INTRODUCTION

Minnesota's State Freight Plan provides guidance and strategies to improve the freight system in Minnesota over the next 20 years. Developed in collaboration with the Minnesota Freight Advisory Committee, it contains key policy and investment recommendations to guide decisions by the Minnesota Department of Transportation (MnDOT).

This Minnesota State Freight Plan is a holistic look at the freight transportation system, its conditions and performance and the state-led funding processes critical to supporting Minnesota's economic growth. This plan meets the requirements of the National Highway Freight Program (23 U.S.C. 167) as established by the Fixing America's Surface Transportation Act (FAST) and continued by the Infrastructure Investment and Jobs Act (IIJA). This includes the development of a state freight plan which addresses the state's freight planning activities, trends and investments, both immediate and long-term.

Since the completion of its first State Freight Plan in 2005, Minnesota has committed itself to a freight policy that has integrated the state's approach to freight planning and economic activity. Through the use of strategic planning and integrated statewide goals across agencies through Minnesota GO, a world-class transportation network that supports the dynamic needs of Minnesota's residents and businesses has been created. It continues to position the state as a national leader in freight innovations as well as a global partner in trade. Minnesota was the first state in the country to form a public-private freight advisory committee, has collaborated in multi-state freight planning coordination efforts and has a strong commitment to outreach to and engagement with disadvantaged population groups. This plan is intended to continue that trend and ensure Minnesota remains a global leader in freight transportation. This plan is intended to continue that trend and ensure Minnesota remains a global leader in freight systems planning.

CHAPTER CONTENTS

ALIGNMENT WITH SMTP OBJECTIVES

This update of the State Freight Plan aligns closely with the six objectives of the Statewide Multimodal Transportation Plan (SMTP) — Transportation Safety, System Stewardship, Climate Action, Critical Connections, Healthy Equitable Communities and Open Decision Making. These objectives cut across all transportation topics, guide priorities for the multimodal freight system and improve the resilience of the freight system and its ability to recover from shocks and stresses created by the natural and built environment.

Transportation Safety:
Changes in travel behavior, partly due to the impacts of COVID-19, have led to a significant step backward in transportation safety. 2021 was the deadliest year on Minnesota roads in more than a decade. A mix of traditional and new practices and methodologies is needed to prevent and mitigate human error and foster changes in driver behavior to encourage patience, reduce excessive speeding and eliminate distracted driving.

System Stewardship:
Infrastructure across the country is aging. As the system ages, more resources go to maintenance and repairs so the system can serve communities as intended. Many parts of Minnesota's transportation system show signs of deterioration and require attention.

Climate Action:
Minnesota's climate is changing. Temperatures are increasing and larger, more frequent extreme weather events are occurring year round. Climate change will impact the way transportation is used, built, designed, operated and maintained. It will also affect people's transportation experience, safety and access. Transportation needs to shift to combat climate change and to provide people with environmentally friendly choices to ensure their daily travel needs are met.

Critical Connections:
A variety of transportation options support how people and goods move across the state, throughout a region or within a community. Collaboration is required to ensure the transportation system offers safe, convenient. and affordable options for moving people and goods.

Healthy Equitable Communities:
Policy, design and operations decisions have led to inequities for underserved communities and especially Black, Indigenous and People of Color communities. Advancing transportation equity requires understanding how the transportation system, services and decision-making processes help or hinder the lives of people in underserved communities in Minnesota.

Open Decision Making:
Transportation decision makers bear the responsibility for making informed choices that reflect the needs of many stakeholders. Open, transparent and equitable decision making is essential to building better relationships and ensuring learning, understanding and trust.

STAKEHOLDER OUTREACH

The development of this plan was undertaken by the Minnesota Department of Transportation (MnDOT) in partnership with public and private sector freight stakeholders throughout the state as shown in Figure 0-1. This outreach was critical in the establishment of the freight plan goals. Stakeholder outreach for this plan included a variety of tools including online engagement and in-person one-on-one meetings. Over 1,300 interactions with Minnesotans from all walks of life were recorded and incorporated into the plan. Additional information regarding stakeholder engagement can be found in Working Paper 8: Stakeholder Engagement Summary.

Figure 0-1: Stakeholder Input

WHAT WE HEARD

Comments and questions from stakeholders covered a wide variety of topics. Some of the more frequent items discussed were the impacts of freight on traffic, infrastructure, the environment, the rising costs of delivery and the need for additional truck parking. Figure 0-2 summarizes six of the most frequently discussed topics during the engagement efforts.

Figure 0-2: Freight Engagement Summary

Traffic & Infrastructure

Residents mentioned truck traffic adds to congestion, creates safety issues with difficult merges, degrades pavement quality.

Truck Parking

Truckers said finding parking spots can be challenging; meanwhile, many residents concerned about trucks parking in their neighborhoods.

Environmental Impacts

Those living near highways, airports, and railroads all expressed concerns about air quality and noise pollution.

Mode Shift

Many recommended increasing freight rail relative to other freight modes due to its higher efficiency.

Rail Safety

Concerns over rail safety including derailments, aging railroad infrastructure, rail crossings, and transportation of hazardous materials.

Rising Cost of Delivery

Many expressed concerns about high fuel costs impacting deliveries and the trucking industry.

STATE FREIGHT PLAN GOALS AND OBJECTIVES

By analyzing and tying together the SMTP Objectives and the needs derived from the stakeholder outreach and assessment of the state's freight system conditions and performance, a series of goals and objectives were developed specific to the current and future needs of Minnesota's freight system. These goals and objectives also directly support the goals of the National Multimodal Freight Policy.

GOAL 1: FREIGHT SYSTEM STEWARDSHIP

In 2019, 740 million tons of freight moved over Minnesota's transportation system. By 2050, that volume is expected to increase to 1.04 billion tons, an increase of 40% overall. This growth in freight transportation will stress Minnesota's transportation infrastructure. Strategic improvements in multimodal freight system infrastructure to ensure critical segments and connections are both available and in a state of good repair are essential for Minnesota to meet expected demand. Minnesota can support this stewardship through a variety of strategies including supporting and encouraging partnerships with stakeholders, developing targeted freight system improvements and prioritizing the maintenance of key freight networks like the National Multimodal Freight Network and Minnesota's Primary Highway Freight System.

- **Objective –** Preserve and Improve Minnesota's Freight Infrastructure: Invest in infrastructure projects that maintain a state of good repair for Minnesota's highways, bridges, railroads, airports and waterways.
- **Objective –** Strategically Invest in New Freight Infrastructure: Identify and invest in projects that expand freight service to new modes or to new markets.

GOAL 2: IMPROVE FREIGHT SAFETY

Safety is a high priority for both public and private organizations involved in freight transportation. Due the size and weight of vehicles involved, crashes involving trucks, trains and other freight vehicles are often more likely to result in fatalities or severe injuries. Freight safety strategy begins early in the process through the design of roadway features that can safely accommodate larger freight vehicles and provide adequate separation between freight vehicles, passenger vehicles and non-motorized users where appropriate. Investments in incident management programs and new freight technologies are also key to continuing to improve freight safety in the state.

- **Objective –** Improve Freight System Safety: Reduce the frequency of crashes on Minnesota's freight system.

GOAL 3: CONNECT MINNESOTANS AND BUSINESSES

The day-to-day freight needs of the public and industry can be hindered in a number of ways, including difficult last-mile access, poor system condition and limited freight transportation options. Minnesota can support these users by targeting investments that improve first- and last-mile freight connections, support a healthy and efficient freight mode balance and support the efficient operation of Minnesota's freight system.

- **Objective –** Improve Freight Mobility, Velocity and Reliability: Reduce the impacts of truck bottlenecks, eliminate physical barriers to freight movement and improve freight system reliability.
- **Objective –** Consideration of All Freight Modes in Planning and Design: Continue to educate stakeholders on freight needs and encourage the inclusion of freight at all levels of planning and design.

GOAL 4: SAFEGUARD MINNESOTA'S HEALTH AND ENVIRONMENT

While the state and national freight system is critical for the safe and efficient movement of goods, the system itself can sometimes negatively impact adjacent communities and the environment. These impacts can relate to air quality and noise, the presence of truck in neighborhoods and freight land use conflicts. In some cases, the negative impacts of the freight system can have outsized impacts on traditionally underrepresented groups such as minority and low-income communities.

It is necessary to plan, design, develop and preserve the freight system in a way that respects and complements the natural, cultural and social context and is consistent with the principles of context sensitive solutions.

- **Objective –** Reduce Freight's Impact on the Environment: Support programs and projects that reduce vehicle emissions and wildlife habitat loss.
- **Objective –** Increase Freight System Resiliency: Support projects and programs that result in a freight system more resilient to major disruptions such as severe weather events.
- **Objective –** Minimize Disparate Freight Impacts to Underserved or Overburdened Communities: Support programs, projects and policies that reduce the impacts of the freight system on overburdened communities.

GOAL 5: SUPPORT MINNESOTA'S ECONOMY

The ability of businesses and industries in Minnesota to compete in the marketplace relies in part on an efficient freight transportation system that effectively moves goods and raw materials within Minnesota and to other locations throughout the country. Minnesota can support these economic activities by maintaining and investing in the freight system while also supporting activities that improve and expand the freight industry workforce.

- **Objective –** Support and Grow Minnesota's Freight Industries: Support projects that improve the competitiveness of Minnesota's freight industries through lower costs and better freight service.

LINKS TO NATIONAL FREIGHT GOALS

While this plan is a critical blueprint to ensuring Minnesota remains at the cutting edge of industry, it is part of a greater national effort to improve freight nationwide. The USDOT has established National Freight Policy goals that MnDOT is meeting to ensure it supports the country as well as Minnesota as shown in Table 0-1.

Table 0-1: Federal and MnDOT Freight Plan Goals

National Multimodal Freight Policy Goals	MnDOT Freight Plan Goal
1. To identify infrastructure improvements, policies and operational innovations that (A) strengthen the contribution of the National Multimodal Freight Network to the economic competitiveness of the United States, (B) reduce congestion and eliminate bottlenecks on the National Multimodal Freight Network and (C) increase productivity, particularly for domestic industries and businesses that create high-value jobs	Support Minnesota's Economy Connect Minnesotans and Businesses Freight System Stewardship
2. To improve the safety, security, efficiency and resiliency of multimodal freight transportation	Improve Freight Safety
3. To achieve and maintain a state of good repair on the National Multimodal Freight Network	Freight System Stewardship
4. To use innovation and advanced technology to improve the safety, efficiency and reliability of the National Multimodal Freight Network	Connect Minnesotans and Businesses
5. To improve the economic efficiency and productivity of the National Multimodal Freight Network	Support Minnesota's Economy
6. To improve the reliability of freight transportation	Freight System Stewardship
7. To improve the short- and long-distance movement of goods that—(A) travel across rural areas between population centers, (B) travel between rural areas and population centers and (C) travel from the Nation's ports, airports and gateways to the National Multimodal Freight Network	Freight System Stewardship Connect Minnesotans and Businesses
8. To improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity	Connect Minnesotans and Businesses
9. To reduce the adverse environmental impacts of freight movement on the National Multimodal Freight Network	Safeguard Minnesota's Health and Environment
10. To pursue the goals described in this subsection in a manner that is not burdensome to State and local governments	Safeguard Minnesota's Health and Environment

STATE FREIGHT PLAN GUIDE

In combining the objectives of the SMTP with the freight needs of the State, utilizing stakeholder outreach to develop goals and freight plan objectives for the improvement of the state freight system and utilizing data to analyze trends and system needs and issues, this plan was authored as a guide for equitable and sustainable improvements to the State's freight transportation system. The blueprint established here is concise and proactive to ensure Minnesota remains a safe and prosperous state for its people using integrated systems of transportation and will meet the needs of the Federal Criteria as established in the FAST Act. It will also meet the needs of the National Multimodal Freight Policy, the criteria of the FAST Act and the IIJA.

The following provides a summary of the freight plan chapters and related materials included as appendices and working papers.

CHAPTER 1: IMPORTANCE OF FREIGHT TO MINNESOTA

This chapter summarizes Minnesota's key freight-dependent industries and how they relate to and support the state's economy.

CHAPTER 2: CURRENT AND FUTURE FREIGHT TRENDS AND ISSUES

This chapter outlines many of the freight trends experienced by Minnesota since the previous State Freight Plan which have been driven by multiple global trade and supply chain disruptions, changing market dynamics, demographic and workforce changes and continued impacts of climate change.

CHAPTER 3: FREIGHT SYSTEM ASSETS, CONDITIONS AND PERFORMANCE

This chapter provides additional detail on the multimodal freight system in Minnesota including highways, railroads, waterways, airports, pipelines and military freight. Some of the key issues discussed include truck parking availability, the movement of crude oil by rail versus pipeline and the importance of air cargo for the shipment of low weight, high value goods.

CHAPTER 4: FREIGHT FORECASTS

This chapter uses national freight data sources to provide estimates of freight tonnage and value flowing into, out of and within the State of Minnesota for existing conditions and forecast to the year 2050. These forecasts provide insight into many of the anticipated freight challenges facing the state in the near future.

CHAPTER 5: FREIGHT POLICIES AND STRATEGIES

This chapter describes the set of detailed strategies that MnDOT and its freight partners will use to implement the goals of the State Freight Plan. Each of the 22 items in the Freight Action Agenda specifies the key actors leading and supporting the implementation of the strategy, the timeframe for the strategy and the connection of each strategy to the overall plan goals.

CHAPTER 6: SUSTAINABLE TRUCK TRENDS AND STRATEGIES

This chapter describes specific goals and strategies developed as part of this plan to reduce the impacts of greenhouse gas emissions from medium and heavy duty truck freight.

CHAPTER 7: FREIGHT INVESTMENT IMPLEMENTATION

This chapter details the freight system investments MnDOT has programmed through the Minnesota Highway Freight Program. The chapter describes the overall approach used to score applications to the program and reviews the evolutions of the program over the three rounds of award.

APPENDICES

This plan includes three appendices. Appendix A summarizes the locations and extents of the federally allocated mileages for Critical Urban Freight Corridors (CUFCs) and Critical Rural Freight Corridors (CRFCs) in the state. Appendix B provides a summary of freight performance measures used by MnDOT to monitor progress on freight goals and objectives. Appendix C provides a summary of federal State Freight Plan requirements and serves as a guide for located those requirements within this plan.

- Appendix A: Critical Urban and Rural Freight Corridors
- Appendix B: Freight Performance Measures
- Appendix C: IIJA State Freight Plan Requirements

SUPPORTING DOCUMENTS

In addition to the main chapters and appendices outlined above, the State Freight Plan is supported by a number of working papers that helped lay the groundwork for the goals, policies and strategies proposed in the plan document.

These working papers can be found on the Minnesota State Freight Plan webpage: www.minnesotago.org/final-plans/state-freight-plan

- Working Paper 1: Existing Plan and Document Review
- Working Paper 2: Freight Trends
- Working Paper 3: Freight Performance Measures
- Working Paper 4: Economic and Freight System Profile
- Working Paper 5: Summary of Statewide Freight Needs
- Working Paper 6: Environmental Justice Analysis
- Working Paper 7: Sustainable Truck Trends and Strategies
- Working Paper 8: Stakeholder Engagement Results