Winnebago County Traffic Safety Action Plan

Final Report May 2025

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Winnebago County Traffic Safety Action Plan

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This document has been prepared by Region 1 Planning Council in collaboration with and on behalf of Winnebago County.

This report was prepared in cooperation with the following:

U.S. Department of Transportation

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The contents, views, policies, and conclusions expressed in this report are not necessarily those of the above agencies.



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Table of Contents

Acknowledgments Table of Contents List of Exhibits	iii iv v
Part 1: Introduction	
Study Area Safe System Approach Safe Streets for All Planning Process Safety Partners	1 2 2 2 2 3
Part 2: Vision, Missions & Objectives	5
Vision Mission Objectives	
Part 3: State of Practice Review	
Projects Programs Policies	
Part 4: Data Analysis and Summary	
Data Overview Countywide Collection Data Other Collision Factors Spatial Analysis	
Part 5: Emphasis Areas	27
Speeding & Aggressive Driving Impaired Driving Distracted & Drowsy Driving Unrestrained Occupants Pedestrians Bicyclists Younger & Older Drivers Motorcycles Heavy Vehicles Intersections Protection Zones Lane/Roadway Departures	28 29 30 31 33 35 37 39 40 42 44 44
Part 6: Strategies & Recommendations	
Objective #1. Safer Speeds Objective #2. Safer People Objective #3. Safer Vehicles Objective #4. Safer Roads	
Part 7: Implementation & Evaluation	
Additional Planning Efforts Planning Linkages Collaboration and Coordination Monitoring Progress Amending the Plan	64 65 66 67 68
Appendices	

Appendix A: Acronyms and Glossary	70
Appendix B: Public & Stakeholder Engagement	73
Appendix C: High Injury Network Methodology	77
Appendix D: Traffic Safety Action Plan Toolkit	79
Appendix E: SS4A Self-Certification	89
Appendix F: SS4A & Safe System Approach Overview	94
Endnotes	96

List of Exhibits

Figures

Figure 1-1: Map of Winnebago County	1
Figure 1-2: Safe System Approach	2
Figure 1-3: Planning Process	2
Figure 1-4: Engage R1 Traffic Safety Map Results	4
Figure 4-1: Fatal Crashes and Total Number of Fatalities	12
Figure 4-2: Serious Injury Crashes and Total Number of Serious Injuries	12
Figure 4-3: Percentage of Severe Outcome Crashes by Crash Type (2017-2022)	12
Figure 4-4: Severe Outcome Crashes by Day of the Week (2017-2022)	13
Figure 4-5: Severe Outcome Crashes by Time of Day (2017-2022)	14
Figure 4-6: Severe Outcome Crashes by Light Condition (2017-2022)	14
Figure 4-7: Fatal Crashes by Mode of Travel (2017-2022)	14
Figure 4-8: Serious Injury Crashes by Mode of Travel (2017-2022)	15
Figure 4-9: Fatal Crashes by Weather Condition (2017-2022)	15
Figure 4-10: Serious Injury Crashes by Weather Condition (2017-2022)	15
Figure 4-11: Fatal Crashes by Traffic Control Device Present (2017-2022)	15
Figure 4-12: Serious Injury Crashes by Traffic Control Device Present (2017-2022)	16
Figure 4-13: Fatal Crashes: Driver Condition (2017-2022)	16
Figure 4-14: Serious Injury Crashes: Driver Condition (2017-2022)	16
Figure 4-15: High Injury Network (Winnebago County)	17
Figure 4-16: Winnebago County High Non-Motorized Crash Network	19
Figure 4-17: Winnebago County Severe Outcome Intersection Crash Density	21
Figure 4-18: Engage R1 Submission Locations by Mode of Concern	22
Figure 4-19: Engage R1 Submission Categorized by Emphasis Area	23
Figure 4-20: Engage R1 Submissions & High Injury Network	24
Figure 4-21: Severe Outcome Crashes in Disadvantaged Areas (Winnebago County)	25
Figure 4-22: High Injury Network Segments in Disadvantaged Areas (Winnebago County)	26
Figure 5-1: Safety Emphasis Areas	27
Figure 5-2: Top Concern Identified in Survey	28
Figure 5-3: Severe Outcomes Impaired Driving Crashes by Day of the Week	29
Figure 5-4: Severe Outcome Impaired Driving Crash Location (2017-2022)	30
Figure 5-5: Severe Outcome Unrestrained Occupant Crash Locations (2017-2022)	32
Figure 5-6: Light Condition: Severe Outcome Pedestrian Crashes	34
Figure 5-7: Severe Outcome Pedestrian Crash Locations (2017-2022)	34
Figure 5-8: Severe Outcome Pedestrian Crashes: Presence of Pedestrian Facilities	35
Figure 5-9: Severe Outcome Bicyclist Crash Locations (2017-2022)	36
Figure 5-10: Severe Outcome Bicycle Crashes: Presence of Bicycle Facilities	37
Figure 5-11: Severe Outcome Younger & Older Drivers Crashes	38
Figure 5-12: Severe Outcome Motorcycle Crash Locations	40
Figure 5-13: Severe Outcome Heavy Vehicles Crashes (2017-2022)	41
Figure 5-14: Severe Outcome Intersection Crashes: Signalization	43
Figure 5-15: Urban vs. Rural: Severe Outcome Intersection Crashes	43
Figure 5-16: Severe Outcome Intersection Crash Locations (2017-2022)	43
Figure 5-17: Severe Outcome Crashes within 1,000 feet of a School	44
Figure 5-18: Urban vs. Rural: Severe Outcome Roadway Departures	46
Figure 5-19: Severe Outcomes Lane/Roadway Departure Crash Location (2017-2022)	46
Figure E-1: SS4A- USDOT Self Certification Checklist	89

Table

Table 1-1: Members of the Steering Committee	3
Table 4-1: KABCO Crash Outcomes	. 12
Table 4-2: Serious Outcome Crashes by Municipality	. 13
Table 4-3: Winnebago County High Injury Roadway Segments	. 18
Table 4-4: Winnebago County Owned High Injury Roadway Segments	. 18
Table 4-5: Winnebago County High Non-Motorized Crash Roadway Segments	. 20
Table 4-6: Winnebago County Severe Outcome Intersection Crash Occurrences	. 20
Table 4-7: Engage R1 Submissions Categorized by Emphasis Area	. 22
Table 5-1: Severe Outcome Speeding & Aggressive Driving Crashes (2017-2022)	. 28
Table 5-2: Severe Outcome Impaired Driving Crashes (2017-2022)	. 29
Table 5-3: Severe Outcome Distracted & Drowsy Driving Crashes (2017-2022)	. 31
Table 5-4: Severe Outcome Unrestrained Occupant Crashes (2017-2022)	. 32
Table 5-5: Severe Outcome Pedestrian Crashes (2017-2022)	. 33
Table 5-6: Severe Outcome Bicyclist Crashes (2017-2022)	. 36
Table 5-7: Severe Outcome Younger & Older Drivers Crashes	. 38
Table 5-8: Severe Outcome Motorcycle Crashes (2017-2022)	. 39
Table 5-9: Severe Outcome Heavy Vehicles Crashes (2017-2022)	. 41
Table 5-10: Severe Outcome Intersection Crashes (2017-2022)	. 42
Table 5-11: Severe Outcome Lane/Roadway Departure Crashes (2017-2022)	. 45
Table 6-1: Safer Speeds Action Items- Emphasis Area #1	. 49
Table 6-2: Safer People Action Items- Emphasis Area #2	. 50
Table 6-3: Safer People Action Items- Emphasis Area #3	. 51
Table 6-4: Safer People Action Items- Emphasis Area #4	. 52
Table 6-5: Safer People Action Items- Emphasis Area #5	53
Table 6-6: Safer Vehicles Action Items- Emphasis Area #6	55
Table 6-7: Safer Vehicles Action Items- Emphasis Area #7	56
Table 6-8: Safer Vehicles Action Items- Emphasis Area #8	57
Table 6-9: Safer Roads Actions Items- Emphasis Area #9	59
Table 6-10: Safer Roads Action Items- Emphasis Area #10	60
Table 6-11: Safe Roads Action Items- Emphasis Area #11	62
Table 6-12: Safer Roads Action Items - Emphasis Area #12	63
Table D-1: Intersection Lighting Countermeasure	80
Table D-2: Leading Pedestrian Interval Counter	80
Table D-3: Longitudinal Rumble Strins and Strines	81
Table D-4: Roundahouts Countermeasures	81
Table D-5: Pedestrian and Refuge Island	81
Table D-6: Sneed Safety Cameras Countermeasures	82
Table D-7: Bicycle Lane Countermeasure	82
Table D-8: School Zones Countermeasure	. 02
Table D-9: Systemic Application of Multiple Low-Cost Countermeasures	. 02
Table D-10: Roadway Reconfiguration Countermeasure	83
Table D-10: Noadway Neconingulation Countermeasure	. 0J
Table D-11. Neetangulai Napid Hashing beacons (NN b) countermeasure	8/
Table D-12: Which Edge Ellies Countermeasures	. 04
Table D-17: Walkways Countermeasure	8/
Table D-14. Walkways Countermeasure	. 04 Q5
Table D-15. Median Damers Countermeasure	05
Table D-10. Dedicated full Lanes at Intersections Countermeasure	05
Table D. 18. Crosswalk Visibility Countermeasure	00 96
Table D 10: Davement Eriction Countermoscure	00
Table D-19. Pavenieni Frictioni Countermeasure Table D-20. Padastrian Hybrid Rosson (DHP) Countermeasure	, 80 00
Table D-20. Peuesciali Hybria Bedcon (PHB) Countermeasures.	. 80
Table D-21. Noauside Design Improvements at Curves Countermedsures	. ŏ/
Table D-22. Sale(yEuge Couller Medsure	. ŏ/
Table D-25. backplates with Reforeneouve Borders Countermeasure	. ŏ/
Table D-24. Tellow Change Intervals Countermeasure	. ठठ

PART 1: Introduction

The United States is facing a traffic safety crisis. Between 2011 and 2020, more than 350,000 people were killed on the nation's streets, roads, and highwaysⁱ. This represents the first time since 1975 that a period of such length (10 years) the number of fatalities per 100 million vehicle miles traveled increasedⁱⁱ. In 2021, 42,939 people were killed on the nation's roadwaysⁱⁱⁱ, a figure greater than the capacity of Wrigley Field (41,649)^{iv}. The number of roadway fatalities in 2021 is the highest recorded total in the United States since 2005^v. Traffic safety impacts the lives of individuals in every county throughout the United States, including Winnebago County.

As a means of addressing this issue, many counties are taking proactive steps to address traffic safety within their jurisdictions, including developing safety action plans, such as this one. Safety action plans demonstrate a commitment to improving traffic safety and are proven to help reduce severe crashes on local road systems. Understanding the importance of addressing this issue, Winnebago County has adopted this document, the Winnebago County Traffic Safety Action Plan. Its purpose is to (1) develop a comprehensive understanding of the state of traffic safety on the County's roadways; (2) identify trends through extensive data analysis; (3) establish a vision, goals, and strategies to reduce the numbers of fatalities and serious injuries; and (4) create a framework of activities that can be implemented to improve traffic safety in Winnebago County.

Study Area

The study area for this document is Winnebago County. Winnebago County, whose current boundaries have been in place since 1837^{vi}, is home to approximately 280,922 residents^{vii} making it the most populous county in the Northern Illinois Region. Figure 1-1 shows Winnebago County's boundaries and its location within the State of Illinois.

As shown in Figure 1-1, Winnebago County borders Boone, Ogle, and Stephenson Counties of Illinois, as well as the State of Wisconsin. It covers approximately 519 square miles and contains several municipalities, including the Cities of Rockford and Loves Park. While large portions of the County are urbanized, much of the County's land can be characterized as rural.



Figure 1-1: Map of Winnebago County

Source: Region 1 Planning Council

Safe System Approach

This action plan uses the Safe System Approach as the guiding paradigm to address roadway safety. The Safe System Approach addresses and mitigates risks in the transportation network by emphasizing multiple layers of protections to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a comprehensive approach that provides a guiding framework to make places safer for peopleviii. The traditional road safety approach strived to modify human behavior and prevent all crashes. Comparatively, the Safe System Approach refocuses transportation system design and operation on anticipating human mistakes and lessening impact forces to reduce crash severity^{ix}.

As shown in Figure 1-2, the Safe System Approach incorporates six guiding principles and five complementary objectives. Elements of the Safe System Approach are incorporated throughout the document.

More information on this approach can be found in Appendix F: SS4A & Safe System Approach Overview.

Figure 1-2: Safe System Approach



Source: Federal Highway Administration

Safe Streets and Roads for All

The Winnebago County Traffic Safety Action Plan has also been developed to align with the Safe Streets for All program's Action Plan Components. Safe Streets and Roads for All (SS4A) is a federal discretionary grant program designed to support the U.S. DOT's National Roadway Safety Strategy and

its goal of zero roadway deaths. Under SS4A, there are eight components that need to be included in the Action Plan for an applicant to be eligible for SS4A Implementation Grants and Supplemental Planning/Demonstration Activities. These components include:

- Leadership Commitment and Goal Setting
- Planning Structure
- Safety Analysis
- Engagement and Collaboration
- Fair Access Considerations
- Policy and Process Changes
- Strategy and Project Selections
- Progress and Transparency

Similar to the Safe System Approach, these eight components are incorporated throughout the document. The SS4A Self-Certification Eligibility Worksheet, included as Appendix E, notes where each of the components has been incorporated.

More information on the SS4A Grant Program can be found in Appendix F.

Planning Process

The Winnebago County Traffic Safety Action Plan was developed over a 24-month period between 2023 and 2025 using an overlapping phased process, as shown in Figure 1-3. This means that several of the phases took place concurrently or were completed prior to the start of the previous one. This approach expedited the process flow, minimized lead times, and efficiently used resources. It also provided the opportunity for information uncovered in one phase to inform or influence others. For example, the data collection and analysis phase informed the identify emphasis area phase and vice versa.

Engagement with stakeholders and the public occurred throughout the planning process and informed the development of various aspects of the plan. More information on outreach efforts can be found under Safety Partners.





A description of work activities completed in each phase is detailed below.

Phase 1 – Target Setting: The initial phase of this process was to find a consensus between traffic safety stakeholders in Winnebago County on a target goal that demonstrates the County's commitment to significantly reduce the number of fatalities and serious injuries by a specific data. The Winnebago County Traffic Safety Action Plan Steering Committee provided a consensus for the County by agreeing on Vision Zero as the target for this Action Plan.

Phase 2 – Data Collection & Analysis: The second phase in the development of the Winnebago County Traffic Safety Action Plan was data collection and analysis. An ample amount of reliable and readily available data from national and state sources was utilized, as well as more granular data provided by Winnebago County's technical staff. Some of these spatial analyses included numeric data trends in crashes by year, the spatial analysis of crash locations, the causes and contributing factors of crashes, a comparison of urban versus rural roadways, and impacts on areas of persistent poverty. More information on the data collected and analyzed in this phase can be found in <u>Part 5. Data Analysis & Summary</u>.

Phase 3 – Identify Emphasis Areas: The third phase was the development of a common understanding of the traffic safety concerns and issues which exist in Winnebago County. Combined with results of the data analysis, these concerns and issues helped identify and prioritize a series of emphasis areas for the County. Emphasis areas highlight contributing factors or populations that are overrepresented in the data, such as pedestrians, roadway departures, impaired driving-related crashes, intersection related crashes, and others. Stakeholder and public input was used in the prioritization of emphasis areas. A description of the emphasis areas, along with associated data, can be found in <u>Part 6. Emphasis Areas</u>.

Phase 4 – Set of Solutions: Following the identification of current conditions and trends, a set of solutions that can be accomplished at the county level were developed in order to achieve the vision of zero fatalities and serious injuries on the roadway network. The projects and strategies included in this set of solutions align with the five objectives of the Safe System Approach. The set of solutions include Proven Safety Countermeasures (PSC) and education and awareness campaigns, as well as enforcement strategies. Solutions are presented in a prioritized list and accompanied by associated timeframes in <u>Part 7. Strategies and Recommendations</u>.

Phase 5 – Project Wrap-Up: The final phase in the planning process was the development of the Winnebago County Traffic Safety Action Plan. At the completion of the draft document, a 30-day public period was held to gather feedback from stakeholders and members of the public. Following the public comment period, the Plan was presented to the Steering Committee and Winnebago County Board for recommendation and adoption, respectively.

Vision Zero

The zero deaths vision acknowledges that even one death on the transportation system is unacceptable and focuses on safe mobility for all road users.

Source: Federal Highway Administration

Safety Partners

Addressing traffic safety concerns requires a collaborative and multi-disciplinary approach. This approach was used for this plan through input sought and received from partners, stakeholders, and members of the public throughout its development.

A steering committee, composed of various traffic stakeholders in Winnebago County, was first convened in Spring 2024 and met several times during the planning process. Members of the steering committee are shown in Table 1-1. Representatives were chosen due to their unique perspective on traffic safety in Winnebago County. The steering committee meetings allowed members the opportunity to share their expertise, as well as guide the development of various components of the plan including, but not limited to: vision, mission, and goals; emphasis areas; current efforts; and priority projects.

Table 1-1: Members of the Steering Committee

Agency	Representative	Contact
Winnebago County Highway Department	Engineering	Carlos Molina
Winnebago County Highway Department	Engineering	Matt Fox
Winnebago County Highway Department	Engineering	Prafull Soni
Winnebago County Emergency Management	Emergency Response	Trent Brass
Winnebago County Sheriff Department	Enforcement	Joseph Broullard
Winnebago County Sheriff Department	Enforcement	Sean Hughes
Winnebago County Communications	Community Outreach	Danielle Grindle
Winnebago County Health Department	Public Health	Rebecca Lyons
Regional Office of Education	Education	Will Hartje
Owen Township Highway Department	Engineering	Charles Barnes
Rockford Township Highway Department	Engineering	Barry Palm

Input was also sought and provided by members of the public and stakeholders. A project webpage was launched early in the planning process on Engage R1, the online engagement platform of Region 1 Planning Council. The project page served as both an informational resource for the plan and a source of input, by featuring both a traffic safety survey and an interactive map that allowed for the identification of specific-locations of concern. Through this webpage, members of the public were able to inform the plan's emphasis areas and priority projects. Since traffic safety plans for the broader Rockford Region and City of Rockford were being developed concurrently with this plan, input was received on three different interactive maps. Locations in Winnebago County submitted across the three maps are shown in Figure 1-4.

On April 13th, 2025, Winnebago County and Region 1 Planning Council staff presented the draft version of the plan to the Winnebago County Public Works Committee and the public. The committee meeting took place during the plan's 30-day public comment period, allowing direct public feedback on the draft plan to be incorporated. The plan was adopted by the Winnebago County Board on May 22, 2025.

More information on the stakeholder and public engagement undertaken for this plan can be found in <u>Appendix B</u>.





Source: Region 1 Planning Council

PART 2: Vision, Mission, & Objectives

Strategic direction plays a crucial role in how Winnebago County achieves a significant reduction of fatalities and serious injuries within the County's boundaries. The vision, mission, and objectives of the Winnebago County Traffic Safety Action Plan align stakeholders, create a unified purpose in developing county-wide efforts, and set measurable targets for performance management. The elements presented below provide a framework to focus funding and resources to implement safety policies, programs, and projects that will best achieve the identified vision, mission, and goals.

The long-term vision for the Winnebago County Traffic Safety Action Plan demonstrates Winnebago County's commitment to ensuring all users of its roadway network reach their destinations safely. The mission recognizes that a collaborative, multi-disciplinary approach, that is both proactive and data-driven, is needed to achieve Vision Zero. The objectives of the plan represent how the long-term vision will be achieved. Strategies and action items identified in later parts of this action plan reflect elements of the safe system approach and support the vision, mission, and objectives stated here.

Vision

Eliminate traffic-related serious injuries and fatalities in Winnebago County, while increasing safe and fair access to mobility for all.

Mission

Work collaboratively with stakeholders from multiple disciplines in Winnebago County to establish a positive traffic safety culture and use a data-driven, proactive approach to prioritize proven safety solutions in an fair manner.

Objectives

- Reduce crashes resulting in serious injury or fatality by 50 percent by 2050.
- Pursue funding opportunities for identified safety solutions.
- Prioritize and program necessary roadway safety improvements.
- Increase community understanding of road safety and risks through education and enforcement.
- Promote the use of proven safety countermeasures.
- Communicate traffic safety as a shared language.

PART 3:

State of Practice Review

Safety planning has been, and continues to be, central to the planning efforts of Winnebago County, its departments, and partners throughout the county. While this Action Plan provides a unified vision for addressing traffic safety concerns in Winnebago County going forward, many actions have already been taken to decrease severe outcome crashes in the county. The projects, programs, and policies described below illustrate the current state of the traffic safety practice in Winnebago County.

Project

A traffic safety project is a focused undertaking with a defined location of impact and time to completion with the primary purpose of improving traffic safety. Local traffic safety projects completed in recent years, or currently in the process of implementation, are described below.

Winnebago County Highway Department

Winnebago County Highway Department (WCHD) has completed more than 20 safety focused engineering projects in the last 15 years. To support active transportation modes, such as biking and walking, WCHD has made efforts to increase the mileage of shared use paths in the county. In 2009, WCHD converted an unused railway corridor stretching from Meridian Road to the county's western edge into the Pecatonica Prairie Path, a 29.5 mile long shared use trail. The Highway Department also been incrementally extending the Perryville Path since 2021. It reached Willow Brook Lane in 2024, and will be extended further north to Prairie Flower in 2025.

Many of the roadways under WCHDs jurisdiction are rural two-lane roadways; it is a priority for WCHD to prevent roadway departures, the most common crash type on this type of roadway. Beginning in 2021, WCHD has begun installing centerline and edge of pavement rumble strips on their roadways, as well as a four foot safety shoulder. Roadways receiving this treatment as of 2024 include Rockton Road, Belvidere Road, Latham Road, Best Road, and Elevator Road. The Highway Department plans to implement these treatments on all of their rural roadways, with Roscoe Road, Owen Center Road, and Elmwood Road set to receive the treatment in 2025 and 2026.

Other safety projects completed by WCHD in recent years include the creation of left turn lanes in coordination with traffic signal upgrades at Forest Hills Road and Pepper Drive/ River Lane in 2016 and the installation of traffic signals at Bauer Parkway and Victory Lane in 2017. Streetlights were up in 2023 at three intersections along Belvidere Road. In 2025, WCHD will construct a roundabout at Owen Center Road and Elmwood Road.

Illinois Tollway

In 2024, the Illinois Tollway underwent a reconfiguration project of the Riverside Drive ramp and Toll Plaza. This was part of a system-wide initiative that is reconfiguring all toll plazas across the system to install electronic tolling and remove obsolete roadway barriers.

Village of Winnebago

As part of a multi-year reconstruction effort on Elida Street from IL-20 to Cunningham Road, a variety of road surfacing projects are underway. The surfacing projects include; striping for pedestrian and bicycle safety, and updated intersections with Americans with Disabilities Act (ADA) improvements. The Village is planning to continue upgrading the bicycle path and has an application in to Safe Routes to School to assist with the upgrades.

Rockford Park District

Rockford Park District (RPD) has commenced with a strategic gate installation project in multiple locations. The Park District has also undertaken various security improvements including the installation of additional cameras, increased RPD Police activity, and the clearing of vehicular congregations during park closure hours.

City of Rockford

The City of Rockford completed a number of projects in recent years to address traffic safety issues within their

jurisdiction. Four roadway rightsizing projects took place in the City between 2010 and 2023. These projects took places at:

- Sandy Hollow Road (From Kishwaukee Street to 9th Street)
- Sandy Hollow Rd (From 20th Street to Merchandise Drive)
- N Rockton Ave (From Auburn Street to Van Wie Avenue)
- Broadway (From 20th Street to E Gate Parkway)

Four roundabouts were also installed at intersections in the City to reduce speeds and conflict points at dangerous intersections. The following intersections were treated with a roundabout:

- N Main Street at Auburn Street
- College Avenue at Seminary Street
- Kishwaukee Street at Airport Drive
- Lyford Road at Mercy Way

The City also installed medians on Chelsea Avenue at Brendenwood Road to reduce conflict points. Right-in/rightout islands were installed on Palm Avenue at E State Street in 2022.

Rockford Public Schools

Rockford Public Schools recently completed projects at two of their middle schools aimed at improving the safety entering and exiting the school on foot. Lincoln and West Middle School's student drop off areas were redesigned to improve traffic flow and better protect students. Two left turn lanes are also planned to be installed at Spring Creek Elementary School to improve safety while accessing the school from Spring Creek Road.

Village of Durand

The Village of Durand completed a safety focused reconstruction of its downtown square in May of 2023. The project was funded by an Illinois Transportation Enhancement Program (ITEP) grant and included multiple safety countermeasures, such as ADA ramps, railings, curb bump-outs, and crosswalks. The Durand Police Department and Durand Community School District have also entered into an agreement to provide a school resource officer at the school's campus beginning in 2025.

City of South Beloit

Several projects with the primary focus of improving traffic safety have been undertaken and completed by the City of South Beloit in recent years. In 2021, City of South Beloit completed a roadway reconstruction along Oak Grove Avenue which included the installation of new traffic signals and curb ramp and crosswalk upgrades at Oak Grove Avenue and IL 2. Projects completed in 2022 addressed bicycle and pedestrian safety concerns. First, a shared-use path off of Dorr Road was connected to an on-street path on S Park Avenue. To create this path, S Park Avenue was reduced from four lanes to two lanes, allowing for bicycle lanes to be delineated by pavement markings. Traffic control devices, including flashing beacons, were added at the intersection of Willowbrook Road and Prairie Hill Road and the intersection of Dearborn Avenue and IL 251.

The City has also submitted an ITEP application to fund the implementation of a shared-use path running along portions of S Bluff Street, Shirland Avenue, Prairie Hill Road, and IL 2. The path would provide connections to Prairie Hill High School and Village of Rockton.

Stateline Area Transportation Study

Stateline Area Transportation Study (SLATS) is the Metropolitan Planning Organization (MPO) serving the Beloit Metropolitan Planning Area (MPA). The Beloit MPA includes portions of northern Winnebago County, such as the City of South Beloit and Village of Rockton.

In 2019 SLATS completed the development of a corridor study for Blackhawk Boulevard from Prairie Hill Road to Shirland Avenue. Another corridor study was completed by SLATS in 2023, covering IL 75 from WIS 67 to IL 2. The City of South Beloit was supplied with recommendations for improving traffic operations and safety along both of these corridors by SLATS at each study's respective conclusion.

Program

Traffic safety programs differ from projects in their scale; programs are collection of related projects that occur across multiple locations over a longer period of time. Many local entities have instituted traffic safety programs in recent years to address threats to the public imposed by traffic concerns. These programs are detailed below.

Winnebago County Highway Department

The Highway Department has successfully employed a program to ensure retroreflective compliance for all of its signage. In 2011 and 2013 WCHD removed and replaced existing warning and regulatory signage across the county to achieve compliance with standards. The WCHD has also employed a program over the last 15 years focused on improving safety at horizontal curves. Winnebago County Highway Department installed signage at horizontal curves

throughout the county in 2017, including chevrons, curve ahead, and advisory speed signs. Between 2009 and 2019 WCHD removed and replaced non-compliant guardrails at 35 different locations in Winnebago County.

Winnebago County Sheriff's Office

The Winnebago County Sheriff's Office (WCSO) maintains a number of programs that address traffic safety concerns in the county. The WCSO participates in the Sustained Traffic Enforcement Program (STEP), funded by the state of Illinois. The STEP program is a campaign centered around major holidays, such as the fourth of July and Christmas, where deputies participate in traffic enforcement on violations including restraint use, distracted driving, speeding, and Driving Under the Influence (DUI). The WCSO also operates ride home programs on Thanksgiving Eve and New Year's Eve. The ride home program helps keep impaired drivers off the road on nights where many individuals are consuming alcohol.

Winnebago County Sheriff's Office also participates in the nationwide "Click It or Ticket" campaign. Each May the WCSO employs high-visibility enforcement techniques to enforce seat belt use laws. Deputies are deployed to enforce the law on Winnebago County roadways while a nationwide media campaign spreads awareness of increased enforcement efforts.

The WCSO also regularly uses high visibility and saturation patrols to enforce traffic laws, including speeding and DUI's. Saturation patrols see a large number of deputies deployed to a specific area to look for impaired driving behavior and can be a very effective enforcement technique. To further support impaired driving enforcement efforts the WCSO recently purchased new blood alcohol concentration (BAC) detectors.

A school enforcement zone is also in place at various Machesney Park elementary schools, as well as at Harlem High School. Deputies are stationed at ingress and egress points near the schools and monitor traffic during pick-up and drop-off times.

Rockford Township Highway

Similar to WCHD, Rockford Township Highway (RTH) has a program dedicated to maintaining all signage in accordance with retroreflective standards. Rockford Township Highway also maintains all roadways right-of-way to ensure that safe sight distance to intersections and signage is provided. A final RTH program sees roadways and bridges sprayed with a pretreatment for ice and snow. This helps vehicles retain traction during winter conditions.

Illinois Tollway

As part of an ongoing project, the Illinois Department of Transportation, Illinois Tollway, Illinois State Police, industry partners and frontline construction workers are joining forces for National Work Zone Awareness Week to ensure "Safe Work Zones for All." Each year, the Illinois Tollway with the Illinois Department of Transportation (IDOT) and the Illinois State Police (ISP) to communicate that work zone safety affects drivers as well as construction workers. The Tollway's participation in this project includes public outreach, data collection, and traffic safety engineering.

The Illinois Tollway's engineering department has implemented crash monitoring program throughout the tollway system. This program monitors crash severity, crash frequency, location of the crash, and relevant independent variables on an outgoing basis.

Rockford Park District

The Park District is undertaking a Master Plan for Levings Park which includes evaluating best practices to meet the needs for optimal traffic circulation, reducing vehicular speeds, and improving the availability of parking. Traffic related items in Levings Park are also being evaluated in order to provide adequate EMS/Police response.

City of Rockford

The City of Rockford employed a number of different safety programs in recent years to improve traffic safety on their roads. Between 2006 and 2023 the City has removed 31 traffic signals from intersections where a traffic signal was not an appropriate treatment. The City also conducted a lane narrowing program using striping. In 2021 and 2022 26 different sections of roadway received striping treatments intended to reduce speeds. Speed feedback signs that alert drivers if they are traveling in excess of the posted speed limit were placed on seven different roadways between 2013 and 2023.

Rockford Mass Transit District

Rockford Mass Transit District (RMTD) has conducted multiple programs aimed at reducing traffic safety risks. All RMTD hybrid and battery electric buses are equipped with an external speaker that alerts nearby roadway users that the bus is about to turn in a specific direction. Rockford Mass Transit District also performs ongoing reviews of stops and routes to make it safer for pedestrians to access stops.

In March of 2024, RMTD installed a software system that detects vulnerable roadway users through the use of intelligent vision sensors. The software then produces a flashing light to alert the driver of the presence of the

vulnerable roadway user. The software tracks the locations of where the warnings are triggered; areas where warnings are frequently triggered can then be further evaluated for safety enhancements. The software also provides drivers with a passive alert if they are not observing a safe following distance.

City of South Beloit

The City of South Beloit Police Department has participated in or enacted various programs in recent years that address traffic safety. To protect vulnerable roadway users in school zones, the police department sends patrol officers to schools to monitor traffic during pick-up and drop-off times. Officers rotate through different schools within the city limits to ensure consistent enforcement. The department also participated in the STEP program from 2019 to 2024 to help raise awareness on traffic safety though enforcement and education.

Policy

A policy is a set of guidelines or rules that states how an entity operates and make decisions. In Winnebago County, policies have been implemented to provide local decision makers with a framework for address traffic safety issues. These policies are described below.

Winnebago County Sheriff's Office

It is the policy of the WCSO to perform a crash reconstruction on any major crash involving two or more vehicles. Major crashes involve fatal crashes, DUI crashes, and reckless driving crashes. The task force, known as the Major Crash Assistance Team (MCAT), reconstructs the events in the lead up to a crash. These reconstructions help settle legal issues related to major crashes, but can also reveal contributing factors to the crash. With this information, decisions can be made to help mitigate a reoccurrence of this crash type.

Illinois Tollway

In conjunction with the traffic safety partnership, the Illinois Tollway has formed a Traffic Safety Committee. This crossdiscipline committee has recurring meetings to review each serious accident and other related concerns. It is the goal of the committee to suggest and implement urgent roadway correction, on an as needed basis.

Along with the traffic safety public engagement, the Illinois Tollway is conducting their own agency stakeholder engagement with the public on traffic safety. This is accomplished through public outreach events, social media postings, and in-person child car seat safety inspections. The Tollway has created three programs to improve traffic safety.

- Work Zone Safety The tollway makes a concerted effort to remind motorists that all users must do their part to improve work zone safety, including awareness events like 2024 National Work Zone Awareness Week.
- **Drop It and Drive** The Tollway works to spread the word about the hand-held cellphone ban in Illinois. It's considered a moving violation even if the vehicle is stopped at a traffic signal.
- **Give Them Distance** Is a collaborative campaign in Illinois intended to expand awareness of the importance of the Illinois' Move Over Law which requires drivers to slow down, move over and change lanes, if possible, to make extra room when approaching any vehicle with lights flashing, stopped on a roadway.

Region 1 Planning Council

In January of 2024, Region 1 Planning Council adopted a Complete Streets Policy for the Rockford Region. Complete Streets policies are a nationwide best practice as they seek to ensure the planning, design, building, operation, and maintenance of streets enable safe access for all roadway users. Region 1 Planning Council's 2024 Complete Street policy seeks to accomplish this goal by integrating safe access principles into its project prioritization process.

The MPOs scoring criteria for the Transportation Alternative Program, Surface Transportation Block Grant, and Carbon Reduction Program now incorporates Complete Streets elements. Projects that alleviate disparities in safety and improve safety while increasing multimodal level of service will be scored more favorably. Region 1 Planning Council also adopted <u>Complete Street Design Guidelines</u> in May of 2024; the guidelines provide local partners with clear templates for designing Complete Streets.

PART 4:

Data Analysis & Summary

To develop recommendations and action items aimed at eliminating all vehicle related crashes resulting in serious injuries and fatalities within Winnebago County, a comprehensive review of the County's current traffic safety conditions was undertaken. The results of the comprehensive review reveal the most significant factors contributing to severe outcome crashes in the county, and the locations where roadway users are at the highest risk of suffering a severe outcome. This chapter provides traffic safety practitioners in Winnebago County with the information needed to take the necessary steps towards achieving Vision Zero. The following sections detail the data analysis process undertaken during this plan's development, highlight key statistical and spatial crash data outcomes, align public input with the results of the analysis, and consider impacts imposed on the county's disadvantaged communities by traffic safety concerns.

Data Overview

Crash data offers the critical information needed to identify both system-wide trends and site-specific crash details. Analysis of crash data identifies contributing factors and trends to which proven safety solutions and countermeasures are determined, recommended, and implemented. The data analysis conducted in this plan is based on crash tables and trees, as well as an analysis of the high-injury transportation corridors.

The data tables have been derived from the annual reported crash statistics, providing an overview of the total number, severity, and additional factors of all crashes. The data tables detail yearly totals, five-year totals, and overall totals for the analysis period. Factors such as weather condition, collision type, road surface conditions, class of city, class of trafficway, day of week, time of day, lighting conditions, road defects, traffic control, roadway features, and driver conditions were incorporated as separate datasets with individual tables.

Data trees also provide a high-level overview of all crashes that occurred in Winnebago County during the study period. The data trees include information on rural vs. urban crashes, intersection vs. non-intersection, signalized vs. nonsignalized, and collision type. Additionally, crashes with signs (serious injuries and fatalities) are highlighted to provide additional context to the type and general location of the crashes.

The primary dataset used for the analyses in this Action Plan was crash data for Winnebago County from 2017 to 2022, sourced from the Illinois Department of Transportation (IDOT). This crash data originates from law enforcement reports specific to each crash site. IDOT crash extract files include information such as a unique crash identifier (crash ID), crash severity, and causes. The person extract files correspond with each unique crash ID and include additional details such as driver condition, seat belt use, and pedestrian prior action, among others. Vehicle extract files provide information on vehicle type, condition of the vehicle, vehicle make and model, and more. Crash extracts were used to determine contributing factors leading to crashes resulting in serious injuries (A) and fatalities (K). Additionally, spatial data files containing the locations of each crash during the analysis period were obtained from IDOT and utilized to perform the various analyses presented in this section of the plan.

The Model Minimum Uniform Crash Criteria (MMUCC) provides updated scales for the severity of a crash through a "KABCO scale." The scale title is related to the individual codes associated with each outcome. Fatal crashes, otherwise known as 'K' crashes, are any crashes that involve a fatal injury or any injury that results in a death within 30 days after the motor vehicle crash in which the injury occurred. Serious injuries, otherwise known as 'A' crashes, are any crashes that involve a suspected serious injury.

Minor injuries, otherwise known as 'B' crashes, are any crashes that involve a suspected minor injury or any injury that is evident at the scene of the crash, other than fatal or serious injuries. Possible injuries, otherwise known as 'C' crashes, are any crashes that involve a possible injury. Simply, any injury reported or claimed that is not a fatal or serious would fall under 'C' crashes. Lastly, no apparent injuries, otherwise known as 'O' crashes, are any crashes where there is no reason to believe that any person received any bodily harm from the motor vehicle crash.^x

Serious Injuries (A):

Any injury other than fatal which results in one of more of the following:

- Sever laceration resulting in exposure of underlying tissues/ muscle/organs or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest or abdominal injury other than bruises or minor locations
- Significant burns (second and third degree burns over 10 percent or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis

Crashes resulting in severe outcomes are denoted by the crashes that include a serious injury (A-Injury on KABCO scale) or fatal injury (K on KABCO scale). All of the remaining data analysis completed for this study focuses specifically on the crashes within the region resulting in severe outcomes from 2017 to 2022.

Geographic Information System (GIS) was utilized by R1 staff to develop a High-Injury Network (HIN). The HIN for Winnebago County is a set of roadway corridors where severe outcome crashes occurred at the highest rates. The HIN allows the safety of the entire system to be analyzed by expanding upon the crash-specific data provided by the data tables and trees, allowing the unique context of each crash to be noted. Analyzing each crash in the context of the entire system reveals roadway corridors where crashes occur at a higher rate than the majority of the system. The HIN reveals where crashes are likely to continue occurring in the future due to specific roadway characteristics.

The spatial analysis provided by the HIN identifies locations on Winnebago County's arterial, collector, and local roads that have a high potential for future crashes. This potential is illuminated by historic crash rates and patterns, as well as the presence of characteristics of the roadway that contribute to the occurrence of crashes. Identifying these roadways allows them to be prioritized as decision-makers implement the strategies included in this plan for addressing traffic safety concerns.

IDOT Crash Trends

The Illinois Department of Transportation (IDOT) supplies crash data to counties across the state, complementing local data collection efforts. This statewide data enables each county to contextualize its own statistics and compare them with other counties throughout Illinois.

Each year IDOT releases a document containing crash data trends from the previous five years. The most recently released report, titled 2018-2022 Illinois Crash Data Trends, contains statewide data showing the crash totals and outcomes for several of the state's top traffic concerns, including speed- and alcohol-related crashes. Data for all 102 counties in Illinois is also available as a point of comparison

Illinois Crash Data Trends from 2022, the most recent year available, indicate that Winnebago County ranks near the top in several crash types when compared to Illinois' other 101 counties, including the following:

- Total Speed Related Crashes: 6th
- Speed related crashes resulting in fatality: 8th
- Alcohol related crashes resulting in fatality: 10th
- Motorcycle driver or occupant fatalities: Tie 17th
- Total fatal crashes involving drivers age 15-20: Tie 11th
- Pedestrian fatal crashes: 6th

In 2021, the second-to-last year for which statewide data is available, Winnebago County ranked even higher in many of the above categories. In that year, Winnebago County was second among all counties in non-vehicle occupant fatalities and fourth for fatal alcohol-related crashes. The County was also tied for third with several other counties for motorcycle driver and occupant fatalities in 2021. While it is encouraging to see the County fare better in 2022's rankings, the County must continue to work to improve its position in these rankings and achieve Vision Zero.

To achieve this vision the Plan also attempts to align with IDOT's 2022-2026 Strategic Highway Safety Plan (SHSP). This statewide safety action plan contains many of the safety emphasis areas present in this Plan, including speeding and aggressive driving, pedestrians, and roadway departures.

As identified in IDOT's SHSP, 14.9 percent of all fatal crashes in Illinois between 2016 and 2020 were pedestrian-type crashes. Winnebago County's pedestrian-type crashes between 2017 and 2022 accounted for 24 percent of all fatal crashes, far exceeding the statewide rate.

Countywide Findings

The following is a summary of the key findings of the analysis of all crash data for Winnebago County:

- There were 36,299 total crashes in Winnebago County between 2017 and 2022. Of these, 1,086 resulted in a serious injury or fatality, or 3 percent of all crashes.
- Crashes involving pedestrians, pedalcyclists, and motorcyclists, also known as vulnerable roadway users, are disproportionately likely to result in a serious outcome. For example, pedestrian crashes accounted for just 0.92 percent of all crashes during the analysis period but made up 24 percent of all fatal outcome crashes. This disparity emphasizes the importance of implementing countermeasures that apply to vulnerable roadway users.

- Crashes occurring on rural roadways between 2017 and 2022 were more likely to result in a severe outcome than • crashes on urban roadways. Rural crashes accounted for just 15.6 percent of all crashes in Winnebago County during the study period, but 27.8 percent of crashes resulting in a severe outcome took place on rural roadways.
- Of the 36,299 crashes that took place in Winnebago County between 2017 and 2022, 84.4 percent took place in urban areas. 784 urban crashes resulted in serious outcomes occurring in urban areas, representing 72.2 percent of all crashes with severe outcomes.
- Serious outcome crashes involving an impaired driver were more likely to have resulted in a fatality than a serious ٠ injury. Thirty-three percent of fatal crashes involved an impaired driver, while just 14 percent of all serious injury crashes involved one.

Countywide Collection Data

Table 4-1: KABCO Crash Outcomes

KABCO Crash	Outcomes (2017-2022)	KABCO Crash	Outcomes (2017-2022)
К	172	B & C	7,580
А	914	0	27,624

Figure 4-1: Fatal Crashes and Total Number of Fatalities



Figure 4-2: Serious Injury Crashes and Total Number of Serious Injuries









Findings by Jurisdiction

Table 4-2 illustrates the municipalities in Winnebago County where serious outcome crashes occurred. The distribution of crashes shows that a joint effort between the State of Illinois, Winnebago County, and the cities, villages, and townships within the county's boundaries is necessary to successfully address traffic safety concerns.

Municipality	Total	Fatal	A-Injury
Unincorporated Winnebago County	240	44	196
Village of Cherry Valley	44	3	41
Village of Durand	1	0	1
City of Loves Park	159	13	146
Village of Machesney Park	63	8	55
Village of New Milford	3	1	2
City of Rockford	464	89	375
Village of Rockton	11	0	11
Village of Roscoe	47	6	41
City of South Beloit	28	3	25
Village of Winnebago	2	0	2
All Municipalities	1062	167	895

Table 4-2: Serious Outcome Crashes by Municipality

Other Collision Factors

When a traffic crash occurs, it is often the result of the culmination of several contributing factors. Temporal factors such as the time of day, and environmental factors, such as weather conditions, can be associated with high and lower rates of severe outcome crashes. Correlations between vehicle mode or driver condition and a severe outcome can also be drawn. Data is presented below to illustrate correlations between several suspected contributing factors to severe outcome crashes in Winnebago County.

Time of Day & Week

The factors contributing to crashes fluctuate based on the time of day and day of the week, reflecting variations in traffic volume and driver behavior. For instance, roadway traffic peaks during weekday mornings and early evenings, as these are the primary hours for commuting to and from work and school.

Crashes resulting in serious injury or a fatality take place at higher frequencies on specific days of the week. During the study period, Saturday saw the highest rate of fatal crashes (18 percent), followed by Monday (17 percent). Friday and Saturday also had the highest rates of serious injury crashes at 16 percent. A disproportionately high amount of serious outcome crashes took place on the weekend, with approximately 32 percent of both fatal and serious injury crashes occurring. The data suggests that the increased frequency of serious outcome crashes could be related to the presence of impaired drivers on the roadways in the early morning hours of Saturday and Sunday.

Occurrences of serious outcome crashes also peak at specific times of the day. The period between 4:00 and 5:00 p.m. has the highest rates of serious injury crashes in addition to high rates of fatal crashes. The number of vehicles on roadways in the county is highest during this time period. Fatal crashes also spike between 8:00 and 9:00 p.m., potentially due to changes in visibility. As mentioned previously, many fatal crashes occur in the early morning hours despite there being relatively few vehicles on the roadway during this time frame.

Figure 4-4: Severe Outcome Crashes by Day of the Week (2017-2022)

Winnebago County Severe Crashes by Day (2017-2022)







Winnebago County Severe Crashes by Time of Day (2017-2022)

Lighting and Visibility

The presence or lack of lighting on a roadway can impact a roadway user's ability to avoid crashes. Good visibility, typically present during daylight hours or on well-lit roadways, enables users to detect vehicles, vulnerable road users, fixed objects, and the roadway's edge. When visibility is limited, individuals may struggle to fully assess their surroundings, increasing the risk of collisions. Visibility can be compromised on unlit roads and during transitional periods such as dawn and dusk. Figure 4-6 shows the light condition at all fatal and serious injury crashes during the six-year study period.

Figure 4-6: Severe Outcome Crashes by Light Condition (2017-2022)

Unknown 0.28% Dusk Darkness 2.76% 17.94% Darkness, Lighted Road 17.20% Daylight 59.71% Dawn 2.12% Darkness Darkness, Lighted Road Dawn

Unknown

Vehicle Type

An assessment was conducted on the vehicle types involved in crashes resulting in serious injury or fatality in Winnebago County. Different types of vehicles present varying levels of risk when involved in crashes. Vehicle types such as motorcycles or bicycles lack the structural protections of a car, while larger and heavier vehicles can inflict serious damage on smaller and lighter vehicle types. When combined, pedestrians and bicyclists accounted for more than one-quarter of all fatal crashes in the county. Vehicles, including cars and trucks, were involved in the majority of crashes resulting in serious outcomes. More information on pedestrians, bicycles, motorcyclists, and heavy vehicles can be found in <u>Part 5: Emphasis Areas.</u>



Severe Outcome Crashes by Light Condition (2017-2022) Figure 4-7: Fatal Crashes by Mode of Travel (2017-2022)

14 | Winnebago County Traffic Safety Action Plan

Davlight

Dusk

Figure 4-8: Serious Injury Crashes by Mode of Travel (2017-2022)

A-Injury Crashes by Vehicle Type (2017-2022)



Weather Conditions

Weather conditions can have a significant impact on a person's ability to safely travel to a destination, and are contributing factors for many of the serious outcome crashes that took place in the county between 2017 and 2022. Inclement weather conditions, such as rain or snow, can reduce traction and impair visibility, thereby increasing the risk of a collision. Due to its geographic location in the Upper Midwest, Winnebago County experiences several types of extreme and inclement weather. Figures 4-9 and 4-10 show the weather conditions at the time of fatal and serious injury crashes in Winnebago County, respectively.

Figure 4-9: Fatal Crashes by Weather Condition (2017-2022)



Fatal Crashes by Weather Condition (2017-2022)

Figure 4-10: Serious Injury Crashes by Weather Condition (2017-2022)

Serious Injury Crashes by Weather Condition (2017-2022)



Traffic Control Devices

Traffic control devices, such as traffic signals and stop signs, inform road users of the required actions to be taken on the roadway. Traffic control devices also provide warning and guidance of potential risks on the roadway; a sign can alert motorists of an upcoming horizontal curve or pedestrian crossing. These devices facilitate traffic control at intersections and contribute to the reduction of serious outcome crashes; their absence, however, can elevate the risk of collision. Figure 4-11 and Figure 4-12 show the presence of traffic control devices at locations where fatal and serious injury outcome crashes occurred in Winnebago County between 2017 and 2022.

Figure 4-11: Fatal Crashes by Traffic Control Device Present (2017-2022)



Fatal Crashes by Traffic Control Device Presence (2017-2022)

Figure 4-12: Serious Injury Crashes by Traffic Control Device Present (2017-2022)



Serious Injury Crashes by Traffic Control Device Prescence (2017-2022)

Driver Condition

Driver condition is a significant contributing factor to severe outcome crashes in the region. Using crash data extracts provided by IDOT, R1 staff was able to assign a driver condition to over 90 percent of severe outcome crashes that took place in Winnebago County during the analysis period. In exactly one- third of fatal outcome crashes, one or more of the drivers was classified as an impaired driver. This figure was lower for serious injury crashes, at 14 percent.

Per the Illinois Department of Motor Vehicles (IL DMV), under Illinois' driving under the influence (DUI) laws, it is illegal for the following driver classifications to operate a motor vehicle when they exceed the following blood alcohol content percentages:

- Drivers under age 21: 0.00 percent
- School bus drivers: 0.00 percent
- Commercial driver's license holders: 0.04 percent
- Drivers age 21 and over: 0.08 percent

Drivers can also be impaired if they are under the influence of narcotics or marijuana. Several crashes also took place in Winnebago County where a driver's condition was described as emotional or fatigued.



Figure 4-14: Serious Injury Crashes: Driver Condition (2017-2022)



Winnebago County Serious Injury Crashes Driver Condition (2017-2022)

Spatial Analysis

A robust spatial analysis was conducted to fully assess the roadway segments, intersections, and other locations at which crashes resulting in serious injury and fatality are occurring at the highest rates. Utilizing IDOT crash data files from 2017 to 2022, several maps were created detailing the roadways in Winnebago County that pose the greatest safety risks to their users. The following sections present the results of the analyses and provide detail into the methodology used to conduct them. Analyses include networks showing the frequency of severe outcome crashes and non-motorized severe outcome crashes, as well as intersections with the most severe outcome crashes. Included are the results of an online public engagement activity that allowed members of the public to submit locations of concern.

High Injury Network

The Winnebago County High Injury Network (HIN) highlights the roadway segments with the highest frequency of severe outcome crashes during the six-year study period. Displayed visually, the HIN reveals the corridors, roadway segments, and intersections that place roadway users at risk of being involved in a severe outcome crash. The map was used to identify priority projects included in <u>Part 6: Strategies</u> <u>& Recommendations</u> and can be used as a reference for local jurisdictions as they prioritize safety investments. The methodology used to generate the HIN can be found in <u>Appendix C</u>. The HIN is shown in Figure 4-15, and the roadway segments with the highest severe outcome crash frequencies are listed in Table 4-3. Segments on roadways classified as local roads or interstates are excluded from the tables.





Source: Region 1 Planning Council

Table 4-3: Winnebago County High Injury Roadway Segments

Top 10 Segments with Crash Rate, excluding Local Roads and Interstates

Roadway Name	Extent	Municipality	Functional Classification	# of Severe Outcome Crashes	Crash Rate(s) Crashes/100m VMT
IL 2	Beltline Rd to S Meridian Rd	Unincorporated	Other Principal Arterial	11	830
Forest Hills Rd	Pepper Dr to Landstrom Rd	City of Loves Park	Other Principal Arterial	11	1,522
E Riverside Blvd	East Dr to IL 251/N 2nd St	City of Loves Park	Other Principal Arterial	10	609
E Riverside Blvd	Alpine Rd to Applewood Ln	City of Loves Park	Other Principal Arterial	10	251
IL 251/N 2nd St	Forest Hills Rd to Bridge St	Village of Roscoe, Village of Machesney Park	Other Principal Arterial	9	59
Kishwaukee St	Brooke Rd to Harrison Ave	City of Rockford	Minor Arterial	8	284
US 20	Pecatonica Rd to Winnebago Rd	Unincorporated	Other Principal Arterial	8	223
Forest Hills Rd	Pepper Dr to Riverside Blvd	City of Loves Park	Other Principal Arterial	8	322
Forest Hills Rd	Windsor Rd to Harlem Rd	City of Loves Park	Minor Arterial	8	209
S Springfield Ave	IL 2/S Main St to Montague Rd	City of Rockford	Other Principal Arterial	7	878

Winnebago County Owned Roads

The table below focuses only on roadways owned by Winnebago County. This table allows the County to identify the roadways under their control that are most in need of safety enhancements. Table 4-4 shows the ten county-owned segments with the highest frequencies of severe outcome crashes during the study period. Segments on roadways classified as local roads, minor-collectors, or major-collectors are excluded from the tables.

Table 4-4: Winnebago County Owned High Injury Roadway Segments

Roadway Name	Extent	Municipality	Functional Classification	# of Severe Outcome Crashes	Crash Rate(s) Crashes/100m VMT
Forest Hills Rd	River Ln/Pepper Dr to Landstrom Rd	City of Loves Park	Other Principal Arterial	11	1,522
E Riverside Blvd	Alpine Rd to Applewood Ln	City of Loves Park	Other Principal Arterial	10	251
Forest Hills Rd	River Ln/Pepper Dr to Riverside Blvd	City of Loves Park	Other Principal Arterial	8	322
S Springfield Ave	IL 2/S Main St to Montague Rd	City of Rockford	Other Principal Arterial	7	878
E Riverside Blvd	Forest Hills Rd to Alpine Rd	City of Loves Park	Other Principal Arterial	7	312
Perryville Rd	Riverside Blvd to Nimtz Rd	City of Loves Park	Other Principal Arterial	7	993
Harrison Ave	Mulford Rd to Perryville Rd	City of Rockford, Village of Cherry Valley	Other Principal Arterial	5	490
Owen Center Rd	Riverside Blvd to Elmwood Rd	City of Rockford	Collector	5	486
Harlem Rd/Bauer Pkwy	IL 2 to IL 251	Village of Machesney Park	Minor Arterial	5	1,553
Ralston Rd	IL 251 to Ventura Blvd	Village of Machesney Park	Minor Arterial	5	687

Non-Motorized High Crash Network

Non-motorized roadway users make up a disproportionate share of the individuals who suffer serious injury or fatality on the County's roadways due to the lack of physical protection around their person. Examples of non-motorized roadway users include bicyclists, pedestrians, and individuals using micromobility devices. The roadway segments that pose the greatest threat to non-motorized roadway users were identified through an analysis of the locations of all severe outcome pedestrian and pedalcyclist crashes. Figure 4-16 is a high crash network for non-motorized crashes only, and the corresponding Table 4-5 shows the segments with the highest frequency of non-motorized crashes from this analysis. Local roads and interstates are excluded from the table displaying the segments with the highest non-motorized crash frequencies. All non-motorized crash outcomes were considered in the development of this high crash network, as the margin between a non-severe and severe outcome is very fine when a non-motorized roadway user is involved in a crash.

Figure 4-16: Winnebago County High Non-Motorized Crash Network



Source: Region 1 Planning Council

Table 4-5: Winnebago County High Non-Motorized Crash Roadway Segments

Roadway Name	Extent	Municipality	Functional Classification	# of Crashes	Crash Rate(s)
Wyman Street	Mulberry Street to W Jefferson Street	Rockford	Other Principal Arterial	4	6,008
11th Street	Roosevelt Road to Sandy Hollow Road	Rockford	Other Principal Arterial	2	2,834
West State Street	N Meridian Road to Daisyfield Road	Rockford	Other Principal Arterial	7	2,767
Spring Creek Road	At IL 251 Interchange	Rockford	Other Principal Arterial	2	2,647
Mulberry Street	N Winnebago Street to N Main Street	Rockford	Other Principal Arterial	3	2,647
Buckley Drive	At E State Street/US BUS 20	Rockford	Major Collector	3	2,585
N Mail Street/IL 2	At Auburn Street	Rockford	Other Principal Arterial	1	2,149
Mulberry Street	N Central Avenue to N Hinkley Avenue	Rockford	Major Collector	2	2,131
S Main Street	At Springfield Avenue/Harrison Avenue	Rockford	Other Principal Arterial	3	1,826
Pierpont Avenue	At West State Street/US BUS 20	Rockford	Major Collector	3	1,522

Intersections

More than half of the fatal and serious injury crashes that took place in Winnebago County during the study period occurred at intersections. Serious outcome crashes occur at high rates at intersections due to the number of conflict points presented as two or more roadways meet. Within Winnebago County, a number of intersections stand out as more dangerous than others. Alpine Road and Riverside Boulevard had nine separate severe outcome crashes during the study period, the most of any intersection. Figure 4-17 shows the intersections with the highest concentration of severe outcome crashes between 2017 and 2022, while Table 4-6 lists the intersections with the most severe outcome crashes.

Table 4-6: Winnebago County Severe Outcome Intersection Crash Occurrences

Roadway Name	Extent	Municipality	Functional Classification	# of Serious Injury Crashes	# of Fatal Crashes	# of Severe Outcome Crashes
Riverside Boulevard	At Alpine Road	Loves Park/Rockford	Other Principal Arterial	9	0	9
IL 75	IL 70	Unincorporated	Minor Arterial	6	1	7
Riverside Boulevard	At Forest Hills Road	Loves Park/Rockford	Other Principal Arterial	5	1	6
Riverside Boulevard	At Owen Center Road/N Central Avenue	Rockford/ Unincorporated	Other Principal Arterial	5	1	6
Harlem Road	At N Perryville Road	Loves Park	Other Principal Arterial	5	0	5
Alpine Road	At Windsor Road	Loves Park	Minor Arterial	5	0	5
Alpine Road	At Harrison Avenue	Rockford	Other Principal Arterial	3	1	4
Riverside Boulevard	At Mulford Road	Loves Park/Rockford	Other Principal Arterial	4	0	4
Spring Creek Road	At Spring Brook Road	Rockford	Other Principal Arterial	4	0	4
Alpine Road	At Broadway/Newburg Road	Rockford	Other Principal Arterial	4	0	4

Figure 4-17: Winnebago County Severe Outcome Intersection Crash Density



Source: Region 1 Planning Council

Public Input

As discussed in <u>Part 1: Introduction</u>, R1's online engagement platform, Engage R1, was utilized to collect locations of traffic safety concern from the public. A social mapping feature on this Winnebago County Traffic Safety Action Plans project page allowed individuals to leave a pinpoint on a map with an associated comment describing the concern at that location. Project pages on Engage R1 have also been created in concurrence with this plan for the Regional Traffic Safety Action Plan and City of Rockford Traffic Safety Action Plan. Many of the locations submitted on these project pages fall within the boundaries of Winnebago County. A review of the comments attributed to each submitted location within Winnebago County allows each location to be assigned to one or more emphasis areas. Table 4-7 shows how many points applied to each emphasis area. Each of the pins, and the mode of travel most impacted by the concern, are shown in Figure 4-18. Figure 4-20 overlays locations of concern onto the High Injury Network. This map allows for the examination of where users of Winnebago County's roadway network and traffic safety data overlap, reinforcing certain locations as areas at which traffic safety countermeasures should be considered for implementation. Additional information about the public engagement process for this plan can be found in <u>Appendix B: Public Engagement Process.</u>

Table 4-7: Engage R1 Submissions Categorized by Emphasis Area

Emphasis Area	# of Times Identified
Intersections	152
Pedestrians	137
Speeding & Aggressive Driving	117
Bicyclists	64
Protection Zones	12
Roadway Departures	6
Heavy Vehicles	4
Motorcycles	3
Younger & Older Drivers	3

Figure 4-18: Engage R1 Submission Locations by Mode of Concern



Source: Region 1 Planning Council

Figure 4-19: Engage R1 Submissions Categorized by Emphasis Area



Source: Region 1 Planning Council

Figure 4-20: Engage R1 Submissions & High Injury Network



Source: Region 1 Planning Council

Areas of Persistent Poverty Considerations

To assess the relationship between communities with limited access to resources and traffic safety issues, an analysis was conducted. The analysis utilized data from the 2014-2018 five-year American Community Survey, specifically indicators showing the proportion of census tracts living in poverty. Census tracts within which 20 percent of more of residents are defined as areas of persistent poverty, or disadvantaged areas. This statistical definition is based on the guidance for determining disadvantaged areas provided in the SS4A Programs FY2025 Notice of Funding Opportunity. In Winnebago County, there are 29 census tracts within which 20 percent or more of residents live in poverty. These areas can be referred to as disadvantaged, or areas of persistent poverty.

Of the 1,053 crashes resulting in serious injury or fatality that took place in Winnebago County between 2017 and 2022, 264 crashes occurred in areas of persistent poverty. Of the 264 total crashes, 52 resulted in at least one fatality, while 222 resulted in at least one serious injury.

The results of the High Injury Network analysis were also compared against the identified disadvantaged census tracts. A total of 497 roadway segments in Winnebago County were categorized as part of this plan's High Injury Network. One hundred ninety six, or approximately 39.4 percent of these segments are located within a disadvantaged census tract. These segments are shown in Figure 4-22. Of the 29 roadway segments with "very high" occurrences of severe outcome crashes, 12 of the segments are located within a disadvantaged census tract.



Figure 4-21: Severe Outcome Crashes in Disadvantaged Areas (Winnebago County)

Source: Region 1 Planning Council

Figure 4-22: High Injury Network Segments in Disadvantaged Areas (Winnebago County)



Source: Region 1 Planning Council

PART 5: **Emphasis Areas**

The Winnebago County Traffic Safety Action Plan contains 12 emphasis areas, shown in Figure 5-1. Safety emphasis areas describe the issues where there is an opportunity to improve. Addressing these safety emphasis areas will provide Winnebago County with the opportunity to significantly reduce instances of fatal and serious injury crashes and achieve the vision and goals of this plan. The emphasis areas included in this chapter were identified by the plans steering committee members, and are supported by the results of the plan's data analysis. Furthermore, each of the emphasis areas aligns with the Safe System Approach. In this chapter, each of the 12 safety emphasis areas is accompanied by a description of the issue and its components and a summary of the data and input that supported its inclusion.

- Speeding and Aggressive Driving
- Impaired Driving
- Unrestrained Occupants
- Distracted and Drowsy Driving
- **Bicyclists**
- Pedestrians
- Younger and Older Drivers
- Heavy Vehicles
- Motorcycles
- Lane/Roadway Departures
- Intersections
- **Protection Zones**

Figure 5-1: Safety Emphasis Areas



Speeding and **Aggressive Driving**



Unrestrained Occupants



Younger Drivers

Heavy Vehicles



Impaired

Driving



Distracted and Drowsy Driving



Bicyclists



Motorcycles



Intersections



Protection Zones



Lane/Roadway Departures



Winnebago County Traffic Safety Action Plan | 27

Pedestrians







Speeding & Aggressive Driving

Speeding has been widely noted as one of the single most dangerous factors when assessing the severity of motor crashes. However, safety professionals have been unable to mitigate the risky behavior through enforcement or public awareness campaigns. Speeding has been shown to increase the chance of severe injuries and fatalities in crashes and consequently, the costs associated with such crashes. Speeding has been increasing since the first observational study for NHTSA in 2002, especially on major arterials that are not access-limited^{xi}. Accordingly, safer speeds are included as an objective of the Safe System Approach^{xii}.

Aggressive driving often includes speeding and is therefore grouped with speeding in this plan. However, the nature of aggressive driving can pose additional risks to the responsible party as well as other vehicles on the road. Some of the characteristics of aggressive driving include, but are not limited to: tailgating or intentionally following a driver too closely, running red lights, cutting in front of other drivers, and passing vehicles on the shoulder. Other aspects of aggressive driving is limited, due to the behavior not always involving a crash and enforcement being unable to assess all events and factors leading up to a crash.

In the United States, occurrences of speeding have steadily been increasing. In a 2018 survey by NHTSA, 30 percent of respondents were classified as "frequent" speeders, and another 40 percent were classified as "sometimes" speeders^{xiii}. Drivers often feel a need to keep up with the flow of traffic or have the expectation of getting to their destination as quickly as possible; these feelings promote or lead to dangerous speeding behaviors. Additionally, a lack of understanding of the risk-reward nature of speeding can lead drivers to reach speeds that exponentially increase the risk of a severe outcome crash while only reducing their travel time by a fraction. Although speeding is a common behavior, the majority of drivers still value safety and believe that it is important for something to be done to reduce speeding^{xiv}.

Crash data is an important metric for evaluating speeding. However, the way speeding is defined varies among states, and it can be difficult to determine the role speeding played during crash investigations. When available, speeding data is an important supplementary metric that can be overlaid with crash data. Doing so can help decision-makers pinpoint locations where speeding countermeasures should be deployed. In Winnebago County, 257 crashes were determined to be caused in part by speeding and aggressive driving. Approximately 18 percent of those 257 crashes resulted in a severe outcome. This data was derived from Illinois Department of Transportation (IDOT) crash extract and vehicle extract files.

While a lack of speeding data makes it difficult to accurately estimate the number of crashes caused by excessive speeds, anecdotal evidence collected during this plan's public engagement process showcases the need for remedies. One hundred eighteen of the three hundred sixty-two submitted locations of traffic safety concern indicated that speeding and aggressive driving were part of their concern. Furthermore, 62 percent of survey respondents cited speeding as one of their top traffic safety concerns, and 71 percent believe that the use of excessive speeds contributes to traffic crashes in Winnebago County.

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Speeding or Aggressive Driving	107	11.70%	27	15.80%	134	12.33%

 Table 5-1: Severe Outcome Speeding & Aggressive Driving Crashes (2017-2022)

Figure 5-2: Top Public Concern Identified in Survey



Top Public Concern: Speeding and Aggressive Driving



Impaired Driving

Impaired driving, caused by the consumption of alcohol or drugs, presents significant challenges to transportation safety and public health. Alcohol-impaired driving has long been recognized as a major contributor to traffic accidents and fatalities, with extensive research documenting its effects on driving ability

and risk levels. In recent years, the focus has also broadened to include drug-impaired driving, encompassing both legal medications and illicit substances. As the prevalence of both alcohol and drug use among drivers persists, understanding these substances' impacts on road safety is crucial for developing effective prevention strategies and policies to protect all road users.

In 2021, there were 13,384 fatalities in crashes involving alcohol-impaired drivers, defined as those with a blood alcohol concentration (BAC) of 0.08 g/dL or higher across the entire United States. This marked a 14.2 percent increase from the 11,718 fatalities recorded in 2020, according to the National Center for Statistics and Analysis^{xv}. These alcohol-impaired driving fatalities accounted for nearly one-third (31 percent) of all motor vehicle deaths in the United States.

Historically, alcohol-impaired driving incidents decreased consistently from the early 1980s to present day. Research attributes this decline to a combination of factors, including the implementation of alcohol-related legislation (such as the .08 BAC limit), administrative license revocation policies, minimum drinking age laws, and demographic shifts like an aging population and a higher proportion of female drivers^{xvi}.

In addition to alcohol, many drugs—both legal and illegal—are known or suspected to impair a driver's ability to safely operate a motor vehicle^{xvii}. While the impairing effects of alcohol and the risks of drinking and driving are well documented, there is significantly less research on the potential impairing effects of other drugs on driving performance.

Impaired driving crash data for Winnebago County was determined by analyses of IDOT crash extracts and person extract files. As shown in Table 5-2, exactly one third of fatal outcome crashes in Winnebago County during the study period involved an impaired driver, slightly above the national share of 31 percent. Of the 1,640 crashes in Winnebago County between 2017 and 2022 that involved an impaired driver, 11.7 percent resulted in a severe outcome. The locations of impaired driving crashes resulting in a severe outcome are dispersed throughout the county, indicating these crashes are less a result of roadway design conditions and more indicative of behavioral factors.

Almost 40 percent of severe outcome impaired driving crashes in the county take place on Saturday or Sunday. These days have lower vehicle miles traveled than weekdays but carry a greater risk for these types of crashes. This relationship could be driven by a greater number of individuals visiting nightlife destinations and becoming impaired on weekend nights.

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Impaired Driving	127	13.90%	57	33.30%	184	16.93%



Table 5-2: Severe Outcome Impaired Driving Crashes (2017-2022)



Severe Outcome Impaired Driving Crashes by Day of the Week







Distracted & Drowsy Driving

Distracted and drowsy driving behaviors pose considerable safety risks and lead to many severe outcome crashes each year. These behaviors, often resulting from modern lifestyle patterns and technological distractions, compromise the alertness and reaction times of drivers. Consequently, they increase the likelihood of collisions, injuries, and fatalities on the road. The widespread prevalence of these issues not only endangers

individual drivers and passengers but also strains emergency services, healthcare systems, and infrastructure maintenance efforts. Addressing distracted and drowsy driving is crucial for enhancing road safety, reducing accident-related costs, and ensuring the overall efficiency and reliability of the transportation system.

Drowsy driving is a significant safety concern arising from lifestyle habits. Nationwide in 2021, approximately 684 people were killed in crashes involving a drowsy driver, accounting for 1.6% of all motor vehicle traffic fatalities^{xviii}. From 2017 to 2021, drowsy driving was indicated as a contributing factor in 1.8% of all fatal crashes in the United States. Research and attention on drowsiness have historically been primarily focused on commercial truck drivers, but the issue is much more widespread^{xix}. In 2014, over one-third of 444,306 respondents aged 18 and older in the United States reported sleeping less than 7 hours a day—the minimum amount recommended for optimal well-being^{xx}. The 2017 AAA Traffic Safety Culture Index revealed that over 40% of the 2,613 surveyed drivers reported getting less than 6 hours of sleep a night during a typical week^{xxi}.

Distracted driving has garnered considerable attention over the past decade. While much of the focus has been placed on mobile device use and texting, many more potential distractions exist. The National Highway Traffic Safety Administration
(NHTSA) defines distracted driving as "any activity that diverts attention from driving, including talking or texting on your phone, eating and drinking, conversing with passengers, adjusting the stereo, entertainment, or navigation systems— anything that takes your focus away from the task of safe driving^{xxii}". Distractions can manifest in various forms: visual distractions, which take a driver's eyes off the road; cognitive distractions, which shift their mental focus away from driving; and manual distractions, which remove their hands from the wheel. Some activities, such as texting, can combine all three types of distraction. In 2021, NHTSA estimated that distracted driving was a factor in 3,522 fatalities, accounting for 8% of all traffic deaths in the United States^{xxiii}.

People perceive the use of hands-free devices as less risky than handheld devices. Nearly half (47%) of the respondents in the NHTSA survey reported feeling safe if the driver was using a hands-free cell phone to make or answer calls, compared to just 35% for handheld phones^{xxiv}. Each year, NHTSA conducts a nationwide observational survey of driver electronic device use. Observations are conducted by trained data collectors from 7 a.m. to 6 p.m. During 2021 an estimated 7.6% of American drivers were using some type of phone (handheld or hands-free) at any given moment during the daytime^{xxv}.

In Winnebago County, IDOT crash and person extracts indicate that distracted or drowsy driving played a role in just 3.86 percent of severe outcome crashes during the study period. Approximately 3 percent of fatal crashes in Winnebago County are caused by distracted or drowsy driving, 5 percent less than the national rates. However, it is conceivable this figure grossly undercounts crashes where distracted driving is a factor, as individuals may be unlikely to self-report a traffic violation or fatigue as a factor contributing to a crash they were involved in. A driver suffering a fatal outcome will also be unable to report they were distracted in the moments prior to the crash. Illinois law prohibits the use of hand-held technology while operating a motor vehicle; drivers who are involved in a crash resulting from distracted driving can face criminal penalties^{xxvi}. Drowsy driving is not regulated by Illinois law.

 Table 5-3:
 Severe Outcome Distracted & Drowsy Driving Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Distracted or Drowsy Driving	37	4.00%	5	2.90%	42	3.86%

Unrestrained Occupants

Research shows that proper use of a seat belt or child restraint is the single most effective way to reduce traffic-related deaths and injuries. Despite this proven safety measure, select individuals still drive or ride in vehicles unrestrained. In 2022, 63 percent of U.S. passenger vehicle occupants ages 18-34 who were killed in nighttime crashes were unrestrained. Young men and pickup truck drivers are among the most likely demographic groups to not wear a safety belt^{xxvii}. Additionally, more than 11,000 passenger vehicle occupants killed in crashes in the United States in 2022 were unbelted, and 57 percent of those killed were unbelted in nighttime crashes^{xxviii}. Choosing not to use seat belts or child restraints can cause occupants to be ejected from their vehicle during a crash, an event that is strongly correlated to fatal outcomes. Seat belts also act as a complement to air-bags, as the force of air-bags can seriously injure or even kill unrestrained occupants^{xxiix}.

Many drivers may feel confident in their driving ability and therefore are less worried about being involved in a crash. However, defensive drivers are still at risk of being hit by another driver. Seat belts are the best defense against impaired, aggressive, and distracted drivers^{xxx}. The use of lap and shoulder combination seat belts reduces the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. Correct use of child restraints reduces fatalities by 71 percent for infants younger than one year old and by 54 percent for children one to four years old in passenger cars^{xxxi}. For children four to eight years old, the use of booster seats in combination with seat belts is most effective.

Following the introduction of seat belt laws across the nation in the early 1980s, average use among drivers and passengers rose significantly. Current data shows that observed daytime seat belt use nationwide was 91.6 percent in 2022 for adult drivers and right-front seat passengers combined,^{xxxii} indicating many vehicular occupants still do not always use seat belts and child restraints. However, the national seat belt use rate only accounts for use in the daytime. In 2021, some 57 percent of passenger vehicle occupants killed in crashes at nighttime in the United States were unrestrained. In contrast, 43 percent of fatally injured passenger vehicle occupants in daytime crashes were unrestrained^{xxxiii}.

Illinois law requires all drivers and passengers age eight and older to wear safety belts, regardless of their position in the vehicle. Children under the age of eight must be secured in an appropriate child restraint system in accordance with the Child Passenger Protection Act^{xxxiv}. Despite this law, 11.5 percent of serious outcome crashes in Winnebago County during the study period involved an unrestrained occupant, and twenty percent of all individuals who suffered a fatal crash outcome in Winnebago County during the study period were unrestrained. Seventeen percent of all crashes that involved an unrestrained occupant in serious injury or fatality. These figures were determined by analyzing IDOT crash and person extract files. Notably, Illinois law allows for primary enforcement of the state's seat belt laws, meaning law enforcement officers can initiate a traffic stop if they observe a violation of said law^{xxxv}.

Table 5-4: Severe Outcome Unrestrained Occupant Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Unrestrained Occupant	90	9.80%	35	20.50%	125	11.50%

Figure 5-5: Severe Outcome Unrestrained Occupant Crash Locations (2017-2022)



Pedestrians

Pedestrian safety in the United States has risen to the level of a crisis in the last decade. Pedestrian fatalities each year declined steadily for four decades until 2009, when the trend reversed. Between 2017 and 2021, an average of 6,502 pedestrians were killed on United States roadways^{xxxvi}. During this five-year period, pedestrian fatalities accounted for approximately 17 percent of all traffic fatalities in the United States^{xxxvii}. An additional 60,577 pedestrians were injured in traffic crashes in 2021. In 2022, 7,522 pedestrians were killed nationwide, representing a 68 percent increase from 2011^{xxxviii}. This number of deaths equates to more than three Boeing 737s falling from the sky every month for a year^{xxxix}.

The Federal Highway Administration (FHWA) and National Highway Traffic Safety Administration (NHTSA) define pedestrian crashes as any motor vehicle crash involving a person on foot, walking, running, jogging, hiking, sitting, or lying down^{xl}. Pedestrian safety has become an area of significant focus in recent years for both of these agencies, as well as state and local transportation agencies, due to the trends discussed above. Transportation decision-makers across the country are looking for solutions to this crisis. The United States Department of Transportation's (U.S. DOT) Safe System Approach, which is adopted by this plan and many others across the nation, is seen as a path toward establishing a transportation system that is safe for all roadway users, including pedestrians.

The National Highway Traffic Safety Administration has identified that roadway environment, vehicle type and design, weather, and road user behaviors are contributing factors for pedestrian crashes. The speed of a vehicle as it impacts a pedestrian has a significant effect on the likelihood of a fatal outcome; the risk of fatality is 8 percent at 31 miles per hour but increases to 50 percent at 47 mph ^{xli}. Alcohol also plays a role in many pedestrian crashes; 43 percent of all pedestrian crashes in 2021 involved a driver or pedestrian with a BAC of .08 or higher^{xlii}. The majority of pedestrian crashes also take place at night; 77 percent of nationwide pedestrian fatalities occurred in the dark.

The trend reversal in pedestrian crashes in 2009 could be driven in part by increases in the size and weight of the average vehicle on the roadway. From 2009 to 2016, the number of fatal pedestrian crashes involving sport utility vehicles (SUVs) increased by 81 percent across the United States^{xliii}. Nationwide, the share of new vehicles sold that were SUVs increased from 27 percent in 2010 to 48 percent by 2018^{xliv}.

The number of potential distractions for roadway users has also increased over the last 15 years. Smart-phones have become widely available and can serve as distractions for both drivers and pedestrians, as demonstrated by numerous studies. Newer vehicles also contain "infotainment" displays that can be an additional distraction for drivers.

The pedestrian safety crisis seen throughout the United States can also be found in Winnebago County, as demonstrated by IDOT crash extracts. Pedestrian crashes accounted for just one percent of all crashes in the county between 2017 and 2022. Despite this, one out of every four fatal crashes in the study period resulted in the death of a pedestrian. This exceeds the national share of 17 percent during the 2017 to 2021 nationwide study period. Furthermore, of the 335 pedestrian crashes that occurred in the county during the six-year study period, just over one third resulted in a serious injury or fatality. Sixty-three percent of severe outcome pedestrian crashes in the county took place in darkness, emphasizing the risk to pedestrians when visibility is low.

Figure 5-7 shows the locations of severe outcome pedestrian crashes in Winnebago County. Nearly all severe outcome pedestrian crashes took place in urban areas. Figure 5-8 shows the relation of severe outcome pedestrian crash locations to the presence of pedestrian facilities. Seventy four of the one hundred and twelve severe outcome pedestrian crashes in the region occurred at locations with incomplete, little, or no pedestrian facilities.

Pedestrian safety concerns also threaten members of disadvantaged communities' ability to travel safely throughout the region. During the study period, 67 of 112 severe outcome pedestrian crashes that took place occurred in an area of persistent poverty.

The feedback received during the plans public engagement efforts also indicates that the public feels pedestrians face significant safety risks in the county. Thirty percent of survey respondents indicated pedestrian safety is one of their top traffic safety concerns, and 139 of the 362 (38 percent) submitted locations of concern in Winnebago County relate to pedestrian safety.

Table 5-5: Severe Outcome Pedestrian Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Pedestrian	71	7.80%	41	24%	112	10.30%



Light Condition: Severe Outcome Pedestrian Crashes









Bicyclists

Bicyclists are vulnerable roadway users; a bicycle offers no protection to its rider when impacted by a motor vehicle. While some parts of the United States provide bicyclists with their own facilities, many do not, forcing bicyclists to ride in the roadway with larger motor vehicles. When crashes between a bicycle and motor

vehicle do occur, there is a high risk of fatality or serious injury due to the size and weight discrepancy between the two vehicle types. Like pedestrian crashes, bicycle crashes resulting in fatality have steadily increased over the last decade. There were 623 bicyclist fatalities in the United States in 2010; this figure increased to 966 in 2021^{xlv}.

The FHWA defines a bicycle crash as any event where a bicyclist hits the ground, a motor vehicle, or any other solid object in a way that can result in bodily harm or property damage^{xlvi}. The increase in bicycle crashes in the United States has coincided with an increase in the number of people riding bicycles; in 2020 bicycle use grew by 4 percent^{xlvii}. An increased emphasis has been placed on bicycle safety as a result of the increase in the modes use. Many safety practitioners support the theory that an increase in the volume of bicyclists will improve their safety. Developing infrastructure to support the use of bicycles in unison with strategies to improve road users' behaviors can help to address the safety concerns associated with the bicycling mode.

The National Highway Traffic Safety Administration has determined that the elimination of conflicts with motor vehicles is the most effective way of protecting bicyclists. Bicycle facilities, such as protected bicycle lanes and shared use paths and trails, accomplish this goal by separating bicyclists from the vehicle right-of-way (ROW). Reducing the number of vehiclebicycle conflict points mitigates the risks imposed on bicyclists by vehicle movements and driver behavior. The risks for bicyclists are greatest in urban areas where the concentration of moving and parked vehicles, intersections, and driveways is highest.

Fatal bicycle crashes are most likely to occur when a vehicle attempts to overtake a bicyclist on a roadway. These movements are made even more dangerous when the driver is distracted. A 2018 study conducted in Michigan revealed that in one of every thirteen overtaking events, the motorist is actively using a cellular device^{xlviii}. Given the extreme vulnerabilities a bicyclist has, these distracted motorists can often cause fatal outcomes for bicyclists. Impairment is also strongly correlated with bicyclist crashes, as 34 percent of all fatal bicycle crashes in 2020 involved alcohol consumption by either the motorist

or the bicyclist. Speed is another significant factor in bicycle crashes. Similarly to pedestrian crashes, higher vehicle speeds at impact are associated with a higher likelihood of a fatal or serious injury outcome for the bicyclist.

There is an opportunity to address bicyclist safety in Winnebago County. According to IDOT crash extracts, bicycle crashes account for approximately 2.5 percent of all serious outcome crashes in the county, and 2.9 percent of all fatal crash outcomes. This exceeds the national share of total traffic fatalities (2.2 percent) that bicyclists accounted for in 2021^{xlix}. Additionally, 14.8 percent of all bicycle crashes that occurred in Winnebago County between 2017 and 2022 resulted in a severe outcome. To support the use of this vulnerable mode of travel, countermeasures must be deployed in locations across the county. Many of the locations of serious outcome bike crashes are in traditionally disadvantaged areas where vehicle ownership rates are lower; 14 of the 27 serious outcome bicycle crashes during the study took place in an area of persistent poverty.

The presence of bicycle facilities, such as bicycle lanes and off street paths, also plays a role in the occurrence of severe outcome bicycle crashes in the county. Twenty of the 27 severe outcome bicycle crashes that took place in the county occurred at locations that did not have either on-street bicycle facilities or an off-street path. As described above, separating bicycles from vehicles, reducing conflict points, and increasing the visibility of bicyclists is strongly correlated with lower rates of severe outcome bicycle crashes. Developing the county's bicycle infrastructure should result in a reduction in severe outcome bicycle crashes.

Table 5-6: Severe Outcome Bicyclist Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Bicyclist	22	2.40%	5	2.90%	27	2.48%

Figure 5-9: Severe Outcome Bicyclist Crash Locations (2017-2022)







Younger & Older Drivers

Younger and older drivers are often overrepresented in crash statistics when compared to other age groups in between. Driving behaviors among these groups differ but can pose similar risks to themselves and the transportation network. Age ranges for younger drivers vary slightly, but

persons aged 15 to 20 years old is the most commonly agreed-upon definition. Older drivers are typically defined as any individual over the age of 65.

Crash risks for younger drivers are typically due to a lack of driver experience and knowledge, as well as the increased propensity for risky behavior associated with normal adolescent development¹. Additionally, research on adolescent development shows that the parts of the brain responsible for decision-making and judgment continue to develop beyond adolescence¹¹. In 2021, over 2,000 drivers aged 15- to 20-years-old were killed in motor vehicle crashes in the United States¹¹¹. A lack of experience combined with distractions such as cell phones or other passengers increases the vulnerability of younger drivers getting on the roadway. While they pose an increased risk for all drivers, other factors such as driving at night, under the influence of alcohol or drugs, or without a seatbelt can be especially dangerous for younger drivers. A study conducted by the Centers for Disease Control (CDC) in 2019 showed that 7.8% of younger drivers in the United States self-reported instances of driving while alcohol-impaired¹¹¹.

Older drivers continue to be more abundant on U.S. roadways than ever, especially as the median age continues to rise. In 2021, more than 20% of licensed drivers in the U.S. were over the age of 65^{liv}. Although age is not a direct determinant of driving ability, changes to individuals' physical and mental abilities occur as they age; these changes, or the failure to adjust to them, can increase the risk of a crash. Without adequate and diverse mode options for older individuals, driving continues to be a necessity for daily lifestyle habits.

In 2021, there were 8,209 traffic fatalities involving an older driver nationwide¹. Certain driving behaviors among older drivers have been observed to be safer compared to other groups, such as higher seat belt use, less impaired driving, and often choosing safer times of the day to drive. However, many older drivers are required to take medicine that could lead to drowsiness or affect driving in other ways. In fact, over 90% of older drivers in the United States take prescription medications^{1/4}.

Lastly, older drivers are less likely to drive aggressively or speed. However, they may exhibit other risky behaviors, such as driving more slowly than prevailing traffic or failing to detect or accurately judge the speed of an oncoming vehicle while making an unprotected left turn^{lvii}.

Crash and person extracts provided by IDOT were analyzed to determine the following Winnebago County statistics specific to this emphasis area. Older (65+ years) and younger drivers (15-20 years) together account for over a third (37.5 percent) of all severe outcome crashes that took place in Winnebago County between 2017 and 2022. Thirty-eight percent of all A-injury crashes involved a younger or older driver, while 32.7 percent of fatal crashes involved a driver from one of these age cohorts. These age cohorts account for 69,816 people in Winnebago County, or 24.5 percent of the county's total population in $2022^{|v|ii|}$. During the study period, 263 drivers over the age of 65 were involved in 246 severe outcome crashes. At the other end of the age spectrum, 160 drivers under the age of 20 were involved in 153 severe outcome crashes. Encouragingly, just 2.3 percent of the 18,068 crashes in Winnebago County that involved a younger or older driver resulted in a severe outcome.

Table 5-7: Severe Outcome Younger & Older Drivers Crashes

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Younger and Older Drivers	352	38.40%	56	32.70%	408	37.53%

Figure 5-11: Severe Outcome Younger & Older Drivers Crash Locations



Motorcycles



Travel by motorcycle carries greater risks than many other modes of transportation. Operating a motorcycle requires more physical skill and strength than driving a passenger vehicle, and motorcycles lack a protective structure, offering virtually no protection in a crash. Additionally, their smaller size compared to most motor

vehicles makes them less visible to drivers and more vulnerable in collisions with larger, heavier vehicles. Many environmental factors can also impact motorcycle safety. Slippery roadway surfaces and markings, surface irregularities and debris, unpaved shoulders, and unforgiving roadway barriers can all pose significant dangers. Motorcycling gained popularity in the early 2000s, with increases in both motorcycle registrations and vehicle miles traveled (VMT) during that period. Since 2011, both registrations and VMT have remained relatively stable^{lix}.

While motorcycles are often grouped into a single category, there is significant diversity in the types being purchased and ridden. In 2018, most registrations were for cruiser (3.5 million) and touring bikes (1.8 million), whereas supersport motorcycle registrations were much lower at around 600,000. Although motorcycle ownership and miles traveled have steadily increased since about 1998, there has been a shift in the age of motorcyclists fatally injured. In 2019, motorcyclists under age 30 accounted for 28 percent of fatalities, while those 50 and older accounted for 37 percent^{ix}.

Despite representing only 3.5 percent of registered vehicles, motorcyclists comprised 14 percent of all motor vehicle traffic fatalities in 2021. Furthermore, motorcyclists were nearly 24 times more likely to die in traffic crashes per VMT than passenger car occupants. In 2021, there were 30.68 motorcyclist fatalities per 100 million VMT, compared to 1.22 passenger car occupant fatalities per 100 million VMT. In 2021, approximately 38 percent of motorcyclist fatalities occurred in single-vehicle crashes^{lxi}. Ninety-two percent of those killed were males, and passengers made up 5 percent of motorcycle fatalities^{lxii}.

In 2022, 7,238 motorcycles were registered in Winnebago County; this represents 2.8 percent of all registered vehicles^{kiii}. Despite only representing 2.8 percent of all registered vehicles in the county, at least one motorcycle was involved in 12.8 percent of all serious outcome crashes in the county. This is marginally smaller than the share of total fatal crashes in the United States that involve a motorcycle (14 percent). For every 100 motorcycles registered in Winnebago County in 2022, 1.9 motorcycles were involved in a serious outcome crash during the study period. More than one out of every four motorcycle crashes in Winnebago County resulted in a serious injury or fatality. At least 23 of the 139 motorcycles involved in a severe outcome crash during the study period were speeding at the time of the crash. The data points described above were determined by analyzing IDOT crash and vehicle extracts.

An additional factor contributing to severe outcome motorcycle crashes in Winnebago County is helmet use. Helmets, as well as other protective gear, can reduce the risk of serious injury and fatality when motorcycle crashes do occur. However, Illinois law does not require the use of a helmet when operating a motorcycle. A 2017 study conducted by IDOT indicated that just 44.6 percent of riders in the state wear helmets^{kiv}

 Table 5-8:
 Severe Outcome Motorcycle Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Motorcycles	117	12.80%	22	12.90%	139	12.79%

Figure 5-12: Severe Outcome Motorcycle Crash Locations





Heavy Vehicles

Heavy vehicles pose a safety risk to lighter vehicles and vulnerable roadway users, as their weight means they exert more force upon impact. The weight of a heavy vehicle provides safety benefits to its occupants but increases the risks for other roadway users. When a vehicle is involved in a crash with a vehicle that is 1,000 pounds heavier, there is a 40 to 50 percent increase in fatality risk for the lighter vehicle's occupants^{Ixv} when compared to a crash involving a vehicle of the same weight. In 2021, there were 5,788 fatalities resulting from crashes involving trucks weighing 10,000 pounds or more in the United States^{Ixvi}. This figure represents a 17 percent increase from 2020. Nationwide, the involvement rate per 100 million large-truck miles is up 24 percent since 2012^{Ixvii}. Six percent of all vehicles involved in fatal crashes in 2022 were large trucks^{Ixviii}.

Heavy vehicles are defined as buses with a capacity for up to 15 passengers, busses with a capacity for 15 passengers or more, single-unit trucks, tractors with or without a semi-trailer, and farm equipment. These vehicles play important roles in the transportation system, transporting large amounts of people and goods but their weight makes them a danger to lighter vehicles and vulnerable roadway users. Heavy vehicles typically have limited sight lines and can struggle to stop or maneuver quickly due to their weight. Developing an understanding between heavy vehicle operators and other roadway users of how heavy vehicles behave on the roadway can help all roadway users to safely coexist. Additionally, these risks can also be mitigated through infrastructure enhancements.

During the six-year study period, 7.45 percent of severe outcome crashes in Winnebago County involved a heavy vehicle, as determined through an analysis of IDOT crash and vehicle extracts. More significantly, over 10.5 percent of fatal outcome crashes involved at least one heavy vehicle, roughly in line with the national share in 2021. Approximately one of every twenty crashes in which a heavy vehicle was involved in Winnebago County resulted in a severe outcome. Tractors with semi-trailers were the heavy vehicle type most commonly involved in severe outcome crashes in Winnebago County; 2.2 percent of all severe outcome crashes involved a vehicle of this type.

On rural roadways, large farm equipment can often be observed traveling well below the prevailing speed. Drivers traveling behind farm equipment may elect to perform a passing maneuver, placing them at risk of a head-on collision or roadway departure. In Winnebago County, farm equipment was involved in one serious injury crash during the study period.

Table 5-9: Severe Outcome Heavy	Vehicles Crashes	(2017-2022)
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Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Heavy Vehicles	63	6.90%	18	10.50%	81	7.45%





Intersections

Despite the small percentage of roadway occupied by intersections, factors such as the crossing of traffic, fluctuations in speed, changes in direction, and the presence of pedestrians can make intersections particularly hazardous to traverse for all users. Intersections are natural areas of conflict for vehicles, as they involve the passing of vehicles traveling in opposing directions. Traffic control devices seek to mitigate the heightened risk of intersections by directing vehicles through at different intervals. However, drivers can still misinterpret or ignore the instructions relayed to them by traffic control devices, putting themselves and other drivers at a heightened risk of collision. In 2021, there were approximately 11,800 traffic fatalities involving an intersection nationwide^{Ixix}. Intersections can be categorized as signalized and non-signalized.

Signalized intersections are designed to move higher levels of traffic in efficient intervals. Across the entire United States, approximately one-third of all intersection fatalities occur at signalized intersections. In 2021 alone, there were over 4,000 traffic fatalities involving a signalized intersection nationwide^{lxx}. Red-light running is a risky driving behavior that is the main cause of many traffic fatalities at signalized intersections. In 2021, there were over 1,200 traffic fatalities nationwide that were the result of red-light running^{lxxi}.

Non-signalized intersections are composed of stop sign-controlled, yield sign-controlled, and uncontrolled intersections. The number of stop or yield signs varies by intersection, with a minimum of one approach containing a sign, except in the case of uncontrolled intersections. Being the most common intersection type throughout the nation, crashes frequently occur at non-signalized intersections. There were over 7,700 traffic fatalities at non-signalized intersections nationwide in 2021^{bxii}. Similarly to red-light running, when drivers disobey traffic signs at non-signalized intersections, the consequences can be severe.

Certain crash types are most common at both signalized and non-signalized intersections. These include angle, turning, and pedestrian crashes. Angle crashes involve a collision between two motor vehicles approaching a location, such as an intersection, at an angle to each other where the intent of both motor vehicles is to go straight (forward only)^{loxiii}. Turning crashes involve at least one vehicle in the process of performing a turning maneuver. Pedestrian crashes occur when a vehicle's first contact point is with the pedestrian in the event of a crash. In 2021, there were about 1,800 pedestrian fatalities at signalized and non-signalized intersections.

To assess intersection crashes in Winnebago County, IDOT crash extracts were analyzed. During the six-year study period, 513 serious outcome crashes in Winnebago County took place at intersections. This represents 47 percent of all serious outcome crashes in the county, less than the national intersection share of total severe outcome crashes, which exceeds 50 percent^{Ixxy}. Angle and turning crash types were the most commonly occurring intersection crash types in Winnebago County; 337 of the 513 severe outcome crashes were either an angle or turning crash. Due to the frequency at which crashes occur at intersections, just 2.7 percent of Winnebago County crashes taking place at intersections resulted in a severe outcome. Additional data about traffic control devices present at intersections can be found in <u>Part 4: Data Analysis & Summary</u>.

The most common primary cause of severe outcome intersection crashes in the county was "failing to yield right of way." One hundred seventy-one severe outcome crashes were attributed to this cause. An additional 80 crashes were determined to have been primarily caused by "disregarding traffic signals" and "failing to reduce speed to avoid crash," respectively. These causes indicate that red light running and failing to stop or properly yield at stop signs are significant contributing factors to severe outcome intersection crashes in Winnebago County. Concerns about red light running were supported by the public engagement process of this plan, as 30 separate comments identified red light running as a concern. As a whole, intersections were identified as a safety concern at 46 percent of submitted locations of concern.

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Intersections	457	49.90%	56	32.70%	513	47.19%

Table 5-10: Severe Outcome Intersection Crashes (2017-2022)

Figure 5-14: Severe Outcome Intersection Crashes: Signalization

Figure 5-15: Urban vs Rural: Severe Outcome Intersection Crashes

Severe Outcome Intersection Crashes: Signalization





Figure 5-16: Severe Outcome Intersection Crash Location (2017-2022)



Urban vs Rural: Severe Outcome Intersections

Protection Zones

Protection Zone This plan uses the term "Protection Zones" to refer to special traffic areas, such as work zones and school zones. These special zones require their own traffic rules and regulations on the road to protect individuals that may be present in those areas. Protection zones are designated to reduce severe outcome conflicts between vehicles and pedestrians. These zones commonly have a higher volume of vulnerable road users such as children on their way to and from school or road crews working closely to traffic.

School Zones are defined by the State of Illinois as any public right-of-way situated immediately adjacent to school property, including but not limited to any stretch of highway within 100 feet of an entrance to school property^{lxxvi}. School Zones in Illinois enforce a 20-mile-per-hour speed limit and use increased signage among other devices, especially around crossings within a School Zone^{lxxvii}. These mitigation efforts are aimed at protecting young pedestrians from vehicles, particularly by alerting drivers to possible pedestrians near the road within the School Zone.

Work zones are characterized by changes in traffic patterns, narrowed rights-of-way, construction workers, and construction vehicles, according to FHWA^{bxviii}. Work zones attempt to separate traffic from active construction work and equipment to ensure a safe environment for travelers and those working on the road. Work zones can cause higher congestion and increased driver frustration that leads to potential conflicts in narrow areas where road work may be ongoing. The implementation of signage and a reduction in speed can alert drivers to workers who may be on the road during construction periods. In 2022, there were 6,862 total crashes and 37 total fatalities within Illinois work zones as reported by the Illinois Department of Transportation^{bxxix}.

Specific data related to officially designated work and school zones within Winnebago County could not be obtained during this plan's development process. However, the characteristics of work and school zones provide opportunities for safety improvements to be made. The dangers imposed upon vulnerable roadway users and workers within school and work zones were highlighted by the plan's steering committee, necessitating the inclusion of protection zones as a safety emphasis area.

Additionally, all severe outcome crashes were analyzed to determine if they occurred within 1,000 feet of any Winnebago County school. Approximately 3.8 percent of all severe outcome crashes in the study period occurred within 1,000 feet of a school. Figure 5-17 shows these crashes and their proximity to nearby schools. While this does not indicate that 3.8 percent of severe outcome crashes occurred within a designated school zone, it does highlight the need to address safety concerns at or near schools.



Figure 5-17: Severe Outcome Crashes within 1,000 Feet of a School

Lane/Roadway Departures

A roadway departure crash is defined by FHWA as any crash that occurs after a vehicle crosses an edge line or center line, or otherwise leaves the traveled way^{lxxx}. Roadway departure crash types include fixed object, front-to-front, sideswipe opposite direction, and overturned.

Roadway departures carry a significant risk of a severe outcome; vehicles leaving the traveled way can strike a fixed object, such as a utility pole, or an oncoming vehicle. Fixed object crashes are not forgiving, as often the object does not move. This leads to all kinetic energy being expended immediately upon the vehicle. Rollover crashes were the most common rural roadway departure crash type between 2014 and 2016, accounting for 30 percent of all rural roadway departure crashes show the link between roadway departure crashes and serious outcomes; between 2016 and 2018, an average of 19,158 fatalities resulted from roadway departures each year. This figure represents 51 percent of all traffic fatalities in the United States^{loxxii}.

Roadway departure crashes most commonly occur on rural roadways. Many factors contribute to this fact, including higher average speeds, hills and curves, minimal lighting, and steeper embankments^{locxiii}. Driver error, such as speeding or impaired driving, is typically a factor in rural roadway departure crashes. In 2018, 26 percent of all rural traffic fatalities in the United States were classified as speeding-related^{locxiv}. Roadway and environmental conditions also play a significant role. Light conditions have the most impact; 45 percent of nationwide rural traffic fatalities in 2018 took place between six p.m. and six a.m., despite lower traffic volumes during these hours^{locxv}. Other environmental conditions, such as rainfall and animals, can cause vehicles to depart from the traveled way.

A fundamental challenge facing traffic safety practitioners seeking to address rural roadway departure crashes is the randomness of roadway departure crash locations. Locations change from year to year, but the crashes stem from the same causes. A systemic approach must be taken to address rural roadway departure crashes as a result of this fact. Roadways with high-risk features must be identified and countermeasures must then be applied to them systemically.

Roadway departures accounted for more than three of every ten serious outcome crashes and more than a third of fatal outcome crashes that took place in Winnebago County during the study period, per IDOT crash extracts. Even though this statistic is lower than the national rate of 51 percent, roadway departures are still a significant area of concern within the county. Approximately 7 percent of the roadway departure crashes that did occur in the county during the study period resulted in a severe outcome. Roadway departures occur more frequently on rural roadways in Winnebago County; 61.9 percent of roadway departure crashes in Winnebago County occurred on rural roadways. Light conditions also appear to be a significant contributing factor in roadway departure crashes occurring in the county. One hundred forty-five of the 296 severe outcome crashes occurring during the study period took place under the cover of darkness. Seventy-six of these crashes also occurred on non-dry roadways.

Table 5-11: Severe Outcome Lane/Roadway Departure Crashes (2017-2022)

Emphasis Area	Number of A	Percent of A	Number of K	Percent of K	Number of KA	Percent of KA
Lane/Roadway Departures	273	29.80%	58	33.90%	331	30.45%

Figure 5-18: Urban vs Rural: Severe Outcome Roadway Departures



Figure 5-19: Severe Outcomes Lane/Roadway Departure Crash Location (2017-2022)



PART 6:

Strategies & Recommendations

A specific set of strategies and action items must be identified in order for Winnebago County to achieve Vision Zero. Based on conversations between traffic safety stakeholders in the county and the results of this plan's data analysis, which identified key contributing factors to severe outcome crashes as well as roadways with high rates of severe outcome crashes, 12 safety emphasis areas were identified. A thorough review of proven practices and countermeasures to address these specific concerns and further conversations with traffic safety stakeholders led to the identification of the safety strategies and recommendations below.

Under the structure of the safe system approach, this plan recommends multiple actions and projects to reduce severe outcome crashes related to each of the plan's 12 emphasis areas. The implementation of the following action items will bring Winnebago County closer to Vision Zero. While each emphasis area is associated with the safe system approach objective it most closely relates to, action items that relate to multiple objectives are indicated as such. Each action item is also accompanied by a list of potential partners, a description of the location or locations at which its implementation is recommended, and a timeframe for implementation. The timeframe lengths are defined as:

- Short: Zero to one year to implementation
- Medium: One to five years to implementation
- Long: Five or more years to implementation

The action items are presented in both narrative format and within a condensed action item matrix to allow for specific projects to be listed by name.

Within each emphasis area group of the action matrix, projects are listed in an order that reflects their priority. Locationspecific projects that will take place on roadways included in the plans High Injury Network (HIN) are listed first, as they have the highest priority. When multiple projects included in the HIN are listed under an emphasis area, their classification within the network will determine the order of priority. Actions included in either the Federal Highway Administration's (FHWA) Proven Safety Countermeasures or the National Highway Traffic Safety Administration's (NHTSA) Countermeasures that Work guidebook make up the second priority group. Any action items that do not fall into either of these categories will be listed at the bottom of the matrix to indicate they have the lowest priority.

Objective #1. Safer Speeds

Encouraging safer speeds across all roadway environments by employing a combination of well-considered, contextsensitive roadway design with targeted education, outreach campaigns, and enforcement efforts will support a reduction in severe outcome crashes in Winnebago. This action plan and the safe system approach attempt to recognize the importance safe speeds play in providing a safe transportation network. Both exceeding posted speed limits and driving too fast for conditions are key factors in speeding-related crashes. A reduction in instances of speeding and aggressive driving will result in a reduction of severe outcome crashes, as less kinetic energy will be transferred between vehicles, roadway users, and other objects when crashes do occur.

Emphasis Area #1. Speeding & Aggressive Driving

The primary objective of this emphasis area is to reduce the severity of crashes by lowering average vehicle speeds. This can be accomplished through a combination of strategies, including enhanced law enforcement, public awareness campaigns, and improvements to roadway design that encourage safer driving behavior. Specific countermeasures aimed at addressing speeding and aggressive driving are outlined below.

Strategy Statement:

Reduce crash severity by lowering average vehicle speeds through enforcement, public awareness campaigns and roadway design.

Action Item #1: Right size roadways to match travel demand and reduce instances of speeding.

Safe System Approach Objective(s): Safer Speeds, Safer Roads

Potential Partner(s): Winnebago County Highway Department

Location(s): Forest Hills Road (Between Riverside Boulevard and Landstrom Road)

Action Item #2: Enhance law enforcements ability to detect and enforce speeding by implementing always on radar on law enforcement vehicles.

Safe System Approach Objective(s): Safer Speeds, Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office

Location(s): Countywide

Action Item #3: Deploy law enforcement vehicles and officers on mobile speed enforcement patrols.

Safe System Approach Objective(s): Safer Speeds

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Countywide

Action Item #4: Place speed trailers along roadways where prevailing speed exceeds posted speed to deter instances of speeding.

Safe System Approach Objective(s): Safer Speeds, Safer Behavior

Potential Partner(s): Winnebago County Highway Department, Winnebago County Sheriff's Office

Location(s): High Speeding Roadways, Countywide

Action Item #5: Develop data sharing agreements between law enforcement and highway and public works departments.

Safe System Approach Objective(s): Safer Speeds

Potential Partner(s): Winnebago County Highway Department, Winnebago County Sheriff's Office

Location(s): Countywide

Action Item #6: Utilize NHTSA resources to produce social media campaigns emphasizing the dangers of speeding and aggressive driving.

Safe System Approach Objective(s): Safer Speeds

Potential Partner(s): Winnebago County, Municipalities

Table 6-1: Safer Speeds Action Items - Emphasis Area #1

Project/Program/Policy	Agency	Time Frame
Forest Hills Road (Between Riverside Blvd and IL 251)	WCHD	Medium
Always On Radar	WCSO	Short
Mobile Speed Enforcement	WCSO	Short
Speed Trucks	WCHD, WCSO	Short
Communications & Outreach	Winnebago County, Municipalities	Short
Data Sharing Agreements	WCSO/WCHD	Short

Objective #2. Safer People

This objective of the safe system approach aims to promote safe, responsible driving and behavior among road users while fostering conditions that prioritize safe arrival at their destinations. Recommended actions under this objective will encourage safer behaviors by all road users, including everyday drivers, vulnerable roadway users, and commercial operators. While most individuals use the roadway system safely on a typical trip, errors, lapses in judgment, and riskier behaviors can still occur. The action items below attempt to instill positive behavior among roadway users as it relates to alcohol and drugs, distractions and drowsiness, and seat belt restraints while also addressing the impact factors such as age and cognitive functioning can have on traffic safety.

Emphasis Area #2. Impaired Driving

The goal of the actions under this emphasis area is to reduce instances of driving under the influence by increasing public awareness of the risks involved. This includes raising the perceived likelihood of arrest and highlighting the potential physical consequences, such as severe injury or death, for both the driver and other road users. Efforts in this area aim to change behaviors through a combination of enforcement, education, and public awareness campaigns that underscore the dangers of impaired driving. Specific countermeasures aimed at addressing impaired driving are outlined below.

Strategy Statement:

Discourage driving while under the influence by increasing the perceived risk of arrest as well as death and severe injury to themselves and other roadway users.

Action Item #1: Deploy publicized high visibility saturation patrols to deter impaired driving and enforce impaired driving laws.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Countywide

Action Item #2: Periodically establish publicized sobriety checkpoints to deter impaired driving and enforce impaired driving laws.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Countywide, Nightlife & Entertainment Districts

Action Item #3: Expand ride home campaigns currently offered on holidays to provide a safe and free ride home for impaired individuals.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Action Item #4: Utilize NHTSA communications resources to produce outreach campaigns emphasizing the dangers and penalties associated with impaired driving.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #5: Promote and support the use of alternative transportation modes, including ride-sharing, to reduce instances of impaired driving.

Safe System Approach Objective(s): Safer Behavior, Safer Roads

Potential Partner(s): Winnebago County, Municipalities, Winnebago County Highway Department

Location(s): Countywide

Table 6-2: Safer People Action Items- Emphasis Area #2

Project/Program/Policy	Agency	Time Frame
High Visibility Saturation Patrols	WCSO	Short
Publicized Sobriety Checkpoints	WCSO	Short
Ride Home Campaigns	Winnebago County	Short
Communications & Outreach	Winnebago County, Municipalities	Short
Alternative Transportation	Various Agencies	Short

Emphasis Area #3. Distracted & Drowsy Driving

The action items associated with the distracted and drowsy driving emphasis area will raise awareness of the serious dangers associated with driving while distracted or when cognitive function is impaired by fatigue. Reducing occurrences of distraction caused by a mobile device is central to the success of this objective. By enhancing the public's understanding of these risks, this effort aims to discourage distracted and drowsy driving behaviors. Actions such as targeted education campaigns, public outreach, and enforcement strategies are designed to highlight the life-threatening consequences of divided attention and driver fatigue and to change driver behavior.

Strategy Statement:

Enrich the perceived danger of driving while distracted, including by cell phones and while cognitive function is inhibited by fatigue.

Action Item #1: Publicized and targeted enforcement of cell phone use traffic laws.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Countywide

Action Item #2: Utilize NHTSA resources to produce outreach campaigns emphasizing the dangers of cell phone use while driving.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #3: Encourage employers, in particular those employing commercial drivers, to develop and implement programs discouraging drowsy and distracted driving.

Safe System Approach Objective(s): Safer People

Potential Partner(s): Employers

Location(s): Countywide

Table 6-3: Safer People Action Items- Emphasis Area #3

Project/Program/Policy	Agency	Time Frame
High Visibility Cell Phone Enforcement	WCSO, Local Law Enforcement	Medium
Communications & Outreach	Winnebago County, Municipalities	Short
Employer Programs	Employers	Short

Emphasis Area #4. Unrestrained Occupants

The primary objective of the actions in this emphasis area is to increase rates of consistent use of seatbelts and child restraints every time someone enters a vehicle. This will be achieved in part through a robust public outreach campaign aimed at raising awareness of the lifesaving benefits of proper restraint use. The campaign will emphasize the importance of making seatbelt use a routine habit for all passengers while educating the public on the implications of failing to use seatbelts and child safety seats. The use of enforcement tactics will also support more consistent belt use in the county. Success in this emphasis area will lead to significant reductions in severe outcome crashes.

Strategy Statement:

Promote the use of seat belts and child restraints every time anyone enters the vehicle

Action Item #1: Publicized and targeted enforcement of belt use laws.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #2: Develop and implement outreach strategies aimed at demographic groups with low seat belt use rates.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #3: Support employer based programs urging or requiring belt use in commercial and personal vehicles.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Employers

Location(s): Countywide

Action Item #4: Designate law enforcement offices and/or fire stations as child restraint inspection stations.

Safe System Approach Objective(s): Safer Behavior, Safer People

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement, Local Fire Districts

Location(s): Law enforcement offices and/or fire stations countywide

Action Item #5: Utilize NHTSA resources to produce outreach campaigns emphasizing the dangers of travelling in a vehicle while unrestrained.

Safe System Approach Objective(s): Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Table 6-4: Safer People Action Items- Emphasis Area #4

Project/Program/Policy	Agency	Time Frame
High Visibility Enforcement of Belt Use Laws	WCSO, Local Law Enforcement	Short
Outreach to Low Belt Use Groups	Various Agencies	Short
Employer Based Belt Use Programs	Various Agencies, Employers	Short
Child Restraint Inspection Stations	Local Law Enforcement, Fire Districts	Short
Communications & Outreach	Winnebago County, Municipalities	Short

Emphasis Area #5. Younger & Older Drivers

The goal of this emphasis area is to educate both younger and older drivers on the dangers of driving, and instill safe driving behaviors and habits to help them avoid involvement in crashes. This emphasis area aims to promote safe driving habits and increase awareness of traffic laws and regulations that impact these age groups. Educational initiatives will be designed to address the unique challenges and risks faced by younger, often inexperienced drivers prone to risky behaviors, and older drivers, who may face age-related changes in cognitive and physical abilities. Through targeted outreach and training, this emphasis area seeks to foster safer driving practices and reduce crash involvement among these populations. Specific countermeasures aimed at younger and older drivers are outlined below.

Strategy Statement:

Educate younger and older drivers on the relationship between individual behaviors and crashes, promote safe travel, and increase awareness of traffic laws.

Action Item #1: Offer and support access to voluntary or mandatory courses for older drivers to help them adjust their driving behaviors as they age.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): Winnebago County, Illinois Secretary of State

Location(s): Countywide

Action Item #2: Provide parents with access to programs that assist them in developing their child's safe driving habits, including NHTSA supported programs such as Checkpoints.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): School districts, Winnebago County

Location(s): Countywide

Action Item #3: Conduct programs in schools that alert new drivers of dangers of driving and enhance hazard perception skills.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134

Location(s): School districts countywide

Action Item #4: Improve driver education programs by emphasizing rules of the road and knowledge of roadways.

Safe System Approach Objective(s): Safer People

Potential Partner(s): School districts countywide, private driver education providers, Illinois Secretary of State **Location(s):** Countywide

Table 6-5: Safer People Action Items- Emphasis Area #5

Project/Program/Policy	Agency	Time Frame
Older Driver Reeducation Programs	Winnebago County, Illinois Secretary of State	Medium
Programs to Assist Parents/Guardians of Young Drivers	Various Agencies	Short
In-School Traffic Safety Awareness Programs	ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134	Short
Enhance Driver Education Programs	Various Agencies	Medium

Objective #3. Safer Vehicles

This objective of the safe system approach is aimed at expanding the availability of vehicle technologies and systems designed to prevent crashes and reduce the severity of their impact on both occupants and non-occupants. The next generation of vehicles will increasingly incorporate advanced technologies that can not only prevent certain types of crashes but also minimize harm to pedestrians, cyclists, and others outside the vehicle. Within the context of this plan, the emphasis areas and action items assigned to this emphasis area are focused on addressing the unique safety concerns around three common vehicle types: bicycles, heavy vehicles, and motorcycles. These vehicle types are either at increased risk or place other roadway users at an increased risk of being involved in a severe outcome crash, necessitating the inclusion of the action items listed below.

Emphasis Area #6. Bicyclists

The primary goal of this emphasis area is the implementation of dedicated bicycle infrastructure that separates bicyclists from motor vehicles whenever possible, thereby reducing the risk of collisions. In situations where full separation is not feasible, efforts will focus on increasing the visibility of bicyclists in shared roadway environments. This may include the addition of bike lanes, protected intersections, enhanced signage, and improved lighting. Public education campaigns and driver awareness initiatives will complement these infrastructure improvements, fostering safer interactions between cyclists and motorists. These action items will support bicycling throughout the county and will protect the safety of both vulnerable roadway users and vulnerable communities.

Strategy Statement:

Implement bicycle infrastructure to further separate bicyclists from vehicles when possible and increase visibility in shared roadways conditions.

Action Item #1: Construct shared use paths to support a safe countywide bicycle network.

Safe System Approach Objective(s): Safer Vehicles, Safer People

Potential Partner(s): Winnebago County Highway Department, City of Loves Park, City of Rockford, Illinois Department of Natural Resources, City of South Beloit, Illinois Department of Transportation, Village of Cherry Valley, Village of Machesney Park, Village of Roscoe, Village of Rockton, Rockford Park District, Winnebago County Forest Preserve

Location(s): Riverside Boulevard from Material Avenue to Bell School Road, Harlem Road from Perryville Road to Rock Cut Entrance, S Bluff Street from Shirland Avenue to Prairie Hill Road, Prairie Hill Road from S Bluff Street to Prairie Hill High School, IL 2 from Prairie Hill Road to IL 75 bicycle path

Action Item #2: Develop Safe Routes to School.

Safe System Approach Objective(s): Safer Vehicles, Safer People

Potential Partner(s): Village of Durand

Location(s): Shared-use path connecting on Center Street from Cameron Drive to South Street

Action Item #3: Install bicycle lanes within the right-of-way to support a safe bicycle network.

Safe System Approach Objective(s): Safer Vehicles, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): Countywide

Action Item #4: Enhance the delineation of existing bicycle pavement markings.

Safe System Approach Objective(s): Safer Vehicles, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): Existing bicycle facilities countywide

Action Item #5: Perform roadway rightsizings to allow for the implementation of bicycle infrastructure.

Safe System Approach Objective(s): Safer Vehicles, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): Forest Hills Road (Riverside Boulevard to Landstrom Road)

Action Item #6: Provide school-aged children with educational opportunities focused on safe bicycle use.

Safe System Approach Objective(s): Safer Vehicles, Safer Behavior

Potential Partner(s): ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134

Location(s): School Districts countywide

Action Item #7: Utilize NHTSA resources to produce outreach campaigns promoting safe behaviors by drivers and bicyclists when interacting on a roadway.

Safe System Approach Objective(s): Safer Vehicles, Safer People

Potential Partner(s): Winnebago County, Municipalities

Table 6-6: Safer Vehicles Action Items- Emphasis Area #6

Project/Program/Policy	Agency	Time Frame
Riverside Boulevard from Material Avenue to Bell School Road	WCHD,City of Loves Park, City of Rockford	Medium
Harlem Road from Perryville Road to Rock Cut entrance	IDOT, WCHD, IDNR	Medium
Center Street from Cameron Drive to South Street	Village of Durand	Medium
Forest Hills Road from Landstrom Road to Riverside Boulevard	WCHD	Medium
S Bluff Street from Shirland Avenue to Prairie Hill Road, Prairie Hill Road from S Bluff Street to Prairie Hill High School, Prairie Hill Road to IL 75 path	City of South Beloit, IDOT, WCHD	Medium
Bicycle Lanes	WCHD, Municipalities	Long
Bicycle Pavement Markings	WCHD, Municipalities	Long
Roadway Right-Sizing	WCHD, Municipalities	Long
Bicycle Safety Education for Children	ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134	Short
Communications & Outreach	Winnebago County, Municipalities	Short

Emphasis Area #7. Motorcycles

The primary objective of this emphasis area is to raise awareness among all roadway users regarding motorcycle safety and to ensure that roadway conditions are conducive to safe motorcycle travel. This includes implementing educational campaigns that inform drivers about the unique vulnerabilities of motorcyclists and the importance of sharing the road responsibly. Additionally, efforts will focus on maintaining and improving roadway infrastructure, such as proper signage, clear lane markings, and well-maintained road surfaces, to provide a safer environment for motorcyclists.

Strategy Statement:

Increase all roadway users awareness of motorcycle safety, including motorcyclists, and maintain roadway conditions to allow motorcyclists to travel safely.

Action Item #1: Participate in the national campaign against impaired driving of motorcycles.

Safe System Approach Objective(s): Safer Vehicles, Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #2: Utilize NHTSA resources to produce outreach campaigns promoting safe behaviors by drivers and motorcyclists when interacting on a roadway.

Safe System Approach Objective(s): Safer Vehicles, Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #3: Maintain roadways in a state of good repair to allow for safe and smooth travel by motorcyclists.

Safe System Approach Objective(s): Safer Vehicles, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Table 6-7: Safer Vehicles Action Items- Emphasis Area #7

Project/Program/Policy	Agency	Time Frame
Ride Sober or Get Pulled Over	Various Agencies	Short
Communications & Outreach	Winnebago County, Municipalities	Short
State of Good Repair	WCHD, Municipalities	Long

Emphasis Area #8. Heavy Vehicles

Heavy vehicles, such as trucks and buses, carry a heightened risk of severe outcomes when they are involved in a crash. To mitigate the risks imposed by their weight, efforts will focus on improving roadway geometry and design, ensuring that infrastructure can accommodate the unique challenges posed by larger vehicles. This includes implementing measures such as appropriate lane widths, enhanced turning radii, and dedicated truck routes to facilitate safer navigation.

Strategy Statement:

Emphasize the increased risk of severe crashes when operating a heavy vehicle and mitigate crash occurrences through improved roadway geometry and design.

Action Item #1: Install structural overlays on roadways with heavy vehicle traffic to maintain the existing roadway and support safe travel for all vehicles.

Safe System Approach Objective(s): Safer Vehicles

Potential Partner(s): Winnebago County Highway Department

Location(s): Swanson Road from IL 251 to Belvidere Road

Action Item #2: Assess heavy vehicle traffic across the roadway network and identify and designate roadways as part of the truck route system as appropriate.

Safe System Approach Objective(s): Safer Vehicles

Potential Partner(s): Winnebago County Highway Department

Location(s): Elmwood Road, Prairie Hill Road from Willow Brook Road to Boone County Line

Action Item #3: Utilize NHTSA resources to the produce outreach campaigns promoting safe behaviors by drivers and heavy vehicle drivers when interacting on a roadway.

Safe System Approach Objective(s): Safer Vehicles, Safer Behavior

Potential Partner(s): Winnebago County, Municipalities, Private commercial driving firms

Location(s): Countywide

Action Item #4: Maintain and replace failing structures, such as bridges, to maintain the viability of existing truck routes.

Safe System Approach Objective(s): Safer Vehicles, Safer Roads

Potential Partner(s): Winnebago County Highway Department

Table 6-8: Safer Vehicles Action Items- Emphasis Area #8

Project/Program/Policy	Agency	Time Frame
Swanson Road from IL-251 to Belvidere Road	WCHD	Medium
Prairie Hill Road from Willow Brook Road to Boone County Line	WCHD	Short
Update Truck Route Classifications	WCHD	Short
Communications & Outreach	Winnebago County, Municipalities. Private commercial driving firms	Short
Structural Replacements to Maintain Existing Truck Routes	WCHD	Long

Objective #4. Safer Roads

The design of roadways has a significant impact on the safety of the roadway users making trips upon them. Each roadway has its own unique context, which in many cases can threaten the safety of roadway users. The surrounding environment, including land use and the intersections of highways, roads, and streets with other transportation modes like transit, plays a crucial role in determining the safety risks faced by the traveling public. Placing safety at the forefront when evaluating the design of a new or existing roadway can reveal necessary changes to better protect roadway users from threats imposed on them. The action items under this objective will address roadway safety at intersections, along rural roadways, for pedestrians, and within work and school zones across various road settings, ranging from high-volume freeways to two-lane rural roads. By addressing these factors comprehensively, the goal is to create safer roadways for everyone.

Emphasis Area #9. Intersections

The primary objective of this emphasis area is to implement comprehensive, system-wide improvements designed to reduce the incidence of red-light violations, angle crashes, turning collisions, and other challenges at two-way stop intersections. This effort will involve a combination of engineering, education, and enforcement strategies. Recommended actions include upgrading traffic signals, enhancing signage, and improving roadway markings to help clarify right-of-way rules and reduce confusion for drivers. Many intersections were revealed by the data analysis to have high rates of severe outcome crashes; roadway safety audits or safety reviews can be performed at these locations, revealing what countermeasures are most appropriate for each specific intersection. Additionally, the installation of advanced signal technologies, such as countdown timers and red-light cameras, can discourage violations and enhance compliance with traffic signals.

Strategy Statement:

Implement system wide improvements aimed at reducing red-light violations, angle crashes, turning collisions, and issues at two-way stop intersections.

Action Item #1: Install transverse rumble strips and enhance signage at rural intersection approaches.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities, Townships

Location(s): Rural intersection approaches countywide

Action Item #2: Conduct roadway safety audits and/or safety reviews at intersections of concern and implement appropriate countermeasures to mitigate identified safety threats.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Village of Roscoe, Illinois Department of Transportation, City of Rockford, Municipalities

Location(s): Elmwood Road & Rockton Avenue, McCurry Road & Love Road, McCurry Road & Willow Brook Road, Meridian Road & IL 70, Prairie Hill Road & Pleasant Valley Road, Prairie Hill Road & White School Road, Belvidere Road & Atwood Road, Newburg Road & Mulford Road, Ralston Road & Blue Bonnet Drive, IL 2 & Prairie Hill Road, Bridge Street & IL 251, Minor intersections on Spring Creek Road between Mulford Road and Perryville Road, Montague Road & Kennedy Hill Road, Forest Hills Road & Pleasant Valley Boulevard, Riverside Boulevard & Central Avenue/Owen Center Road, and Riverside Boulevard & Mulford Road.

Action Item #3: Improve the safety of intersections along high severe outcome crash corridors, including by installing off-set turn lanes.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Illinois Department of Transportation

Location(s): Riverside Boulevard Corridor (Owen Center Road to Argyle Road), Perryville Road Corridor (Swanson Road to Harrison Avenue)

Action Item #4: Convert high risk intersections to roundabouts, r-cuts, or four-way stops.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Illinois Department of Transportation

Location(s): Elmwood Road & Owen Center Road, Montague Road & Meridian Road, S Mulford Road & Baxter Road, US 20 & Conger Road, US 20 & Hoisington Road

Action Item #5: Update signage to meet current Manual on Uniform Traffic Control Devices (MUTCD) standards, including the installation of retroflective street signs and traffic control devices.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Village of Durand, Village of Rockton, Townships

Location(s): Village of Durand, Village of Rockton, Rockton Township, Shirland Township, Laona Township, Durand Township, Countywide

Action Item #6: Reduce speed limits at and enhance the visibility of rural intersections with sight-distance restrictions through countermeasures including hill cuts.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Illinois Department of Transportation

Location(s): IL 70 & IL 75, South Bend Road & Kishwaukee Road

Action Item #7: Install or modernize traffic signals to improve the communication of expected actions to roadway users.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Illinois Department of Transportation

Location(s): Bridge Street & IL 251, Riverside Boulevard Corridor (Owen Center Road to I-90)

Action Item #8: Close roadways or restrict their access to intersections where characteristics of the intersections impose a non-mitigatable to safety.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Illinois Department of Transportation

Location(s): South Bend Road & Kishwaukee Road

Table 6-9: Safer Roads Action Items- Emphasis Area #9

Project/Program/Policy	Agency	Time Frame
Riverside Corridor (Owen Center Road to I-90)	WCHD, IDOT	Medium
Perryville Road Corridor	WCHD	Medium
Owen Center Road and Riverside Boulevard	WCHD	Medium
Spring Creek Road Corridor (Mulford Road to Perryville Road)	WCHD	Medium
IL 70- IL 75	IDOT	Medium
Baxter Road- 11th Street	WCHD, IDOT	Medium
Owen Center Road- Elmwood Road	WCHD	Medium
Meridian Road- IL 70	WCHD, IDOT	Medium
Bridge Street- IL 251	WCHD, IDOT	Medium
Gleasman Road- IL 2	WCHD, IDOT	Medium
Ralston Road- Blue Bonnet Drive	WCHD	Medium
Newburg Road- Mulford Road	WCHD, City of Rockford	Medium
Mulford Road- Baxter Road	WCHD	Medium
Belvidere Road- Atwood Road	WCHD	Medium
McCurry Road- Love Road	WCHD	Medium
Montague Road- Meridian Rd	WCHD	Medium
Prairie Hill Road- Pleasant Valley Road	WCHD	Medium
Prairie Hill Road- White School Road	WCHD	Medium
McCurry Road- Willow Brook Road	Village of Roscoe	Medium
US 20- Conger Road	IDOT	Medium
US 20- Hoisington Road	IDOT	Medium
IL 2- Prairie Hill Road	City of South Beloit, IDOT, WCHD	Medium
Kishwaukee Road- South Bend Road	WCHD	Medium
Rural Intersection Approaches Program	Countywide	Long
MUTCD Update Program	WCHD, Townships, Village of Durand, Village of Rockton	Long
Forest Hills Road & Pleasant Valley Boulevard	WCHD	Medium
Riverside Boulevard & Central Avenue/Owen Center Road	WCHD	Medium
Riverside Boulevard & Mulford Road	WCHD	Medium

Emphasis Area #10. Protection Zones

Safe travel behavior and increased awareness of traffic laws within protection zones are imperative to ensuring the safety of children and workers. Recommended efforts under this emphasis area include enhanced enforcement of traffic laws in protection zones, education campaigns so that drivers can be better informed on laws related to protection zones, and improved ingress and egress plans at schools. Additionally, pedestrian safety training for school-aged children and safer layouts of work zones can help address the emphasis area.

Strategy Statement:

Increase awareness of traffic laws in school and work zones to promote safe travel behaviors and ensure the safety of children and workers.

Action Item #1: Develop or update ingress and egress plans for all schools within Winnebago County.

Safe System Approach Objective(s): Safer Roads, Safer People

Potential Partner(s): ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134

Location(s): All school zones countywide

Action Item #2: Place temporary and permanent signage, barricades, and traffic control devices near and within work and schools zones to increase driver awareness and enhance delineation of the zone.

Safe System Approach Objective(s): Safer Roads, Safer People

Potential Partner(s): All Publics Works Agencies, All Education Agencies

Location(s): School and work zones countywide

Action Item #3: Utilize automated enforcement within work zones to reduce instances of speeding.

Safe System Approach Objective(s): Safer Speeds, Safer People

Potential Partner(s): Illinois State Police

Location(s): IDOT Work Zones

Action Item #4: Publicized and targeted enforcement of work zone traffic laws.

Safe System Approach Objective(s): Safer People

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Work zones countywide

Action Item #5: Hire or designate a school resource officer to enforce traffic laws within school zones.

Safe System Approach Objective(s): Safer Roads, Safer People

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): School Zones Countywide

Action Item #6: Ensure of the presence of traffic control officers at large public events.

Safe System Approach Objective(s): Safer People

Potential Partner(s): Durand Police Department, Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Village of Durand

Table 6-10: Safer Roads Action Items- Emphasis Area #10

Project/Program/Policy	Agency	Time Frame
Ingress & Egress Plans	ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134	Medium
Automated Enforcement	IDOT	Short
High Visibility Enforcement	All Law Enforcement Agencies	Short
Enhanced Delineation of Work and School Zones	All Education Agencies, All Public Works Agencies, Village of Durand	Medium
School Resource Officer	WCSO, Durand Police Department, Local Law Enforcement	Medium
Traffic Control Officers	Village of Durand, WCSO, Local Law Enforcement	Short

Emphasis Area #11. Lane/Roadway Departures

The primary objective of this emphasis area is to optimize roadway geometry and design features to reduce the risk of vehicles leaving the roadway, veering into adjacent lanes, or colliding with fixed objects. This includes implementing design improvements such as wider lanes, improved shoulder designs, safety-focused design at horizontal curves, and better signage to guide drivers and maintain their vehicle's position. Additionally, incorporating safety features like rumble strips, barriers, and protective guardrails can help prevent vehicles from straying off course and mitigate the impact of potential collisions.

Strategy Statement:

Optimize roadway geometry and design elements to decrease the likelihood of vehicles leaving the roadway, veering into adjacent lanes, and colliding with fixed objects.

Action Item #1: Pave shoulders along rural roadways to reduce drop-offs and departures.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Townships

Location(s): Rural roadways countywide

Action Item #2: Assess delineation, grading, and clear zones of horizontal curves and implement necessary countermeasures.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Townships

Location(s): Horizontal curves countywide

Action Item #3: Continue installing rumble strips and stripes on all rural roadways.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Illinois Department of Transportation, Townships **Location(s):** Rural roadways countywide, IL 70

Action Item #4: Paint or maintain center- and edge-line pavement markings in good condition and use retroflective materials to enhance visibility.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): Rural roadways, countywide

Action Item #5: Analyze emergency response times in rural areas and develop post-crash care plans accordingly.

Safe System Approach Objective(s): Post-crash Care

Potential Partner(s): Emergency response agencies

Location(s): Rural areas

Action Item #6: Install stabilized safety shoulders with fore-slope grading to prevent vehicles from running off the road.

Safe System Approach Objective(s): Safer Roads

Potential Partner(s): Winnebago County Highway Department, Village of Durand, Townships

Location(s): Montague Road from Kennedy Hill Road to US 20, Meridian Road (US 20 to Shirland Road), Harlem Road/Argyle Road from McFarland Road to Beloit/Belvidere Road, Elmwood Road from Owen Center Road to IL 2, Village of Durand, Pecatonica Road (Edwardsville Road to II-75)

Table 6-11: Safer Roads Action Items- Emphasis Area #11

Project/Program/Policy	Agency	Time Frame
IL 70 from Riverside Boulevard / Springfield Avenue to IL 75	IDOT	Medium
Montague Road from Kennedy Hill Road to US-20	WCHD	Medium
Meridian Road (US 20 to Shirland Road	WCHD	Medium
Elmwood Road from Owen Center Road to IL 2	WCHD, IDOT	Medium
Harlem Road / Argyle Road from McFarland Road to Beloit / Belvidere Road	WCHD	Medium
Paved Shoulder Program	WCHD, Townships	Long
Horizontal Curves Program	WCHD, Townships	Long
Rumble Strips Program	WCHD, Townships	Long
Pavement Markings Program	WCHD, Townships	Long
Rural Post Crash Care Plans	Emergency Response Agencies	Medium
Stabilized Safety Shoulder Program	WCHD, Village of Durand, Townships	Long
Pecatonica Road (Edwardsville Road to IL-75)	WCHD	Medium

Emphasis Area #12. Pedestrians

The action items under the pedestrian emphasis area are focused on making roadways safer for their most vulnerable users through design improvements. By enhancing crosswalks, sidewalks, lighting, and signage, as well as implementing trafficcalming measures, the emphasis area aims to reduce pedestrian-related crashes. Public outreach and education campaigns will complement these physical improvements to foster a shared responsibility between drivers and pedestrians for safer interactions on the road. The implementation of these action items will support a significant reduction in the overall number of severe outcome crashes taking place in the county, due to the large representation of pedestrian crashes within the overall amount.

Strategy Statement:

Expand and enhance pedestrian facilities and roadway design that make drivers more aware of the most vulnerable roadway users as well as encourage safer behavior among pedestrians.

Action Item #1: Install or enhance pedestrian visibility measures at crosswalks, including enhanced delineation of crosswalks, rectangular rapid flashing beacons, and pedestrian refuge islands.

Safe System Approach Objective(s): Safer People, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): Perryville Path, Guilford Road at Reid Farm Road, IL 2 & Prairie Hill Road, Countywide

Action Item #2: Conduct pedestrian safety audits at high risk locations and implement countermeasures to address identified contributing factors.

Safe System Approach Objective(s): Safer People, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Municipalities

Location(s): High risk locations countywide

Action Item #3: Designate areas where pedestrians are at high risk as pedestrian safety zones, and implement engineering, education, and enforcement countermeasures within the zone.

Safe System Approach Objective(s): Safer People, Safer Roads

Potential Partner(s): Winnebago County Highway Department, Winnebago County Sheriff's Office, Winnebago County **Location(s):** Pedestrian safety risk areas

Action Item #4: Publicized and targeted enforcement of pedestrian safety laws at high traffic pedestrian crossings.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): Winnebago County Sheriff's Office, Local Law Enforcement

Location(s): Countywide

Action Item #5: Conduct pedestrian safety training classes and exercises in local elementary schools.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134

Location(s): School Districts Countywide

Action Item #6: Utilize NHTSA resources to promote safe behaviors by drivers and pedestrians when interacting on a roadway.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Countywide

Action Item #7: Install side-walks, shared-use paths, and other forms of pedestrian infrastructure to enhance connectivity and safe pedestrian travel.

Safe System Approach Objective(s): Safer People, Safer Behavior

Potential Partner(s): Winnebago County, Municipalities

Location(s): Riverside Boulevard (Material Avenue to Bell School Road)

Table 6-12: Safer Roads Action Items- Emphasis Area #12

Project/Program/Policy	Agency	Time Frame
Perryville Path	WCHD	Medium
Guilford Road at Reid Farm Road	WCHD	Medium
Crosswalk Visibility Enhancements Program	WCHD, Municipalities	Medium
Pedestrian Safety Audits	WCHD, Municipalities	Medium
Pedestrian Safety Zones	WCHD, WCSO, Winnebago County	Long
High Visibility Enforcement	WCSO, Local Law Enforcement	Short
Elementary-Age Child Pedestrian Training	ROE3, RPS205, WCUSD 323, DCUSD 322, HSD 122, HCHSD 207, KCCSD 131, PCUSD 321, PHCCSD 133, RSD 140, SCCSD 134	Medium
Communications & Outreach	Winnebago County, Municipalities	Short
Riverside Boulevard (Material Avenue to Bell School Road)	WCHD	Medium

PART 7:

Implementation and Evaluation

The Winnebago County Traffic Safety Action Plan sets the foundation for addressing traffic safety concerns in Winnebago County. The actions items and strategies included in the plan, based upon both an extensive data analysis process and public and stakeholder feedback, elucidate the path toward achieving Vision Zero in Winnebago County. The implementation of these actions will rely heavily upon a coordinated inter-agency process between Winnebago County, its various departments, local public agencies (LPAs) within the county, the Illinois Department of Transportation (IDOT), and the United States Department of Transportation (US DOT) to effectively prioritize traffic safety investments, program available funding for safety projects, and institute proactive traffic policies.

Local Public Agency (LPA):

A governmental entity that plans and manages local transportation projects and infrastructure. LPAs can be municipalities, counties, boards, commissions, and other government agencies, such as park districts and housing authorities.

Additional planning efforts will be needed to fully implement this plan, such as corridor studies and safety audits. Additionally, projects leveraging federal funds, such as Safe Streets and Roads for All (SS4A) Implementation Grants, will need to be programmed within the Transportation Improvement Program (TIP) of the Metropolitan Planning Organization (MPO) servicing that respective area of Winnebago County. Capital Improvement Plans adopted by both the county and LPAs within its boundaries within which safety projects are programmed are also critical.

Implementation of this plan will require a high level of sustained cooperation between Winnebago County, the MPOs, LPAs in Winnebago County, and other interested parties over a prolonged period. Vision Zero will not be achieved without commitment from all individuals and entities that impact traffic safety in Winnebago County. Commitment and cooperation are essential to maintaining consistency between the priorities of all LPAs within the county and ensuring the achievement of Vision Zero on the county's transportation network.

Finally, implementation will need to be supported by continued data-driven analysis in order to properly prioritize efforts, monitor the effectiveness of implemented actions, and assess progress toward the plan's targets.

The following chapter provides insight into the implementation of the Winnebago County Traffic Safety Action Plan through the themes identified above: additional planning efforts, linkages between this action plan, TIPs, and CIPs, collaboration and coordination, and monitoring the progress and performance of the system. It also describes the process by which the Winnebago County Traffic Safety Action Plan will be amended to reflect changing priorities and future traffic safety conditions.

Additional Planning Efforts

While the Winnebago County Traffic Safety Action Plan lays the groundwork for determining where strategic traffic safety investments are needed within the county, additional planning work is likely to be necessary following its adoption to determine the exact countermeasures to deploy at each location. While it is common for characteristics to be shared between roadways, each roadway ultimately has its own unique context. Additional planning efforts such as corridor studies, safety audits, modal plans, and further data analyses allow this context to be determined and considered, supporting the vision of the Winnebago County Traffic Safety Action Plan. Efforts to be undertaken by Winnebago County, the MPOs, and LPAs in support of implementing this action plan are highlighted below.

Corridor Studies, Roadway Safety Audits, and Modal Plans

The adoption of the Winnebago County Traffic Safety Action Plan necessitates further planning efforts aimed at furthering the traffic safety goals and strategies of Winnebago County. These efforts fall into three main categories: (1) corridor studies, (2) roadway safety audits (RSAs), and (3) MPO special studies and modal plan updates.

Corridor studies published by the County, an MPO, or an LPA take an in-depth look at a roadway and its surroundings. Corridor studies can be centered on roadway safety, while also incorporating other topics such as travel reliability and economic development. As a corridor study puts a roadway under the microscope, it will reveal what conditions and factors along the roadway contribute to severe outcome crashes. The Winnebago County Traffic Safety Action Plan recommends corridor wide safety improvements for multiple roadways in the county; the development of a full corridor plan should be considered at the following locations to ensure safety countermeasures are deployed appropriately and in line with the purpose of the roadway and its adjacent land:

- Riverside Boulevard (Owen Center Road to Argyle Road)
- Perryville Road (Swanson Road to Harrison Avenue)

In addition to potential corridor studies, the Winnebago County Traffic Safety Action Plan also directly recommends the conducting of multiple RSAs. As defined by US DOT, an RSA is the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. Roadway safety audits lead to the determination of roadway elements that pose a safety concern, the extent of the concern, the roadway users impacted by the concern, and the circumstances under which the concern is present. In addition to these determinations, RSAs lead to the identification of countermeasures that can be used to mitigate the safety concerns.

As RSAs are conducted independently from the agency implementing any potential countermeasures, a report detailing the findings must be produced. This action plan recommends that an RSA be considered at multiple locations, in lieu of a traditional safety review from the responsible jurisdiction. Specific locations at which RSAs could be conducted in Winnebago are listed within <u>Part 6:</u> <u>Strategies and Recommendations</u>.

Lastly, special studies, programs, and modal plans undertaken by Region 1 Planning Council (R1), the MPO for the Rockford Metropolitan Planning Area (MPA), can support the implementation of the strategies and action items recommended in the Winnebago County Traffic Safety Action Plan. While the focus of these studies, programs, or plans may not be primarily centered on traffic safety, there are opportunities for alignment with the goals and strategies set forth in this plan. Studies, programs, and modal plans R1 intends to undertake which overlap with the aims of this action plan in the next five years include, but are not limited to:

- Bus Stop Accessibility and Safety Assessment
- State of the Trails Report
- Bicycle and Pedestrian Plan (update)
- Greenways Plan (update)
- Resiliency Improvement Plan

Planning Linkages

As mentioned in the introduction, the Winnebago County Traffic Safety Action Plan is linked to other planning documents that apply to Winnebago County. The most notable linkages are programming documents, specifically Transportation Improvement Programs (TIP) and Capital Improvement Programs (CIPs). These document types set forth the transportation projects programmed for implementation in Winnebago County in the medium term. As safety projects are identified and programmed within the TIPs and CIPs that apply to the county this plan must be updated to reflect the updates, and vice versa.

Transportation Improvement Program (TIP)

The purpose of a TIP is to document infrastructure and noninfrastructure transportation projects programmed within the MPA of the respective MPO for the next four fiscal years. Winnebago County is serviced by two MPOs: R1, the MPO for the Rockford MPA, and Stateline Area Transportation Study (SLATS), the MPO for the Beloit MPA. Both R1 and SLATS must produce a TIP at least every four years, as this is a federal requirement for MPOs.

All surface transportation projects receiving Federal or State funding and/or deemed to be regionally significant, as well as capital and/or operating expenses for public transportation providers, must be documented within the respective MPOs TIP. This includes traffic safety projects, which are deemed to be regionally significant by R1 regardless of the functional classification of the roadway they occur on or their funding source. In order to receive federal or state highway, transit, or other transportation related funds, a project must be listed in the current TIP. As the SS4A program is a federal program, projects awarded an SS4A Implementation Grant must be listed within the TIP, provided they are taking place within the MPA of either R1 or SLATS.

Budgets & CIPs

The budgets and CIPs of Winnebago County and the LPAs within it will also contain traffic safety projects programmed by the county or respective LPA. A capital improvement plan is a short-range multi-year plan that identifies, prioritizes, and programs capital improvement projects within the

jurisdiction of an LPA. Currently, the Winnebago County Highway Department is in the process of developing a five year CIP update. Its current programming is outlined in the Winnebago County budget. Other LPAs within Winnebago County, such as the City of Rockford and the City of Loves Park, regularly update and approve CIPs for their jurisdictions. Programmed traffic safety projects included within LPA budgets and CIPs should also be included in the Winnebago County Traffic Safety Action Plan moving forward. Additional consideration should also be given to overall budgets of the county and other municipalities, as this will dictate the allocation of funds for publicly funded enforcement, education, and outreach efforts to mitigate traffic safety threats.

Collaboration and Coordination

Significant collaboration and coordination will be needed to ensure a consistent approach is taken among all local and state partners towards the vision put forth by this plan. Because Winnebago County does not have ownership of all roadways within its county, achieving the targets of this plan will require action by the MPOs, state agencies, and LPAs. The roles of the County, MPOs, State Agencies, and LPAs in implementing this plan are highlighted below.

Winnebago County

Winnebago County is responsible for ensuring safe travel on all county highways. The Winnebago County Sheriff's Office is also responsible for enforcing traffic safety laws throughout the entirety of the county. As the county must work with all LPAs within its boundaries, it can help support the implementation of traffic safety actions in line with the safe system approach throughout its jurisdiction. This may take the form of technical assistance to smaller LPAs on SS4A Implementation Grant applications.

State Agencies

Illinois Department of Transportation (IDOT) is responsible for ensuring safe travel on all state highways through maintenance and operations activities, including those within Winnebago County. They also assist, guide, and direct LPAs in the accomplishment of multi-modal (highway, rail, pedestrian, and bicycle) activities to promote safety and quality of life. This includes establishing highway design safety standards, and safety policies and procedures. IDOT also assists in the planning, financing, design, construction and maintenance, and integration of LPA safety programs and projects with IDOT safety programs.

In addition to IDOT, other state agencies play a role. Illinois

State Police is responsible for enforcing traffic safety laws on state highways and IDOT work zones. The Illinois Department of Motor Vehicles and the Illinois Office of the Secretary of State administer policy and programs as set forth by the State of Illinois, such as driver's license requirements, vehicle safety standards, and driver reeducation programs.

Local Public Agencies

Local public agencies are responsible for ensuring traffic safety through the design, engineering, operation, and maintenance of the roadways within their respective jurisdictions. Like Winnebago County, LPAs most commonly have law enforcement agencies responsible for enforcing traffic safety laws in their jurisdiction. Local public agencies, such as school districts, also play a role in developing safe driving behaviors on roadways within Winnebago County through education and outreach.

Metropolitan Planning Organizations

Region 1 Planning Council and SLATS create a fair and impartial setting for regional decision-making about transportation, including the award of federal transportation dollars allocated to their respective MPA. The MPOs also provide technical assistance to LPAs during the planning and design phase of a project, such as public engagement, and plan reviews. Other technical assistance activities include the development of corridor studies and the conducting of safety audits.

Additional Considerations

While the implementation of traffic safety improvements is primarily the responsibility of the various units and agencies of government identified above, it also depends on the cooperation of private entities. These private sector interests range from businesses, developers, builders, and engineering and design consultants—who have a major influence on development patterns in the region—to private conservancy groups who play an increasingly important role in the protection and management of environmentally significant open spaces. The groups may not directly relate to traffic safety, but their interests are likely to overlap on major safety infrastructure projects.

Furthermore, a holistic approach to collaboration and coordination should be used during the implementation of this plan. In other words, all stakeholders and interested parties, such as members of the public, should be involved in the entire lifecycle of a transportation project. Meaningful public involvement should occur early and throughout the entire planning process of a project and
include representation from all communities affected. This is key to successful project delivery^{bxxvi}. Meaningful public involvement can:

- Increase trust between the organization and the community.
- Increase the likelihood that projects, programs, or plans will be accepted.
- Create more effective solutions.
- Improve a community's knowledge of the project, program, or plan.
- Empower people from different backgrounds to become involved in transportation safety decision-making.
- Increase compliance with authorities such as Title VI, NEPA, and ADA that require public input and nondiscrimination.^{bxxxvii}

Organizations responsible for making transportation decisions should make a thoughtful, concerted effort to engage individuals in disadvantaged, and overburdened communities. Thoughtful engagement with these communities allows agencies to identify specific barriers and find effective ways to overcome them in a culturally aware and sensitive manner^{boxviii}.



Meaning Public Involvement:

A process that proactively seeks full representation from the community, considers public comments and feedback, and incorporates that feedback into a project, program, or plan when possible.

Source: U.S. Department of Transportation

Monitoring Progress

Winnebago County, in tandem with Region 1 Planning Council, is responsible for monitoring the progression of the county towards the traffic safety targets set forth by this plan. This monitoring process applies a performance-based approach to traffic safety planning and programming in Winnebago County; traffic safety conditions in Winnebago County; traffic safety conditions in Winnebago County will be measured against state targets and the reduction targets of the county, adopted in this plan. Monitoring the success of safety-focused transportation investments and the overall system will establish a baseline for understanding between the public and stakeholders while simultaneously ensuring short- and long-range safety investments are having the desired effect^{lxxxix}.

The implementation and evaluation portion of PBPP tries to answer the question "how did we do?" through monitoring, evaluation, and reporting. These three elements are the core of PBPP.

- Monitoring System Performance. Tracking the performance of the system, typically in terms of goals, objectives, measures, and targets that have been set in the planning process.
- **Evaluating Programs and Projects.** Interpreting results to understand the impacts that investments and policies have had on performance.
- **Reporting Performance Results.** Communicating information about system performance and the effectiveness of plans and programs to policymakers, stakeholders, and the public.^{xc}

To monitor the county's progress toward Vision Zero and the target goals set forth in <u>Part 2: Vision, Mission, and Goals</u>, Winnebago County will continue to leverage the technical assistance provided by Region 1 Planning Council. Monitoring will be focused on two main components of transportation safety: overall system safety and safety at locations where countermeasures have been implemented.

As IDOT crash data becomes available each year, periodic updates to the data files used to conduct the data analyses presented in this plan will be performed. Each year, Region 1 Planning Council or Winnebago County staff will compile the two most recently released IDOT crash data files and assess them to determine the amount, location, and type of severe outcome crashes occurring within Winnebago County. This process will be triggered upon the release of 2024 crash data by IDOT.

To assess the overall safety of Winnebago County's roadway network, the number of severe outcome crashes will be compared against both the previous year's data and the 2022 data. Comparison against the previous year's data will allow for trends in crashes to continue to be identified, while comparison to the 2022 data will allow for the progress toward the plans vision and reduction target, shown below, to be assessed and publicly reported:

- **Vision.** Eliminate traffic related serious injuries and fatalities in Winnebago County.
- **Target Goal.** Reduce crashes resulting in serious injury or fatality by 50 percent by 2050.

As appropriate, system wide analyses into specific crash types, such as pedestrian and bicyclist crashes, can be conducted to support the development of future strategic investments. Should traffic safety conditions in Winnebago County change dramatically, in the form of either an increase or decrease in the number of severe outcome crashes, it may be necessary to adjust the cycle by which new crash data is analyzed.

A more focused monitoring process will be employed to determine the success of location-specific traffic safety investments. Utilizing annual traffic safety data from 2017 through the most recently analyzed data at the time of assessment, conditions before and after investment will be compared to determine if the proper safety countermeasures were implemented. For example, if an intersection receives a safety improvement in 2025, planners will compare annual crash data at that location from 2017 to 2025 against annual crash data from all future years, as that data becomes available. These analyses will help support future traffic safety investments by providing empirical data to assess the success of countermeasures in Winnebago County.

Amending the Plan

The regular development of an updated traffic safety action plan is not currently required by US DOT or IDOT; however, changes in federal and state policy or in traffic safety conditions in the county may necessitate the updating of this plan. Changes in traffic safety conditions, as shown by data analyses and future actions determined necessary as a result of changing conditions can serve as justification for updating the plan. The plan also may be updated in the short term to comply with the guidelines of federal and state grant programs.

To accommodate these potential changes, the Winnebago County Traffic Safety Action Plan is to be considered a living document. If at any time elected officials or staff of Winnebago County deem an update to the plan to be necessary, R1 staff will execute the update and present it to the Winnebago County Public Works Council and Winnebago County Board for approval.

Appendices

Appendix A: Acronyms and Glossary	70
Appendix B: Public & Stakeholder Engagement	73
Appendix C: High Injury Network Methodology	77
Appendix D: Traffic Safety Action Plan Toolkit	79
Appendix E: SS4A Self-Certification	89
Appendix F: SS4A & Safe System Approach Overview	94

Appendix A: Acronyms and Glossary

Acronyms & Abbreviations

A

A: Suspected Serious Injury/A-Injury (KABCO Injury Scale)
 ADA: Americans with Disabilities Act
 AAAFTS: AAA Foundation for Traffic Safety

В

B: Suspected Minor Injury (KABCO Injury Scale)BAC: Blood Alcohol Concentration

С

C: Possible Injury (KABCO Injury Scale) **CDC:** Center for Disease Control (CDC)

D

DMV: Department of Motor Vehicles **DUI:** Driving Under the Influence

F

FHWA: Federal Highway Administration **FMVSS:** Federal Motor Vehicle Safety Standards

G

GIS: Geographic Information Systems

Η

HIN: High Injury Network

IDOT: Illinois Department of Transportation

Κ

K: Fatality (KABCO Injury Scale)KA: Fatal and Injury Crashes (KABCO Injury Scale)KABCO: All Crashes (KABCO Injury Scale)

L

LEP: Limited English Proficiency LPI: Leading Pedestrian Interval LRSP: Local Road Safety Plan

Μ

MCAT: Major Crash Assistance Team MMUCC: Model Minimum Uniform Crash Criteria (KABCO Injury Scale) MPA: Metropolitan Planning Area

Ν

NCSA: National Center for Statistics and Analysis **NHTSA:** National Highway Traffic Safety Administration

0

O: No bodily harm injury (KABCO Injury Scale)

Ρ

PSC: Proven Safety Countermeasure (Identified by FHWA)

R

R1: Region 1 Planning Council
ROW: Right-of-Way
RPD: Rockford Park District
RMTD: Rockford Mass Transit District
RTH: Rockford Township Highway
RRFB: Rectangular Rapid Flashing Beacon

S

SHSP: Strategic Highway Safety PlanSRTS: Safe Routes to SchoolSS4A: Safe Streets and Roads for AllSTEP: Saturated Traffic Enforcement Program

U

USDOT: United States Department of Transportation **UZA:** Urbanized Area

V

VMT: Vehicle Miles Traveled

W

WCHD: Winnebago County Highway Department **WSCO:** Winnebago County Sheriff's Department

Glossary of Terms

A

Alternative Transportation: Any mode of personal transportation other than a single-occupant vehicle, including biking, walking, carpooling, and public transportation.

Source: MPO Alternative Transportation Committee Bylaws

Arterial: Roads that provide the highest level of mobility and the highest speeds over the longest uninterrupted distance. Source: Federal Highway Administration

Average Annual Daily Traffic (AADT): The total volume of traffic on a highway segment for one year, is divided by the number of days in the year.

Source: Federal Highway Administration

С

Capacity: The maximum hourly flow rate of persons or vehicles under prevailing conditions.

Source: Federal Highway Administration

Centerline Miles: The total length of a given road from its starting point to its endpoint, and does not take the width or number of lanes into account.

Source: Texas Department of Transportation

Collector: Major and minor roads that connect local roads and streets with arterials.

Source: Federal Highway Administration

F

Functional Classification: Classification of roadways based on the type of service the road provides to the motoring public.

Source: Federal Highway Administration

I

Intermodal: The ability to connect, and the connections between, modes of transportation.

Source: Federal Highway Administration

J

Jurisdiction: The authority and obligation to administer, control, construct, maintain and operate a highway subject to the provisions of the Illinois Highway Code.

Source: Illinois Department of Transportation

L

Land Use: Land use is a term used to describe the human use of land. It represents the economic and cultural activities (e.g. agricultural, residential, industrial, mining, and recreational) that are practiced at a given area.

Source: U.S. Environmental Protection Agency

Lane Miles: Calculated by multiplying the centerline mileage of a road by the number of lanes it has.

Source: Texas Department of Transportation

Local Road: Roads that provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas.

Source: Federal Highway Administration

Μ

Metropolitan Planning Area (MPA): The geographic area in which the metropolitan transportation planning process required by 23 U.S.C. 134 and section 8 of the Federal Transit Act (49 U.S.C. app. 1607) must be carried out.

Source: Federal Highway Administration

Metropolitan Planning Organization (MPO): A regional policy body, required in urbanized areas with populations over 50,000, and designated by local officials and the governor of the state to carry out the metropolitan transportation requirements of federal highway and transit legislation.

Source: Federal Highway Administration

Metropolitan Transportation Plan (MTP): The official intermodal transportation plan is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area.

Source: Federal Highway Administration

Ν

National Highway System (NHS): The system of highways is designated and approved in accordance with the provisions of 23 U.S.C. 103b.

Source: Federal Highway Administration

R

Right-of-Way (ROW): The land owned by the roadway entirety and devoted to transportation purposes.

Source: Federal Highway Administration

S

Shared Use Path: A bikeway is physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.

Source: National Association of City Transportation Officials

Stakeholders: Individuals and organizations involved in or affected by the transportation planning process. Include federal/state/local officials, MPOs, transit operators, freight companies, shippers, and the general public.

Source: Federal Highway Administration

Surface Transportation: Transportation by road, rail, or pipeline.

Source: University of Cornell

Τ

Transportation Resiliency: The ability of a transportation system to adapt to, recover from, and respond to threats of all kinds.

Source: Region 1 Planning Council

U

Urban Area: A collective term referring to urbanized areas and urban clusters.

Source: U.S. Census Bureau

Urbanized Area: To qualify as an urban area, the territory identified according to criteria must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters.

Source: US Census Bureau

Appendix B: Public & Stakeholder Engagement

Effective traffic safety planning requires meaningful collaboration between planners, the public, and key stakeholders. Winnebago County and Region 1 Planning Council (R1) together recognized that the success of this plan and its initiatives are dependent on their understanding of the unique safety challenges faced by roadway users in the county. To achieve this level of understanding R1 and Winnebago County utilized a robust public and stakeholder strategy throughout the development of this plan.

This strategy aimed to ensure a diverse range of voices informed the development of the Winnebago County Traffic Safety Action Plan. Tools such as Engage R1, R1's online public engagement platform, were leverage to support public involvement, and the role of the plans steering committee, composed of traffic safety stakeholders in the county, allowed for both the public and stakeholders to have a consistent voice throughout the plans development. Additionally, multiple public and stakeholder events provided further opportunities for the perspectives of these groups and individuals to be shared. As a result of the strategy and the engagement opportunities provided by it, R1 was able to receive feedback providing insight into both existing traffic safety conditions and potential future solutions within Winnebago County.

Stakeholder Engagement

Robust stakeholder engagement was vital to the development of the Winnebago County Traffic Safety Action Plan. Stakeholders from various different sectors of Winnebago County's transportation and traffic safety community came together on multiple occasions to guide the development of the plan. These engagement efforts, which included a workshop and a steering committee, are described in detail below.

Traffic Safety Workshop

In February of 2024, R1 hosted a Traffic Safety Workshop at Rockford Mass Transit District's (RMTD) East Side Transfer Center. This meeting was held early in the development process of the Winnebago County Traffic Safety Action Plan, as it was primarily intended to support the development of the Regional Traffic Safety Action Plan. The 40 plus attendees of the workshop primarily included traffic safety stakeholders in Boone and Winnebago County, such as traffic engineers and education administrators, but members of the public were also in attendance. Region 1 Planning Council staff began the workshop by providing attendees with background on the Safe Streets & Roads for All (SS4A) program and the planning process for the four safety plans being developed by R1. The remainder of the workshop consisted of breakout group discussion about traffic safety threats currently imposed on the Rockford Region's roadway users. Several guiding questions were used by breakout group facilitators; they include:

- What traffic safety issues are your priority?
- Where are you observing these issues?
- Who is most vulnerable to the traffic safety issues?
- What can be done to address your identified traffic safety concerns?

The contents of the breakout discussions were shared out to all workshop attendees, and notes summarized by R1 helped to provide a baseline level of understanding as the planning process for the Winnebago County Traffic Safety Action Plan began.

Steering Committee

A steering committee, composed of various traffic stakeholders in Winnebago County, was first convened in spring 2024 and met three times during the planning process. Members of the steering committee are shown in Table B-1. Representatives were chosen due to their unique perspective on traffic safety in Winnebago County, within representatives from law enforcement, emergency management, education, and public works all being present. The steering committee meetings allowed members the opportunity to share their expertise, as well as guide the development of various components of the plan. A summary of each of the four steering committee meetings is provided below.

• May 9th, 2024 Meeting: The first steering committee meeting began with a summary of the SS4A program and an explanation of what a local road safety is. The planning process for the Winnebago County Traffic Safety Action Plan was described in detail, as was Vision Zero and the Safe System Approach. An overview of the results of the data analysis conducted to that point was also provided. Staff then provided the committee members with an opportunity to discuss their traffic safety concerns. Many concerns were identified, including specific locations, roadway characteristics, and driver behaviors. These identified concerns helped to identify the safety emphasis areas described in <u>Part 5: Emphasis Area.</u>

- June 27th, 2024 Meeting: At the second committee meeting, R1 and Winnebago County Highway Department (WCHD) staff presented the plans drafted vision, mission, and goals to the committee for approval. The committee approved these, and then ranked the emphasis areas identified in the previous meeting in order of priority. The R1 staff member facilitating the meeting then presented on the Federal Highway Administration's (FHWA) Proven Safety Countermeasures and the National Highway Traffic Safety Administration's (NHTSA) Countermeasures that Work. This presentation was used to facilitate a discussion that allowed for existing actions to address safety concerns in Winnebago County to be identified, informing the contents of Part 3: State of Practice Review.
- August 28th, 2024 Meeting: The third steering committee began with a presentation of the public engagement feedback received to data, and a further presentation of the maps produced by the spatial analysis undertaken as a part of the plans

development. Committee members were able to discuss what stood out to them from the analysis and public input. The remainder of the meeting was devoted to discussion of potential action items and projects to include in the plan, based on the results of the data analysis and public input..

Public Engagement

Meaningful public involvement in the planning process of traffic safety action plans is crucial to developing an understanding of the conditions roadway users face on an everyday basis. Residents, visitors, and those who work in the region each make use of thousands of different combinations of start points, end points, and routes each day, with each routes posing its own unique safety concerns. As planners cannot possibly know the unique context of each of these routes, the public must be consulted to gather additional information that exposes locations and behaviors that threaten safety, as well as solutions to these threats. The following efforts were made to incorporate meaningful public involvement into the planning process of the Winnebago County Traffic Safety Action Plan.

Agency	Representative	Contact
Winnebago County Highway Department	Engineering	Carlos Molina
Winnebago County Highway Department	Engineering	Matt Fox
Winnebago County Highway Department	Engineering	Prafull Soni
Winnebago County Emergency Management	Emergency Response	Trent Brass
Winnebago County Sheriff Department	Enforcement	Joseph Broullard
Winnebago County Sheriff Department	Enforcement	Sean Hughes
Winnebago County Communications	Community Outreach	Danielle Grindle
Winnebago County Health Department	Public Health	Rebecca Lyons
Regional Office of Education	Education	Will Hartje
Owen Township Highway Department	Engineering	Charles Barnes
Rockford Township Highway Department	Engineering	Barry Palm

Table B-1: Members of the Steering Committee

Engage R1

The main source of public feedback during the planning process of this plan was Engage R1, R1's online public engagement platform. Project pages were created for the safety plans being developed by R1 for Winnebago County, City of Rockford, Boone County, and the Rockford Region; the majority of these geographies cover all or some of Winnebago County. Each project page contains background information of the respective plans planning process, the SS4A program, and traffic safety data.

In May of 2024, early in the planning process, two engagement features were added to the Winnebago County project page. First, a social map feature was added, allowing site visitors to indicated locations with safety concerns to be pinpointed on a public map. After identifying a point, site visitors then took a short survey where they answered questions about the concern they had at that location, such as which mode it most affects. This features was also uploaded onto the City of Rockford project page in May, and had been present on the Rockford Region page since December of 2023. The social map was closed to the public in September of 2024, 120 days after it was first made available to the public.

On the Winnebago County page, 113 locations of concern were identified across the county; across all three project pages, 346 locations of concern located in Winnebago County were submitted. These points can be seen in Figure 1-4 Engage R1 Traffic Safety Map Results. The submission comments attached to each location were analyzed to determine which of the plans 12 emphasis areas is most closely aligned. The vast majority of points aligned with one of the following four emphasis areas: intersections (134 points), pedestrians (83 points), speeding and aggressive driving (69 points), and bicyclists (40 points). All other emphasis areas had five or fewer associated points.

The information from the safety map helped to support the inclusion and priority ranking of the emphasis areas identified above. Furthermore, the points submitted to the map were used to corroborate roadway segments and intersections identified in the plans High Injury Network, as shown in Figure 4-20 Engage R1 Submissions & High Injury Network. Locations that appear in both maps were doubly identified as locations of concern, and the submission comments associated with these locations were considered during the action item identification process.

A traffic safety survey was also added to the Winnebago County project page in May of 2024, and remained open for 120 days before being closed in September of 2024. The survey received 21 responses, with questions covering topics such as the safety of specific modes, contributing factors to crashes, and top traffic safety concerns. The responses gather from this survey were used to direct efforts in the data analysis process; the analysis into contributing factors presented in <u>Part 4. Data Analysis & Summary</u> aligned with the results of the survey. Responses also justified the inclusion of each emphasis area and its related action items.

Public Comment

In addition to these public engagement efforts made throughout the plan's development process, an opportunity to give feedback on a drafted version of the plan was also afforded to the public. On May 13, 2025, a public meeting was hosted at the Winnebago County Administration Building, prior to a presentation of the contents of the drafted version of the plan to the Winnebago County Public Works Committee. The public meeting allowed the public to view the results of the data analysis and the drafted action items, and provide direct feedback to R1 and Winnebago County.

The public open house was hosted during the plans 30-day public period; the plan was also posted on Engage R1 and Winnebago County's website during this time, with a form available to submit comments on the drafted plan. Between the 30-day public comment period and the public open house, four comments were received and incorporated into the plan. The received comments are listed below:

• While safety measures need to be a priority, you need to come up with solutions for the ones that cause the accidents in the first place. Such as those who choose to run red lights, especially at high speeds. Those that drive but do not obey the driving rules and regulations, ignoring stop signs, stop lights, and yields. These are mostly younger people, and they cause serious hit and runs. As far as ambulances, how about designated lanes for their use only, just like bike lanes. Also, for safety issues, how about installing pull over areas for police stops vs stopping on the highways like Perryville and State St. I realize this would be a great cost and undertaking, but again for the safety of the first responders and the offenders. (I am not talking about the shoulder of the road; I mean a stop off of the road and shoulder). State St and Mulford is a problem. Perryville and State St is a problem. Riverside and Mulford is a big problem. **Pedestrian safety is a huge issue. Lacking in safe sidewalks and crossings. The need for over or underpasses at major intersections and roads such as Foresthills, North of Harlem. State St and Bell School Roads. More lighting would be helpful on streets such as Bell School Rd, North of State Street and the from downtown Rockford on West State St to the graveyard.

- I think an important factor to consider is more harsh consequences/requirements for residents of other counties, who get charged with a DUI in this county while on active felony probation with a neighboring county. If strict consequences not able to be bought out of were implemented then my daughter would still be alive. In 2023 an adult male on probation with a neighboring county was pulled over and charged with a DUI here in Winnebago county. Despite this happening he was able to still drink, maintain a secret relationship with my child who resides in Winnebago county who he regularly traveled here to pick up without her parents knowledge. Over the span of 6 months having an intoxalock device in his vehicle he was regularly able to travel to this county, pick up my child, have her blow into his device often to operate his vehicle. If anyone who was responsible for checking his data on the device had did something or actually checked, he would not have been able to travel here in August, pick up my child, drive intoxicated with her and then crash his vehicle taking my child's life. Winnebago county should consider implementing employees to monitor or at least check up on the activities of nonresidents charged with a DUI in this county, before considering dropping the charge. For example: John Doe is a resident of Sample County, he is driving in Winnebago County and gets pulled over charged with a DUI. He is on current probation with Sample County where he lives. The pretrial case gets transferred to his residential county requires him to install an intoxalock device in his vehicle. When the case comes to court for trial or reaches a plea deal agreement, Winnebago County should require the intoxalock data to be reviewed by someone from THIS county before agreeing to drop the charge. The driver should also be banned from driving in this county during that time unless there is a proven necessary reason such as legal employment in this county.
- I think the biggest overlooked factor of road safety in this report is the expansion of existing pedestrian/ bicyclist routes throughout the county. As a lifelong resident who resides in Machesney Park, there is a visible gap in many areas where pedestrians have to walk along the side of the road in the grass where they are not very visible. This is not only extremely dangerous, but inconvenient for many residents as I myself have been fearful of hitting a person I could not see on the side of the road. The road I reside off of, Forest Hills Road, is a particular area where many people walk on the side. Installing lit paths (sidewalks, bike paths, multi-use, etc.) that not

only give residents an alternative transportation opportunity, but a safe option for residents who do not have a reliable vehicle would be an enormous quality of life improvement, while furthering the connections for neighborhoods and towns throughout the county. This is also an excellent opportunity for strengthening recreational routes, as the county is littered with many parks and a river to encourage pedestrian/ bicycle use. In many places, there are the foundations for a pedestrian transportation network, and strengthening this network through meaningful connections would be a monumental asset to the county's transportation going forward.

I think round-a-bouts are stupid and cause a lot of accidents. I love the ideas of Rectangular Rapid Flashing Beacons (RRFB) and Pedestrian and Refuge Islands for bikes and pedestrians. Another thing that I think would help improve people's traffic safety is more enforcement from law enforcement agencies. Giving them the proper tools and legislation is so important. Lights are really important to me as a biker, walker, and runner. RRFBs would be really cool to have in the area. And the last thing I think is important is training. Whether it be harder tests for people to get their DL, etc. (I know that's not applicable to you guys though.) Encouraging pedestrian safety is a must. Pedestrians must realize that they are not a god and they cannot just go wherever they think. I can't tell you how many times I have seen people just go through a crosswalk without even a glance. So, if you don't want to go the training route for them, you must go the training route for drivers. That's why more signage and lights would be really important.

Appendix C: High Injury Network Methodology

The High Injury Network is a visual representation of the roadways that carry the greatest threat to traffic safety; actions must be taken to mitigate the traffic safety concerns on these roadways. The development of this process took place over the course of several months as staff attempted to find a concrete methodology that satisfies the requirements of the SS4A program. The information below details the methodology used to determine the plans High Injury Network.

The information listed below outlines the methodology used to classify roadways on which a severe outcome crash took place during the six year study period into one five categories—Very High, High, Medium, Low and Very Low by leveraging quantile calculations. Quantiles are a statistical measure that indicates the relative standing of a value within a dataset. In this context, quantiles are used to rank roadway segments and categorize them into one of the five categories based on their position within the overall distribution.

The High Injury Network was developed with two key criteria in mind: logical termini and the location of severe outcome crashes. Logical termini within the network allow for specific roadway segments in need of addressing to be clearly identified. Focusing on instances of severe outcome crashes mean the network will place greater emphasis on the segments where the most serious injuries and fatalities are taking place. This emphasis aligns the High Injury network with the safe system approach, the guiding paradigm for both this plan and the SS4A program.

Calculation of High Injury Network Categories

The specific steps used to determine the High Injury Network are described below.

Step 1 – Data Preparation:

To create a network with logical termini, a new roadway segment layer had to be created. This layer was created through the use of spatial roadway files created and maintained by WinGIS. Roadway segments in between two intersections where both approaches were functionally classified as minor collector or above were joined together to create one contiguous segment between the two intersections. This led to the removal of all local roads from the layer. Using this criteria allowed for segments to be of relatively uniform length; segments commonly share characteristics between intersections of this type.

Crashes resulting in serious injury or fatality between 2017 and 2022 within the geographic boundaries of the study area were then assigned to the closest segment. Crashes located more than 150 feet from any segment were not assigned to any of the segments, as they occurred on a local road or in an alley or parking lot. The output of this spatial join was a GIS layer containing all roadway segments in between intersections where all approaches were at least minor collector or above at which a severe outcome crash occurred during the study period.

Retroactively, local roads that saw two or more severe outcome crashes take place on a segment between two minor collectors or above were added to segment layer. Local roads with one severe outcome crash were not included as there was no indication the roadway segment had a pattern of severe outcomes. Minor collector and above roadway segments with one crash were retained in the dataset as they often were connected to segments with higher frequencies, showing a continuing threat to safety along a series of segments.

Step Two – Quantile Calculation:

Quantiles were selected as the statistical analysis tool for this classification. Quantiles break the data into percentile groups and reduce the skewed nature of data. Each quantile group is equal in size to the others, showing a clear distribution of all segments instances of severe outcome crashes. Five quantile groups were used for this analysis to show the frequency of severe outcome crashes across the study areas roadway segments.

- Very Low: 1st to 20th percentile (1 Severe Outcome Crash)
- Low: 21st to 40th percentile (2 Severe Outcome Crashes)
- **Medium:** 41st to 60th percentile (3 Severe Outcome Crashes)
- **High:** 61st to 80th percentile (4-5 Severe Outcome Crashes)
- **Very High:** 81st to 100th percentile (6-11 Severe Outcome Crashes)

Step 3 – Classification:

Based on the calculated quantiles, each road segment was categorized into one of the five categories: Very High Crash Frequency, High Crash Frequency, Medium Crash Frequency, Low Crash Frequency, or Very Low Crash Frequency.

All segments included in the High Injury Network, regardless of the level of classification, are considered to be roadways where public safety is threatened. Table 4-16 in <u>Part 4: Data</u> <u>Analysis & Summary</u> Shows Winnebago County's High Injury Network.

Appendix D: Traffic Safety Action Plan Toolkit

Introduction

This Traffic Safety Toolkit provides a summary of Federal Highway Administration proven safety countermeasures and their potential effects of implementation. The strategies offered by these countermeasures are aimed at reducing fatalities and serious injuries to motorists, pedestrians, and all other road users. These countermeasures are viable to be used on all roads, from high volume urban routes to rural two-lane highways. Each countermeasure will have a brief description of what it is and where they are to be located or housed within the transportation system. Within this toolkit there will be examples of implementation options for each countermeasure showcasing what low-cost versus high-cost measures may look like. Within each countermeasure there are different strategies in reducing crash rates showcasing the malleability of some strategies to fit desired needs. Each countermeasure will have information on:

- **Crash Type** Which type of crashes the countermeasure aims to mitigate with its implementation.
- Percentage of Crash Reduction Factor (CRF) -The expected reduction in crash rates of specific crash type due to the implementation of a countermeasure.
- **Percentage of Federal Match Funding** The percentage of funding that federal government will match based on the project type.
- Life Expectancy of Countermeasure How long to expect the countermeasure to remain in use and viable before materials need updates.
- **Cost** Using prior costs and background information on previous projects will lead to an informed decision on whether a project is high, medium, or low.
- **CMF ID Number** To direct users to specific types of projects within each countermeasure.

This toolkit uses data and research from FHWA, Crash Modification Factors Clearinghouse (CMF), and Region 1 Planning Council (R1) to build a log of the necessary information for engineers and planners to use as a guide to make better-informed decisions on which countermeasures best fit their community's safety needs.

Statement on Life Expectancy Category

The life expectancy of a countermeasure is an important factor when determining whether, a countermeasure is a good fit to be implemented. Using information from FHWA and industry leaders, an accurate estimate of the lifecycle of materials and technology that make up these countermeasures was gathered. Industry leaders spanned from construction consultants that gauge the life expectancy of materials, such as asphalt or thermoplastic pavement markings, or manufacturers who develop technologies such as LED lighting systems or traffic control hardware. The information provided by these leaders, along with FHWA standards, helped develop a lifecycle of effectiveness for each countermeasure listed.

Statement on Cost Category

To determine whether a cost was high, medium, or low for a given countermeasure, projects were selected to average their total cost.

- **High** Generally will require high equipment, labor, and material costs that are typical of a larger scale project and can be difficult to implement because of all these factors. Projects that exceed \$950k are considered high cost.
- **Medium** Projects that fall in the medium cost category will typically have varying costs due to the scale in which the countermeasures are chosen to be implemented. Using higher quality materials like steel instead of concrete for a median barrier will also lead to a larger variation in the cost of a project. Projects in the medium cost category will fall between \$250k and \$949k for total cost.
- Low The projects that fall within the low category are easy additions to the transportation system and require less labor and equipment to be successful. Projects that are under \$250k are considered low cost.

To gather an average cost of a countermeasure, five projects were selected for each countermeasure to give a relative average cost based on previous implementation. The lifecycle and materials used for a countermeasure were also considered when determining the cost of a countermeasure's implementation to provide better background information. The averages were then broken into three categories based on their relative cost to the other countermeasures. Using educated discretion from the average cost of projects and background research allowed for determining which of the three categories the countermeasure would be placed in.

Countermeasures

Traffic safety countermeasures are essential components of any effort to reduce roadway injuries and fatalities. Within the framework of the Regional Traffic Safety Action Plan Toolkit, these measures are designed to address key risk factors and adapt to the unique needs of local communities. This chapter explores the variety of countermeasures outlined in the toolkit, emphasizing their potential to mitigate high-risk behaviors, improve roadway infrastructure, and foster safer travel environments. Each countermeasure is grounded in evidence-based practices, ensuring its effectiveness in addressing the specific challenges identified in regional traffic data.

From engineering solutions, such as road reconfigurations and pedestrian safety enhancements to educational campaigns that influence driver behavior, the toolkit provides a holistic approach to reducing crashes. Additionally, enforcement strategies and policy adjustments also play a crucial role in complementing these efforts.

1. Intersection Lighting

A street light or street lamp is often mounted on a lamp column or pole, or suspended on a wire across a road. Applicable to intersections that have a disproportionate number of nighttime crashes and do not currently provide lighting at the intersection or its approach. The addition of lighting to an intersection can also help motorists identify pedestrians and other non-motorists at nighttime. An easy and cheaper option for improving lighting at intersections would be general updates to possible outdated lighting systems to improve the visibility of all road users near intersections. An enhanced and more expensive option would be to extend lighting in road segments to provide more continuous lighting during travel to aid drivers in nighttime trips.



Table D-1: Intersection Lighting Countermeasure

Crash Type	Pedestrian and Night
CRF%	35%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Low
CMF ID	436, 433, 192, 2376

2. Leading Pedestrian Interval (LPI)

Implementing modified signal phasing at intersections with high vehicle turning volumes will enhance traffic flow and safety. A Leading Pedestrian Interval (LPI) would allow pedestrian travelers to establish themselves in the crosswalk 3 to 7 seconds before a vehicle is given a signal. This increases pedestrians' presence in the crosswalk before vehicles can turn left or right. Giving a head start would lead to vehicles yielding to pedestrians at higher rates and allow those pedestrians who move slowly to move through a conflict area more quickly. This is a low-cost option as it only requires changing the timing between walk signals and traffic signals.



Table D-2: Leading Pedestrian Interval Counter

Crash Type	Pedestrian and Bicycle
CRF%	13%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Low
CMF ID	9918

3. Longitudinal Rumble Strips and Stripes

Rumble strips are textured sections of pavement that alert drivers to the edge of the travel lane. When the car tire goes over the rumble strip, it will cause vibration and sound to alert the driver to a possible departure from the road. Typically rumble strips are located on the edge of roads or the centerline of a two-lane road. Implementation of rumble strips is relatively low-cost and offers different versions such as "mumble strips" that are quieter and can be used in road segments with noise restrictions around it. Rumble strips are an easy addition to any road that is being repaved or an easy addition to existing roadsides.



Table D-3: Longitudinal Rumble Strips and Stripes Countermeasure

Crash Type	Roadway Departures, Intersections, & Pedestrians
CRF%	38.50%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Low
CMFID	10342, 10333, 2259

4. Roundabouts

Roundabouts can be installed at two-way stop-controlled intersections or signalized intersections. They channel traffic through curved approaches to reduce vehicle speed as it enters circulating traffic. Roundabouts are effective in managing high traffic speeds in rural or urban settings while being able to effectively manage traffic flow all while creating a significant reduction in conflicts that arise at traditional intersections. The benefit of roundabouts, to counter their high costs, is that they can be implemented across all road types and remain as effective.



Table D-4: Roundabouts Countermeasures

Crash Type	Intersections
CRF%	80%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	High
CMF ID	211, 226

5. Pedestrian and Refuge Island

Pedestrian refuge islands are installed to help guide and protect pedestrians across intersections. The implementation of refuge islands can also lead to traffic calming effects and placemaking efforts in certain settings. Pedestrian islands improve safety by reducing the distance to refuge for those crossing and shifting the focus of pedestrians to one lane of traffic at a time. This low-cost solution helps make crossing larger and more popular corridors easier, and elderly or disabled individuals have to cover less ground to safety.



Table D-5: Pedestrian and Refuge Islands Countermeasure

Crash Type	Pedestrian and Intersection
CRF%	56%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Low
CMF ID	175

6. Speed Safety Cameras

Speed safety cameras (SSC) are a technological supplement to speed enforcement. By detecting high speeds, SSCs will log video or photos of the vehicles breaking set speed enforcement measures. Introducing SSCs to intersections or high-speed roads can deter drivers from exceeding speed limits to improve road safety. This high-cost countermeasure would work as a strong enforcement technique to prevent aggressive driving behaviors like speeding. Speed Safety Cameras can be deployed in targeted sections of roads that experience higher rates of aggressive driving to correct driving behavior.



Table D-6: Speed Safety Cameras Countermeasure

Crash Type	All
CRF%	37%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	High
CMF ID	7718, 2915, 2921, 7582

7. Bicycle Lanes

Bicycle lanes are developed from refitting streets to accommodate a part of the road for cyclists or building off-road paths. Dedicating protected space to cyclists can mitigate conflicts between cars and promote an increase in bicycle ridership. The size and speed disparity between the modes of transportation makes bicycle travel inherently more dangerous without dedicated infrastructure for protection. A higher cost bike lane project could include a two-way separated bike lane with barrier protections and traffic controls. Lower cost projects may just include extending road shoulders in rural areas to allow for bicycle traffic or road dieting to make available room for an unprotected bike lane.



Table D-7: Bicycle Lanes Countermeasure

Crash Type	Bicycles
CRF%	41.50%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Medium
CMF ID	11296, 10738, 10742

8. School Zones

A school zone is an area directly near schools or other educational establishments that experience a high volume of school children and young pedestrians. School zones will have signage corresponding to parking, road speeds, and pedestrian crossings. Countermeasures in school zones are low cost and increase awareness in the area to alert drivers to possible young pedestrians near the road. Some typical countermeasures in school zones are high visibility signage, high visibility crossings, and reduced traffic speeds. These actions work cohesively to make drivers more aware of their surroundings.



Crash Type	Pedestrian
CRF%	17%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	10
Cost	Low
CMF ID	N/A

9. Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

This strategy involves developing low-cost countermeasures at stop-controlled intersections to generate safer crossings for all road users. By using low-cost methods such as increased signage, enhanced edge lines, or flashing beacons increases the amount of intersections that can be enhanced. Simple changes in rural areas such as cutting back vegetation near intersections to increase visibility on an approach can be effective and low-cost. Using simple countermeasures across several locations will lead to mitigating conflicts at intersections within the transportation system.



 Table D-9:
 Systemic Application of Multiple Low-Cost Countermeasures

Crash Type	Intersection
CRF%	18.50%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	10
Cost	Low
CMF ID	8867, 8870, 8874, 8893

10. Roadway Reconfiguration

Roadway reconfiguration is the process of changing the traffic surface elements in an effort to improve safety and provide better mobility for all road users. By reconfiguring, a road can be made to suit the safety needs of a particular segment and develop a cohesive complete streets environment for all road users. The use of road dieting techniques can be viewed as high cost because of the overhaul requires such as labor and equipment that is used to reconfigure the road. Road dieting can open opportunities to implement other safety measures as well as enhance the safety of the current transportation system.



Table D-10: Roadway Reconfiguration Countermeasure

Crash Type	All
CRF%	33%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	High
CMF ID	5554, 2841

11. Rectangular Rapid Flashing Beacons (RRFB)

Rectangular Rapid Flashing Beacons (RRFB) are bright yellow rectangular signs with a flashing LED light to alert drivers to other road users. These work as enhanced visual aids for drivers at all times of the day and can lead to reduced conflicts at crossings. These effective low-cost enhancements can be easily added to existing signs at crossings or intersections. The implementation of RRFBs aim to alert drivers to curb incidents between vehicles and pedestrians in areas like mid-street crossings or high pedestrian traffic intersections.



Table D-11: Rectangular Rapid Flashing Beacons (RRFB) Countermeasure

Crash Type	Pedestrian
CRF%	47%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	10
Cost	Low
CMF ID	9024

12. Wider Edge Lines

Wider edge lines are implemented to aid drivers in the visibility of travel lanes. By adding a minimum of four inches to existing edge lines, they become "wider" and enhanced. Adding wider edge lines can be beneficial as vehicles begin to incorporate more sensors to guide vehicular travel, making road edges easier to be picked up by vehicle sensors especially at night. Enhancing edge lines is a relatively cheap addition to roads; however using better quality materials can increase the initial cost but extend the lifecycle. The addition of enhanced wider edge lines leads to a mitigation in roadway departures.



Table D-12: Wider Edge Lines Countermeasure

Crash Type	Roadway Departures
CRF%	29.50%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	5
Cost	Low
CMFID	4737

13. Enhanced Delineation for Horizontal Curves

A series of countermeasures can be implemented to reduce roadway departures before or within curves and to alert drivers to upcoming curves at night. Countermeasures can be in the form pavement markings, radar feedback, and increased signage warning that there of a curve. There are many strategies that can be implemented at a low-cost, however it is easy to increase the cost by adding several strategies together at curves. For example, adding only reflective pavement markers would be relatively low-cost. However, adding those along with a speed radar feedback sign and additional reflective signage before and in the curve can drive up the costs.



Table D-13: Enhanced Delineation for Horizontal Curves Countermeasure

Crash Type	Roadway Departures and Night
CRF%	37.50%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	10
Cost	Medium
CMF ID	2439, 2431, 2438, 10362, 10312, 9167

14. Walkways

Walkways are essential to pedestrian mobility and healthy communities. Providing safe access to walkways that shield users from traffic and connect communities to essential locations is imperative, but countermeasure can range in cost. For example, building dedicated shared-use paths in urban corridors can be a high cost project. In rural areas where pedestrians may be sparse, paved shoulders on rural highways are a cheap way to add paved walkways for pedestrians in those areas. Walkways are essential for meeting the needs of all pedestrians and providing safe routes for travel.



Table D-14: Walkways Countermeasure

Crash Type	Pedestrian
CRF%	77%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	20
Cost	Medium
CMFID	N/A

15. Median Barriers

Barriers are implemented to separate opposite flows of traffic on roadways and prevent head-on collisions from opposing traffic flows. Medians also help prevent accidents from spilling over to the opposite side of traffic to interfere with the traffic flow of an entire road. Using barriers on the outside edge of roads can help prevent roadway departures as well. The cost of implementing median barriers can be low cost, but the cost can rise depending on the materials used. Concrete medians are relatively low cost to use; however, barriers can be made of steel or steel cables, which is a more expensive product.



 Table D-15:
 Median Barriers Countermeasure

Crash Type	Roadway Departures
CRF%	97%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Medium
CMF ID	7040

16. Dedicated Turn Lanes at Intersections

Creating dedicated right-or-left turn lanes helps improve the overall flow of traffic on high-traffic roads or turning from minor roads on to high traffic roads. Dedicated turn lanes help prevent head-on collisions by providing better lines of sight to vehicles turning, they also prevent rear-end collisions that occur from traffic stopping or slowing in travel lanes. These can be implemented at intersections that experience an increase in turning-related collisions to help curb rates of injuries and fatalities. Creating offset turn lanes helps to create protected space for turning vehicles and creates improved sightlines for left turning vehicles to prevent the need for a protected turn light. The cost of this project can be low depending on how many lanes are being added and how large the lane is being made. More lanes for longer stretches can raise the overall price of the project.



Table D-16: Dedicated Turn Lanes at Intersections Countermeasure

Crash Type	Intersections
CRF%	31%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Medium
CMF ID	260, 268, 285, 289, 6096

17. Reduced Left-Turn Conflict Intersections

Reduced left-turn conflict intersections are geometrically designed to change how left turns are performed by drivers. They ease drivers into a left turn by utilizing space between opposing directions of traffic which does not require a large amount of space to utilize. There are two types of systems that can be built, Restricted Crossing U-turn and Median U-turn. Both help reduce the distance it takes to cross traffic while making a left turn and ease decision making for drivers. These road designs help reduce the severity of crashes that occur near high-volume intersections.



Table D-17: Reduced Left-Turn Conflict Intersections Countermeasure

Crash Type	Intersections
CRF%	42.50%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Medium
CMF ID	5556, 9985, 4884, 10867

18. Crosswalk Visibility

Crosswalk visibility improvements consist of different elements such as pavement markings, increased signage, and flashing lights. These elements are essential especially if the crosswalk is a midblock crossing. These enhancements help alert drivers to pedestrians and reduce speeds near crossings to mitigate potential conflicts. These countermeasures are low-cost additions such as improved lighting, high-visibility crosswalks, and pavement markings. These are essential measures to take a non-traditional crossings to ensure that vehicles are aware of possible pedestrian activity.



Table D-18: Crosswalk Visibility Countermeasure

Crash Type	Pedestrian and Intersection
CRF%	35.50%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	10
Cost	Low
CMF ID	4123, 436, 9017

19. Pavement Friction

Pavement friction is a critical part of roadway safety, it plays a crucial role in how vehicles interact with the physical road. Areas where vehicles turn, slow down, or stop can be areas of concern over worn pavement. When compiling a list of locations with high crash rates, whoever has jurisdiction over roads should be checking pavement friction to see if it is a possible contributor to crashes. High friction surface treatment is used to reinforce or restore the friction of the road, it is particularly effective near areas such as steep downgrades and curves where tire performance is essential to safety. This can be a low-cost countermeasure if it is used in particular sections of roads, but higher quality treatments or use on larger sections of roads can raise the cost of implementing this countermeasure.



Table D-19: Pavement Friction Countermeasure

Crash Type	All
CRF%	41.50%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	10
Cost	Medium
CMF ID	10342, 10333, 2259

20. Pedestrian Hybrid Beacon (PHB)

Pedestrian Hybrid Beacons (PHB) serve as a light signal for pedestrians crossing high-speed roadways. Pedestrians activate a light series to signal drivers that they will be crossing, alerting vehicles to slow down and be aware of pedestrians crossing. Similar to a traffic signal, it will start a blinking yellow light to alert drivers to an impending red stop light to allow pedestrians to cross safely. These signals are effective for popular crossings on high-speed roads or extended distances in crossings. The signals ensure pedestrian safety and reduce poor decisions by pedestrians to cross high-speed traffic. Pedestrian Hybrid Beacons are a low-cost implementation that can be added to traffic systems in locations where concerns for pedestrian crossings is high.



Table D-20: Pedestrian Hybrid Beacon (PHB) Countermeasure

Crash Type	Pedestrian
CRF%	35%
Federal Eligibility Funding (%)	90% to 100%
Expected Life (Years)	10
Cost	Low
CMF ID	9020, 2911, 2917

21. Roadside Design Improvements at Curves

Roadside curve enhancements involve improving the safety of the edge of roads on curves. These safety designs are implemented to reduce severe crashes, allow vehicles an opportunity to recover safely and prevent total roadway departures. Strategies can vary from changing the environment on the shoulder of roads to placing barriers on curves. Flattening sloped edges off the road or extending shoulders gives drivers the ability to recover their vehicle in the event of a roadway departure. Using median like barriers such as concrete or steel guardrails to prevent total roadway departures all together. Reducing roadway departures, as well as making them less dangerous or recoverable for drivers, is the goal of these strategies. Cost may vary depending on which or how many of these strategies are implemented.



Table D-21: Roadside Design Improvements at Curves Countermeasure

Crash Type	Roadway Departures
CRF%	26%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Medium
CMF ID	4627, 4632, 35, 36

22. SafetyEdge

SafetyEdge is implemented during road construction and re-pavement and creates a 30-degree slant at the edge of pavement. This enhancement reduces the chances of a vertical drop-off from vehicles, reducing road departures and increasing control for drivers. Adding a SafetyEdge design to roads is a low-cost countermeasure that can be added to any road that does not have any barrier on the edge, and would allow the driver to ride the slanted edge back onto the roadway.



Table D-22: SafetyEdge Countermeasure

Crash Type	Roadway Departures
CRF%	16%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Low
CMF ID	9205, 9211, 9217

23. Backplates with Retroreflective Borders

Backplates offer improved visibility to drivers, especially at night. The backplates accentuate the signal light better with the contrasting reflective yellow metal against the night sky. Frames are typically one to three inches thick around an entire traffic light. These are low-cost implementations that can be easily added to all traffic signals to improve nighttime visibility of intersection signaling. Rural areas can implement these as intersections in rural areas may not have any lighting and drivers may have difficulties identifying critical traffic signs at intersections.



Table D-23: Backplates w	vith Retoreflective	Borders Countermeasure
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Crash Type	Intersection and Night
CRF%	15%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	10
Cost	Low
CMF ID	1410

24. Yellow Change Intervals

Manipulating the yellow change interval at intersections can be done to extend the time a yellow light is active to prevent high-speed traffic from running red lights or causing rear-end collisions. This can be used at high-speed intersections that experience higher rates of intersection collisions and severe crashes. With a retiming of yellow lights at specific intersections based on traffic and crash data, this is a low-cost strategy to implement.



Table D-24: Yellow Change Intervals Countermeasure

Crash Type	All
CRF%	11%
Federal Eligibility Funding (%)	80%
Expected Life (Years)	20
Cost	Low
CMF ID	380, 384

Appendix E: SS4A Self-Certification

The USDOT requires the self-certification worksheet for all SS4A Implementation Grant applications and any Planning and Demonstration Grant applications.

The worksheet can be found at https://www.transportation.gov/grants/ss4a/how-to-apply

Figure E-1: SS4A- USDOT Self Certification Checklist

$\frac{S}{4} \frac{S}{A}$ Safe Streets and Roads for All Self-Certification Eligibility Worksheet

All applicants should follow the instructions in the NOFO to correctly apply for a grant. See the <u>SS4A website</u> for more information.

Table 1 of the <u>SS4A NOFO</u> describes <u>seven components of an Action Plan</u>, which correspond to the questions in this worksheet. Applicants should use this worksheet to determine whether their existing plan(s) contains the required components to be considered an eligible Action Plan for SS4A.

This worksheet is required for all SS4A **Implementation Grant** applications and any **Planning and Demonstration Grant** applications to conduct Supplemental Planning/Demonstration Activities only. Please complete the form in its entirety, do not adjust the formatting or headings of the worksheet, and upload the completed PDF with your application.

Eligibility

An Action Plan is considered eligible for an SS4A application for an Implementation Grant or a Planning and Demonstration Grant to conduct Supplemental Planning/Demonstration Activities if the following two conditions are met:

- You can answer "YES" to Questions 3, 6, and 8 in this worksheet; and
- You can answer "YES" to at least three of the five remaining Questions, 1, 2, 4, 5, and 7.

If both conditions are not met, an applicant is still eligible to apply for a Planning and Demonstration Grant to fund the creation of a new Action Plan or updates to an existing Action Plan to meet SS4A requirements.

Applicant Information

Lead Applicant: ____

UEI:

Action Plan Documents

In the table below, list the relevant Action Plan and any additional plans or documents that you reference in this form. **Up to three plans or documents may be included**. Please provide a hyperlink to any documents available online or indicate that the Action Plan or other documents will be uploaded in Valid Eval as part of your application. Note that, to be considered an eligible Action Plan for SS4A, the plan(s) coverage must be broader than just a corridor, neighborhood, or specific location.

Document Title	Link	Date of Most Recent Update
Winnebago County Traffic Safety Action Plan	https://drive.google.com/file/d/1tjzQf007YehNKJaFjDYFPdAtgP2FwGFHAiew	May 22, 2025
		-

SS4A Self-Certification Eligibility Worksheet | Page 1 of 5

Action Plan Components

For each question below, answer "YES" or "NO." If "YES," list the relevant plan(s) or supporting documentation that address the condition and the specific page number(s) in each document that corroborates your response. This form provides space to reference multiple plans, but please list only the most relevant document(s).

1. Leadership Commitment and Goal Setting

Are BOTH of the following true?

- A high-ranking official and/or governing body in the jurisdiction publicly committed to an eventual goal of zero roadway fatalities and serious injuries; and
- The commitment includes either setting a target date to reach zero OR setting one or more targets to achieve a reduction in roadway fatalities and serious injuries by a specific date.

Note: This may include a resolution, policy, ordinance, executive order, or other official announcement from a high-ranking official and the official adoption of a plan that includes the commitment by a legislative body.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	5

2. Planning Structure

To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan's development, implementation, and monitoring?

\checkmark	YES
	NO

YES

NO

Note: This should include a description of the membership of the group and what role they play in the development, implementation, and monitoring of the Action Plan.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	3, 67-68, 73-74



SS4A Self-Certification Eligibility Worksheet | Page 2 of 5

3. Safety Analysis

Does the Action Plan include ALL of the following?

- Analysis of existing conditions and historical trends to provide a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;
- Analysis of the location(s) of crashes, the severity, contributing factors, and crash types;
- Analysis of systemic and specific safety needs, as needed (e.g., high-risk road features or specific safety needs of relevant road users); and,
- A geospatial identification (geographic or locational data using maps) of higher risk locations.

Note: Availability and level of detail of safety data may vary greatly by location. The <u>Fatality and Injury</u> <u>Reporting System Tool (FIRST)</u> provides county- and city-level data. When available, local data should be used to supplement nationally available data sets.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	10-27, 27-46

4. Engagement and Collaboration

Did development of the Action Plan include ALL of the following activities?

- Engagement with the public and relevant stakeholders, including the private sector and community **YES** groups;
- · Incorporation of information received from the engagement and collaboration into the plan; and
- Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.

Note: This should include a description of public meetings, participation in public and private events, and proactive meetings with stakeholders.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	2-3, 21-24, 28, 66-67, 73-75



SS4A Self-Certification Eligibility Worksheet | Page 3 of 5

YES

NO

NO

5. Policy and Process Changes

Are BOTH of the following true?

- The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and
- The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.

Note: This may include existing and/or recommended Complete Streets policy, guidelines for community engagement and collaboration, policy for prioritizing areas of greatest need, local laws (e.g., speed limit), design guidelines, and other policies and processes that prioritize safety.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	6-9, 47-63, 64-68

6. Strategy and Project Selections

Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, with information about time ranges when projects and strategies will be deployed, and an explanation of project prioritization criteria?

YES

NO

Note: This should include one or more lists of community-wide multi-modal and multi-disciplinary projects that respond to safety problems and reflect community input and a description of how your community will prioritize projects in the future.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	47-63



SS4A Self-Certification Eligibility Worksheet | Page 4 of 5

7. Progress and Transparency

Does the plan include BOTH of the following?

- A description of how progress will be measured over time that includes, at a minimum, outcome data.

YES NO

YES

VO

• The plan is posted publicly online.

Note: This should include a progress reporting structure and list of proposed metrics.

If "YES," please list the relevant document(s) and page number(s) that corroborate your response.

Document Title	Page Number(s)
Winnebago County Traffic Safety Action Plan	67-68

8. Action Plan Date

Was at least one of your plans finalized and/or last updated between 2020 and June 26, 2025?

Note: Updates may include major revisions, updates to the data used for analysis, status updates, or the
addition of supplemental planning documents, including but not limited to an ADA Transition Plan,
one or more Road Safety Audits conducted in high-crash locations, or a Vulnerable Road User Plan.

If "YES," please list your most recent document, date of finalization, and page number(s) that corroborate your response.

Document Title	Date of Most Recent Update	Page Number(s)
Winnebago County Traffic Safety Action Plan	May 22, 2025	i-99



Appendix F: SS4A & Safe System Approach Overview

The Winnebago County Traffic Safety Action Plan was created in alignment with federal guidelines, strategies, and approaches. As the plan is funded by a Safe Streets and Roads for All (SS4A) planning and demonstration grant, federal approaches including the National Roadway Safety Strategy and Safe System Approach were incorporated throughout the plans development. A full understanding of each of these three federal elements is necessary to understand how they shaped this plan; information on each element is provided below.

Safe Streets and Roads for All Program

Safe Streets and Roads for All is a discretionary grant program designed to support the U.S. Department of Transportation's (USDOT) National Roadway Safety Strategy and its goal of zero roadway deaths. Safe Streets and Roads for All was established by the Bipartisan Infrastructure Law (BIL) with five billion dollars in appropriated funds being available from 2022 through 2026. Counties, cities, towns, transit agencies, MPOs, and federally recognized Tribal governments are all eligible for SS4A grants.

There are two types of SS4A grants:

- Planning and Demonstration Grants. Planning and Demonstration Grants provide federal funds to develop a comprehensive safety action plan. A Safety Action Plan's goal is to prevent fatalities and serious injuries through the development of a holistic and well-defined strategy.
- Implementation Grant. In order to apply for an Implementation Grant, the agency, body, or jurisdiction must already have a Safety Action Plan in place. The funds provided by this grant can be used to tackle roadway safety problems through the implementation of the projects and strategies discussed in the Safety Action Plan. These projects and strategies can have an infrastructure, behavioral, or operational focus. Funds can also be put towards demonstration activities, supplemental planning, and project-level planning, design, and development.

National Roadway Safety Strategy

The United States Department of Transportation (USDOT) National Roadway Safety Strategy (NRSS) sets a vision and goal for the safety of the Nation's roadways and adopts the Safe System Approach principles. The purpose of the NRSS and its adoption of the Safe System Approach is to address contributing factors from all angles and build layers of prevention, protection, and mitigation. These principles guide safety actions, and identify critical and significant actions the USDOT will take in pursuit of five core objectives.

- 1. **Safer People:** Encourage safe, responsible behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.
- 2. **Safer Roads:** Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.
- 3. **Safer Vehicles:** Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.
- 4. **Safer Speeds:** Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.
- 5. **Post-Crash Care:** Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices^{xci}.

Safe System Approach

The Safe System Approach differs significantly from a conventional safety approach in that it acknowledges both human mistakes and human vulnerability, and designs a redundant system to protect everyone. USDOT recognizes the Safe System Approach as encompassing all the roadway

safety interventions required to achieve the goal of zero fatalities, including safety programs focused on infrastructure, human behavior, responsible oversight of the vehicle and transportation industry, and emergency response. The Safe System Approach and roadway safety policy are inclusive of all roadway users in all communities and the many people who use the roads and streets outside of motor vehicles. The Safe System Approach is also intended to be iterative and will adapt to how people use the Nation's highways, roadways, and streets.

The Safe System Approach incorporates the following principles:

- 1. **Death and Serious Injuries are Unacceptable.** While no crashes are desirable, the Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries since no one should experience either when using the transportation system.
- 2. Humans Make Mistakes. People will inevitably make mistakes and decisions that can lead or contribute to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes, and avoid death and serious injuries when a crash occurs.
- 3. **Humans Are Vulnerable.** People have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates physical human vulnerabilities.
- Responsibility is Shared. All stakeholders including government at all levels, industry, nonprofit/advocacy, researchers, and the public – are vital to preventing fatalities and serious injuries on our roadways.
- 5. **Safety is Proactive.** Proactive tools should be used to identify and address safety issues in the transportation system, rather than waiting for crashes to occur and reacting afterwards. 6. Redundancy is Crucial. Reducing risks requires that all parts of the transportation system be strengthened, so that if one part fails, the other parts still protect people.

This approach involves using all available tools, including education, outreach, engineering solutions, and enforcement. For example, emphasis on complete streets and context sensitive designs/solutions can be applied toward physical transportation infrastructure improvements contributing to increased safety for roadway use. Activities such as building safety culture within organizations and leveraging public health approaches can assist with the practical implementation of a Safe System Approach. Safety culture, for NRSS purposes, is defined as the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands^{xcii}.

Endnotes

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