MINNESOTA

2025-2029 STRATEGIC HIGHWAY SAFETY PLAN

FEBRUARY 2025

DRAFT

DEPARTMENT OF TRANSPORTATION

MINNESOTA: COMMITTED TO PROGRESS

As 2025 begins, Minnesota faces a sobering truth about highway safety: The sharp increase in fatal and serious injury crashes that began with the COVID pandemic continues today. 2021 saw the highest number of fatalities on Minnesota's roadways in more than a decade, with 2024 close behind. More than two decades of efforts to end fatal and serious injury crashes are no longer bringing the change we need. Like others throughout the country, we seek a new paradigm to achieve our traffic safety goals.

This 2025-2029 Strategic Highway Safety Plan (SHSP) plan aims to course-correct, identify effective strategies, improve upon those that haven't worked, and unite a broad coalition of people in the fight against the safety epidemic on our roadways. Public engagement activities conducted for the plan suggest that crash data alone does not reflect what traffic safety professionals and the public suspect: inattention and speed are the two most significant factors contributing to serious crash outcomes in the state.

The Minnesota Department of Transportation, in close collaboration with the Minnesota Department of Public Safety and the Minnesota Department of Health, led the SHSP development. Countless other road safety stakeholders and individuals statewide also contributed. We extend our thanks to all who participated in the SHSP's development, whether that meant providing information, responding to questions, completing surveys, giving voice to safety concerns and new or proven solutions, or helping in other ways.

Everyone has a stake in reducing traffic fatalities and serious injury crashes – from those who work in traffic safety to those who drive or are passengers to those who walk, bike, or roll. As Minnesota implements this plan, we encourage your involvement at any level. That may mean securing funding for traffic safety initiatives, designing safer roadways, collaborating with others on multidisciplinary efforts, or practicing safe driving behavior and encouraging others you know to do the same.

TOGETHER, WE CAN MAKE ZERO TRAFFIC DEATHS AND SERIOUS INJURIES A REALITY.

CONTENTS

INTRODUCTION

Minnesota's 2025-2029 Strategic Highway Safety Plan (SHSP) offers a comprehensive framework to analyze data and engage stakeholders with the aim to reduce the number of crash-related deaths and serious injuries. Updated every five years, the SHSP also plays an essential role in helping secure funding for projects and initiatives to reduce traffic deaths and serious injuries on public roadways by satisfying the requirements of a range of federal funding programs.

Throughout the years, Minnesota's SHSP has guided key milestones, including legislation requiring drivers to wear seat belts, the introduction of ignition interlock devices, and media campaigns paired with law enforcement efforts to promote safe driving behavior. The SHSP also has helped bring proven safety infrastructure innovations such as roundabouts to the forefront.

The 2025-2029 SHSP includes features that bring in new voices and approaches and that carefully consider best practices, innovations, and implementation steps, including:

- Consistent involvement of Minnesota's new Advisory Council on Traffic Safety
- Expanded stakeholder engagement, including outreach to underserved populations and vulnerable roadway users
- Data-based approach to equity that explores needs, prioritizes focus areas, and develops strategies
- Incorporation of the Safe System Approach as a guiding framework
- More prominent role for public health partners
- Fresh look at prioritizing the factors that contribute to crashes, resulting in a set of fully updated safety strategies and tactics

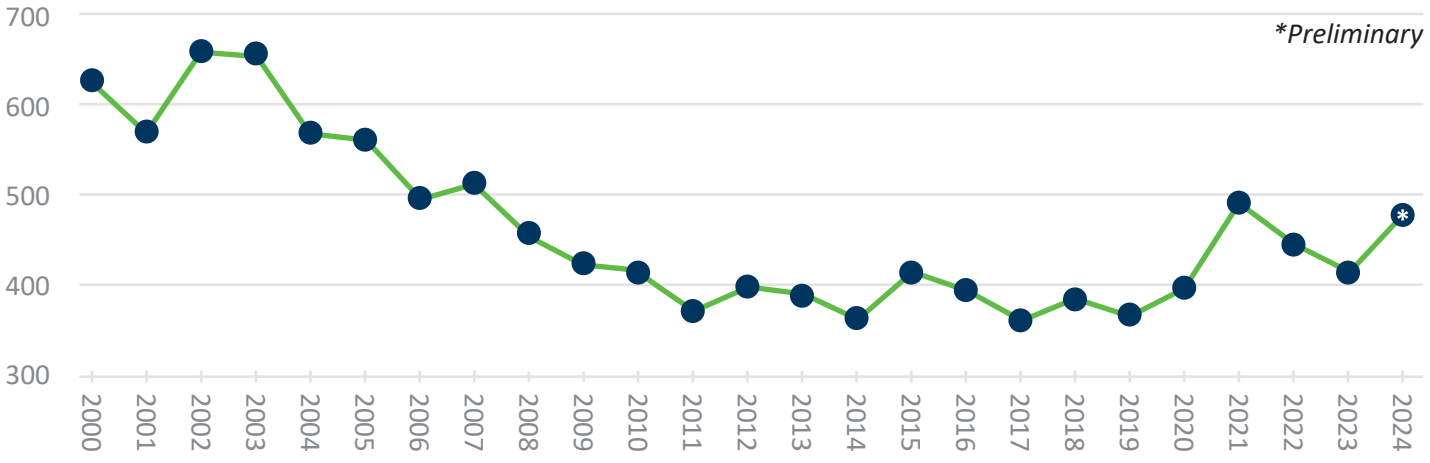
IMPROVING TRAFFIC SAFETY IN MINNESOTA IS CRITICALLY IMPORTANT

One person died and four people were seriously injured on average each day in 2022 as a result of crashes on Minnesota roadways

Fatal and serious injury crashes in the state rose by nearly 22 percent during the five-year period from 2018 to 2022

Preliminary numbers show another spike in fatalities in 2024

Minnesota Roadway Fatalities (2000-2024)



ADVISORY COUNCIL ON TRAFFIC SAFETY: NEW LEADERSHIP

In 2023, the Minnesota Legislature established the Advisory Council on Traffic Safety (ACTS) to improve traffic safety for all users on Minnesota roadways and designated it as the lead for the state's Toward Zero Deaths (TZD) program. ACTS' charge includes advising the governor and Minnesota commissioners of Public Safety, Transportation, and Health on policies, programs, and services that affect traffic safety, as well as advising the appropriate state departments on TZD program activities.

The ACTS leadership team contributed throughout the process to develop the 2025-2029 Minnesota SHSP, offering ongoing feedback, reviewing data, and sharing comments on the plan. The ACTS will play a key leadership role in implementing the SHSP, supporting work to implement and fund the plan's strategies and tactics.

MINNESOTA TZD

The state's cornerstone traffic safety program, Minnesota TZD, takes an interdisciplinary approach to reducing traffic crashes, injuries, and deaths on Minnesota roadways. Its vision: reducing the number of roadway fatalities and serious injuries to zero. The SHSP shares TZD's vision of moving toward zero deaths.

Minnesota TZD strives to create a culture where traffic deaths and serious injuries are no longer acceptable. It involves those who work in the 4 E's—Education, Enforcement, Engineering, Emergency Medical and Trauma Services—and others in a collaborative approach. It leverages data, proven safety countermeasures, best practices, and new innovations and technologies to advance traffic safety. TZD supports eight regional coordinators throughout the state who work within their local areas on safety initiatives. Recent Minnesota TZD developments include a TZD 2.0 initiative to assess and update the Minnesota TZD organizational structure and increase the program's flexibility to meet local needs, produce new and innovative strategies that improve traffic safety, and reenergize stakeholders.

▲ *Minnesota TZD works to create a culture in which traffic deaths and serious injuries are no longer acceptable through the integrated application of the "4 E's": Education, Enforcement, Engineering, and Emergency Medical and Trauma Services. "Everyone" underscores the collaborative approach to adopting behaviors and changing culture to achieve our traffic safety goals.*

The Advisory Council on Traffic Safety is committed to guiding Minnesota toward zero fatal and serious injury crashes by fostering collaboration among stakeholders and promoting innovative safety solutions, best practices, and shared expertise. The Council offers expert advice to agency commissioners and supports communities, practitioners, and policymakers in building an equitable and safe roadway system for all, while leading the state's Toward Zero Deaths program.

FUNDING: NEW OPPORTUNITIES?

Federal, state, and local funding decisions profoundly impact roadway safety in Minnesota.

States receive annual roadway safety funding allocations through the Highway Safety Improvement Program (HSIP), the National Highway Traffic Safety Administration (NHSTA) and other federal programs. In turn, state legislatures and agencies create processes for distributing these funds. This includes the challenging task of balancing the needs and priorities of various stakeholders. For example, how should funds be shared between the state-owned versus locally owned and operated networks? How should projects be identified, prioritized, and selected? What types of improvements should be eligible for funding?

Programs such as the HSIP provide opportunities to dedicate increased funds for local safety projects, simplify and streamline applications, and elevate equity in project funding decisions. Aligning funding criteria and design standards to support additional project types—such as roadway lane reductions, enhanced pedestrian crossings, and rural curve delineation—can empower local agencies to implement the strategies they know work best for their communities.

Prioritizing traffic safety means keeping safety at the core of funding decisions at all levels. Where possible, funding programs should be designed to advance the SHSP investment priorities. As an example, in this SHSP, stakeholders repeatedly identified the lack of state funding for driver education in schools as a gap that disproportionately affects lower income families. Tackling this gap may present an opportunity for the SHSP's lead state agencies – Transportation, Public Safety, and Health – to pursue innovative funding strategies.

MINNESOTA TRAFFIC SAFETY GOAL

0 DEATHS AND SERIOUS INJURIES

Our long-term goal is to eliminate deaths and serious injuries on Minnesota roadways.

BY 2030

NO MORE THAN

225 TRAFFIC DEATHS

980 SERIOUS INJURIES

FIVE-YEAR TARGETS: THE CHALLENGE IS REAL

During development of the previous SHSP in early 2020, statewide fatal and serious injury crash trends had plateaued and the increases that followed the COVID pandemic had not occurred. With that context, the previous plan set ambitious targets to achieve not more than 225 fatalities and 980 serious injuries by the year 2025.

Despite continued collaborative efforts by partners throughout the state, Minnesota is far from reaching these goals. In statewide discussions during the plan update process, stakeholders did not want to go backwards and consistently endorsed maintaining the same, or lower, targets for fatal and serious injury crashes moving forward. The SHSP update adopts these same aspirational numbers as an acknowledgment of the continued challenges we face and our commitment to ongoing improvements.

PLAN OVERVIEW

PRIMARY ELEMENTS

The SHSP includes the following primary elements:

- **Crash Data Analysis.** Data helps define characteristics of crashes, such as location, date and time, severity, weather conditions, driver behavior, involvement of vulnerable road users and other factors. This data-driven approach is crucial for understanding the factors that contribute to fatal and serious injury crashes, and in turn developing the most effective strategies and tactics to address them.
- **Stakeholder Engagement.** Crash data tells an important story, but not the whole story. Moving toward zero crash-related deaths and serious injuries requires stakeholders from all walks of life and all geographic areas to share their knowledge and lived experience. Minnesota SHSP engagement activities reached throughout the state, incorporated inclusive and equitable outreach strategies, involved a wide range of disciplines, and encouraged public participation.
- **Focus Area Framework**. Minnesota crash records identify key attributes for each fatal and serious injury crash that occurs on state roadways. This information helps to identify "focus areas" which lead to a better understanding of common contributing factors to crashes. As a way to bring focus to the plan, the SHSP identifies two focus areas of overarching importance, referred to as "Umbrella" focus areas: Speed, which data shows as one of the most significant contributors to fatal and serious injury crashes, and Inattention, which overwhelmingly topped the list from stakeholders as a major contributor to a growing number of crashes.
- **Safety Strategies and Tactics.** The plan includes dozens of strategies and tactics, organized by focus area. These were developed in partnership with stakeholders based on safety countermeasures that have been proven successful and offer the greatest potential to reduce fatalities and serious injury crashes.

The plan identifies **Key Tactics**, highlighting especially impactful or timely actions. For emphasis, these key tactics are included in the final section of the plan. The full list of strategies and tactics is provided in **Appendix A**.

SHSP Process Summary

GUIDING PRINCIPLES

The following serve as guiding principles for the 2025-2029 Minnesota SHSP:

INCORPORATE THE SAFE SYSTEM APPROACH (SSA)

Each focus area includes strategies that together address at least three of the five SSA elements

INTEGRATE EQUITY

The SHSP identified selected focus areas as equity emphasis focus areas, based on their degree of association with social and mobility vulnerability factors

PROMOTE A TRAFFIC SAFETY CULTURE

The SHSP incorporates a traffic safety culture focus area and includes strategies to activate new work within agencies, TZD, and other organizations

CONTINUE WHAT WORKS

The plan reflects the input of stakeholders and other professionals regarding the most important existing strategies and tactics to continue

IDENTIFY EMERGING ISSUES

The plan includes a discussion of emerging issues for further attention and action.

The SHSP explores the first three guiding principles in greater detail in the sections that follow, including why they are important and how they are addressed.

SAFE SYSTEM APPROACH

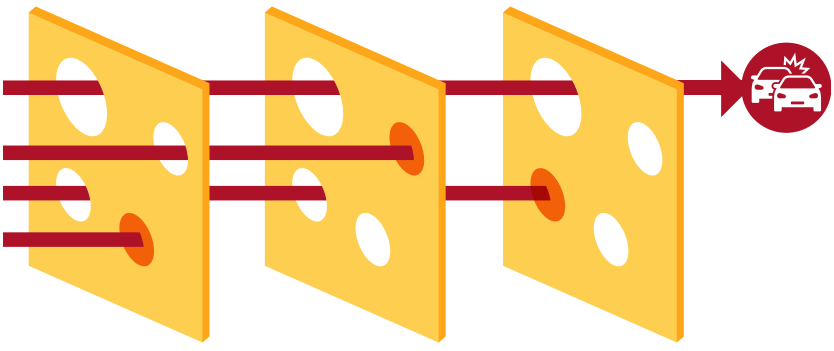
The U.S. Department of Transportation's guiding paradigm to address road safety, the Safe System Approach (SSA), acknowledges people make mistakes and human beings are fragile. Recognizing the role of human vulnerability leads to a different approach to safety than in the past.

The SSA offers a framework to design and manage a roadway infrastructure system that includes redundancies to help mitigate human mistakes. The SSA builds and reinforces multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. Its elements include safer people, safer roads, safer vehicles, safer speeds, and improved post-crash care. The SSA incorporates the following principles:

- **Deaths and Serious Injuries are Unacceptable:** Places priority on the prevention of crashes that result in fatalities and serious injuries.
- **Humans Make Mistakes:** Acknowledges normal lapses in judgment can result in crashes and looks to design and operate a transportation system that prepares for those mistakes.
- **Humans are Vulnerable:** Recognizes the physical limits of human bodies and develops strategies to reduce crash forces that can lead to death and serious injury.
- **Responsibility is Shared:** Requires all stakeholders to work together to prevent fatalities and serious injuries.
- **Safety is Proactive:** Seeks to identify and address safety issues early rather than react to crashes.
- **Redundancy is Crucial:** Strives to strengthen all parts of the transportation system, so if one part fails, the other parts still protect people.

In the context of crash reporting, speed is defined as exceeding the posted speed limit or driving too fast for conditions. The Safe System Approach extends this definition by considering speed through the lens of human vulnerability, focusing on how reducing speeds can decrease the risk of serious injury and acknowledging the fact that humans are unlikely to survive a high-speed crash. The SHSP encompasses both of these approaches.

Safe System "Swiss Cheese" Model



SAFETY FOR ALL

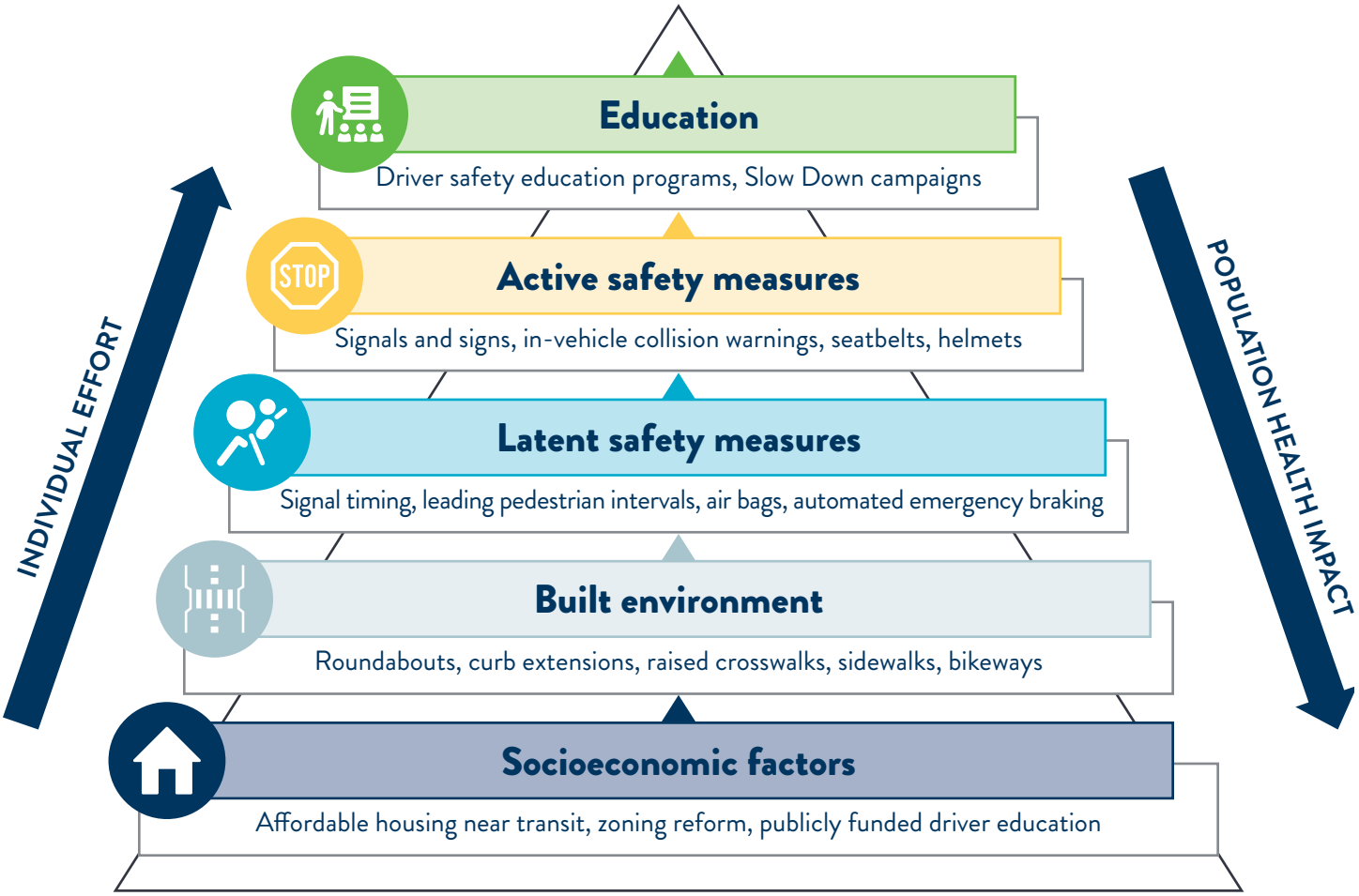
The SHSP emphasizes addressing safety for all users. Plan development activities included an equity crash data analysis and focused outreach to stakeholder groups, as described in subsequent sections of the plan.

During development of the SHSP, the project team also embraced the role of addressing underlying social issues that disproportionately increase exposure to traffic safety risks for some individuals or groups. Examples include people who have less choice about where they live or work and need to drive more as a result (increased exposure) or people who work a night shift or have no option for remote work during bad weather (increased exposure to more hazardous conditions), among others.

While traditional safety strategies and tactics seek to mitigate crash risks, they do not typically consider underlying issues such as poverty, or lack of affordable housing or transportation options. The Safe System Pyramid, however, describes an emerging approach that combines the population-based tactics of public health with transportation's Safe System Approach. As shown in the figure, moving toward the base of the pyramid increases the reach of an intervention while also building it in to daily life for all individuals.

Addressing the underlying causes of transportation crashes is challenging, requiring broad policy changes, a long timeframe, and different approaches to funding. At the same time, changes that help resolve underlying social issues are extremely powerful. To this end, the SHSP strategies and tactics begins with an overarching principle to prioritize the needs of vulnerable users and underserved populations in the implementation of the SHSP wherever relevant.

Safe System Pyramid



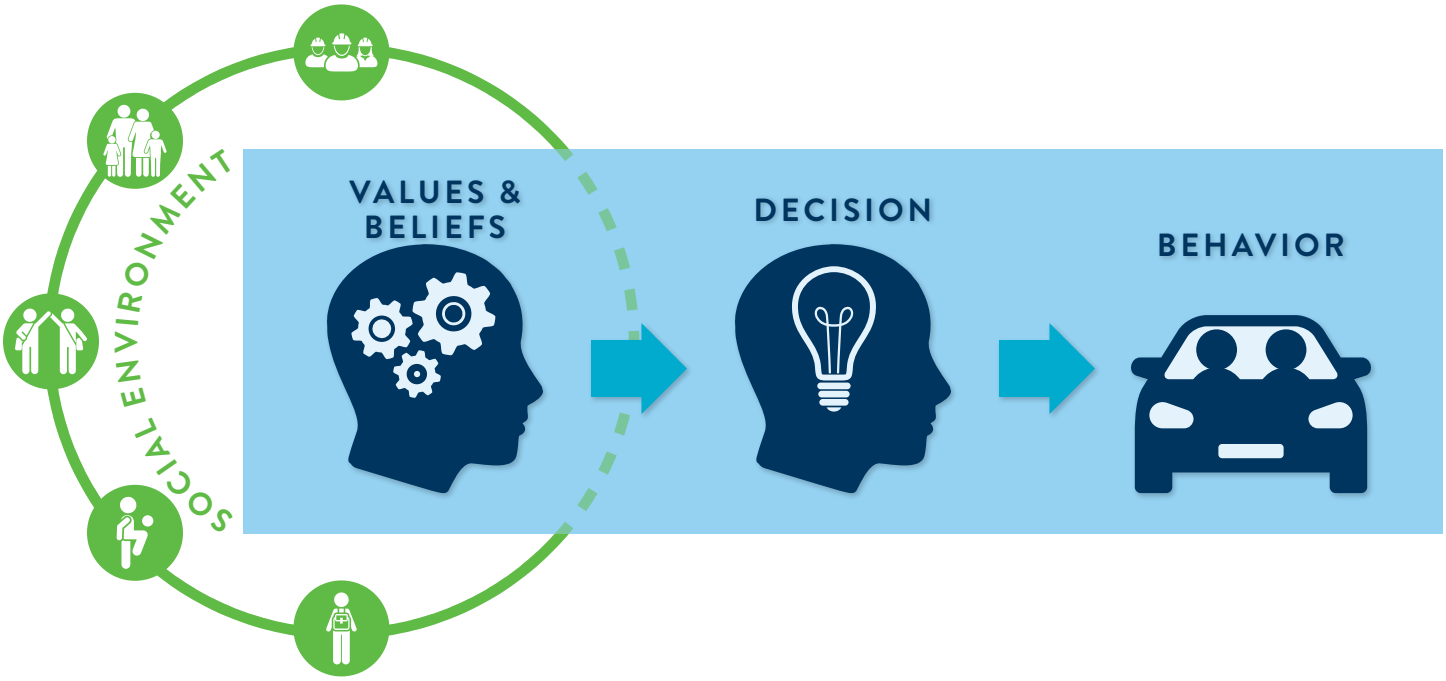
TOGETHER WE CAN CHANGE: TRAFFIC SAFETY CULTURE

Most traffic safety strategies focus on changing the behavior of individual road users who engage in risky behavior to instead choose safer behavior. More recently, a different approach has emerged to promote traffic safety by recognizing that most people make safe choices. Rather than focusing only on changing the behavior of the risky minority, attention is shifting to the role of the safe majority as allies in reaching shared traffic safety goals.

Traffic safety culture focuses on influencing the culture behind driver decisions and relies on group social dynamics to sustain safe behaviors. One example of the power of social dynamics occurs when a group of young adults visits a bar and refuses to allow an impaired friend to drive home. In this case, other cultural influences, such as a presentation at school, a meaningful ad, or family and friend conversations communicating expectations or norms, may have led group members to stop their friend from driving impaired. Similarly, a change in culture within an organization can spread downward and outward through its actions and those of its employees.

The Minnesota SHSP identifies specific strategies and tactics to grow traffic safety culture in the state. These are supported by analyzing crash data to learn about the extent and characteristics of risky driver behavior, by identifying other strategies and tactics that encourage safe driving behavior and strengthen consequences for unsafe driving behavior, by bringing stakeholders together and involving them in implementation, and by advocating for ongoing education and outreach.

Traffic Safety Culture



Adapted from Montana State University, Center for Health and Safety Culture

CRASH DATA: KEY FINDINGS

Crash data analysis is fundamental in understanding the factors that most often contribute to fatal and serious injuries on Minnesota roadways. This analysis provides a quantitative basis for identifying where, how, and why fatal and serious injury crashes occur, and is a key ingredient in developing effective strategies to reduce them.

The SHSP analyzed crash data from calendar years 2018 through 2022, which was sourced from the Department of Public Safety (DPS) MNCRASH Database. The database reflects various characteristics of a crash as recorded by the responding law enforcement officer, including crash severity, driver behavior, weather conditions, and other observations. Using these characteristics, one or more contributing factors (focus areas) are assigned to each crash. The crash analysis conducted for this plan considered crashes from a variety of perspectives to understand the fundamental context, trends, and contributing factors for fatal and serious injury crashes throughout the state.

FATAL AND SERIOUS INJURY TRENDS

The early 2000's marked a new era where traffic fatalities in the state began to drop significantly from a total of 657 in 2002 to 358 in 2017. Statistics show a steady downward trend during that time, with a few ups and downs, until the numbers started to plateau from 2014 through 2019. During that period, fatalities ranged from a high of 411 in 2015 to the low of 358 two years later.

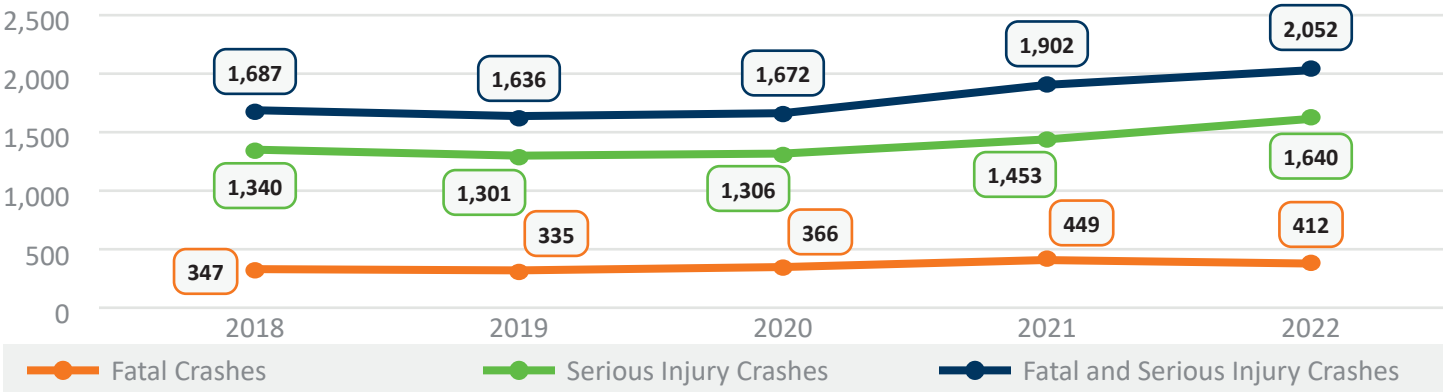
More recently, the COVID-19 pandemic changed the course of Minnesota's progress toward zero deaths. In 2021, the number of traffic fatalities increased sharply to peak at 488 crash-related deaths, a 34 percent increase from the 2019 total of 364. The increase in fatalities occurred even though vehicle miles travelled (VMT) declined. While VMT decreased by 15 percent from 2019 to 2020, Minnesota's fatal crashes grew by nearly 10 percent and continued to increase in 2021. Serious injury crashes also increased during this period, with a 26 percent jump from 2020 to 2022.

Minnesota was not alone. Nationwide, crash-related deaths rose from 38,680 in 2020 to 42,514 in 2022 - an increase of 10 percent, according to the U.S. Department of Transportation. Preliminary National Highway Traffic Safety Administration research suggests that a rise in risky driver behaviors, such as speeding, failure to wear seat belts, and impaired driving, are common contributing factors.

This phenomenon had a profound impact on non-motorized users, with the Governors Highway Safety Association indicating that national pedestrian fatalities increased by 15 percent from 2020 to 2022. Minnesota experienced a similar trend, with pedestrian fatal and serious injury crashes increasing by 40 percent (68 crashes) and those involving bicyclists increasing by 37 percent (23 crashes) from 2020 to 2022.

At the end of 2024, the number of fatal and serious injury crashes in Minnesota had not returned to pre-pandemic levels. In fact, total traffic deaths for the year were more than in 2022 and 2023 and only five percent less than the high number from 2021.

Annual Statewide Fatal and Serious Injury Crashes (2018-2022)



UNDERSTANDING CONTRIBUTING FACTORS

The Minnesota SHSP considers the trends associated with 15 crash focus areas, the primary categories for reporting and analyzing crash data. Because crashes often have multiple contributing factors, they are typically associated with more than one focus area. For example, a crash involving an unlicensed driver that speeds through an intersection and crashes with an older driver could be assigned four focus areas: intersections, speed, unlicensed drivers, and older drivers.

Listed in order of decreasing prevalence in the crash database, the 15 data-driven focus areas are:

- Intersections
- Lane Departure
- Impairment
- Speed
- Unlicensed Drivers
- Older Drivers
- Unbelted
- Motorcyclists
- Younger Drivers
- Pedestrians
- Commercial Vehicles
- Inattention
- Bicyclists
- Work Zones
- Trains

Beyond the focus areas included in the crash data analysis, the SHSP also addresses five Support Solutions focus areas: Traffic Safety Culture, EMS and Trauma Systems, Vehicle Safety Enhancements, Management Systems, and Data Management.

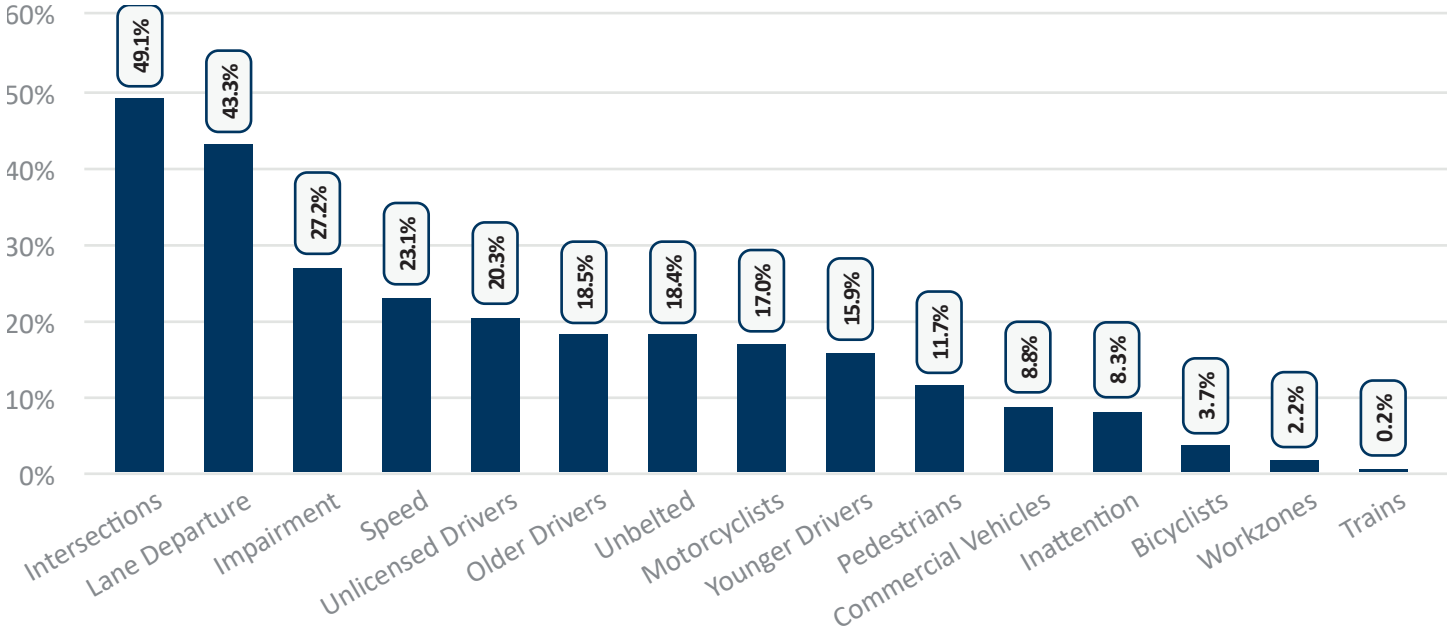
SPEED KILLS

Since 2020, 31 percent of fatal crashes and 23 percent of serious injury crashes in Minnesota were speed-related

SEAT BELTS SAVE LIVES

90% of Minnesotans wear seat belts. However, between 2020-2023, 33 percent of vehicle-occupant fatalities involved occupants who did not wear seat belts.

Percent of Total Fatal and Serious Injury Crashes by Focus Area (2018-2022)



CRASH FACTS: HIGHLIGHTS

The following crash-related information from 2018 to 2022 highlights key crash statistics of significance.

WHERE DO CRASHES TAKE PLACE?

- Fifty-one percent of fatal and serious crashes occur on rural roadways, with 25 percent occurring on rural county roadways and 18 percent on rural state trunk highways.
- Forty-nine percent of fatal and serious injury crashes occur on urban roadways, with urban city roadways accounting for the largest percentage of those crashes.
- The largest percentage of fatal and serious injury crashes – 39 percent – take place on county-owned roadways, most of which are in rural areas.

WHEN DO CRASHES HAPPEN?

- While crashes occur at all hours every month, the data shows that the largest percentage of fatal and serious injury crashes happen in the months of May (9 percent), June (14 percent), July (14 percent), August (12 percent), and September (9 percent).
- When it comes to time of day, most crashes take place between noon and midnight, with 21 percent of crashes occurring from 3 PM to 6 PM and 18 percent of crashes occurring from 6 PM to 9 PM.

WHAT TYPES OF DRIVERS ARE MOST INVOLVED IN CRASHES?

- Drivers between the ages of 26 to 35 were involved in the highest percentage of fatal and serious injury crashes, accounting for 21 percent of such crashes.
- Seventy-one percent of drivers in fatal and serious injury crashes were male, and 29 percent were female.

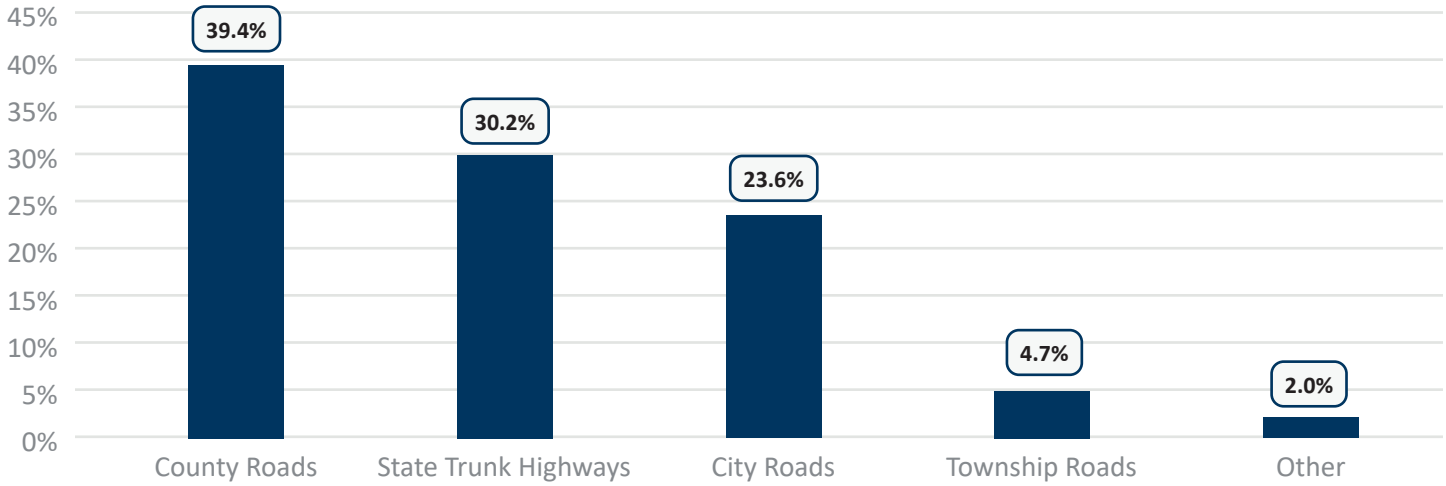
ARE PEDESTRIANS AND BICYCLISTS AT HIGHER RISK?

- While the long-term trend for vehicle crashes has been downward, the numbers of pedestrian and bicycle crashes have remained at similar levels. The SHSP highlights new and continued tactics to reduce pedestrian and bicycle crashes.
- Pedestrians face a high risk of serious outcomes in a crash, with 22 percent of the 4,684 pedestrian-involved crashes resulting in fatal or serious injuries.
- Bicyclists are also at a high risk of serious crash outcomes. Of the 2,775 reported bicycle crashes during the five-year period from 2018 to 2022, 12 percent were fatal or serious injury crashes.

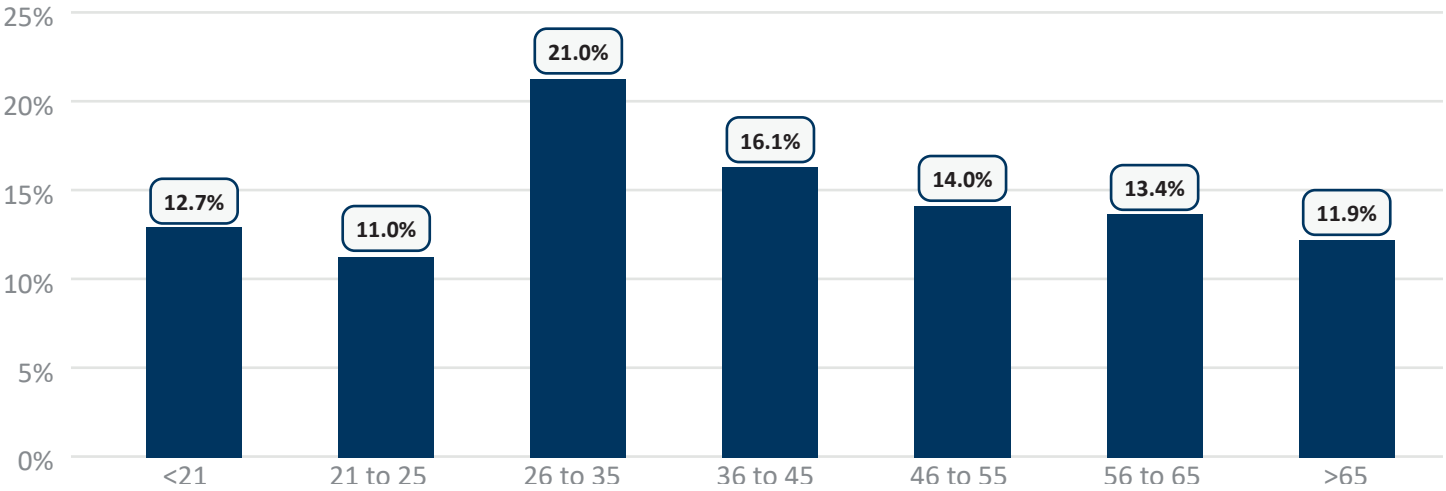
WHAT ABOUT MOTORCYCLISTS?

- Motorcyclists face a high risk if they are involved in a crash: Nearly one third of all reported motorcycle crashes resulted in death or serious injury.
- Most fatal and serious injury crash victims did not wear a helmet.

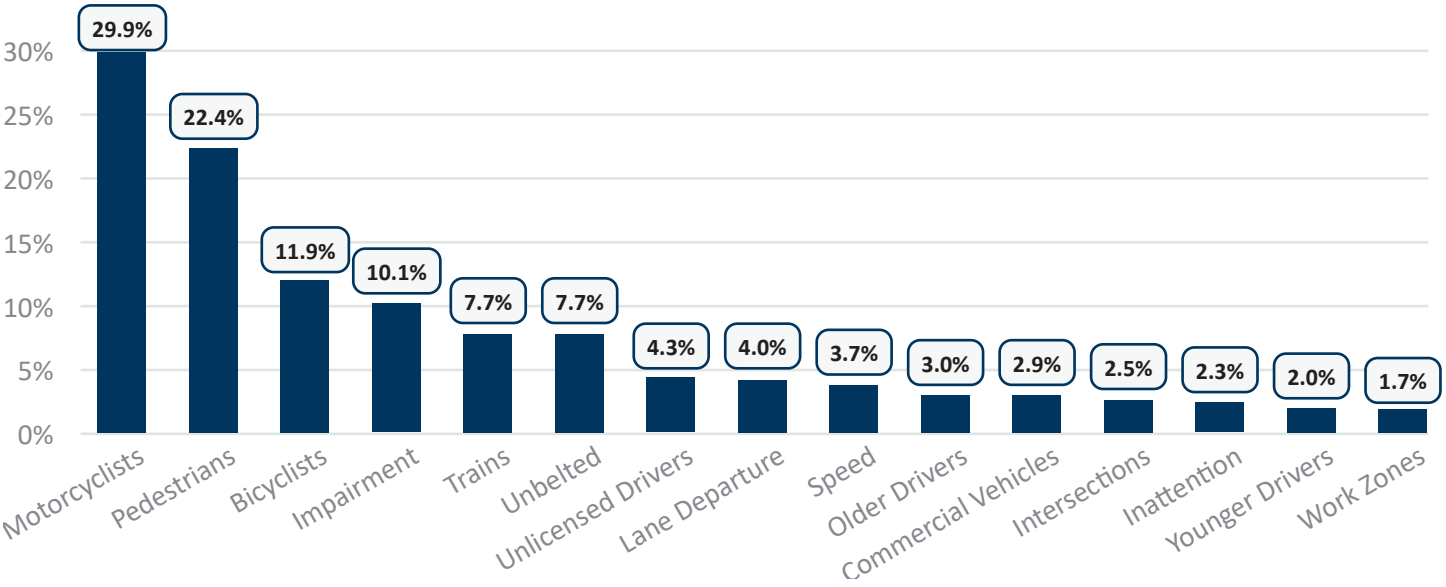
Percent of Total Fatal and Serious Injury Crashes by Roadway Jurisdiction (2018-2022)



Percent of Total Fatal and Serious Injury Crashes by Age of Driver At Fault (2018-2022)



Statewide Fatal and Serious Injury Crash Proportion by Focus Area (2018-2022)



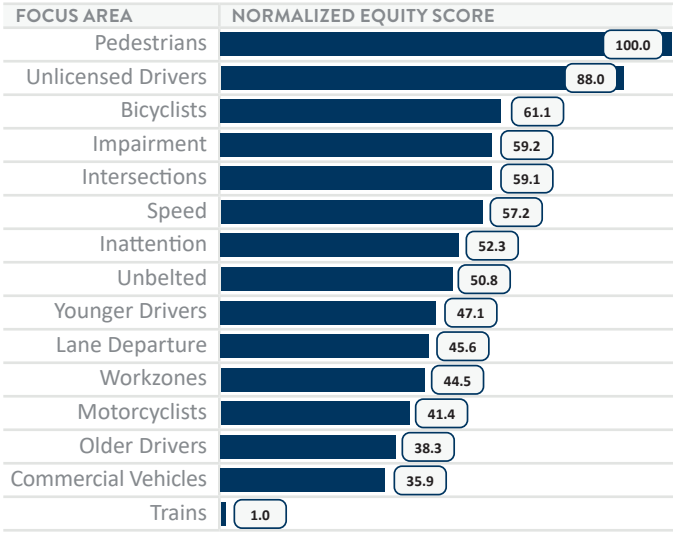
UNDERSTANDING INEQUITIES

Traffic-related fatal and serious injury crashes disproportionately impact some communities. For example, nationally those who identify as African American and Native American are killed in traffic crashes at significantly higher rates than those identifying as white, and people living in higher-poverty areas are more likely than others to be hit and killed in crashes.[1]

To better address these disparities in severe crash outcomes, the Minnesota SHSP drew upon the MnDOT SPACE[2] dataset and ranked crash focus areas based on their degree of geographic association with underserved communities. Results described below are similar to other analyses conducted in Minnesota and nationwide.

Factors considered in the crash equity analysis include unemployment, poverty, household vehicle access, disability status, and share of residents that are Black, Indigenous, or People of Color (BIPOC), among others. The analysis combined factors into a spatial equity index, which was overlaid with locations of fatal and serious injury crashes throughout the state. Each fatal and serious injury crash for the 2018-2022 period was assigned an equity score based on its location relative to the equity index. Crashes were then grouped by each of the 15 crash focus areas and an average equity score for each focus area was calculated. See **Appendix B: Crash Trends Technical Report** for more detailed methodology and results.

Normalized Average Equity Score by Focus Area



INTERSECTING VULNERABILITIES

These findings aided the study team in conducting targeted outreach with members of the communities likely to experience disproportionate impacts, and in developing strategies and tactics with the highest potential to address crash disparities throughout the state.

Analysis results show “pedestrians” as the focus area with the highest average equity score and “bicyclists” as the third highest. While all users not in a motor vehicle are more vulnerable, this intersection between underserved communities and pedestrians and bicyclists highlights the cross-cutting benefits of safety improvements for these modes. The other four focus areas in the top six by equity score – unlicensed drivers, impairment, intersections, and speed – reinforce associations between vulnerabilities based on travel mode and broader measures of social vulnerability, such as low income, language or culture barriers, and other factors.

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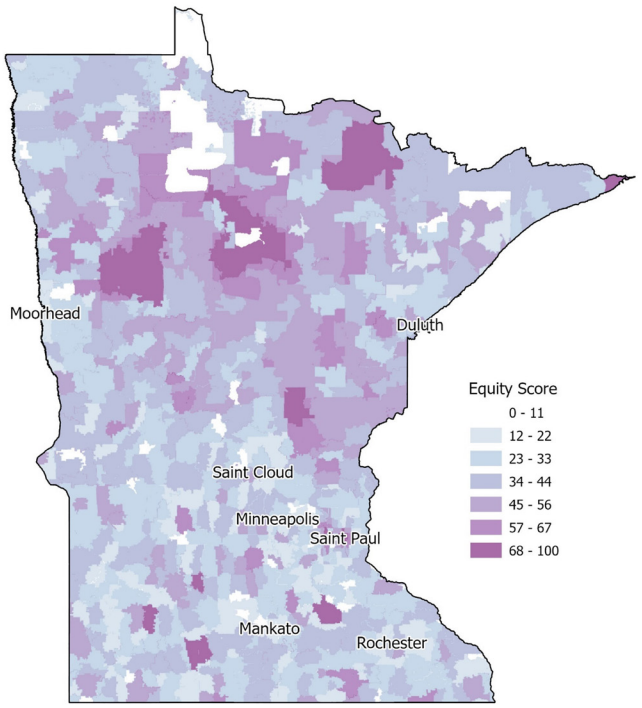
Equity Score



1 https://visionzeronetwork.org/wp-content/uploads/2023/09/Prioritizing_Health_Equit_in_Vision_Zero_Planning.pdf
2 https://mndotspace.mn.gov/

STAKEHOLDER ENGAGEMENT

SHSP development included many voices from diverse stakeholder groups throughout the state – those who work in traffic safety, those who advocate for traffic safety, and those who travel on Minnesota's roadways.

The planning process embraced broad outreach to build a greater understanding of traffic safety challenges and opportunities, bring a range of valuable perspectives to discussions, and support the ongoing collaborations that strengthen plan implementation and the state's traffic safety culture.

ACTIVITY SUMMARY

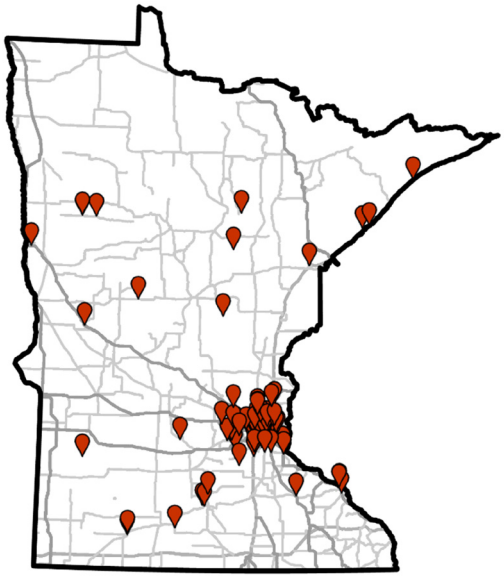
During the plan development process, the Minnesota Department of Transportation's Let's Talk Transportation portal offered Minnesotans statewide a place to learn more about the plan and to share their perspectives and priorities on traffic safety. The cornerstone for public input was an online survey and an interactive comment map, advertised through social media and email updates.

For more than a year, meetings and interactive presentations allowed deeper engagement with many hundreds of stakeholders throughout the state. Engagement at the TZD regional workshops alone involved more than 800 participants. Engagement event highlights include:

- 2023 and 2024 Minnesota TZD Annual Conferences
- 2024 Minnesota TZD Regional Workshops and Roundtables (11 meetings statewide)
- Minnesota Advocacy Council for Tribal Transportation
- Twin Cities Auto Show
- Minnesota Tribal Traffic Safety Summit
- Mall of America 2024 Traffic Safety Day
- Minnesota Metropolitan Planning Organization Director's Meeting
- Department of Public Safety Event Booths
- 2024 Minnesota Transportation Conference

Participants at many of these meetings took part in exercises to provide input on an updated traffic fatality goal, to rank the top focus area priorities, and to evaluate past SHSP strategies and offer suggestions for new strategies and tactics. At various in-person events, they shared their thoughts through large- and small-group conversations and online and paper surveys.

Map of Interactive Comments Across Minnesota



▲ *Interactive comments and surveys responses on safety priorities were received from around the state.*

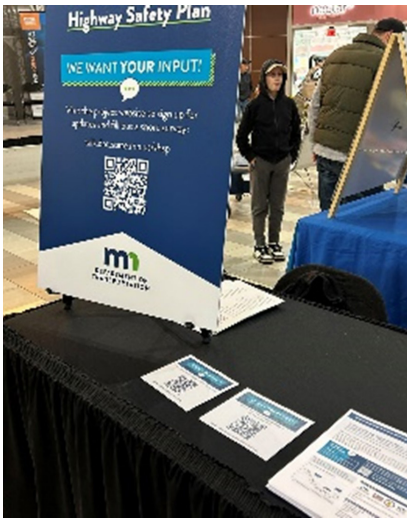
Through more than two dozen in-person events and an on-line portal, hundreds of Minnesotans throughout the state provided input on issues, concerns, priorities, and strategies for the SHSP.

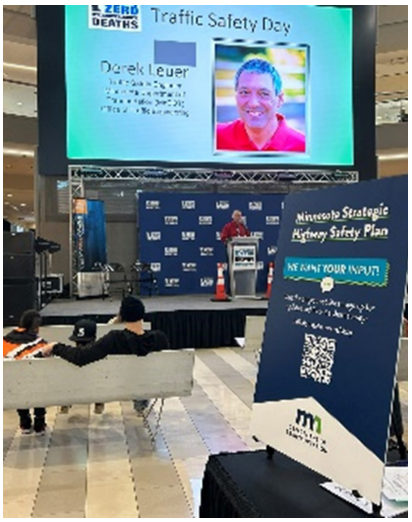
Engagement also took place through a series of interviews with representatives from vulnerable and underserved communities. Key themes from these interviews included needs for:

- Accessibility and access
- Education tailored to different cultural backgrounds
- Improved infrastructure to support all modes
- Consistent enforcement
- Clear communication

In addition, one-on-one meetings and conversations with a wide range of traffic safety stakeholders helped inform the development of strategies and tactics. These included subject matter experts from the Minnesota Departments of Transportation, Public Safety, and Health, the Minnesota Safety Council, and others.

Reaching New Audiences at the first-ever at Traffic Safety Day at the Mall of America





ARE THERE ANY OTHER CONCERNS YOU HAVE ABOUT SAFETY ON MINNESOTA ROADWAYS THAT YOU WOULD LIKE TO SHARE?

> *Stop designing with speed first. Safety should be paramount, and speeds need to be reduced in areas where you'd expect pedestrians or bicyclists.*

> *Focus on traffic safety culture. Break the mold. Try radical new things.*

> *Emphasize the use of child restraints in ATV's. Minnesota is an ATV/OHV state, especially in the north.*

> *Stronger enforcement is needed rather than new laws.*

> *We need more roundabouts. They are safer than signals, keep traffic flowing, and they reduce pollution at signals.*

Comments from online survey regarding SHSP priorities, 2024

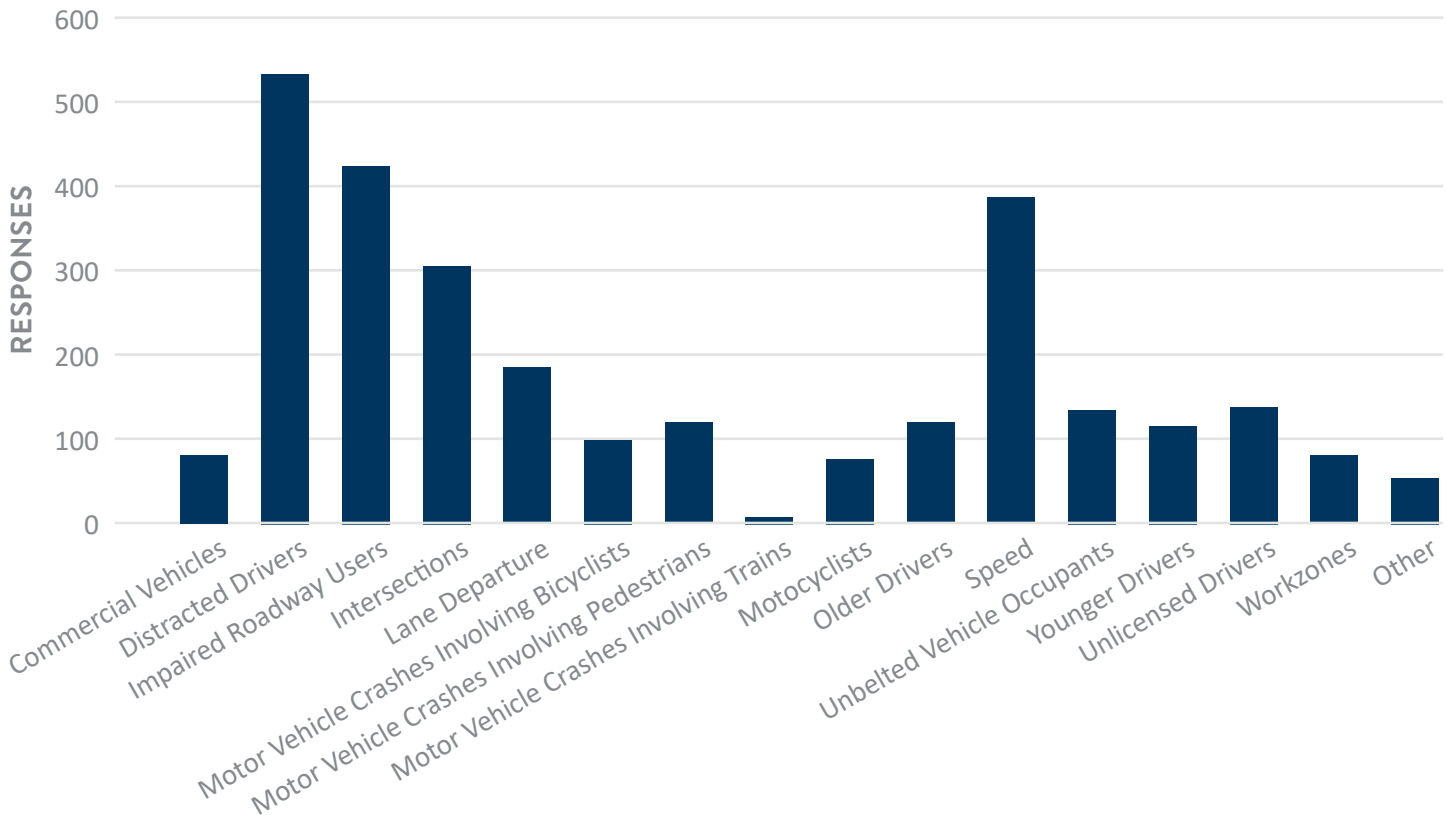
COMMON THEMES

Some common themes emerged from the stakeholder feedback:

- **Priority Focus Areas:** Stakeholders consistently selected speed, inattentive drivers, intersection safety, and impaired roadway users as their top focus areas, observations that align well with the data.
- **Concern About Trends:** Stakeholders expressed a general concern about crash trend numbers and about the inability to reach the previous SHSP goal of 225 traffic fatalities by 2025.
- **Solutions:** Stakeholders most often focused on infrastructure and education tactics as their popular safety solutions.
- **Uncertainty Around Automation:** There were mixed opinions when it came to automated enforcement tactics as solutions, such as safety cameras to detect speeding and red-light running, and vehicle automation enhancements that range from lane assist technology to full automation.
- **More Friendly Plan Format:** The updated SHSP – particularly its strategies and tactics – should be easier to read and understand at a glance.
- **New Safety Concerns:** Interest in All Terrain Vehicle/ Utility Task Vehicle (ATV/UTV) safety, specifically in greater Minnesota, has increased in recent years.
- **Spread the Word:** Most people feel a responsibility to keep our roadways and highways safe, but fewer people believe their friends feel the same way, which indicates a need to emphasize and improve traffic safety culture.

Appendix C provides complete documentation of the SHSP engagement activities and results.

Online Survey Responses: Top Focus Areas for Reducing Fatal and Serious Injury Crashes



FOCUS AREA PRIORITY FRAMEWORK

The combination of concerning crash increases in some focus areas, stubbornly high fatal and serious injury numbers overall, and limited resources makes setting priorities more important than ever. While comprehensive, the Minnesota SHSP also points to areas with the greatest potential and greatest need to reduce crash-related deaths and serious injuries. To this end, the 2025-2029 SHSP establishes a focus area framework based on both data and stakeholder input.

THE UMBRELLA: SPEED AND DISTRACTED DRIVING

Speed and inattention form the highest-priority focus areas based on the following criteria:

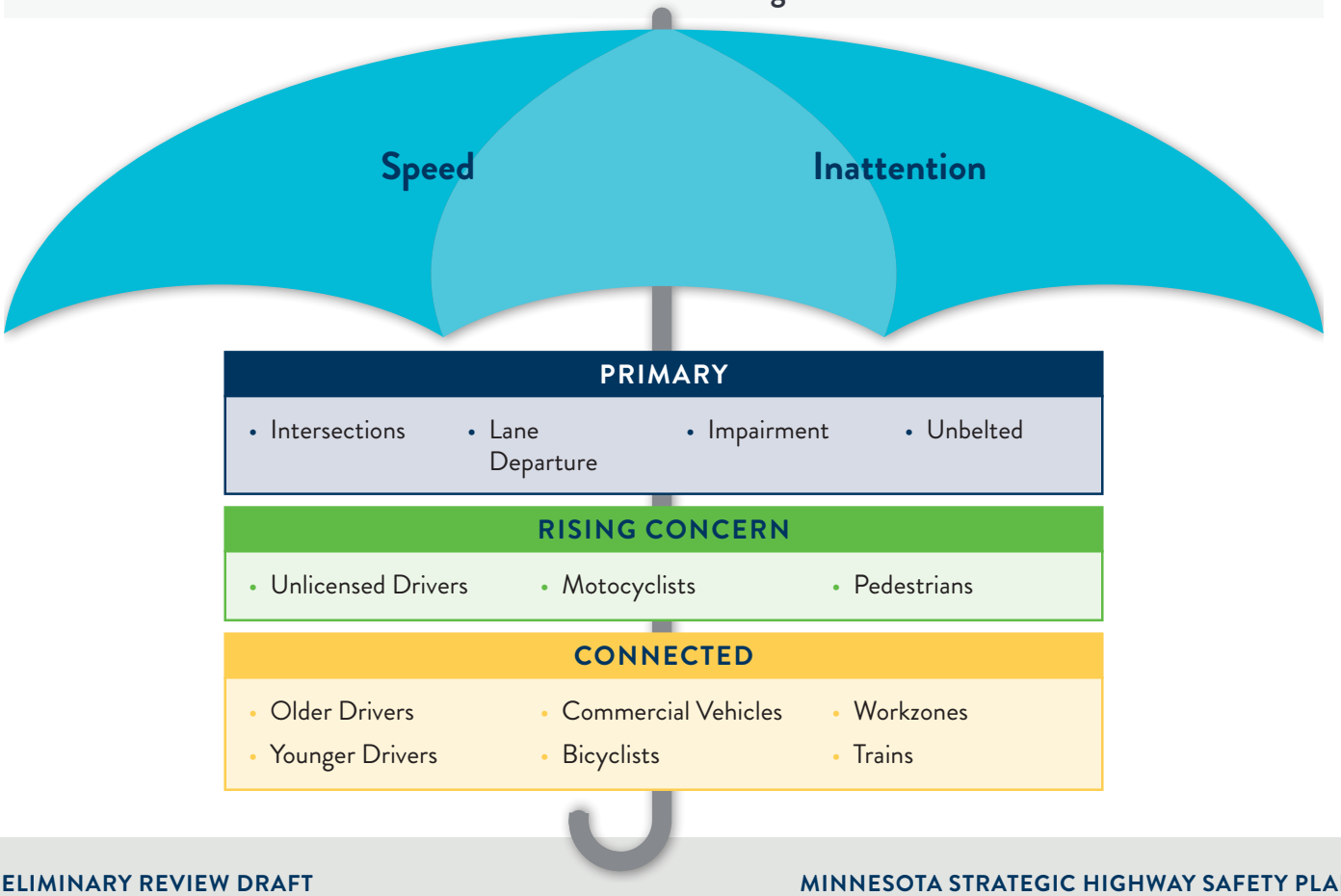
- **Quantitative analysis:** A strong association with fatal and serious injury crashes
- **Qualitative data:** Consistently and broadly cited as a top concern by stakeholders
- **Expert opinion:** Considered by safety experts to be among the most important factors in crash occurrence

As a result, speed and inattention top the SHSP prioritization framework, with "speed" understood to mean both exceeding the speed limit or driving too fast for conditions as well as human limitations in surviving the impact of vehicles at higher speeds. The umbrella of speeding and inattention reflects a key conclusion:

Slowing down and paying attention can make a significant difference in reducing crashes that result in deaths and serious injuries.

Multiple factors, including culture, roadway design, and enforcement, influence the behavior change that results in slower speeds.

Focus Areas and Categories



PRIMARY FOCUS AREAS: THE NEXT FOUR

Under the Umbrella focus areas, the "Primary" focus areas include intersections, lane departure, impairment, and unbelted.

The SHSP considers these four as Primary focus areas because they account for a large share of fatal and serious injury crashes. With the recent legalization of marijuana in Minnesota, impaired driving has taken on even greater importance.

Together, the Umbrella focus areas and these Primary focus areas comprise the big six of contributing factors, accounting for 90 percent of fatal and serious injury crashes that occurred during the analysis period.

RISING CONCERN FOCUS AREAS

The unlicensed drivers, motorcyclists, and pedestrians focus areas represent smaller numbers of crashes than other focus areas. However, based on rising numbers, user vulnerability, stakeholder input, and the high proportion of fatal and serious injury crashes compared to other focus areas, these focus areas demand greater attention.

Included as focus areas of Rising Concern, they, combined with the Umbrella and Primary focus areas, account for 95 percent of fatal and serious injury crashes.

CONNECTED FOCUS AREAS

Since fatal and serious injury crashes often involve more than one focus area, many focus areas share a dependency with other focus areas. Connected focus areas – which include older drivers, younger drivers, commercial vehicles, work zones, bicyclists, and trains – represent a small relative portion of crashes, but are deeply intertwined with the Umbrella, Primary, and Rising Concern focus areas.

Because of this, investments in the Connected focus areas have an outsized potential to strengthen and support strategies for the other focus areas. Together, the Umbrella, Primary, Rising Concern, and Connected focus areas accounted for 100 percent of fatal and serious injury crashes occurring during the analysis period.

SUPPORT SOLUTIONS FOCUS AREAS

This focus area category recognizes the importance of systems that support the other focus areas, as well as efforts to strengthen traffic safety culture in homes, schools and universities, workplaces, neighborhoods, organizations, and government.

Support Solutions include the five focus areas of data management, traffic safety culture, vehicle safety enhancements, management systems, and emergency medical systems and trauma systems. They are critical to the implementation and effectiveness of all other focus area strategies.

STRATEGIES AND TACTICS

The SHSP includes strategies and tactics for each focus area. While strategies and tactics for the higher-priority focus areas are expected to have the greatest quantitative impact, all strategies and tactics are interconnected and reinforce one another to create a cohesive safety approach. In addition, the plan includes an overarching principle that calls for emphasizing the safety needs of those with inherently increased safety risk or exposure based on travel mode and socioeconomic characteristics.

The strategies and tactics set the direction for traffic safety partners to continue their work to reach zero serious injuries and fatalities on the state's roadways. Comprehensive in breadth and depth, they also provide documentation to support federal funding requests.

Key Tactics are actions considered to be especially impactful or timely. For emphasis, these key tactics are provided in the final section of the plan. The full list of strategies and tactics is provided in **Appendix A**.

MOVING FORWARD

Minnesota's SHSP sets a direction for the future and establishes a foundation for change that includes:

- **Fresh Approaches**: The SHSP incorporates emerging trends and challenges in traffic safety, including new or renewed attention to traffic safety culture, vulnerable road users and underserved communities, the Safe System Approach, and the troubling increases in fatal and serious injury crashes in recent years.
- **Focus:** Data analysis and stakeholder input emphasize the overall importance of addressing speed and inattention. The SHSP uses data and stakeholder input on these and other focus areas to develop a focus area framework that brings helpful direction to the plan.
- **Comprehensive Strategies and Tactics:** The SHSP includes an updated, vetted, and thorough catalogue of strategies and tactics to address all 20 of the identified focus areas. This resource also highlights key tactics, equity focus areas, stakeholder leadership roles (4 E's), and Safe System Approach elements.
- **Supportive Partnerships:** The SHSP was developed through extensive engagement with multidisciplinary stakeholders who work in transportation, public safety, enforcement, public health, and emergency medical services, as well as other disciplines. It also involved members of the public from throughout the state, and representatives of underserved and vulnerable roadway user groups.

IMPLEMENTATION

The SHSP lays out tactics to reduce crash-related deaths and serious injuries. To turn these strategies and tactics into action requires leadership, collaboration, coordination, and resources. SHSP implementation relies on counties, cities, and other government agencies working together and with private organizations, communities, and advocacy groups. The following groups will support SHSP implementation.

LEADERSHIP

Advisory Council on Traffic Safety. The recently formed Advisory Council on Traffic Safety (ACTS), which guides Minnesota's TZD program, includes multidisciplinary representation. Together, the ACTS and TZD offer structured leadership that supports collaboration, communication, and coordination with the state's traffic safety network. The ACTS will play a key leadership role in implementing the SHSP.

STATE AGENCIES

Minnesota Department of Transportation (MnDOT). MnDOT will continue using the SHSP to inform other safety planning work, such as County Road Safety Plans, as a best practice guide for roadway design; and as a support document for federal funding of safety improvement projects. The SHSP will also be a resource as the agency continues to integrate the Safe System Approach into project development and project selection.

Minnesota Department of Public Safety (DPS) will consider opportunities to support implementation of behavioral tactics or partner with others on tactics that include behavioral and enforcement components. DPS also will continue collecting and sharing data about fatal and serious injury crashes, which aids in tracking trends and measuring safety projects and initiatives. DPS will coordinate the DPS Highway Safety Plan with the SHSP.

Minnesota Department of Health (MDH) will continue to integrate traffic safety into its ongoing programs that focus particularly on the needs of underserved and vulnerable community members.

PLANNING COORDINATION

The SHSP also provides direction for traffic safety partners statewide to incorporate relevant strategies and tactics into their own organization's plans and activities. Those plans include MnDOT's modal plans, district safety plans and county road safety plans, the TZD strategic plan, DPS' Highway Safety Plan, and MDH work plans, among others. Agencies such as MnDOT, DPS, and MDH also will work with their state, regional, and local partners to integrate the SHSP into their plans.

EMERGING ISSUES

During the SHSP development, stakeholders noted emerging areas that impact safety and warrant continued monitoring.

ATV/UTV SAFETY

According to data from early November 2024, 30 people died in ATV crashes on Minnesota roadways, surpassing the previous high of 27 people killed in 2020. For comparison, this is more annual fatalities than for bicyclists in a given year. As ATV/UTV traffic on public roads has increased, so has the risk of rollovers or collisions on these roadways.

TRAFFIC SAFETY CAMERAS

The 2024 Legislature approved a traffic safety camera pilot, authorizing the cities of Minneapolis and Mendota Heights to test the use of traffic safety cameras in detecting speeding and red-light running. In addition, as part of the legislation, MnDOT will pilot work zone speed cameras on two to four projects. The Legislature requires that city and MnDOT list all pilot locations on their websites and establishes the penalties for violations of more than 10 miles per hour over the speed limit. Minnesota will continue to learn from the work of its peers in exploring traffic safety cameras as a key TZD initiative.

PEOPLE EXPERIENCING HOMELESSNESS

In particular in more urban areas, Minnesota has seen an increase in the number of people experiencing homelessness living in the public right-of-way. However, highway right-of-way and roadways are inherently not safe places for people to live. When responding to the complex and urgent needs of people experiencing homelessness, MnDOT regularly coordinates with local service providers and state and county partners to provide information, support and alternatives before closing any space. MnDOT is a member of the Minnesota Interagency Council on Homelessness and works closely with sister agencies supporting efforts to prevent and end homelessness as outlined in the Crossroads to Justice Strategic Plan. MnDOT will continue these efforts in the future.

CURRENT AND EMERGING TECHNOLOGIES

Approaches with the potential to improve traffic safety through increased use of technology include intelligent transportation systems (ITS), transportation systems management and operations (TSMO), and telematics, among others. As these technologies evolve even beyond those identified in this plan, they may play a bigger role in augmenting traditional safety strategies and tactics.

MEASURING PROGRESS

The SHSP offers a multi-jurisdictional roadmap for how to achieve zero fatalities and serious injuries on Minnesota's roads. Success of the SHSP ultimately will be measured in reduced fatal and serious injury crashes. Success also can be measured in other ways including new collaborations and partnerships, innovative approaches and programs, increased awareness, legislative actions, and cultural changes.

Each SHSP strategy includes carefully developed tactics that represent the actions to achieve that strategy over time. The Key Tactics represent implementation priorities for the next five years. Prior to development of the next update, it will be important to evaluate the Key Tactics to understand what has been effective and modify or remove what has not. In close coordination with the Advisory Council on Traffic Safety, MnDOT staff will commit to realizing the following evaluation and reporting schedule for the 2025-2029 SHSP:

- **By year 2 (Fall 2026):** In coordination with the ACTS and relevant implementation partners, define core evaluation topics for each Key Tactic. This may include implementation leadership (lead agency and partners), primary funding sources, performance measures, implementation goals, and implementation benchmarks, among others.
- **By year 4 (Spring 2028):** Prepare and present to the ACTS an assessment report for the Key Tactics. The assessment report will be integral in development of the next (2030-2034) SHSP contract, and will be included within that SHSP as a progress report on implementation since the prior (2025-2029) SHSP.

SPECIAL RULES

Crashes come with greater risk to lives when they involve pedestrians, drivers on rural roadways, older drivers, and bicyclists. Recognizing those risks, the Federal Highway Administration requires states that complete an SHSP to analyze the following types of crash data:

CRASHES ON HIGH-RISK RURAL ROADWAYS (HRRR)

CRASHES THAT IMPACT OLDER DRIVERS AND OLDER PEDESTRIANS

CRASHES THAT IMPACT VULNERABLE ROADWAY USERS (VRU), SUCH AS PEDESTRIANS AND BICYCLISTS

If the state's crash trends for these items meet the criteria for a special rule to take effect, the SHSP must identify specific SHSP strategies and tactics to address them. As of publication of this plan, the data shows that Minnesota triggers only the HRRR special rule, with further details below. While Minnesota does not trigger the other special rules, the SHSP continues to address the concerns that drive these rules, namely the safety of people walking and biking and of those using the rural road network. The plan also includes a Vulnerable Road User Safety Assessment (**Appendix D**), as well as strategies and tactics that directly address people walking and biking and those that help make the roadways safer for all.

HIGH-RISK RURAL ROADWAYS SPECIAL RULE

The 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) implemented the High-Risk Rural Roads (HRRR) Special Rule requiring states with an increase in fatality rates on rural roads to obligate a specified amount of Highway Safety Improvement Program (HSIP) funds to HRRR. The HRRR Special Rule applies if "the fatality rate on rural roads in a State increases over the most recent 2-year period for which data are available."[1] If the data triggers the HRRR Special Rule, a state must obligate an amount equal to 200 percent of its Fiscal Year (FY) 2009 set-aside for high-risk rural roads.

Comparison of the five-year average rural road fatality rates for calendar year 2016-2020 with 2018-2022 shows the fatality rate on Minnesota's rural roads increased over the most recent two-year period (2020-2022). As a result, Minnesota is required to obligate in FY 2025 an amount equal to at least 200 percent of its FY 2009 HRRR amount (a total of at least $3,620,110). Federal legislation defines a HRRR as "any roadway functionally classified as a rural major or minor collector or a rural local road with significant safety risks, as defined by a State in accordance with an updated State SHSP." As part of the SHSP update process, a state must define its methodology for identifying roadways with "significant safety risk."

Minnesota defines HRRRs as county-owned roads that are functionally classified as a rural major or minor collector or a rural local road with significant safety risks. The presence of significant safety risks is determined using the County Road Safety Planning process, which identifies roads satisfying the functional classification requirements that have a higher probability of fatal and serious injury crashes as indicated through assessment of surrogate risk factors. Eligible roadways also may qualify if they can demonstrate that the fatal and serious injury crash rate is statistically significantly above the statewide average for similar facilities.

Minnesota has addressed the HRRR Special Rule requirements through two key efforts:

- **HSIP Funding of HRRR Projects through County Road Safety Plans (CRSPs):** The Minnesota CRSPs identify high-impact, cost-effective projects along the state's HRRRs. Using a proactive safety assessment to identify highest-risk locations within the HRRR network, CRSPs assign proven countermeasures based on risk factors and recommend high-priority projects for HSIP funding. Through this process, MnDOT has committed funds to HRRR projects well in excess of the required amount for 2025, as well as for each additional year through 2028.

1 https://highways.dot.gov/safety/hsip/hsip-special-rules

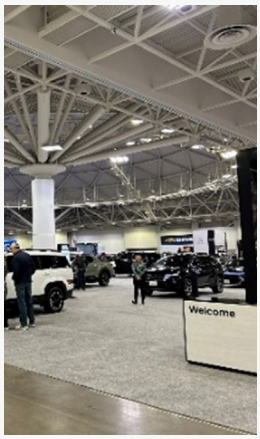
- **HRRR-Focused Strategies and Tactics within the SHSP:** Several SHSP strategies and tactics recommend proven countermeasures with particular relevance to rural roadway safety. These countermeasures were developed in response to crash data combined with engagement with rural road network stakeholders, both as part of the SHSP update and MnDOT's ongoing statewide County Road Safety Plan (CRSP) program. As companion documents, the SHSP and CRSP work in concert to identify the highest-risk rural roadways and identify effective solutions to improve them. Examples of SHSP strategies and tactics with relevance to HRRRs include:
  - **Lane Departure – Strategy 1:** Design roadways to reduce the frequency and severity of lane departure crashes
    - **Tactic 1.1:** Design roadways to bring awareness to roadway edges and reduce the frequency of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include rumble strips and edge line markings.
    - **Tactic 1.2:** Design edge of roadway to reduce the severity of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include maintaining clear zones, appropriate shoulder widths, establishing and maintaining cable barrier/other barriers, Safety Edge installation, and appropriate slope design.
  - **Lane Departure – Strategy 2:** Design horizontal curves to reduce the frequency and severity of lane departure crashes
    - **Tactic 2.1:** Implement designs to improve curve visibility and reduce the frequency of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include rumble strips, enhanced edge line markings, chevrons/delineators, lighting, high friction surface treatment, and appropriate curve radii.
    - **Tactic 2.2:** Design edge of roadway within curves to reduce the severity of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include clear zones, appropriate shoulder widths, cable barrier/other barriers, Safety EdgeSM installation, and appropriate slope design.
  - **Lane Departure – Strategy 3:** Evaluate and implement existing and new safety features and technologies
    - **Tactic 3.2:** Implement ITS and other technologies to reduce severe lane departure crashes at high-risk locations or locations with a sustained crash pattern. Examples include sequential dynamic flashing chevrons, speed warning for sharp curves, changeable message signs and variable speed limits for inclement weather, and wrong way driving detection.

A LAST WORD: TRAFFIC SAFETY CULTURE

While the SHSP identifies specific traffic safety culture strategies and tactics, it is collaboration that brings the SHSP strategies and actions to life and helps Minnesota's traffic safety culture grow. When stakeholders work together and share their knowledge and expertise with one another and the public, they become greater advocates for cultural changes that lead to positive driving behaviors and improved professional practices.

Promoting a traffic safety culture is a guiding principle for this SHSP. The efforts of Minnesota TZD and many others to change the culture around safety and socially acceptable behavior is essential to the plan's success. Together, we can change.

TZD Public Engagement at the Twin Cities Auto Show



STRATEGIES AND KEY TACTICS

This section includes all the SHSP strategies and those tactics identified as Key Tactics, considered to be especially impactful or timely. The complete list of strategies and tactics, is included in **Appendix A**.

SHSP FOCUS AREAS, STRATEGIES, AND TACTICS

The SHSP defines 20 focus areas, each with corresponding strategies and tactics. Focus areas are grouped within the categories of Umbrella, Primary, Rising Concern, Connected, and Support Solutions.

The focus areas, strategies, and tactics reinforce each other and work on multiple levels to reduce severe crash outcomes on Minnesota roads.

1. **Focus area category** is presented on top.
2. **Focus area name** is identified at the top of the page.
3. **Equity Focus Area** designation is given to the top six focus areas by average equity score.
4. **Strategies** represent the "what." They describe a key opportunity to reduce crashes associated with a specific Focus Area.
5. Corresponding **Safe System Approach** elements are identified at the strategy level, representing the multiple layers of defense that each strategy incorporates.
6. **Tactics** represent the "how." They are specific actions that can be taken by implementation partners to achieve a strategy's objective.
7. **Key Tactics** are considered especially impactful or timely and will be given implementation priority.
8. Leadership categories are identified by showing one or more **4E's** elements for each tactic.
9. Symbols are defined in the **legend** included on each page.

OVERARCHING PRINCIPLE

EMPHASIZE SAFETY NEEDS OF VULNERABLE AND UNDERSERVED POPULATIONS IN SHSP IMPLEMENTATION

STRATEGY 1: SEEK TO PRIORITIZE THE NEEDS OF VULNERABLE AND UNDERSERVED POPULATIONS IN THE IMPLEMENTATION OF SHSP STRATEGIES AND TACTICS WHEREVER RELEVANT

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
1.1: Invite non-traditional partners, such as Statewide Health Improvement Program staff, to develop implementation approaches that emphasize the safety needs of vulnerable and underserved populations.	
1.2: Incorporate safety needs of vulnerable and underserved populations into grant scoring criteria.	
1.3: Expand transportation safety data collection and sharing to better understand and address the needs of vulnerable and underserved populations.	
1.4: Through multi-agency collaboration, explore enhanced equitable enforcement approaches based on research and review of new and best practices.	

UMBRELLA FOCUS AREAS

SPEED

EQUITY FOCUS AREA

STRATEGY 1: DEVELOP A COMPREHENSIVE PLAN TO SYSTEMATICALLY REDUCE SPEEDS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
1.1: Develop a comprehensive Speed Management Action Plan that identifies locations, times, and strategies to effectively manage speed through enforcement, speed safety cameras, engineering design, and traffic safety culture tactics. Involve staff from State Patrol, local law enforcement, engineering, Toward Zero Deaths and others.	

STRATEGY 2: IMPROVE SPEED-RELATED CRASH DATA AND DRIVER VIOLATION HISTORY

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
2.2: Provide law enforcement with up-to-date driver violation history and prior convictions at the time of a traffic stop to help identify repeat violators.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 3: ASSESS AND EXPAND THE PILOT USE OF SPEED SAFETY CAMERAS AND RELATED PUBLIC EDUCATION EFFORTS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
3.2: Develop a speed safety camera program plan for work zones and school zones based on Minnesota's pilot results. Consider the USDOT speed safety camera guidelines for planning, public involvement, stakeholder coordination, implementation, maintenance, and evaluation.	
3.4: Develop messaging to educate the public on how speed safety cameras, when implemented with proper controls, can offer fair and equitable enforcement of speeding laws.	

STRATEGY 4: STRENGTHEN SPEED ENFORCEMENT CAMPAIGNS AND PUBLIC VISIBILITY

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
4.3: Strengthen penalties for repeat speeding offenders including the required use of Intelligent Speed Assistance. Intelligent Speed Assistance may be used to provide warnings on vehicle speed, automatically adjust vehicle speed based on the speed limit, or use other features to assist drivers in maintaining a safe and legal speed.	

STRATEGY 5: STRENGTHEN DRIVER AWARENESS OF SPEED-RELATED CONSEQUENCES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
5.2: Fund a Minnesota pilot program coupled with media outreach for the use of telematic monitoring systems to provide real-time feedback on speeding and other high-risk driving behaviors to encourage mid-driving correction and crash prevention.	

STRATEGY 6: DESIGN ROADWAYS TO ENCOURAGE APPROPRIATE SPEEDS AND REDUCE CRASH SEVERITIES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
6.2: Incorporate speed-reducing design on corridors, especially high-speed to low-speed transition zones. Highly effective examples include reduced lane widths, raised medians, radar feedback devices, transverse pavement markings/converging chevron markings, lane shifts, road diet (four to three-lane conversion), and signal timing.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

INATTENTION

STRATEGY 1: IMPROVE THE QUALITY OF INATTENTIVE DRIVING CRASH DATA

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
1.1: In collaboration with Minnesota Traffic Records Coordinating Committee, ensure enforcement crash reporting aligns with the attribute values in the 2024 edition of the Model Minimum Uniform Crash Criteria.	Engineering, Enforcement

STRATEGY 2: IMPROVE EDUCATION AND AWARENESS TO REDUCE INATTENTIVE DRIVING

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.2: Increase funding to support public awareness prior to inattentive driving enforcement campaigns, and to support public outreach featuring the campaign's results once the campaign has concluded.	Enforcement, Education

STRATEGY 3: STRENGTHEN ENFORCEMENT TOOLS AND CRIMINAL PENALTIES TO REDUCE INATTENTIVE DRIVING

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
3.2: Identify new funding for law enforcement tools and equipment needed to identify offenders and effectively enforce Minnesota's distracted and careless driving laws.	Enforcement, Education
L **3.4:** Strengthen criminal penalties for distracted driving causing severe injuries or death through 1) legislative changes to the Criminal Vehicular Homicide and Criminal Vehicular Operation statutes to specifically include "use of an electronic device while driving," and 2) supporting an increase in the severity levels for Criminal Vehicular Homicide and Criminal Vehicular Operation within the Minnesota Sentencing Guidelines Grid.	Enforcement

STRATEGY 4: SUPPORT THE ADVANCEMENT OF TECHNOLOGY IMPROVEMENTS TO REDUCE INATTENTIVE DRIVING

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
4.1: Fund pilot program coupled with media outreach for the use of telematic monitoring systems to provide real-time feedback on inattentive and other high-risk driving behaviors to encourage mid-driving correction and crash prevention.	Education

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)
Engineering
Enforcement
Emergency Services
Education

PRIMARY FOCUS AREAS

INTERSECTIONS

EQUITY FOCUS AREA

STRATEGY 1: IMPROVE SAFETY THROUGH INTERSECTION DESIGN CHANGES AND ALTERNATIVE INTERSECTIONS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
1.1: Design intersections to eliminate critical conflict points, especially at high-risk locations or those with a history of severe crashes. Highly effective examples include roundabouts, J-Turns, ¾ intersections, restricted movement intersections, directional medians, and others. Preserve or improve pedestrian mobility where these alternative intersections are implemented.	

STRATEGY 2: INCORPORATE ENHANCED SAFETY FEATURES AT INTERSECTIONS

Safe System Approach Elements Addressed:
Safe Roads

TACTIC	LEADERSHIP
2.1: Improve the visibility of all road users at intersections through use of lighting and unobstructed sightlines, especially at high-risk locations or locations with a history of severe crashes.	

STRATEGY 3: UPDATE INTERSECTION PLANNING POLICY

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
3.1: Incorporate a safety-first approach to intersection planning. Encourage engineering analysis of safety features before exclusion of those options. Utilize MnDOT's adopted slogan of "Safety First, Safety Always" in intersection planning discussions.	
3.2: Support legislation to improve intersection safety options, such as speed safety cameras or red light safety cameras.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

LANE DEPARTURE

STRATEGY 1: DESIGN ROADWAYS TO REDUCE THE FREQUENCY AND SEVERITY OF LANE DEPARTURE CRASHES

Safe System Approach Elements Addressed:
Safe Roads

TACTIC	LEADERSHIP
1.1: Design roadways to bring awareness to roadway edges and reduce the frequency of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include rumble strips and edge line markings.	
1.2: Design edge of roadway to reduce the severity of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. On rural high-speed roads, highly effective examples include maintaining clear zones, appropriate shoulder widths, cable barrier/other barriers, Safety Edge installation, and appropriate slope design. Combining these treatments can increase overall effectiveness and reduce crashes and severities.	

STRATEGY 2: DESIGN HORIZONTAL CURVES TO REDUCE THE FREQUENCY AND SEVERITY OF LANE DEPARTURE CRASHES

Safe System Approach Elements Addressed:
Safe Roads

TACTIC	LEADERSHIP
2.1: Implement designs to improve curve visibility and reduce the frequency of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. Highly effective examples include rumble strips, enhanced edge line markings, chevrons/delineators, lighting, and appropriate curve radii. Explore the effectiveness of high friction surface treatment as an additional design solution.	
2.2: Design edge of roadway within curves to reduce the severity of lane departure crashes, especially at high-risk locations or locations with a history of severe crashes. On rural high-speed roads, highly effective examples include clear zones, appropriate shoulder widths, cable barrier/other barriers, Safety EdgeSM installation, and appropriate slope design. Pair with high-visibility enforcement and education to maximize efficacy.	

STRATEGY 3: EVALUATE AND IMPLEMENT EXISTING AND NEW SAFETY FEATURES AND TECHNOLOGIES

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
3.2: Implement ITS and other technologies to reduce severe lane departure crashes at high-risk locations or locations with a sustained crash pattern. Examples include sequential dynamic flashing chevrons, speed warning for sharp curves, changeable message signs and variable advisory speed limits for inclement weather, and wrong way driving detection.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

IMPAIRMENT

EQUITY FOCUS AREA

STRATEGY 1: STRENGTHEN DWI STRATEGIC PLANNING AND PROGRAM OPERATIONS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
1.2: Obtain performance feedback and evaluate the effectiveness and return on investment of Law Enforcement Liaison activities. Based on results, refine performance expectations, position descriptions, and ongoing assessment process as needed to achieve the desired outputs and outcomes.	Enforcement

STRATEGY 2: REDUCE EXCESSIVE DRINKING THROUGH RESPONSIBLE ALCOHOL SERVICE, COMMUNITY OUTREACH, AND EMPLOYER-BASED INTERVENTION PROGRAMS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
L **2.1:** Enact state-level comprehensive social host liability statutes that extend social host liability to those who knowingly serve visibly intoxicated adults.	Enforcement, Education
L **2.5:** Adopt the use of Screening, Brief Intervention, and Referral for Treatment at the time of arraignment for all first-time DWI offenders.	Enforcement, Education
2.6: Promote social norming communication strategies to increase the perceived risk of impaired driving, raise the profile of responsible driving, and expand media campaigns to feature drug-impaired driving. Incorporate the use of medical personnel such as emergency room doctors to educate the public on the consequences of impaired driving.	Enforcement, Emergency Services, Education

STRATEGY 3: STRENGTHEN SUPPORT FOR LAW ENFORCEMENT TO DETER AND REMOVE IMPAIRED DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
L **3.1:** Based on the evaluation results of Minnesota's roadside oral fluid testing pilot, refine operational procedures and processes as needed and expand the pilot to a fully-adopted roadside test for drug-impaired driving.	Enforcement
3.2: Increase DWI Traffic Safety officers, supported by National Highway Traffic Safety Administration grant funding for the Department of Public Safety Office of Traffic Safety, to provide dedicated year-round impaired driving enforcement.	Enforcement

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 4: STRENGTHEN DWI SANCTIONS AS WELL AS THE PROSECUTION AND ADJUDICATION OF DWI OFFENDERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
4.1: Strengthen the ignition interlock device law to apply to all offenders, including first time offenders, and require the use of ignition interlock devices for DWI offenders refusing a field sobriety test.	
4.5: Increase the number of DWI courts in Minnesota to strengthen repeat DWI offender monitoring and supervision and reduce recidivism.	

STRATEGY 5: INCREASE PUBLIC AWARENESS CAMPAIGNS TO REDUCE DRUGGED-IMPAIRED DRIVING

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
5.1: Secure funding for and conduct a public education and outreach campaign on cannabis use and drugged-impaired driving.	

UNBELTED

STRATEGY 1: IMPROVE DATA QUALITY TO STRENGTHEN PROBLEM IDENTIFICATION OF UNRESTRAINED OCCUPANTS

Safe System Approach Elements Addressed:
Safe Road Users and Post-Crash Care

TACTIC	LEADERSHIP
1.1: Conduct and communicate the findings of data-driven analysis on the increased injury severity of unbelted occupants in traffic crashes.	
1.3: Expand the annual Minnesota Toward Zero Deaths Regional Observational Seat Belt Survey to include child safety seat use.	
1.5: Adopt use of the National Digital Car Seat Check Form by Minnesota Child Passenger Safety Technicians for all state- and federally-funded activities to improve statewide data collection, tracking, and analysis.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: EXAMINE ALLOCATION OF RESOURCES TO STRENGTHEN SEAT BELT USE

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.1: Review funding and resource allocations for seat belt programs and child passenger safety programs to ensure the allotments for each are based on thorough problem identification and sound cost/benefit analysis.	

STRATEGY 3: STRENGTHEN THE ENFORCEMENT AND MONITORING OF UNRESTRAINED OCCUPANTS AND THE ADJUDICATION OF CITATIONS ISSUED

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
3.2: Identify alternative funding sources to increase support for localized seat belt enforcement saturations addressing areas and timeframes demonstrating low belt use.	
3.3: Conduct judicial outreach and education to promote the consistent adjudication of seat belt and child passenger seat citations.	

STRATEGY 4: STRENGTHEN PUBLIC OUTREACH AND TRAINING TO INCREASE SEAT BELT AND CHILD RESTRAINT USE

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
4.1: Utilize a single statewide seat belt use and enforcement message during national Click It or Ticket campaigns, balanced with sustained localized social norming messaging addressing higher-risk populations within areas and timeframes demonstrating low belt use.	
4.4: Expand messaging within the medical community and schools to increase public understanding of the risk of increased injury severity for failure to wear seat belts or to properly restrain children.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

RISING CONCERN FOCUS AREAS

UNLICENSED DRIVERS

EQUITY FOCUS AREA

STRATEGY 1: ENHANCE LAW ENFORCEMENT CONTACT WITH UNLICENSED DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
1.1: Increase the frequency of equitable law enforcement contact with unlicensed drivers through consistent enforcement of impaired driving, speeding, distracted driving, and seat belt use.	Enforcement, Education

STRATEGY 2: EMPLOY SANCTIONS TO IDENTIFY AND PREVENT INVALID LICENSED DRIVING

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.1: Require the use of ignition interlock devices by all DWI offenders to eliminate invalid license driving during the license sanction period.	Enforcement, Education
2.3: Conduct a scan of best practices from other states for addressing unlicensed driving, including limiting license suspensions to dangerous driving behaviors only (for example, a DWI rather than non-driving license suspensions such as failure to pay child support). Use these findings to develop refined SHSP unlicensed driver safety recommendations.	Enforcement, Education

STRATEGY 3: IMPROVE REAL-TIME DRIVER MONITORING AND FEEDBACK TO PROMOTE SAFE DRIVING FOR INEXPERIENCED DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
3.1: Fund a pilot program coupled with media outreach for the use of telematic monitoring systems to provide real-time feedback on high-risk driving behavior to encourage mid-driving correction and crash prevention.	Education

STRATEGY 4: INCREASE DRIVER AWARENESS OF AND IMPROVE DRIVER EDUCATION AND TRAINING FOR ALL DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
4.2: Create a robust driver education and skills training program and make it a requirement for all new drivers (including those 18 and above). Dedicate and sustain funding for the required training program to improve access for all new drivers.	Education

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)
Engineering
Enforcement
Emergency Services
Education

MOTORCYCLISTS

STRATEGY 1: STRENGTHEN PUBLIC AWARENESS AND EDUCATION TO IMPROVE MOTORCYCLE SAFETY

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
1.1: Promote rider understanding of the safety benefits of high-visibility and protective gear and safe riding behaviors. This includes wearing helmets and all personal protective gear, wearing highly visible clothing, ensuring the visibility of the motorcycle, understanding the risks of impaired riding, and new motorcycle licensing/riding laws.	
1.2: Promote peer-to-peer outreach and identify and equip key influencers of motorcycle advocacy groups with safety messages and talking points to strengthen social norms and encourage shared helmet-use behavior.	

STRATEGY 2: IMPROVE MOTORCYCLE SAFETY-RELATED POLICIES

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
2.1: Convene a 2027 National Highway Traffic Safety Administration Safety Program Assessment of the Office of Traffic Safety Motorcycle Safety Program to identify strengths, weaknesses, and opportunities for improvement.	
2.2: Monitor crashes that may be a result of the Minnesota law in effect 7/1/25 allowing motorcyclists to lane split. Assess crash performance associated with the law and use findings to guide modifications to the law if needed.	
2.4: In the absence of a universal helmet law for all riders, require motorcycle endorsement holders to wear a helmet for the first two years after receiving their endorsement. This applies regardless of age, and any passengers during that time must also wear a helmet.	

STRATEGY 3: STRENGTHEN ENFORCEMENT TO DISCOURAGE MOTORCYCLE RIDER HIGH-RISK BEHAVIORS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
3.1: Implement the practice of comparing vehicle registration and driver licensing files to help identify unlicensed riders and educate riders on motorcycle endorsement requirements.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

PEDESTRIANS

EQUITY FOCUS AREA

STRATEGY 1: IMPROVE ROAD DESIGN AND MAINTENANCE FOR PEDESTRIAN SAFETY

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
1.1: Improve intersection and roadway design to provide safer walking and crossings for pedestrians, especially at high-risk locations or locations with high pedestrian/cyclist activity. Highly effective examples include installing sidewalks, enhanced crosswalk markings and signs, leading pedestrian intervals, median refuge islands, roadway reconfiguration to fewer lanes, and curb extensions.	
1.2: Provide adequate and safe midblock pedestrian crossing facilities. Highly effective examples include pedestrian hybrid beacons or rectangular rapid flashing beacons (RFFB), curb bump outs, median refuge islands, lighting to increase pedestrian visibility, and enhanced pavement markings and signs.	

STRATEGY 2: PROMOTE POLICY CHANGES THAT REDUCE SEVERE PEDESTRIAN CRASHES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
2.1: Improve pedestrian-related data collection to identify trends with respect to health, law, plans, accessibility, and policies. Data types include pedestrian volumes, ADA-compliance, vehicle speeds, pedestrian crashes, near miss data at locations with safety concerns or limited crash history, and status of existing and planned pedestrian facilities.	

STRATEGY 3: INCREASE EDUCATION AND AWARENESS ABOUT PEDESTRIAN SAFETY FOR ALL ROAD USERS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
3.1: Conduct high-profile pedestrian safety education campaigns with increased media coverage for all road users and all professionals that contribute to road safety. Include easy-to-understand information on Safe Routes to School, Walk! Bike! Fun!, Vision Zero programs, and pedestrian-related laws. Collaborate with public health agencies or programs such as the Statewide Health Improvement Program to develop equitable and effective campaigns. Pair with high-visibility enforcement to maximize efficacy.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

CONNECTED FOCUS AREAS

OLDER DRIVERS

STRATEGY 1: STRENGTHEN THE REPORTING/REFERRAL AND ASSESSMENT OF AT-RISK OLDER DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
1.2: Increase awareness of and access to MN Department of Public Safety's on-line mechanism for medical staff, family members, or friends to notify Department of Public Safety Driver and Vehicle Services licensing staff of at-risk drivers for an assessment of the driver's ability to safely drive.	Enforcement, Education

STRATEGY 2: STRENGTHEN LICENSING PRACTICES OF AT-RISK OLDER DRIVERS TO EXTEND DRIVING WHILE ENHANCING SAFETY

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.1: Conduct a comprehensive review of licensing policies and practices for at-risk older drivers; strengthen policies and practices to reflect best practices and proven approaches such as regular interval testing of driving skills, mandatory age and more frequent in-person license renewal, and maximizing restricted licenses (e.g., geographic, time of day, high speed).	Enforcement, Education

STRATEGY 3: EQUIP OLDER DRIVERS TO PLAN FOR AND ADOPT SAFE DRIVING PRACTICES

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
L **3.1:** Require a recurrent on-line driver refresher course every 4 years, concurrent with driver's 4-year license renewal.	Education
3.4: Establish an on-line "one-stop" resource to guide older drivers and their families in navigating changing driving needs and available resources. Include information on driver evaluation processes and assessment of driving capabilities and limitations, skills development, locating CarFit programs, available driving courses, vehicle safety technologies, alternative safe mobility options, licensing restrictions for safe driving, and voluntarily limiting driving to reduce crash risk.	Education

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)
Engineering
Enforcement
Emergency Services
Education

STRATEGY 4: USE ROADWAY DESIGN THAT MEETS THE NEEDS OF OLDER DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
4.1: Use enhanced visibility measures and lighting to accommodate older drivers. Highly effective examples include retroreflective signal back plates and stop signposts, high-visibility or oversized signs, highly legible design elements, enhanced pavement markings, raised pavement markings, curve delineation, and LED stop signs/flashing beacon stop signs.	

YOUNGER DRIVERS

STRATEGY 1: STRENGTHEN YOUNGER DRIVER PROGRAM PLANNING AND COORDINATION

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
1.1: Revitalize the Teen Driver Safety Commissioner's Advisory Task force to provide oversight, partner coordination, and input to Department of Public Safety with the goal of reducing teen driver severe traffic injuries.	

STRATEGY 2: ENGAGE YOUNG DRIVERS TO IMPROVE YOUNGER DRIVER SAFETY

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
2.1: Expand the implementation of Minnesota's Impact Teen Drivers Program to engage, educate and empower teens and their influencers on the dangers of high-risk motor vehicle driver and passenger behaviors.	
2.2: Explore partnership with the Department of Public Safety Driver and Vehicle Services, Office of Traffic Safety, and the Department of Education to incorporate youth traffic safety topics and crash data into classroom curricula and student engagement exercises.	

STRATEGY 3: STRENGTHEN PARENT/GUARDIAN EMPOWERMENT TO ENGAGE WITH AND MONITOR TEEN DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds and Post-Crash Care

TACTIC	LEADERSHIP
3.1: Increase community participation in adopting the Point of Impact: Teen Driver Safety Parent Awareness Program to strengthen parents' role and engagement in their teen's safe driving development.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)
Engineering
Enforcement
Emergency Services
Education

STRATEGY 4: STRENGTHEN GRADUATED DRIVER LICENSING SAFETY PROVISIONS FOR YOUNG DRIVERS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
4.1: Align teen driver provisional license nighttime safety provisions with nationally recommended timeframes for nighttime driving to reduce severe crash risk while gaining driving experience.	
4.2: Align teen driver provisional license passenger safety provisions with nationally recommended passenger allowances to reduce severe crash risk while gaining driving experience.	

STRATEGY 5: PUBLICIZE, ENFORCE, AND ADJUDICATE YOUNG DRIVER SAFETY LAWS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
5.2: Increase parent, law enforcement, prosecutors', and judges' understanding and adjudication of graduated driver's licensing safety provisions for younger drivers.	

STRATEGY 6: STRENGTHEN YOUNG AND INEXPERIENCED DRIVER EDUCATION AND TRAINING

Safe System Approach Elements Addressed:
Safe Road Users and Safe Speeds

TACTIC	LEADERSHIP
6.1: Create a robust driver education and skills training program and make it a requirement for all new drivers (including those 18 and above). Dedicate and sustain funding for the required training program to improve access for all new drivers.	

COMMERCIAL VEHICLES

STRATEGY 1: IMPROVE ENFORCEMENT FOR COMMERCIAL VEHICLES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Vehicles

TACTIC	LEADERSHIP
1.1: Improve enforcement of unsafe commercial vehicles and their operators and provide training for local law enforcement focused on commercial vehicles. Provide additional law enforcement at commercial vehicle inspection sites to assist with driver impairment checks.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: PLAN, DESIGN, AND MAINTAIN ROADS AND REST AREAS FOR COMMERCIAL VEHICLE SAFETY

Safe System Approach Elements Addressed:
Safe Roads

TACTIC	LEADERSHIP
2.1: Design and implement roadway geometric features that reduce severe crashes involving commercial vehicles. Examples include high friction surface treatment (HFST), higher-performance barriers, rumble strips, cross slope breaks, truck climbing lanes and alternate passing lanes, and enhanced drainage.	

STRATEGY 3: INCREASE EDUCATION ON COMMERCIAL VEHICLE SAFETY

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
3.1: Provide more public awareness of blind spot dangers for trucks, such as the No Zone campaign.	

STRATEGY 4: SUPPORT SAFETY-RELATED COMMERCIAL VEHICLE TECHNOLOGY

Safe System Approach Elements Addressed:
Safe Road Users and Safe Vehicles

TACTIC	LEADERSHIP
4.2: Support education regarding safety technologies in commercial vehicles and explore installing these technologies in MnDOT or state heavy vehicle fleets. Technology examples include speed limiters, on-board impairment detection, lateral side guards, and high-vision cabs.	

BICYCLISTS

EQUITY FOCUS AREA

STRATEGY 1: IMPROVE ROAD DESIGN AND MAINTENANCE FOR BICYCLIST SAFETY

Safe System Approach Elements Addressed:
Safe Road Users, Safe Speeds, and Safe Roads

TACTIC	LEADERSHIP
1.1: Provide dedicated bicycle facilities along and across roadways that are physically separated from vehicle traffic. Highly effective examples include shared use paths, wider shoulders (rural roads), separated bike lanes, green colored pavement for bike facilities, bike boxes, and bike signal heads at intersections.	
1.2: On lower-volume, low-speed roads, use traffic calming measures to reduce vehicle speeds and allow for safe shared usage of the road. Highly effective examples include lane width reduction, speed humps, chicanes, marked shared lanes (sharrows), and urban landscaping.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: PROMOTE POLICY CHANGE THAT REDUCES SEVERE BICYCLE CRASHES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
2.2: Develop bicycle plans and Complete Streets plans at regional and local levels. Utilize the Minnesota GreenStep Cities & Tribal Nations Program, MnDOT's Active Transportation Assistance program, and Office of Sustainability and Public Health for funding, training, and technical support.	

STRATEGY 3: INCREASE EDUCATION AND AWARENESS FOR DRIVERS AND CYCLISTS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
3.1: Conduct high-profile bicyclist safety education campaigns with increased media coverage for all road users and all professionals that contribute to road safety. Include easy-to-understand information on Safe Routes to School, Walk! Bike! Fun!, Vision Zero programs, helmet education, and bike-related laws. Collaborate with public health agencies or programs such as the Statewide Health Improvement Program to develop equitable and effective campaigns.	

WORK ZONES

STRATEGY 1: REDUCE SPEEDING WITHIN WORK ZONES

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
1.2: Conduct a pilot project to test automated camera enforcement in work zones. Install automated/enhanced speed enforcement or camera-assisted enforcement in work zones. Following the pilot project, encourage legislative changes to allow for automated camera enforcement in work zones.	
1.3: Encourage drivers to drive slower in work zones through built environment indicators. Examples include dynamic speed feedback signs, "Workers Present" speed limits in work zones during times when workers are present, and traffic calming geometric design such as lane width reduction, lane shifts, and speed humps.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: IMPROVE WORK ZONE NOTIFICATIONS AND EDUCATION

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.2: Use consistent and appropriate advance warning signs and temporary transverse rumble strips to alert drivers of work zones and dynamic message signs for changing work zone conditions, travel times, and incidents within work zones.	⚙

STRATEGY 3: USE TECHNOLOGIES AND INNOVATIVE WORK ZONE PLANNING TECHNIQUES TO IMPROVE WORK ZONE SAFETY

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
3.1: Develop worker schedules to diverge from peak vehicle traffic times when possible. Examples include changing traditional work schedules based on traffic trends, avoiding lane closures when excessive queuing could occur, and using full road closures to avoid traffic conflicts and accelerate work where appropriate.	⚙

TRAINS

STRATEGY 1: DESIGN AT-GRADE RAILROAD CROSSINGS TO REDUCE SEVERE CRASHES BETWEEN TRAINS AND ROAD USERS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Roads

TACTIC	LEADERSHIP
1.1: Use gated protection with warning devices and trapped vehicle detection on high-speed rail sections at appropriate crossings. Include strategies which make it difficult for motorists to drive around gates, such as median islands on the approaches to rail grade crossings.	⚙
1.2: Close or grade-separate unsafe or closely spaced grade crossings to vehicular traffic.	⚙

STRATEGY 2: INCREASE AWARENESS OF RAIL CROSSING RISKS AND EDUCATION ON RAIL CROSSING SAFETY AND LAWS

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.1: Conduct high-profile rail crossing safety education campaigns with increased media coverage targeted at all road users. Examples include Operation Lifesaver, See Track Think Train, campaigns regarding crossing laws, and suicide prevention initiatives.	🎓

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

⚙ Engineering
Enforcement
✚ Emergency Services
🎓 Education

SUPPORT SOLUTIONS FOCUS AREAS

TRAFFIC SAFETY CULTURE

STRATEGY 1: IMPROVE COMMUNICATION AND COORDINATION AMONG DISCIPLINES, AGENCIES, AND THE PUBLIC

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
1.3: Develop a Toward Zero Deaths stakeholder and public communications/marketing plan and include consistent monthly communications and positive social norming.	Education

STRATEGY 2: INVEST IN NEW AND/OR UPDATED SAFETY INITIATIVES, OUTREACH, STUDIES, AND RESOURCES

Safe System Approach Elements Addressed:
Safe Road Users

TACTIC	LEADERSHIP
2.1: Restart the Traffic Safety Culture Task Force. Initial projects may include participation in the traffic safety culture pooled fund study, the work zone safety campaign (saturated positive culture campaign), and Department of Natural Resources education about ATV/UTV safety and requirements. Operationalize lessons learned from the Park Rapids pilot project to implement a statewide program.	Education
2.3: Use effective outreach methods for contacting diverse and underserved communities, including attending community events, continuing the Tribal Traffic Safety Summit, initiating tribal traffic safety roundtables, and using non-English speaking law enforcement officers to talk with students whose primary language isn't English.	Education

EMS AND TRAUMA SYSTEMS

STRATEGY 1: IMPROVE POST-CRASH CARE THROUGH INNOVATIVE TREATMENTS AND TECHNOLOGY

Safe System Approach Elements Addressed:
Post-Crash Care

TACTIC	LEADERSHIP
1.1: Work with the Minnesota EMS Physician's Advisory Council to examine the benefits of implementing prehospital blood administration. Consider the need to train paramedics to perform prehospital blood administration, inventory blood product locations, and coordinate with blood banks to use supply efficiently.	Emergency Services
1.2: Integrate emerging technology into traffic incident management, such as Automated Incident Detection, FIRST NET communications resources for first responders, Next Gen 911 digital upgrades, up-to-date radio communications, and adding rural internet such as Starlink on ambulances.	Emergency Services

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: UPGRADE EMS SYSTEMS FOR EFFICIENCY AND RESILIENCE

Safe System Approach Elements Addressed:
Post-Crash Care

TACTIC	LEADERSHIP
2.2: Expand the southwestern Minnesota rural telemedicine pilot to other rural areas to improve post-crash, pre-hospital care and provide peer-to-peer support between medics and first responders in the field and physicians, paramedics, and/or nurses in the hospital.	+

STRATEGY 3: ENGAGE FIRST RESPONDERS AND EMS PROFESSIONALS IN TRAFFIC INCIDENT MANAGEMENT

Safe System Approach Elements Addressed:
Post-Crash Care

TACTIC	LEADERSHIP
3.1: Conduct interagency traffic incident management training for field responders. Integrate traffic incident management training into law enforcement, fire, and EMS-based training programs. Identify and train quality instructors from a variety of disciplinary backgrounds. Provide Minnesota-specific online training opportunities.	+

VEHICLE SAFETY ENHANCEMENTS

STRATEGY 1: DEVELOP STANDARDS AND POLICIES TO ENCOURAGE SAFE VEHICLE DESIGN

Safe System Approach Elements Addressed:
Safe Road Users and Safe Vehicles

TACTIC	LEADERSHIP
1.2: Encourage the implementation of vehicle safety features such as adaptive cruise control, forward-collision warning and automated emergency braking, blind spot monitoring, driver-attention monitoring, lane departure warning and lane-keeping assist, bicyclist and pedestrian detection, and intelligent speed assistance. Discourage the implementation of distracting "infotainment" systems in vehicles.	⚙
1.3: Advocate the research of new crashworthiness testing standards for electric vehicles, which can be heavier and have a different weight distribution than gas vehicles.	⚙

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

⚙ Engineering
Enforcement
+ Emergency Services
Education

STRATEGY 2: SHARE CONNECTED AND AUTONOMOUS VEHICLE (CAV) KNOWLEDGE REGARDING SAFETY BENEFITS WITH OTHER RESEARCHERS AND THE PUBLIC

Safe System Approach Elements Addressed:
Safe Road Users and Safe Vehicles

TACTIC	LEADERSHIP
2.1: Document and publish research projects related to CAV and vehicle safety and share internally and broadly across the country. Conduct industry and academic outreach on CAV.	

STRATEGY 3: PREPARE POLICY AND PLANNING INITIATIVES FOR CONNECTED AND AUTONOMOUS VEHICLES TO REALIZE THEIR FULL SAFETY BENEFITS

Safe System Approach Elements Addressed:
Safe Road Users and Safe Vehicles

TACTIC	LEADERSHIP
3.3: Build future policies upon lessons learned from both MnDOT and others' research on CAV and vehicle safety. Prepare policies and programs to achieve desired CAV outcomes.	

STRATEGY 4: SUPPORT THE RESEARCH AND DEVELOPMENT OF CONNECTED AND AUTONOMOUS VEHICLE (CAV) TECHNOLOGY, FOCUSING ON SAFETY BENEFITS OF THESE TECHNOLOGIES FOR ALL ROAD USERS

Safe System Approach Elements Addressed:
Safe Vehicles

TACTIC	LEADERSHIP
4.1: Research technology that improves safe mobility options. Continue to pilot CAV technology related to transit, freight, work zones, and CAV communication technology (C-V2X), focusing on the safety benefits of these technologies for both drivers and people traveling outside vehicles.	

MANAGEMENT SYSTEMS

STRATEGY 1: USE THE SAFE SYSTEM APPROACH AS THE BASIS FOR TRANSPORTATION SYSTEM PLANNING AND IMPLEMENTATION

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
1.2: Utilize the MnDOT Safe System Approach Implementation Plan. Identify performance measures and evaluate the implementation of Safe System Approach on a regular basis.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education

STRATEGY 2: CONTINUE TO USE METHODS THAT ALREADY WORK AND MAKE THEM MORE EFFECTIVE WHEN POSSIBLE

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
2.3: Find more ways to link traffic safety into existing public health efforts (such as substance prevention, driving under the influence) and provide funding. Include public health offices such as the Office of American Indian Health to address disparities and interpret trends through another lens to increase awareness of the intersection of traffic safety with public health.	

STRATEGY 3: TRAIN SAFETY PROFESSIONALS WHO ARE INVOLVED WITH SAFETY PLANNING AND INCIDENT RESPONSE ON BEST PRACTICES

Safe System Approach Elements Addressed:
Safe Roads

TACTIC	LEADERSHIP
3.2: Encourage the pursuit of training and development opportunities for roadway professionals involved in safety work. Examples include participation in the Toward Zero Deaths conference, Toward Zero Deaths webinar series, or Road Safety Professional 1 and 2 certifications.	

DATA MANAGEMENT

STRATEGY 1: FACILITATE SYSTEM INTEROPERABILITY BETWEEN AGENCIES/ PARTNERS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
1.1: Catalogue available data sources from county, city, and state agencies in a library and publicize this library so duplicates are not created.	
1.2: Improve the linking of data between crash, vehicle, driver, roadway, citation/adjudication, and EMS/injury surveillance through the development of the Road Safety Information Center.	

STRATEGY 2: IMPROVE TRAFFIC INCIDENT MANAGEMENT DATA COLLECTION AND ANALYSIS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
2.2: Combine analytics tools such as Regional Integrated Transportation Information System with tools that aggregate incident data and crowd-sourced data (such as HERE, Waze, Streetlight) to help interpret traffic incident management outcomes.	

The order of the strategies and tactics does not indicate priority.

Key Tactic
Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)
Engineering
Enforcement
Emergency Services
Education

STRATEGY 3: REDUCE BARRIERS TO DATA SHARING THAT WILL HELP PROACTIVELY ADDRESS SAFETY WHILE MAINTAINING PRIVACY

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
3.1: Reduce barriers to sharing Personal Identifiable Information health data related to crash severity between the Department of Health, MnDOT, and the Department of Public Safety while still protecting personal privacy.	

STRATEGY 4: FILL KNOWN DATA GAPS TO SUPPORT THE EFFECTIVENESS OF SAFETY INITIATIVES

Safe System Approach Elements Addressed:
Safe Road Users, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
4.1: Conduct a statewide inventory of all safety elements (roundabouts, J-Turns, high-tension cable median barrier, **pedestrian/bicycle facilities and safety devices**, etc.) to better track existing gaps and future maintenance requirements. Engage with asset management professionals to assess database improvements that would benefit roadway safety project development.	

STRATEGY 5: ENHANCE AND UTILIZE DATA THROUGH THE USE OF BIG DATA AND EMERGING TOOLS

Safe System Approach Elements Addressed:
Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care

TACTIC	LEADERSHIP
5.1: Incorporate data analytic tools such as artificial intelligence, machine learning, and language learning models to increase the speed of data analysis and support efficient dataset integration	

The order of the strategies and tactics does not indicate priority.

Key Tactic
L Legislative Action

STAKEHOLDER LEADERSHIP (4E'S)

Engineering
Enforcement
Emergency Services
Education