPOs direct federal transportation and other funding to communities in their jurisdictions. Since 1967, the Metropolitan Council has been the MPO for the region that includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties.

Regional planning for essential services and coordinated development

In 1967, the Minnesota Legislature created the Metropolitan Council as a way to effectively and economically deal with the increasing failures of septic tank systems and resulting contamination of the region's lakes, streams, creeks, and rivers. With almost 300 separate local units of government and 33 municipal treatment plants, leaders realized that the scope of the problem was too broad and expensive for any one municipality to handle individually.

By 1979, under the Metropolitan Waste Control Commission, 21 of the most ineffective plants were closed and four new treatment plants were built. Today, the region is served by eight regional treatment plants and 600 miles of regional interceptors serving more than 100 communities. The system regularly wins national environmental awards.

At the time the Council was created, the regional bus system was privately owned, but had oversight from the Metropolitan Transit Commission (MTC). The Council supported the MTC's effort to take over, expand, and modernize the bus system in 1970.

In 1976, the Minnesota Legislature passed the Metropolitan Land Planning Act, requiring all local governments to prepare and adopt comprehensive plans that are consistent with the Council's mandated metropolitan planning guide and regional systems plans – transportation, water resources, parks, and housing policy. A development guide is prepared once every 10 years, coinciding with the census, the most recent being *Thrive MSP 2040*.

In 1974 the Legislature designated 31,000 acres of city and county parks as regional parks. Today the regional park system consists of 53,000 acres in 49 parks and reserves, 28 regional trails, and six special recreation features – all operated in partnership with local park agencies.

Four agencies merge in 1994

In 1994, the Metropolitan Waste Control Commission, the Regional Transit Board, and the Metropolitan Transit Commission all merged with the Metropolitan Council. This consolidation of essential regional planning and services allows for efficient, orderly, and sustainable regional growth.

This planning model – setting regional development standards, establishing an urban growth boundary, and coordinating growth with essential services such as wastewater treatment and transportation – is virtually unique in the nation; only Portland, Oregon, has a similar model.

K. Civic Engagement

The Metropolitan Council prepared the *2040 Transportation Policy Plan* under the Council's Public Participation Plan for Transportation Planning, which meets requirements of 23CFR§450.316 and federal guidance on Environmental Justice. This plan has built upon the extensive outreach and engagement, including targeted community engagement with historically underrepresented communities, that informed *Thrive MSP 2040.* Over the course of three years, the Council engaged with thousands of the region's residents about their vision of the region.

Public engagement will be strengthened under Council commitments in *Thrive MSP 2040* and its Public Engagement Plan that defines consultation with historically underrepresented populations, focuses on developing lasting relationships, and works toward making decisions with, and not for, people. The plan can be found on the Metropolitan Council's website.

The Transportation Policy Plan strategies under "Healthy Environment" commit the Council and its regional transportation partners to foster public engagement in systems planning and project development.

The Council has convened several focused, in-depth discussions of transportation users, including members of traditionally underrepresented communities. Additional widely advertised workshops and other opportunities were held for the public to provide feedback on the plan. In addition to these efforts, newsletters, the Council's website, and various social media channels were used throughout the process of drafting the plan.

Engagement

A summary of Transportation Policy Plan public involvement and civic engagement includes:

1. **108 meetings** attended by more than 2,000 people were held during 24 months throughout the region as part of the *Thrive MSP 2040* process. Transportation was an integral part of discussions and were carefully documented and considered.

2. **Focused transportation discussions** were held in January and February of 2014 which were geared towards under represented communities: students, elderly, persons with disabilities, people of color, and low-income people. Agenda included:

   - Discussions about their experiences with the transportation system
   - What they thought the future of regional transportation should look and feel like
   - What they want transportation decision-makers to know
   - The pros and cons of MnPASS lanes
   - A discussion and a chance to vote on transportation investment factors
   - Handout materials included information on *Thrive MSP 2040* and the systems plans and a handout on how transportation funding works and how to get involved

3. **Interactive workshops** that were open to the general public. Agenda included participants' general experience with the transportation system, and a discussion and a chance to vote on transportation investment factors. Meetings were held April through June of 2014.

4. **One-on-one interviews** with workshop participants. Interview focused on their experiences with the transportation system, regional mobility, and how they would improve the system if they could. Participants included a retiree, people with a disability, and people of color.

5. **10 public workshops** held throughout the region and attended by 154 people. Workshops consisted of a short presentation outlining the draft *2040 Transportation Policy Plan*, presentation boards with summary information, opportunities to vote on transportation investment factors, and opportunities to comment on the plan, as well as information on alternative ways to comment.

General Themes from Civic Engagement

- Expand and improve regular route transit

When discussing public transit with participants, most expressed a desire to see regular routes expanded to serve areas not currently well-covered, or to have more frequent service in the routes they currently use. This sentiment was expressed by both those dependent solely or mostly on transit, as well as those who predominantly drive to reach their destinations. Those who drive to work expressed that trying to take transit instead is often more time consuming, or inconvenient if they have to pick kids up from school.

- Buses are hard to navigate, trains are easier

Participants expressed that when planning trips to destinations new to them, navigating the regular route bus system can be confusing and intimidating. Insufficient signage, lack of updated schedules, and an inability to know where they are on a route relative to where they need to stop were the major issues cited. Participants noted that they felt trains were easier to navigate, and cited that obtaining fares, clear schedules, clear route signage and the clarity of information about where they were on the route in relation to their destination were the features they appreciated the most.

- The transit system should be universally designed

The issue of accessibility came up often. Whether participants were fully or partially dependent on transit, they felt that more could be done to have a system that was universally accessible. Some acknowledged the positive changes that Metro Transit has made over the years, such as kneeling buses, but more progress needs to be made.

- Bicycling and walking are great, but infrastructure can be a barrier

Many participants, especially students, expressed that they like the feeling of independence that comes with relying mostly on walking or biking to get around, but they often felt discouraged from doing so because of the lack of dedicated bike lanes, and sometimes the lack of sidewalks.

- Safety, perceptions of safety, station amenities, maintenance, and cleanliness

An overwhelming sentiment was the issue of safety and perceived safety. Lighting, bus shelters, and on-demand knowledge of the arrival of the next bus or train were all issues that contributed to participants' safety and perceived safety.

Station amenities such as shelters, heated shelters and places to sit were often cited as lacking. Participants felt it was an equity issue and expressed that more stops should have heated shelters.

The winter of 2013-2014 was one of the coldest recorded in recent years. Participants expressed frustration at the lack of snow and ice removal at many bus stations and stops. These concerns were wide-spread, but none felt them more than those in the disability community.

Cleanliness also came up. Participants felt that some stations were better maintained than others.

- Highway congestion is a problem

Participants acknowledged that highway congestion is a regional problem that is getting worse. Many expressed that while they had considered transit, it was not always a feasible option for them because of time and/or childcare issues. Trips that require more than one bus or a bus and a train were also seen as prohibitive.

- MnPASS is not fully understood

A workshop exercise revealed that participants understood in general terms what the purpose of MnPASS lanes are. They had robust conversations that generated a list of pros and cons – with almost an equal number of each. However, participants did not know specific details such as how or when rates changed, and where they can "jump in" a MnPASS lane if they changed their minds when they were already on the highway.

- More funding is needed

Whether a participant's predominant mode is walking, biking, transit, or driving, most felt that their dominant mode of transportation needed more funding. At the beginning of the workshop, many thought that there is one big pot of transportation dollars that is divided up. However, during the course of the workshop – through exercises, discussions and handouts – it was explained that there are dedicated sources of funds for each of the modes, with little to no flexibility regarding the types of projects each fund is used for.

The Council's mission is to foster efficient and economic growth for a prosperous metropolitan region

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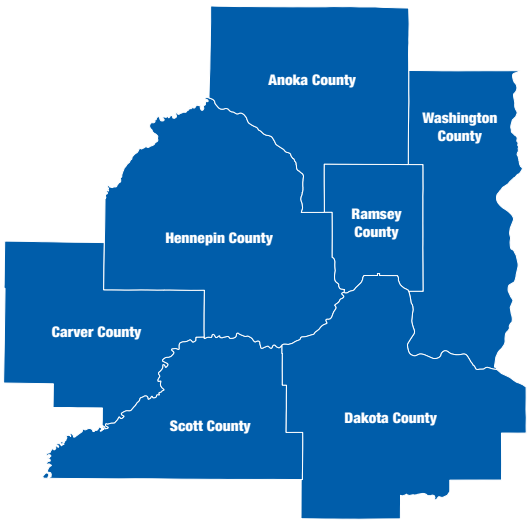

The Metropolitan Council is the regional planning organization for the seven-county Twin Cities area. The Council operates the regional bus and rail system, collects and treats wastewater, engages communities and the public in planning for future growth, coordinates regional water resources, plans and helps fund regional parks, and administers federal funds that provide housing opportunities for low- and moderate-income individuals and families. The 17-member Council board is appointed by and serves at the pleasure of the governor.

On request, this publication will be made available in alternative formats to people with disabilities. Call Metropolitan Council information at 651-602-1500 or TTY 651-291-0904.

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METROPOLITAN COUNCIL