

Twin Cities Mobility

A CRITICAL CONNECTIONS INVESTMENT

Twin Cities Mobility is one of the 14 investment categories of MnSHIP, a fiscally constrained plan MnDOT uses to balance the needs and risks of Minnesota's state highway network. Folios for each investment category describe potential levels of investment and associated outcomes. Through MnSHIP, MnDOT will create an investment direction that guides state highway capital investments for the next 20 years.

INVESTMENT CATEGORY DETAILS

What is Twin Cities Mobility?

Through investments in Twin Cities Mobility, MnDOT aims to increase mobility in the metro area, increase trip reliability, and enhance travel options.

Why is Twin Cities Mobility important?

Roughly half of all roadway travel in Minnesota occurs within the Twin Cities metropolitan area. Travel reliability is important to the entire state of Minnesota as it impacts the movement of people and goods with implications on quality of life, safety conditions, air quality, regional connectivity, and economic competitiveness. Not only is congestion costly to people, freight, and transit traveling on MnDOT roads, the same effects can spill over to local and county roads, leading to reduced fuel-efficiency and air quality, and slower travel times for all users.



MnPASS lanes are one example of Twin Cities Mobility Investments.

Some level of congestion is an accepted reality in the Twin Cities area, but effectively managing congestion while providing travel options can provide many benefits to those living in and traveling through the region and state.

How does investing in Twin Cities Mobility support the MN GO vision and the State Multimodal Transportation Policy?

Investing in Twin Cities Mobility supports the guiding principles laid out in the 50-year vision for the state's transportation system, Minnesota GO. These include:

- Emphasizing reliable and predictable options;
- Ensuring regional connections; and
- Leveraging public investments to achieve multiple purposes.

Building upon these principles, investment in Twin Cities Mobility strengthens multiple strategies identified in the Statewide Multimodal Transportation Plan (SMTP), notably:

- Apply multimodal solutions that ensure a high return-on-investment, given constrained resources, and that complement the unique social, natural and economic features of Minnesota;
- Collaborate with partners to provide greater accessibility and more efficient movement of goods and people throughout the Twin Cities metropolitan area; and
- Work together to support and implement both system-wide and project-specific approaches to avoid, minimize, and mitigate adverse impacts to Minnesota's natural and cultural resources.

How has the planning context for Twin Cities Mobility changed since 2013 MnSHIP?

Updates to the Metropolitan Council's 2040 Transportation Policy Plan (TPP) (www.metrocouncil.org/Transportation/Planning-2.aspx) impacts the context in which MnSHIP addresses Twin Cities Mobility. MnDOT coordinates with the Metropolitan Council and Metro Transit on how to best align Twin Cities Mobility with the objectives in the TPP. In addition to the updated TPP, travel trends among Twin Cities transportation users is continuing to evolve. For instance, while the daily vehicle miles traveled is estimated to increase over the next 20 years, the number of miles traveled per resident is expected to decrease. This means that less people are choosing to drive. Increases in transit ridership reflects this outcome. Behavior changes like this have implications for investments in bus-only shoulders and MnPASS express lanes, which provide transit advantages.

How does MnDOT measure performance in Twin Cities Mobility?

MnDOT indicators used to track Twin Cities congestion include the percent of urban freeway miles that are flowing below 45 miles per hour during weekday peak periods (5 to 10 a.m.; 2 to 7 p.m.). The Federal Highway Administration will soon require MnDOT to develop different mobility measures as part of the new

surface transportation funding law (MAP-21). One possibility could be using private sector global positioning system (GPS) to then establish a performance measure and target based on an expected level of delay.

Tips for using this table

Performance Levels

- **Performance Level 0 (PL 0)** represents a strategy which corresponds to the most extreme risk level MnDOT would consider for investing in Twin Cities Mobility.
- MnDOT’s current spending in Twin Cities Mobility approximately corresponds to **PL 1**.
- Cost + benefit increase and risks decrease from left to right.
- PLs for Twin Cities Mobility are independent of other performance categories.

Investment Approach

- See **MnSHIP Investment Approaches** folio

Investment Levels

- The **pie charts** represent MnSHIP’s total planning investment for years 2022-2037 (\$17.1 billion) and the portion of it which will be dedicated to Twin Cities Mobility investment at each PL.
- **Base investment for other categories** is the amount required to invest at PL 0 in every other category.
- **Remaining revenue available** is the additional investment beyond the base investment for all categories in MnSHIP.

Outcomes

- Highlights key outcomes associated with each PL. For Twin Cities Mobility, outcomes correspond with key performance measures.

Risks

- Identified as **high**, **medium**, or **low** in each PL; each risk decreases in severity from left to right.

System Investment Strategies

- Details the steps MnDOT would make to mitigate risk at each PL.

How did MnDOT create the investment levels?

The performance levels outlined in the table represent plausible investment levels for Twin Cities Mobility. A risk-and performance-based analysis was undertaken in the summer of 2015 to illustrate potential future scenarios. Performance levels

Twin Cities Mobility		
Overarching Goal: Optimize the capacity of the existing system and provide reliable travel alternatives to move people and freight as effectively and efficiently as possible		
	Performance Level 0 <i>Lowest cost, greatest risk</i>	Performance Level 1 <i>Lower cost, higher risk</i>
Investment Approach <i>(See Approach Folio)</i>	Approach A, C	Approximately corresponds with current investment, Approach B
Investment Level <i>Total</i>	<div><div>Years 5-10 (2022-2027) Years 11-20 (2028-2037)</div><div><div>\$0 M</div><div>\$0 M</div><div>\$0 M</div><div><div>Remaining revenue available</div><div>Twin Cities Mobility 0%</div><div>Base investment for other categories</div></div></div></div>	<div><div>\$126 M</div><div>\$21.0 M/yr \$0 M/yr</div><div><div>Remaining revenue available</div><div>Twin Cities Mobility 0.8%</div><div>Base investment for other categories</div></div></div>
Investment Description	No investment beyond already planned projects	Current level of investment as identified in 2013 MnSHIP
Outcomes <i>To what extent would MnDOT meet Twin Cities Mobility goals and objectives?</i>	<ul style="list-style-type: none">• No MnPASS investment• No spot mobility improvements• No major capacity projects• No ATM investments	<ul style="list-style-type: none">• 1 MnPASS investment• 6 spot mobility improvements• No major capacity projects• No ATM investments
Risks	<div><div>High</div><ul style="list-style-type: none">• Less predictable travel times and longer lasting congestion for people driving<div>Medium</div><ul style="list-style-type: none">• Reduced reliability and efficiency for transit services• Inability to attract/retain people and businesses• Decreased system resiliency for all users• Reduced ability for all users to reach desired destinations</div>	<div><div>High</div><ul style="list-style-type: none">• Less predictable travel times and longer lasting congestion for people driving<div>Medium</div><ul style="list-style-type: none">• Reduced reliability and efficiency for transit services• Inability to attract/retain people and businesses• Decreased system resiliency for all users• Reduced ability for all users to reach desired destinations</div>
System Investment Strategies <i>What strategies would MnDOT use to manage risk?</i>	<ul style="list-style-type: none">• Invest in currently planned and programmed mobility projects	<ul style="list-style-type: none">• Focus on investments that provide reliable congestion-free options for commuters in 1 corridor• Focus on low cost spot mobility projects that provide safety and reduced delays

reflect investments between 2022 and 2037 (2018-2021 funding levels influenced by 2013 MnSHIP). PL 0 through PL 4 represent a range of options to help stakeholders and decision-makers understand outcomes, risks, and system investment strategies for Twin Cities Mobility.

How does MnDOT typically invest in Twin Cities Mobility?

Twin Cities Mobility investments are coordinated with the Metropolitan Council’s planning efforts, such as the 2040 Transportation Policy Plan update. Both plans emphasize innovation, technology, and multimodal options as important

Performance Objectives: Manage delay by providing reliable alternatives to congested corridors, including transit investments.

Performance Level 2 <i>Greater cost, lower risk</i>	Performance Level 3 <i>Greater cost, lower risk</i>	Performance Level 4 <i>Greatest cost, lowest risk</i>
Does not correspond with an approach	Does not correspond with an approach	Does not correspond with an approach
<div><div>\$1,204 M</div><div>\$59.7 M/yr \$84.6 M/yr</div><div><div>Remaining revenue available</div><div>Twin Cities Mobility 7.2%</div><div>Base investment for other categories</div></div></div>	<div><div>\$2,408 M</div><div>\$119.4 M/yr \$169.2 M/yr</div><div><div>Remaining revenue available</div><div>Twin Cities Mobility 14.5%</div><div>Base investment for other categories</div></div></div>	<div><div>\$4,473 M</div><div>\$221.7 M/yr \$314.3 M/yr</div><div><div>Exceeds remaining revenue</div><div>Twin Cities Mobility 26.9%</div><div>Overlap</div><div>Base investment for other categories</div></div></div>
Current level of investment through 2021; \$44 M per year through 2037	Current level of investment through 2021; \$88 M per year through 2037	Build out majority of managed-lane corridors and doubling of strategic mobility investments
<ul style="list-style-type: none">• 3-4 MnPASS investments• 10-12 spot mobility improvements• 5-7 major capacity projects focused on projects costing \$ 20-30 million• 5 miles or 1 corridor of ATM investments per year, assuming an increase in RTMC operating budget	<ul style="list-style-type: none">• 6+ MnPASS investments• 20-24 spot mobility improvements• 5-7 major capacity projects focused on projects costing \$ 20- 30 million and 1-2 larger investments such as system interchanges• 10 miles or 1-2 corridors of ATM investments per year, assuming an increase in RTMC operating budget	<ul style="list-style-type: none">• 10+ MnPASS investments• 20-24 spot mobility improvements• 10+ major capacity projects focused on projects costing \$ 20-30 million and 2-3 larger investments such as system interchanges• 10 miles or 1-2 corridors of ATM investments per year, assuming an increase in RTMC operating budget
<div>Medium<ul style="list-style-type: none">• Less predictable travel times and longer lasting congestion for people driving• Reduced reliability and efficiency for transit services• Inability to attract/retain people and businesses• Decreased system resiliency for all users• Reduced ability for all users to reach desired destinations</div>	<div>Medium<ul style="list-style-type: none">• Less predictable travel times and longer lasting congestion for people driving• Decreased system resiliency for all users<div>Low<ul style="list-style-type: none">• Reduced reliability and efficiency for transit services• Inability to attract/retain people and businesses• Reduced ability for all users to reach desired destinations</div></div>	<div>Low<ul style="list-style-type: none">• Less predictable travel times and longer lasting congestion for people driving• Decreased system resiliency for all users• Reduced reliability and efficiency for transit services• Inability to attract/retain people and businesses• Reduced ability for all users to reach desired destinations</div>
<ul style="list-style-type: none">• Focus on investments that provide reliable congestion-free options for commuters in 4 corridors• Focus on multiple spot mobility projects that provide safety and delay benefits• Focus on lower cost strategic mobility improvements	<ul style="list-style-type: none">• Focus on investments that provide reliable congestion-free options for commuters in 7 corridors• Focus multiple spot mobility projects that provide safety and delay benefits• Focus on low and high cost strategic mobility improvements	<ul style="list-style-type: none">• Focus on investments that provide reliable congestion-free options for commuters in 13 corridors• Focus multiple spot mobility projects that provide safety and delay benefits• Focus on low and high cost strategic mobility improvements

congestion management strategies. They aim to address regional mobility issues through Active Traffic Management (ATM), spot mobility improvements, MnPASS express lanes, Major Capacity Investments, transit, and alternative mode choice. These system-wide strategies include implementation of:

- Active Traffic Management (ATM) — ATM applications help to manage some of the effects of congestion, such as increasing reliability and reducing the number of incidents. Examples include traffic cameras, ramp meters, and changeable message signs that recommend speeds or alert freeway users to incidents ahead.
- Spot Mobility Improvements — Lower cost, high benefit projects to improve traffic flow and provide bottleneck relief. Examples include addressing safety hazards, improving intersection design, and constructing lanes to ease entering and exiting freeways.
- MnPASS express lanes (www.mnpass.org) provide buses, carpoolers, and other drivers a reliable congestion-free option. MnDOT currently operates two MnPASS express lanes on I-394 and I-35W, with another currently under construction (I-35E).
- Major Capacity Investments — Includes system-to-system interchanges, freight related improvements, and corridor level improvements.



Increased investment in Twin Cities Mobility can improve the resiliency of the entire metro area transportation system

Where is MnDOT headed?

Under current funding levels (identified in 2013 MnSHIP), MnDOT

Find more information with these additional folios!

System Stewardship

- Pavement Condition
- Bridge Condition
- Roadside Infrastructure Condition
- Jurisdiction Transfer
- Facilities

Transportation Safety

- Traveler Safety

Critical Connections

- Greater Minnesota Mobility

- Bicycle Infrastructure
- Accessible Pedestrian Infrastructure

Healthy Communities

- Regional + Community Improvement Priorities

Other

- Project Delivery
- Small Program

will invest approximately \$126 million in Twin Cities Mobility through 2023. Post 2024, there are no funds identified for this investment area and no new projects would be undertaken. This level of funding corresponds with Performance Level 1 in the table on page 2.

What risks are addressed through increased Twin Cities Mobility investment?

Generally, the more MnDOT invests in Twin Cities Mobility, the more MnDOT is able to reduce these key risks for automobile users, transit users, carpoolers, freight, and other system users:

- A future increase in travel demand will lead to longer periods of congestion and less predictable travel times for passengers and freight.
- Shipping, transit, and general travel times become less reliable because of incidents, such as crashes, construction, weather, and debris.
- Traffic congestion, unreliability and/or a lack of options compared to peer regions limits the ability of the Twin Cities to compete in attracting and retaining businesses and workers.
- Congestion hinders development of reliable and efficient transit and ride-sharing services and results in lower people-moving capacity.
- Inability to adapt to shifting travel and land use patterns, limits accessibility of desired destinations.

How is MnDOT enhancing financial effectiveness through Twin Cities Mobility?

To maximize the benefit from Twin Cities Mobility investment, MnDOT priorities these strategies:

- Using technology to manage corridor congestion;
- Encouraging the use of transit and carpooling through MnPASS, bus-only shoulders and bus rapid transit, increasing the efficiency of the system; and
- Targeting investments in corridors that are at or near capacity during peak travel times; thereby making a larger impact (cost-benefit).

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