

DRAFT

# VISION ZERO MADISON

**DRAFT FOR REVIEW**

**6/25/2021**

VISION  
ZERO  
MADISON

ACTION PLAN  
2020 - 2030





Vision Zero Madison aims to eliminate all fatalities and severe injuries that occur as the result of traffic collisions on city streets by 2030. Until this point, transportation systems have focused disproportionately on moving vehicles as efficiently as possible. Consequently, this action plan represents a shift towards the prioritization of safe, healthy and equitable mobility for all roadway users.

This action plan outlines strategies and actions that should be taken within the next nine years, yet it must not be considered unchangeable. It is a dynamic, living document that is designed to address the needs of a city in flux. The recommendations it contains are meant to be a starting point, not a final all-encompassing list. The plan will respond to data trends and continue to incorporate safety innovations and opportunities to eliminate traffic fatalities and injuries as time passes.



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LETTER FROM  
MAYOR AND POLICYMAKERS





# DEDICATION/ ACKNOWLEDGEMENT

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# WHY VISION ZERO

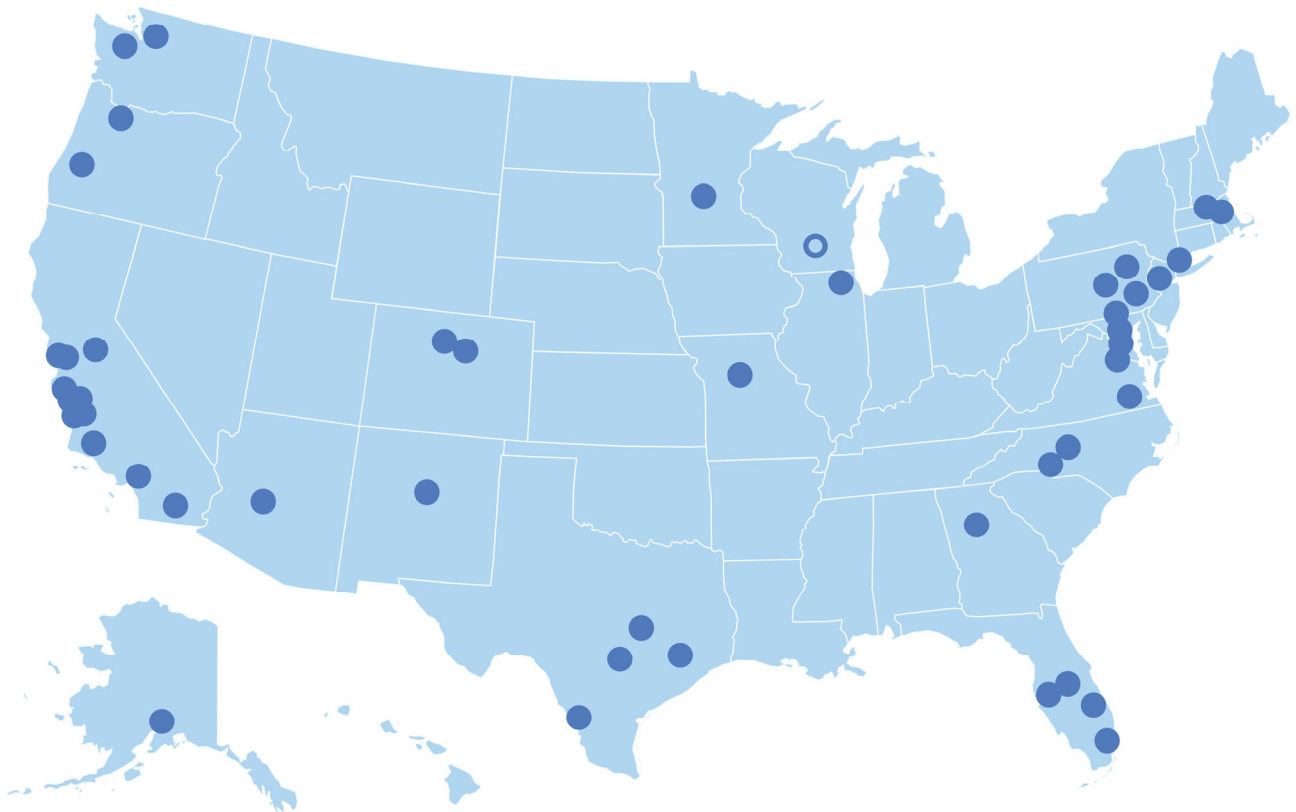
## What is Vision Zero?

Vision Zero Madison is an initiative with the goal of reducing all traffic deaths and severe injuries on city streets to zero by 2030. It represents a fundamental transformation in the city's approach to traffic safety in its prioritization of human life over the movement of motor vehicles.

Developed in Sweden in the 1990s, Vision Zero began as a national transportation policy centered on the assertion that nobody should be killed or seriously injured as the consequence of traffic collisions.

The campaign has since become a growing movement: According to the Vision Zero Network, more than 40 cities in the United States have committed to the goal of zero traffic deaths and life-altering injuries by developing action plans and implementing community-specific strategies that address each transportation system's unique circumstances. If Madison succeeds in meeting the required criteria, it would become one of the first cities in the Midwest and the first city in Wisconsin to be a part of the network.

## THE VISION ZERO NETWORK









## The Vision Zero approach to traffic safety...

### **Recognizes that deaths are preventable.**

Traditionally, traffic deaths have been understood as unavoidable. The incalculable value of human life, however, means that no amount of fatalities or severe injuries is ethically acceptable. Instead, we must begin thinking about traffic deaths and the life-altering injuries that can occur as the result of collisions as preventable. This means that we must re-conceptualize the role that government should play in safety by recognizing that it has the agency to produce safe conditions, systems and behavior.

### **Moves away from individual responsibility and integrates human failure.**

Vision Zero requires us to rethink who should be blamed in the case of a traffic collision. Normally, individual road users are seen as the problem-- bad drivers, distracted bicyclists, and careless walkers are considered the cause of crashes.

As a result, solutions have typically focused on the level of the individual and tried to cultivate perfect human behavior. Driver's tests are expanded to include new questions, social media campaigns warn of the dangers of using your phone while driving, and signs placed alongside highways ask drivers to buckle up.

Vision Zero, on the other hand, recognizes that humans will never be perfect. Instead of influencing individual behavior directly, it aims to shape policies, systems, and the built environment to encourage the desired behavioral choices. It is the responsibility of system designers to recognize the predictable errors that drivers make and adapt accordingly. By changing the transportation system instead of blaming human error, Vision Zero makes the right choices intuitive, rational, and easy for everyone.

### **Focuses on severe crashes.**

While an ideal world would not have any collisions in it, it is not realistic to attempt to prevent all car crashes. Instead, Vision Zero focuses on reducing

the severity of collisions. We can't stop people from making mistakes, but we can stop those mistakes from having catastrophic consequences. This human-centered approach allows Vision Zero to prioritize life-saving strategies over those that address crashes in general.

### **Is driven by data.**

Vision Zero's prioritization of data helps make its approach efficient and effective. It considers demographic information, vulnerable communities, and geographic disparities in addition to the data that is normally collected in police and public health reports. By more thoroughly analyzing where and how crashes happen, we can focus on implementing the actions that will be the most beneficial to the Madison community.

### **Emphasizes community engagement and social equity.**

Two other core elements of Vision Zero are community engagement and social equity. As all individuals have the right to move safely through their communities, public participation in transportation decision-making is vital. Cities should help generate collective action around the need for safer streets and give residents the space to express their concerns and desires.

All people deserve to be safe while traveling through cities, whether walking, bicycling, driving or taking transit, and regardless of age, race, ability, or background. Traffic collisions disproportionately impact vulnerable communities like people of color, individuals with lower incomes, seniors, children, and people with disabilities. Vision Zero addresses these inequities by prioritizing interventions in areas most in need of safety improvements and incorporating vulnerable populations into the decision-making process.



Uses a systems approach.

Rather than only impacting traffic engineering strategies, Vision Zero is a multi-agency and multi-partner initiative that compels us to consider the road system in its entirety. Committees should include representation from all divisions and departments that can influence the factors involved in traffic injuries and deaths. Road design, speed, en-

forcement, driving culture, available technology, and laws all contribute to safe mobility. Consequently, transportation planners, engineers, policy-makers, law enforcement, emergency response teams, public health professional, and community leaders are all responsible for the safety of the road system. System-wide change requires cooperation and collaboration across the community.

Traditional Approach	Vision Zero
Traffic deaths are inevitable	Traffic deaths are preventable
Aims to fix humans	Changes systems
Expects perfect human behavior	Integrates human failure
Prevents collisions	Prevents fatal and severe crashes
Exclusively addresses traffic engineering	Considers the road system as a whole
Doesn't consider disproportionate impacts	Regards road safety as an issue of social equity



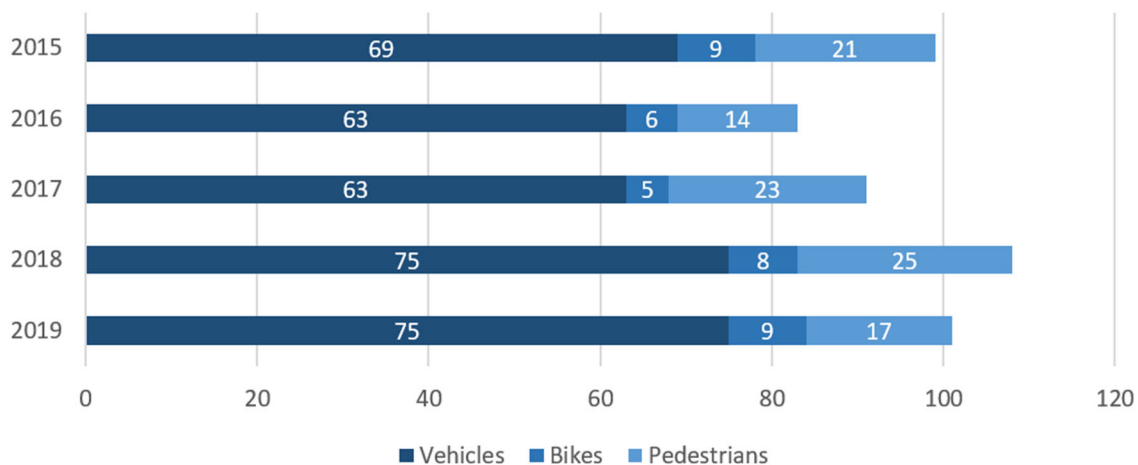




## Why Madison Needs Vision Zero

According to Wisconsin's Department of Transportation, Dane County had one of the state's highest average number of traffic fatalities from 2015 to 2019, second only to Milwaukee County. Forty four people died from crashes on Madison streets between 2015 and 2019, and hundreds more were injured. These deaths are not acceptable.

Madison Fatalities and Severe Injuries



Data from TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.



## The future of Madison

The City of Madison is projected to gain over 43,000 residents between 2010 and 2040, the biggest numeric increase in the state. This growth of over 18% will bring the City's population to the largest it has ever been at over 280,000. Historic growth trends provide even higher population projections. With more people living in the area, the number of vehicles on the road, the number of pedestrians crossing intersections, and the number of bicyclists navigating through the City will all increase, resulting in more opportunities for collisions. In order to prevent the traffic related deaths and injuries that will occur otherwise, the City of Madison must take bold and decisive action to make our streets safer.

## Multimodal transportation

Madison prides itself on being a city that is accessible to both bicyclists and walkers, but safety concerns from users limit use of our bicycle infrastruc-

ture and sidewalks by those that are more hesitant. Many bicyclists must use busy streets in order to gain access to bike paths, and pedestrians often cross major intersections while traveling through the city. Vision Zero can help increase the accessibility of these modes of transportation for all residents by making them safer.

Madison was awarded a Platinum Bicycle Friendly Designation by the League of American Bicyclists in the fall of 2015 that was renewed in 2019. The City was also designated a Gold Level Walk Friendly Community in 2021.

## Public health

Traffic injuries and fatalities are a preventable public health problem. Additionally, traffic safety and public health are closely connected, as making alternatives to driving like biking and walking more attractive can directly encourage physical activity, limit air pollution, and improve quality of life.

**Map of severe injuries and fatalities on Madison streets from 2015 to 2019 to be placed here.**

## Vision Zero in Madison

In July 2020, Mayor Satya Rhodes-Conway announced that Madison would aspire to eliminate fatal and serious traffic injuries in the City by 2030 by beginning the development of a Vision Zero Action Plan. Earlier that month, the Common Council unanimously approved a resolution of support, further indicating Madison's commitment to the initiative.

“We must prioritize safety over speed. We must prioritize safety over shaving a few minutes off our commute. We're talking about the deaths of someone's mother or father, someone's child, someone's friend.”

— Mayor Satya Rhodes-Conway



## The Vision Zero Action Plan

This action plan contains foundational elements and actionable strategies that will allow Madison to make substantial progress towards its target of zero traffic deaths and life-altering injuries. Including central principles in this document allows us to guarantee that the actions we recommend accurately reflect the initiative's core values. Given a strong foundation, it is possible to create specific, measurable, and realistic goals for the city as it seeks to move away from a transportation system built for vehicles to a system that is built for people. This plan represents both a shift in priorities and a commitment to hold ourselves accountable as we attempt to generate meaningful change.



### Why 2030?

Setting a timeline brings urgency to this initiative and helps us hold ourselves accountable. In 2030, the City of Madison will evaluate its progress and develop a new action plan if necessary.



### Why Zero?

Zero is the only justifiable target for this plan to aim to achieve. Setting it as a shared goal is bold and reinforces that we need major shifts in the way we think about our transportation system.



# VISION ZERO GUIDING PRINCIPLES

## Prioritizing Safety

Vision Zero Madison aims to lay the groundwork for a new approach to traffic safety by designing City streets for people rather than cars. In the past we have disproportionately prioritized efficient vehicle movement. We now have the opportunity to reprioritize the functions we expect from our transportation system to fully eliminate traffic fatalities and injuries. Instead of trying to make it safer for personal vehicles to move faster or reduce travel times, we must focus on safe mobility for all roadway users.

Prioritizing safety includes allocating limited public space, resources, and support to those who need it most, including pedestrians, bicyclists, and those riding public transit. People use Madison's streets for a variety of activities, so we must construct them in a manner that balances the needs of all users. In order to equitably redistribute public space, we must recognize that not all users are alert adults that can see clearly, walk briskly, or react quickly to changes in their environment. Vulnerable users including the young, the elderly, and people with disabilities should be given the highest priority when we begin to think about strategies that can be implemented to make our streets safer.

### Pedestrians

Vision Zero Madison commits to providing continuous, unobstructed, and clear paths that are easy and safe to navigate for all pedestrians. The perspective of those walking will play a large role in determining the level of danger still present in facilities. Traffic engineers will plan for different pedestrian speeds, including those that are walking quickly, stopping to look at their surroundings, or traveling slowly. When it comes to pedestrian infrastructure, all people walking through Madison's streets would benefit from improvements like shorter crossing distances, refuge medians, and larger sidewalks.

### Bicyclists

Designing safe bicycling infrastructure is integral to this principle of safety. Cohesive, connected networks are necessary to allow cyclists to access all areas of the city. Incorporating the needs of cyclists into intersection design can also help in the creation of complete cycle networks. The city will move towards an all ages and abilities bike network that includes protected bike lanes, separated bike paths, and other measures that remove cyclists from traffic hazards. This will allow people of all ages and confidence levels to have access to a connected network that gets them to jobs, services, and schools.

### Transit Users

Transit riders will be taken into consideration as well. Dedicating space for public transportation makes service more convenient and reliable, creating a safe and attractive transportation option. It also increases the people-moving capacity of our streets. As part of the MetroForward initiative, which includes implementation of Bus Rapid Transit, Madison will make substantial improvement to transit service and access.



## Data Driven

As discussed earlier in this report, Vision Zero relies heavily on data to investigate which types of strategies should be implemented and where they would be most effective. This approach allows researchers to identify trends and uncover issues that can be addressed collectively rather than limiting the scope of analysis to isolated incidents. This forward facing determination of risk factors is proactive rather than reactive, and can prevent crashes before they happen as well as mitigate crash severity. Additionally, it acknowledges the limited resources allocated to traffic safety initiatives by locating neighborhoods where investments in safety are most urgent.

### Data Collection

Most of the data used in the creation of this Action Plan was compiled and distributed by the Traffic Operations and Safety (TOPS) Laboratory based at the University of Wisconsin-Madison. The crash database contains complete records of all police reported crashes in the state from 1994 through 2019, including information regarding the location of the crash, the modes of transport involved, and general crash attributes.

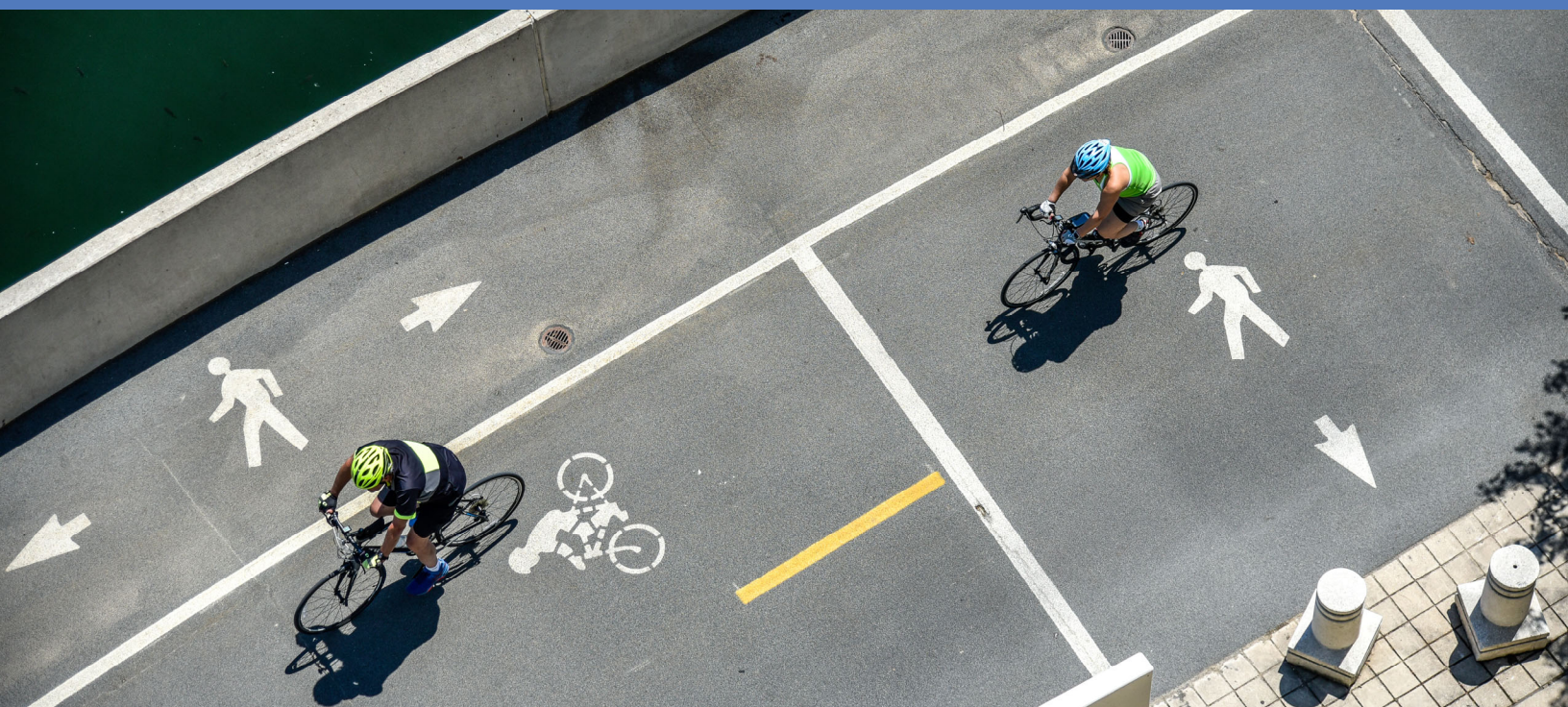
In the future, Vision Zero Madison would like to expand its cooperation with Public Health Madison & Dane County to include data-sharing agreements that would consist of more comprehensive information like detailed injury data and information

from crashes that don't involve motor vehicles or are not reportable to the Wisconsin Department of Transportation to give a fuller picture of the causes and consequences of collisions in Madison. As members of systemically marginalized communities are less likely to report traffic crashes or be treated adequately when they do so, such a partnership would also allow us to ensure that our data accurately represents the experiences of people of color in the City.

### Data Analysis

In the past, the job of analyzing traffic data has been left solely to traffic engineers. Our fight to move beyond traditional understandings of our transportation system, however, compels us to expand the list of those involved in interpreting data to include policy makers, public health officials, police departments, civil rights advocates, and other stakeholders.

Furthermore, it is important to understand that data alone is not all that is necessary for the development of Vision Zero strategies and actions. We must use it as means to identify vulnerable communities and voices that have not yet been heard. Without the context provided by residents of the neighborhoods that we hope to improve, gaps will appear in Vision Zero Madison's proposed strategies and inequities will continue to grow.





## Equity

Everyone deserves the right to move through the City safely, but the transportation systems of some communities in Madison have been continually neglected. This past must be taken into account when we decide where and how Vision Zero projects should be implemented. Equity is integrated into every component of Vision Zero Madison's planning process as a means to repair the harm that has occurred as a result of traditional approaches to traffic safety. We cannot and should not rewrite history, but we must uncover, recognize, and reconcile the historical and current injustices experienced by marginalized communities in Madison.

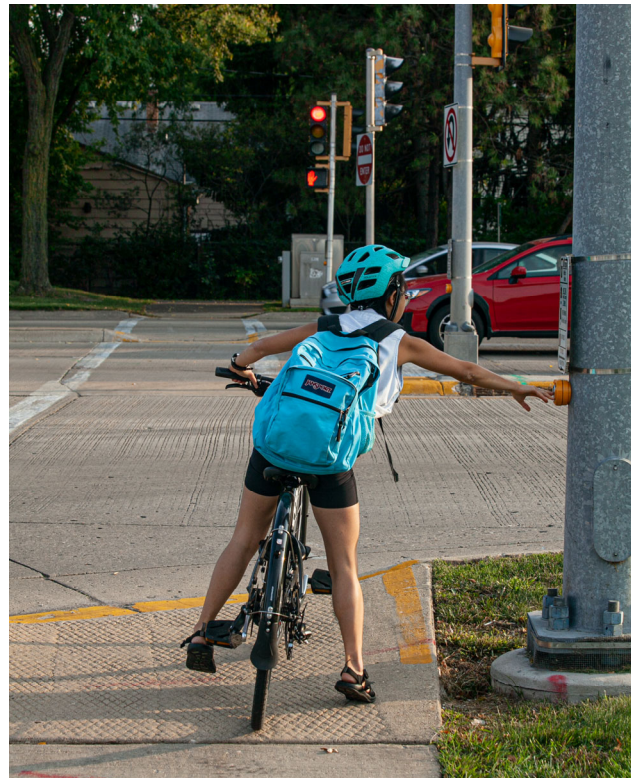
In conjunction with its goal of eliminating all traffic-related fatalities and life-altering injuries, Vision Zero Madison aims to reduce geographic and racial disparities in such collisions. Car crashes disproportionately affect the lives of people of color and those with lower incomes, communities of color are unjustly burdened when it comes to traffic policing, and marginalized neighborhoods also experience more pollution, negative environmental factors, public health concerns, lack of economic opportunity, and historic underinvestment.

In response, outreach efforts will focus on communities that have been traditionally underserved. Although online engagement is more accessible to those with limited mobility, full-time jobs, or children, its technology requirements limit its reach. In addition to hosting events over Zoom and encouraging people to take online surveys, we will be holding in-person events in communities of color and lower income neighborhoods that have a variety of meeting times to make sharing input and opinions even more convenient.

Moreover, Vision Zero Madison will prioritize street design safety efforts that fill gaps in infrastructure occurring in neighborhoods where residents have been historically marginalized. Making biking, walking, and public transit more accessible will increase residents' transportation options, allowing them to pick the best one for themselves. Not only must we respond to the fact that some of our neighborhoods have faced consistent underinvestment, actions taken in these geographic locations will have a bigger

impact on City safety than those taken in other neighborhoods, making them a more responsible use of the City's limited resources.

As we reshape our City's traffic priorities and policies, it is important to keep in mind that they may not be applied equally to all residents. People of color are more likely to be stopped by law enforcement for non-hazardous citations like driving with a suspended license, as discussed later in this report. Increasing overall enforcement therefore can exacerbate existing injustices in our City, sowing distrust and contributing to systemic racism. We recognize that we cannot merely enforce our way to zero traffic deaths and severe injuries by relying on threats of fines and jail time to make members of our communities obey the law. Instead, we intend to focus on better designing roadways and cultivating a driving culture that puts safety over speed. In the short term, we will implement enforcement policies that do not disproportionately target people of color, and commit to consistently collecting and analyzing data that is disaggregated by race to hold ourselves accountable.





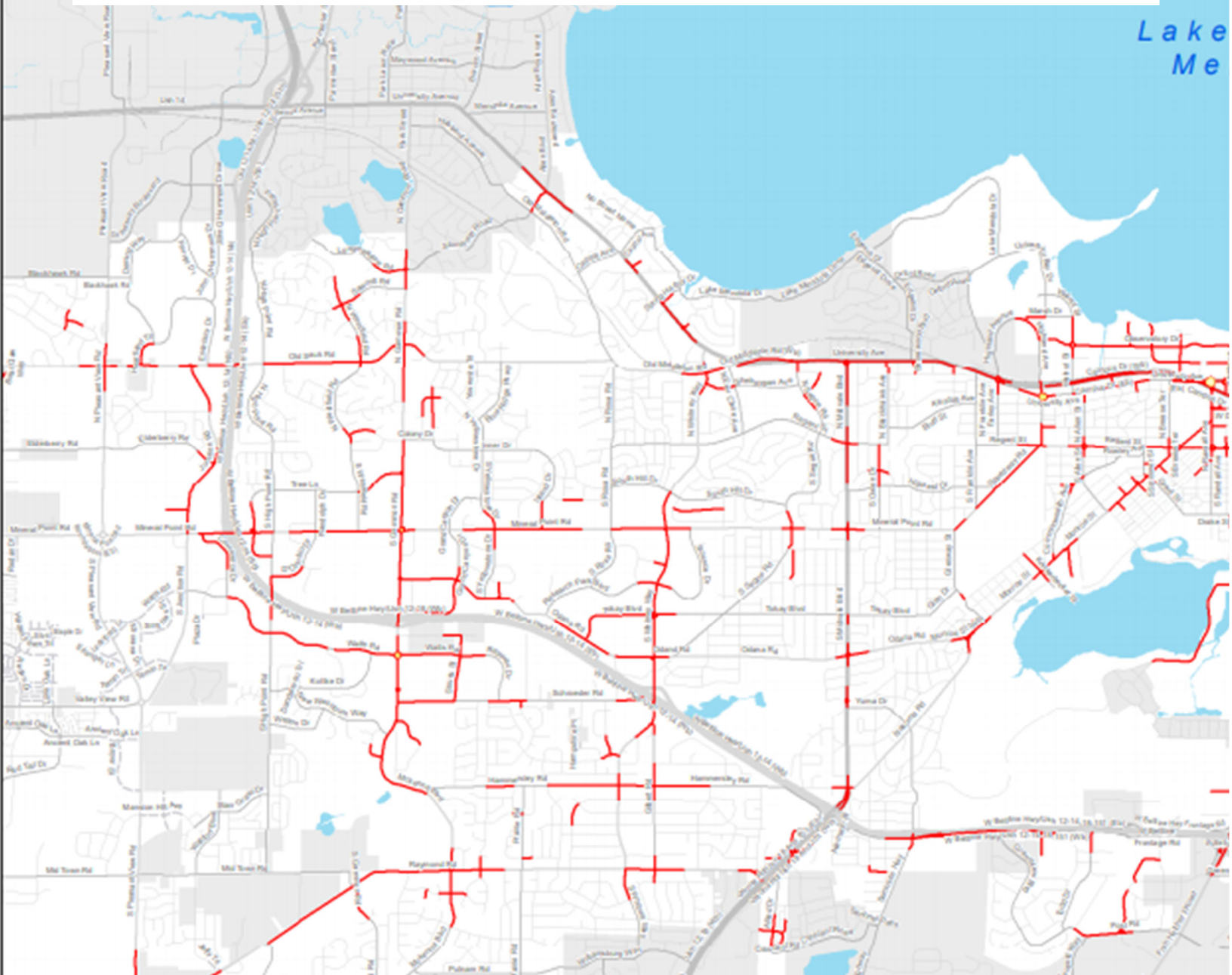
Engagement Section:

To be completed after a series of initial  
engagement events are held

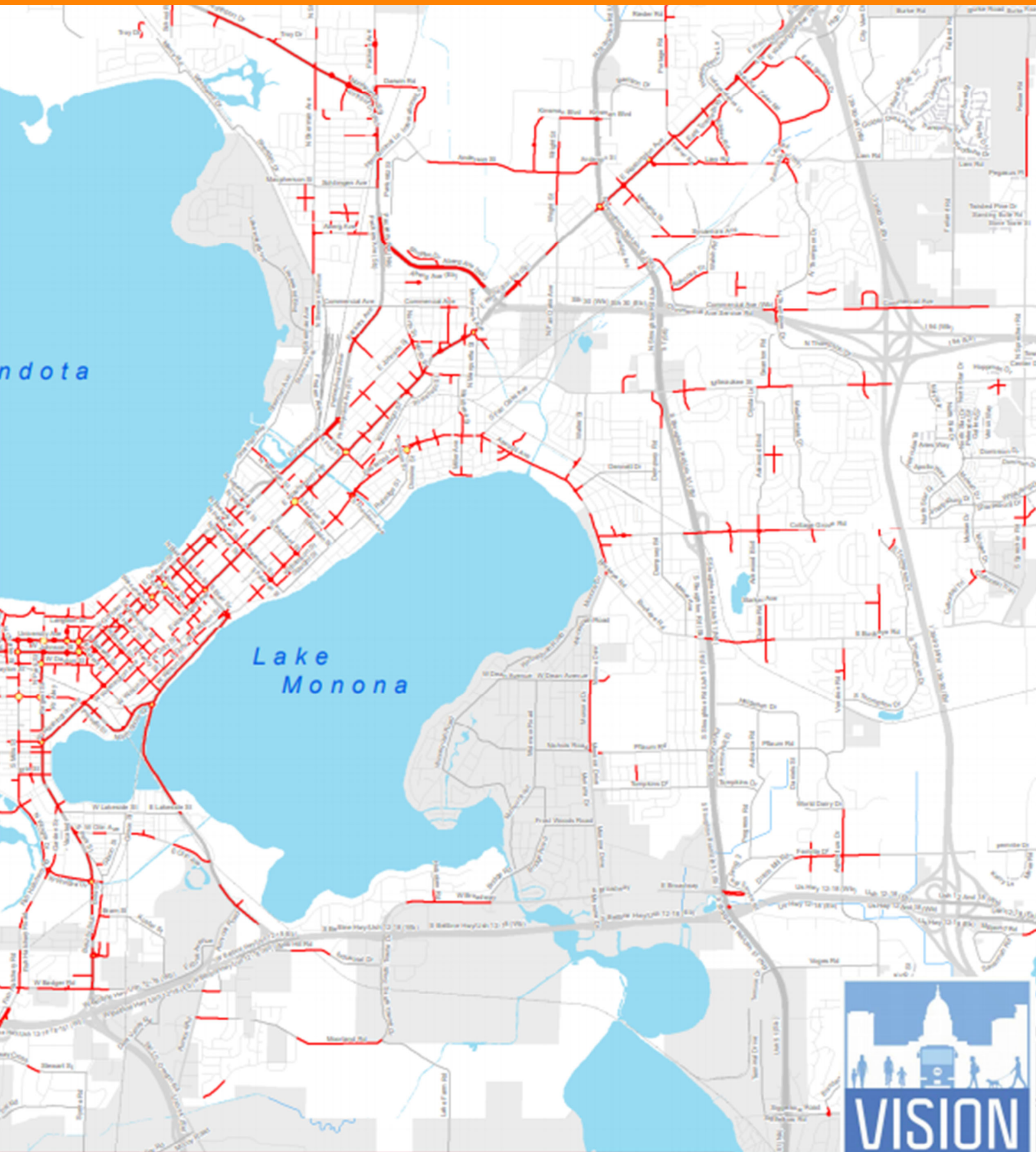
Engagement Section:

To be completed after a series of initial  
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Placeholder image of Proposed 2021 Interim High Injury Network. Will be replaced by a high quality image of the final network after it has been approved, along with a brief description of how it was developed.

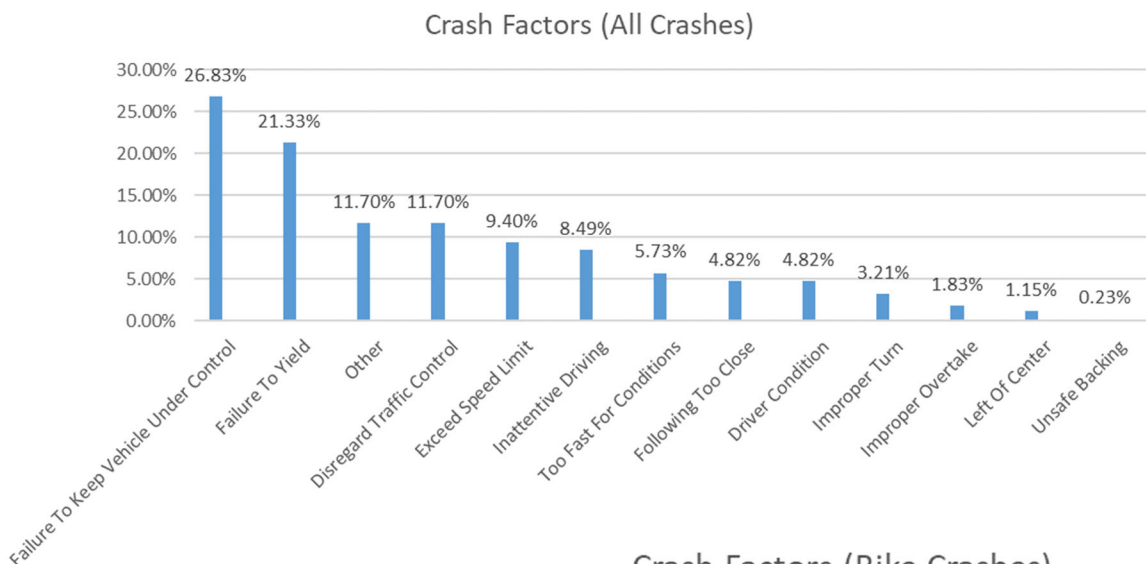


Placeholder image of Proposed 2021 Interim High Injury Network. Will be replaced by a high quality image of the final network after it has been approved, along with a brief description of how it was developed.



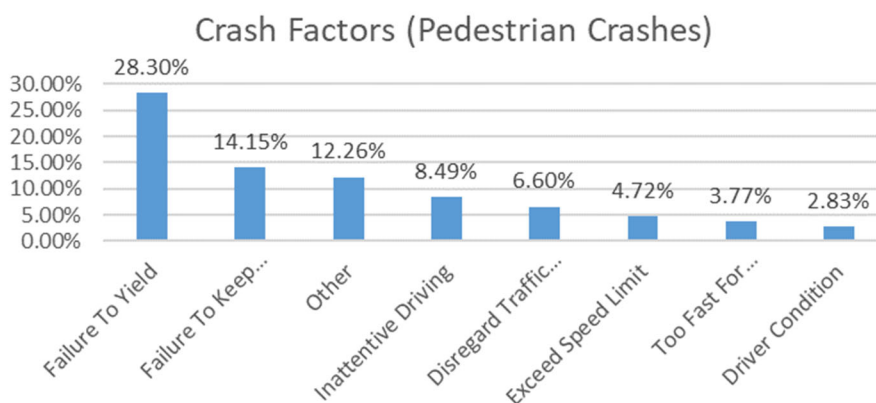
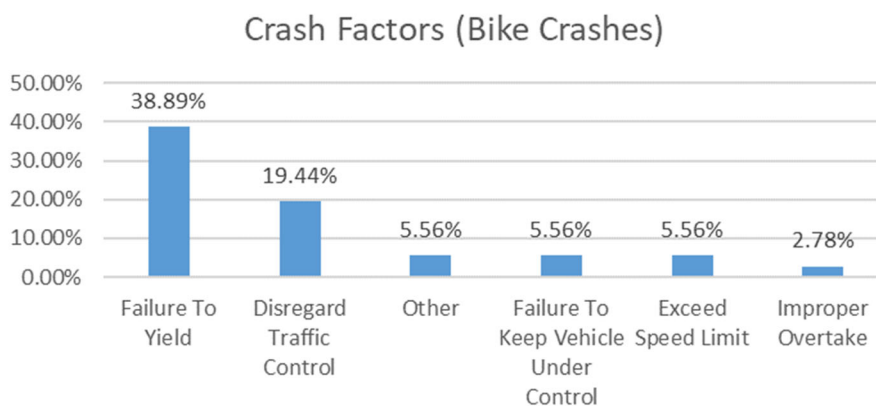
## Crash Factors

All data shown on these first two pages only refers to severe or fatal crashes (labeled K or A), and data in this section refers to all streets in the City of Madison, regardless of whether or not they were used in the production of the HIN.



The factor most commonly identified in the case of severe and fatal crashes is “Failure to Keep Vehicle Under Control.” Better street design can reduce the severity of such crashes through the use of medians and similar strategies. Additionally, lowering speed limits increases stopping distance, giving drivers more control and reducing the severity of a crash.

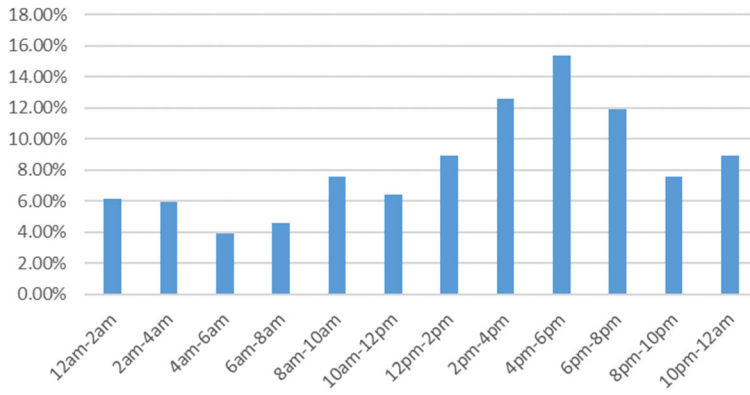
The biggest factor in both bicycle and pedestrian crashes is “Failure to Yield.” Street design elements like high visibility crosswalks can address this trend by providing greater awareness of the crossing—prompting drivers to yield to cyclists and pedestrians, and shifts in driving culture can normalize yielding in areas where it is uncommon.



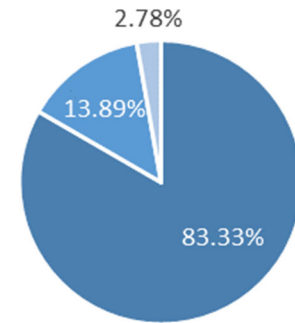
Crash data: TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.

National data for comparison: National Safety Council analysis of National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) and Crash Report Sampling System (CRSS) data sets.

Time (All Crashes)

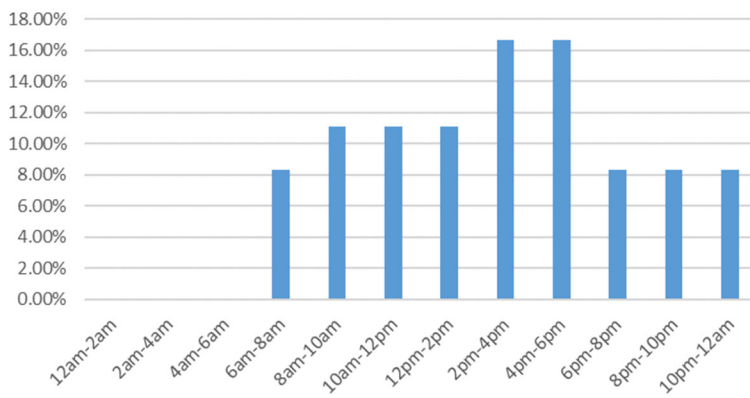


Light Conditions (Bike Crashes)

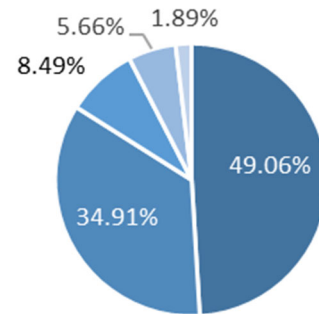


■ Daylight ■ Dark-Lighted ■ Dark-Unlit

Time (Bike Crashes)

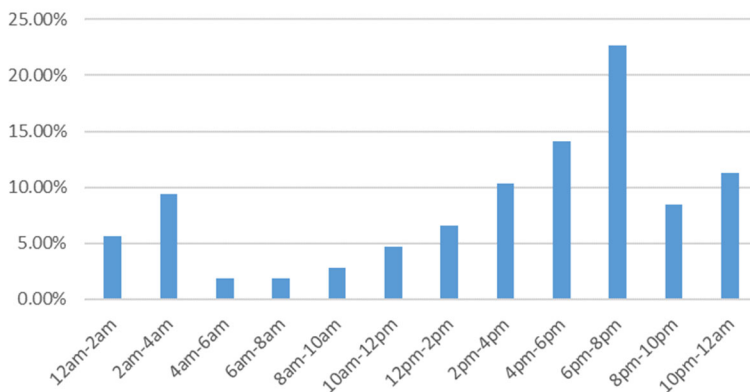


Light Conditions (Pedestrian Crashes)



■ Dark-Lighted ■ Daylight  
■ Dark-Unlit ■ Dusk  
■ Dawn

Time (Pedestrian Crashes)



Late afternoon and evening are consistently the most dangerous time periods for drivers, bicyclists, and pedestrians. Such a trend is similar to national statistics and could be the result of increased street volumes as commuters return home from work and school.

Severe pedestrian crashes peak slightly later than other types of collisions, reaching their apex between 6:00pm and 8:00pm. Data regarding lighting conditions shows that this may be a consequence of reduced visibility. Unlike bike crashes, which overwhelmingly take place in daylight, 8.49% of pedestrian crashes occur in unlit dark conditions and 49.06% occur in lighted dark conditions. Measures that increase pedestrian visibility in all areas regardless of lighting status, including the installation of high visibility crosswalks and pedestrian-activated flashing beacons, could help address this trend.



## Speed Kills

Research shows that speed plays a critical role in determining whether someone involved in a collision will survive. Speed is flagged twice as frequently in crashes that resulted in fatal or incapacitating injuries as compared with collisions with no injuries, possible injuries, or non-incapacitating injuries. This means that while speed might not be one of the leading causes of crashes, a vehicle speeding makes in much more likely that a crash will have severe consequences.

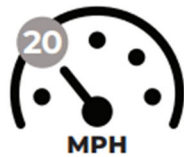
**On Madison streets, a vehicle speeding increases the chance that a collision will result in death or severe injury.**

When bicycle and pedestrian crashes are considered, speed is flagged 4 to 8 times more frequently in crashes with fatalities and in severe injuries when compared to general crashes with bicycles and pedestrians.

Vision Zero Madison's prioritization of the prevention of severe and fatal crashes over the elimination of all collisions means that more weight will be given to strategies that reduce the severity of crashes than actions that solely aim to reduce the total number of collisions. Controlling the speed at which vehicles travel through City streets is key to our goal of zero traffic deaths and life-changing injuries by 2030.

## Controlling Speed is Key

When a person is driving at...



This is their field of vision:



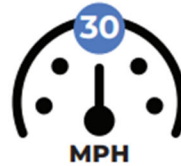
This is their stopping distance:



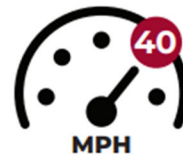
And pedestrians hit at this speed have a...



**13%** likelihood of fatality or severe injury

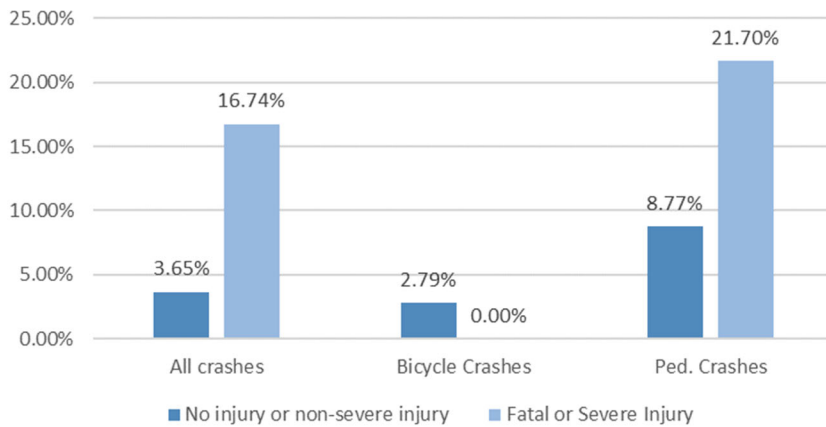


**40%** likelihood of fatality or severe injury



**73%** likelihood of fatality or severe injury

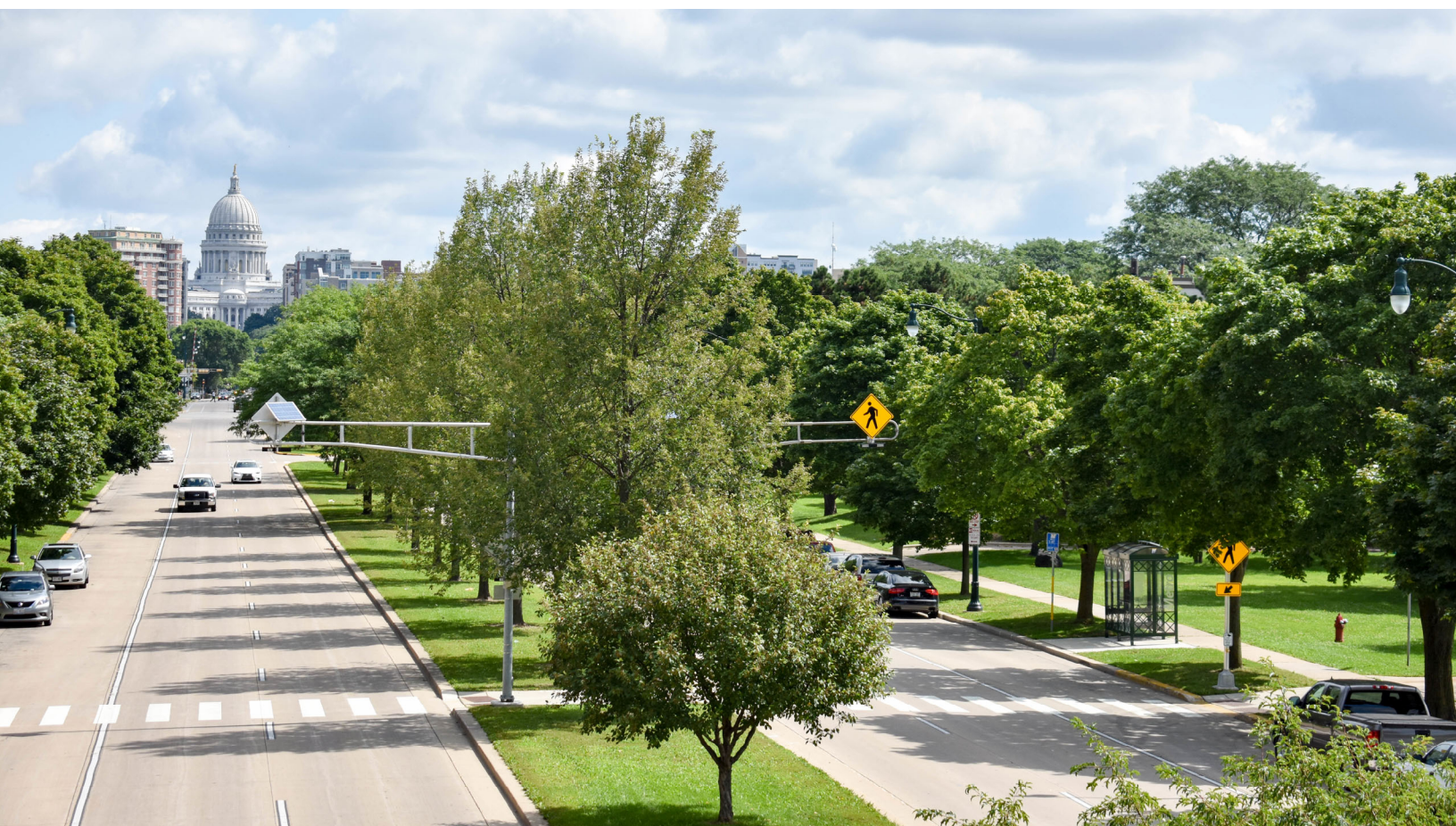
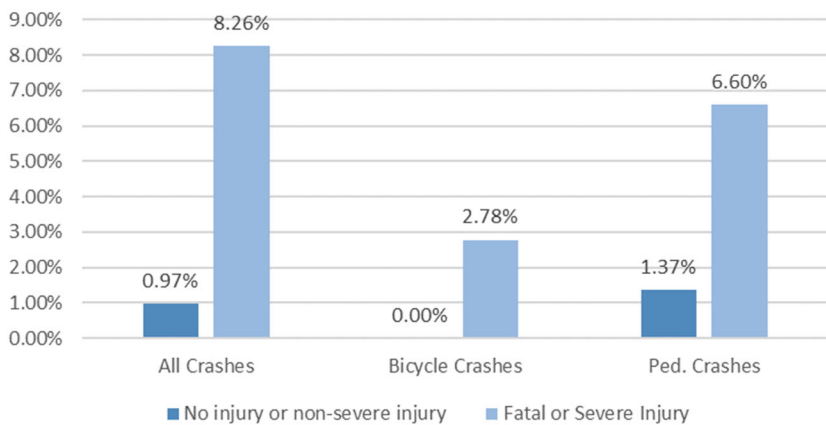
## Alcohol Flagged



For almost all types of crashes, drugs and alcohol were flagged more often for collisions that resulted in an individual dying or suffering a life-altering injury than other types of crashes.

In addition to educating drivers on the dangers of drinking before getting behind the wheel, it is also important to remember that Vision Zero strives to integrate human error into the transportation system rather than only focusing on fostering ideal driving behaviors and building roads for perfect drivers. As mentioned earlier, street design can lessen the consequences that occur when drivers make mistakes by ensuring that crashes are less dangerous when they do happen.

## Drug Flagged

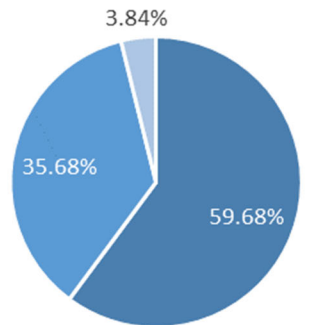




## Crash Demographics

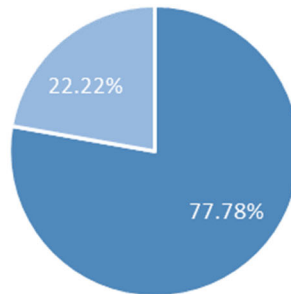
At this point in the development of the action plan we have only had the chance to analyze crashes disaggregating based on sex and age due to the specific way that race and ethnicity are recorded in the TOPS database. Data in this section refers to all streets in the City of Madison, regardless of whether or not they were used in the production of the HIN.

Crashes by Sex (All Crashes)



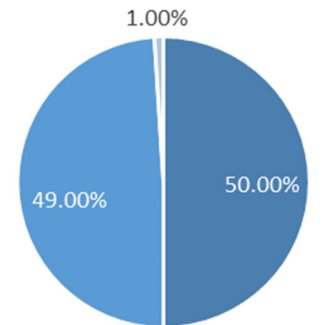
■ Male ■ Female ■ Unknown

Crashes by Sex (Bicyclists)



■ Male ■ Female

Crashes by Sex (Pedestrians)

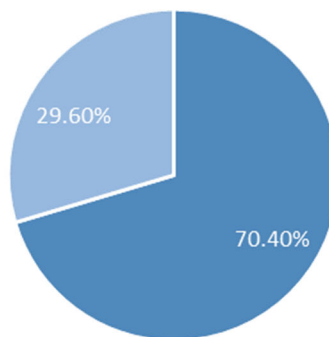


■ Male ■ Female ■ Unknown

Analysis of car crash data reveals that men are more likely to be killed or seriously injured in a collision, and this disparity increases when only bicycle crashes are considered. On the other hand, men and women are almost equally as likely to be killed or experience a life-altering injury when involved in a pedestrian crash.

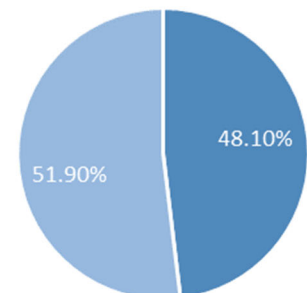
This stark contrast between bicycle crashes and pedestrian crashes can be partially explained by differences in the amount of bicycle and pedestrian trips taken by each sex. Women are less likely to bike in general, and survey data shows that concerns regarding distracted driving play a large role in this decision.

Percentage of Bike Trips



■ Male ■ Female

Percentage of Walking Trips



■ Male ■ Female

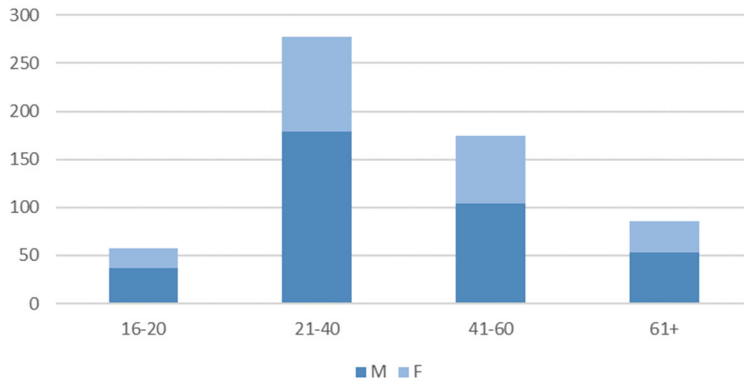
Crash data: TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.

Trip data: Ralph Buehler (2017). Analysis of 2017 and 2009 National Household Travel Survey data for the League of American Bicyclists.

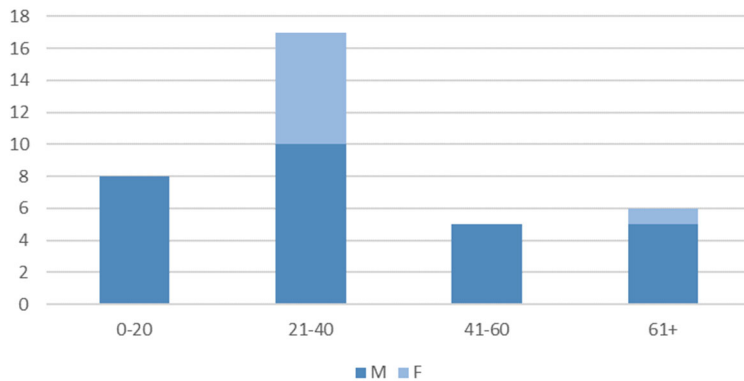
Survey data: Sibley, Anna (2010). Women's Cycling Survey: Analysis of Results. University of North Carolina Greensboro.

Tefft, B.C. (2017). *Rates of Motor Vehicle Crashes, Injuries and Deaths in Relation to Driver Age, United States, 2014-2015* (Research Brief). Washington, D.C.: AAA Foundation for Traffic Safety.

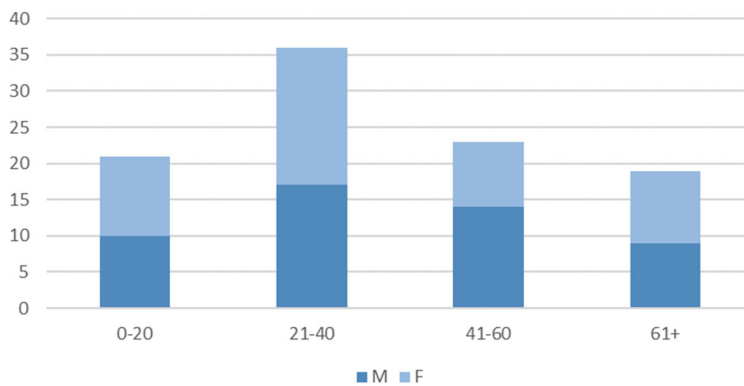
All Crashes by Age, Separated by Sex



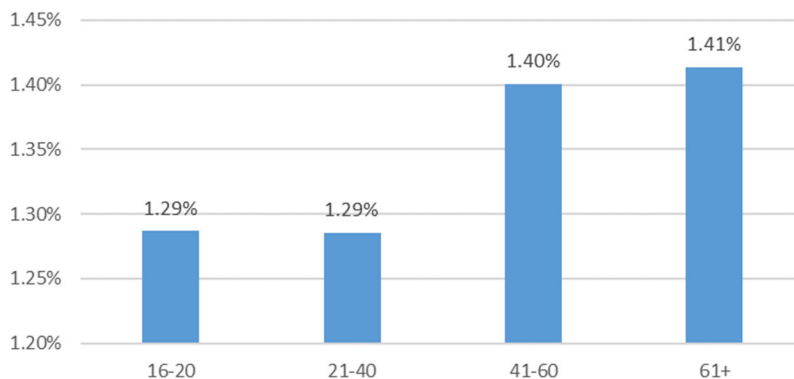
Bicycle Crashes by Age, Separated by Sex



Pedestrian Crashes by Age, Separated by Sex



Percentage of Fatalities/Injuries of Total Crashes Experienced by Age Group



When crashes are disaggregated by age, clear trends emerge that remain when mode of travel and sex are also taken into account. For all crashes, bicycle crashes, and pedestrian crashes, individuals between the ages of 21 and 40 are disproportionately represented.

This data is similar to national trends in car fatalities and indicates that education should be targeted to specific age groups in order to have the largest impact on traffic deaths and life-altering injuries. Furthermore, these trends should be considered in street design. We cannot assume that all drivers, bicyclists, and pedestrians are experienced, alert or ready to react quickly to changes in their environment.





# STRATEGIES AND ACTIONS

## Introduction:

Achieving Zero Deaths and Injuries will require a safe systems approach that address factors that lead to deaths. Madison's uses the following factors in a safe systems approach:

**Safety Data** – Safety Data gives us the tools to understand where injuries and deaths are occurring and what factors are causing the crashes. We can't address a problem until we understand it, and we achieve what we measure. Vision Zero is a data driven process that will direct resources and attention to where we have the greatest opportunity to make a difference.

**Safe Streets** – Factors that lead to fatalities and injuries include the geometry and speed of our streets. Motor vehicle drivers travel fast on streets that feel fast – and speed has a large correlation with crash severity. Altering the layout and geometry of a street can help lower travel speeds and reduce conflicts.

**Safe People** – Encouraging safe behavior for Motor Vehicle drivers, cyclists, and pedestrians is an important part of Vision Zero. In Madison over half of crashes had driver behavior as a contributing factor.

**Safe Vehicles** – Properly operating vehicles with safety equipment can significantly decrease the severity of crashes. For example, the National Highway Traffic Safety Council estimates that the combination of an airbag plus a lap and shoulder belt reduces the risk of death in frontal crashes by over 60 percent.

**Safety Focused Enforcement** – The City is growing in the understanding of the role enforcement plays in safety. Traditionally, enforcement across the country has had a disproportionate

impact on low-income and communities of color, with modest increases in compliance. Madison seeks to address recklessness that leads to deaths, without profiling or creating disproportionate impacts to members of our community.

## Overview of Strategies:

With each factor in the safe system approach, there are corresponding strategies that are actionable. The following bullets summarize the strategies, while the tables that follow provide more detail on the actions.

### Safe Streets

1. Create safer streets through speed limit reductions.
2. Make safety improvements systematically on High Injury Network Streets.
3. Improve street lighting to increase visibility regardless of transportation mode.
4. Incorporate Vision Zero into project selection.
5. Close gaps in the pedestrian and bicycle network.
6. Secure increased funding for implementing Vision Zero strategies & for long-term maintenance of improvements.

### Safe People

1. Develop materials to educate and communicate to city staff and key stakeholders.
2. Build a traffic safety culture in Madison.
3. Expand safe routes programming and walk/bike/travel education.
4. Expand and support alternatives to driving.

## Safe Vehicles

1. Encourage and promote vehicle safety technologies when purchasing vehicles.
2. Train drivers to make the best decisions available to them using defensive driving strategies.

## Safety Data

1. Improve City data, transparency, and communication.
2. Use data to direct funding and resources.

## Safety Focused Enforcement

1. Coordinate engineering, education, and enforcement activities so that MPD can focus traffic enforcement at times and locations to have the greatest impact on reducing unsafe driving and serious crashes.
2. Limit use of pretextual traffic stops and implement clear guidance on their appropriate use.

3. Prioritize hazardous driving behaviors (i.e., speeding and DUI) as the motivation for traffic enforcement and de-prioritize citations for non-hazardous and discretionary offenses (i.e., license and registration).
4. Support non-citation outcomes for non-hazardous violations, and restorative justice for minor traffic offenses, along with programs to reinstate drivers' licenses.
5. Implement a training program for officers regarding traffic safety and implicit bias and hold officers accountable for instances or patterns of biased behavior.
6. Advocate for changes to state statutes and funding that would improve its ability to advance the goals of Vision Zero.



## Acronyms present in the following tables:

MO	Mayor's Office
DOT	Department of Transportation
TE	Traffic Engineering
CE	Engineering
FLT	Fleet
MPD	Madison Police Department
PH	Public Health Madison Dane County
DCR	Department of Civil Rights
AO	Attorney's Office
MC	Municipal Court
MMSD	Madison Metropolitan School District
Metro	Metro Transit
TC	Transportation Commission
TPPB	Transportation Policy and Planning Board
PL	Planning
CC	Common Council
ST	Streets



## Safe Streets

### 1. Create safer streets through speed limit reductions

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	Launch “20 is Plenty” program to reduce the default speed limit to 20mph	Year 1	\$	2 neighborhoods	TE	TC
1.2	Expand “20 is Plenty” citywide	Year 2	\$\$	Citywide default speed limit lowered to 20 mph	TE	TC, CC
1.3	Analyze all HIN streets to determine appropriate speed limits and implement changes	Within 10 years	\$\$		TE	
1.4	Use street reconstruction and repaving project as an opportunity to evaluate speed limits and implement changes where needed.	Ongoing	\$		TE	CE
1.5	Monitor and evaluate results of speed limit changes and recommend needed improvements based on results.	Ongoing	\$\$		TE	CE, MPD
1.6	Increase the use of mobile & permanent speed feedback signs to discourage speeding.	Ongoing	\$\$	Establish an efficient rotation for mobile speed boards on HIN streets.	TE	MPD

### 2. Make safety improvements systematically on High Injury Network streets

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Use Vision Zero data to be proactive in street design that incorporates crash reduction measures	Ongoing	\$		TE	CE, PL
2.2	Use the Complete Green Streets to guide design of projects in the street right-of-way	Year 2		Complete Green Streets project completed in 2022	DOT – TE	CE, PL

2.2	Implement spot treatments such as higher visibility signals, hardened centerlines, green markings, protected left turns and other small improvements on HIN.	Ongoing	\$		TE	CE
2.3	Do quick build projects that can be implemented until a permanent project is possible	Year 1	\$	Start with Slow Streets Program projects	TE	CE
2.4	Prioritize installing pedestrian countdown signals and Leading Pedestrian Intervals at intersections on the HIN	Ongoing	\$		TE	CE
2.5	Develop a policy for when APS pedestrian signals/RRFBs are added without a written request (for example, BRT stations)	Year 2	\$	Have an approved policy by Dec 2022	TE	DCR, CE, Metro
2.6	Add RRFBs and other crossing improvements at non-signalized transit stops on HIN	Ongoing	\$	Minimum five crossing upgrades per year	TE	Metro
2.7	Upgrade curb ramps along HIN streets that are not ADA compliant	Ongoing	\$		CE	TE, DCR
2.8	Use HAWK signals where warrants are not met for a signal		\$		TE	CE
2.9	Collaborate across departments to further safety strategies while also considering emergency access, development plans and more.	Ongoing			MO	Citywide

### 3. Improve street lighting

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1	Convert lighting to LED	Ongoing	\$\$\$		TE	
3.2	Enhance street lighting to improve visibility throughout the HIN	Ongoing	\$		TE	
3.3	Ensure high visibility lighting at BRT station crosswalks	Within 5 years	\$		TE	Metro



## 4. Incorporate Vision Zero into project selection

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1	Develop a data driven, equitable process for prioritizing Vision Zero fund-	Year 2	\$	Process in place for 2022 project selection	TE	CE, MPD TC, TPPB
4.2	Use Vision Zero and the HIN as a criteria in selecting capital improvement projects	Ongoing	\$		CE	TE TC, BPW
4.3	Use the HIN and Vision Zero as a consideration in project selection the NTMP and Ped Bike Enhancement	Year 2	\$	Process in place for 2022 project selection	TE	CE TC, TPPB

## 5. Close gaps in the pedestrian network and bicycle network

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
5.1	Increase mileage of protected bike lanes on HIN streets and secure budget to cover cost of maintenance	Within 5 years	\$\$\$		DOT - TE	CE, ST
5.2	Use information from updated School Travel Plans to identify priorities near schools	Within 5 years	\$\$	All MMSD school travel plans updated by 2023	TE	MMSD, CE
5.3	Update Pedestrian Plan	Within 5 years	\$\$	Completed plan by 2025	DOT - TE	CE, PL, PH, METRO
5.4	Prioritize closing gaps in the pedestrian and bicycle network on and along the HIN	Ongoing	\$\$\$		TE	CE
5.5	Update Bicycle Plan	Within 5 years	\$	Updated plan by 2025	MPO?	TE, CE

## 6. Secure increased funding for implementing Vision Zero strategies &amp; for long-term maintenance of improvements

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
6.1	Increase dedicated fund-	Within 5 years	\$\$\$			
6.2	Increase funding for maintenance of continental crosswalks, green markings, DFB, RRFBS, protected bike lanes and other safety improvements	Within 5 years	\$\$\$			
6.3	Continue to pursue federal & state funding for infrastructure safety improvements on HIN streets	Ongoing	\$		CE	TE

## Safe People

### 1. Develop materials to educate and communicate to city staff and key stakeholders

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	Create a guide for Public Information Officers to guide communication around Vision Zero	Year One	\$		TE	Citywide
1.2	Use the guide to develop something that can be used by Vision Zero Stakeholders Task Force members when discussing VZ	Year One	\$		TE	Community
1.3	Use Vision Zero logo on construction project signs, bumper stickers on city vehicles, helmets, etc.	Year Two	\$		TE	CE, FLT
1.4	Develop a guide and presentation for departments to understand Vision Zero & how to incorporate into their work to reach goals.	Year Two	\$		TE	Citywide

### 2. Build a traffic safety culture in Madison

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Continue to improve the Vision Zero website and share messages through city social media and other outlets (emails, mailings, media channel, etc.).	Ongoing	\$			Citywide, Community
2.2	Create a Vision Zero outreach campaign based on data such as common crash factors and locations. Include culturally relevant materials in multiple languages.	Year One, Ongoing	\$\$		TE	MPD, PH, DCR
2.3	Create a Vision Zero communication campaign specifically around speed limit change to educate travelers about the connection between safety and speed and increase understanding of new speed limits.					



2.4 Provide opportunities for survivors to share their personal stories

2.5 Offer safe driving classes (such as the Bicycle Friendly Driver Program) to both city staff and the public. *(How does this item fit with Safe Vehicles actions?)*

2.6	Work with the Municipal Court to develop additional diversion classes similar to Pedestrian Safety Seminar	Within 5 years	TE	AO, MC, MPD
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2.7	Develop ways to support driver education for youth who cannot afford private instruction.	Within 5 years		
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Support continued requirement for driving examinations for new drivers

2.8 Work with programs and businesses that offer driver instructor training to include Vision Zero information in their trainings and ensure that laws that make walking and biking safer are a part of the trainings. Offer incentives for taking the trainings.

2.9 Provide opportunities for private sector involvement.

2.10 Participate in [Place of Last Drink](#) to combat DUI

### 3. Expand Safe Routes programming and walk/bike/travel education

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1	Work with MMSD and community partners to support a continued Safe Routes to School program and expand programming.	Ongoing	\$\$			

3.2	Work with MMSD to update School Travel Safety Plans with an emphasis on increasing walk and biking and prioritizing safety. Ensure schools are educating parents/families on the School Travel Safety Plans and encouraging walking, biking, and transit.	Year Two	\$\$	TE	MMSD, Community
3.3	Expand safe walking and bicycling education for youth.	Ongoing	\$\$	TE	MMSD, Community
3.4	Offer mobility education to high school students that includes information on safe walking, biking, driving and taking transit.	Within 5 years	\$\$		MMSD, Metro, TE
3.5	Expand Be Bright at Night light giveaways to ensure that all residents have access to required bike lights.	Ongoing	\$	TE	Community

#### 4. Expand and support alternatives to driving

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1	Support policies that reduce VMT to reduce the total number of motor vehicles on the streets of Madison.	Ongoing	\$\$\$		DOT	Citywide
4.2	Increase convenience of alternatives to driving	Ongoing	\$\$\$		DOT	Citywide
4.3	Support programs that discourage impaired driving by offering fee/low cost alternatives		\$\$			Citywide, Community



## Safe Vehicles

These safe vehicles strategies aim to assist drivers with emerging technologies. These technologies range from alerts, to triggering actions, to driver behavior, to automated driving features.

### 1. Encourage and promote vehicle safety technologies when purchasing fleet vehicles

There are different technologies available for installation on vehicles. Some technologies like anti-lock braking system (ABS), lane departure alert, and backup cameras can be obtained directly from the manufacturer. Other technologies do not come standard from the manufacturer and require us to reach out to different vendors. These technologies usually require a pilot, and coordination to retrofit our vehicles. Furthermore, some technologies can be leveraged to assess driver behavior.

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	All sedans, pickups, and vans that the City purchases will include back-up cameras and ABS.	Ongoing	\$	All City vehicles will have the minimum technologies to assist drivers.	Fleet	
1.2	Where available, the City will purchase vehicles with lane departure alerts, adaptive cruise control, automatic emergency braking, side cameras, and other, newly available technologies.	Ongoing	\$\$		Fleet	
1.3	The City will pilot the different technologies available as long as they are cost efficient and/or will greatly benefit the City, employees, and residents.  If the pilot is successful and there is a return on investment, the City will try to purchase the technology.	Ongoing	\$\$	Have the right tools to minimize human error while operating City vehicles.	Fleet	
1.4	The City will continue to install telematics devices on all Public Works vehicles.	Ongoing	\$	Create a telematics program that allows for driver coaching.	Fleet	Geotab
1.5	Speeding, harsh braking, hard acceleration, seat-belt usage, and idling will be monitored by participating departments.	Ongoing	-	Monthly reporting will be used	Fleet	Public Works

1.6	Geographical trends will be used to further identify opportunities to invest time in design, enforcement, and education.	Ongoing	-	As more data is reviewed from our vehicles, trends will stand out which will help us focus our efforts more efficiently.	Fleet	Public Works, TE, MPD
1.7	A database of collision costs involving City vehicles including insurance claims, worker's compensation, and auto body repair will be centrally tracked and reported on.	Ongoing	-	Better understand the budget impact of collisions and how such costs can be mitigated.	Fleet	Risk Management

## 2. Train drivers to make the best decisions available to them using defensive driving strategies

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	All City staff will attend a defensive driver training in the next few years.	Year 1-2	\$	All City employees will have an understanding of defensive driving and practice its methodology when driving.	Fleet	Citywide
2.2	The City will review driver behavior by department and identify risky drivers.	Ongoing	-		Fleet	Public Works
2.3	Drivers deemed risky will need to attend a mandatory training session.	Ongoing	\$	Focused training will be available to drivers' who engage on risky behaviors.	Fleet	Citywide
2.4	City Vehicle Driver rules updated to place more focus on safety (APM 2-13).	Year 1	-		Fleet	Citywide
2.5	"How's My Driving?" bumper stickers being drafted and placed on all vehicles by the summer of 2021.	Ongoing	\$	Have a centralized line where residents can call to report drivers involved in risky behaviors.	Fleet	Citywide
2.6	Safe Driver Award to recognize City drivers.	Ongoing	\$		Fleet	Citywide

## Safety Data

### 1. Improve City data, transparency, and communication

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	Work with Public Health to incorporate emergency room data into Vision Zero data	Year 2-3	\$		TE	PH
1.2	Track Vision Zero Action Plan implementation & share annual report	Year 1	\$	Establish annual report	TE	Citywide
1.3	Maintain the Vision Zero website with updated crash data, annual report and other progress information	Ongoing	\$		MO	
1.4	Increase the use of mobile & permanent speed feedback signs to discourage speeding.	Ongoing	\$\$	Establish an efficient rotation for mobile speed boards on HIN streets.	TE	MPD

### 2. Use data to direct funding and resources

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Conduct evaluation studies to measure effectiveness of Vision Zero treatments	Ongoing	\$	Conduct x many evaluations per year	DOT - TE	CE, MPD
2.2	Analyze Vision Zero investments using an equity framework	Year 2	\$	Develop a framework for analyzing the equity of project implementation, programming and engagement efforts	DOT	Citywide
2.3	Monitor and evaluate results of speed limit changes and recommend needed improvements based on results.	Ongoing	\$\$		TE	CE, MPD
2.5	Work with UW TOPS Lab to create a High Injury Network framework	Year 1	\$		TE	



## Safety Focused Enforcement

As adopted, the resolution that commits the City of Madison to eliminating traffic deaths and serious injuries also challenges stakeholders to examine the role traffic enforcement plays in creating safer streets. The same resolution requires the Vision Zero Action Plan to document the disproportionate impacts of traffic enforcement on people of color, and to create a plan that works to reduce and eliminate those harms.

The Safety Focused Enforcement working group within Vision Zero Madison has worked for the last six months to synthesize data, strategies, policies, and practices that will best inform the Vision Zero Action Plan, and to lay groundwork for continued efforts.

### The Role of Traffic Enforcement in Traffic Safety

Our working group believes that in the long run, the City of Madison should strive to achieve its Vision Zero objectives with minimal traffic enforcement. This provides an opportunity for the city to shift further away from traffic enforcement in general. This will require deliberate road design decisions and efforts to create a self-enforcing culture of safe driving.

In the near term, however, there are important steps that MPD can take through its existing traffic enforcement programs—the Traffic Enforcement and Safety Team (TEST), traffic enforcement grants from WisDOT’s Bureau of Transportation Safety (BOTS), and patrol-based enforcement—to support the goals of Vision Zero. Our recommendations reflect these opportunities.

Pretextual stops are used to stop drivers suspected of criminal activity, independent of traffic violations. These stops often create a procedural justice issue, introducing racial disparities, and need to be examined as to the role they should have in policing in general. We believe they do not have a role in traffic

enforcement and should be reserved for very specific situations.

A research review by our working group suggests that knowing and quantifying the impacts of traffic enforcement on safety is surprisingly complicated (6–11). In general, however, effective traffic enforcement should be part of proactive efforts targeting the most dangerous behavior and paired with physical road changes and public awareness strategies (1, 12, 13). This points to the need for deliberate coordination of traffic enforcement with other Vision Zero initiatives in Madison and for a better understanding of the effectiveness of different traffic enforcement activities.

### Traffic Enforcement Snapshot: Citations and Disparities

According to traffic citation records from 2019 to 2020 in Madison, 12,151 (65%) are for hazardous violations (aka “traffic safety violations”) such as speeding (26%) and driving while impaired or intoxicated (8%), while 6,454 (35%) are for non-hazardous violations such as invalid license or registration (26%). This distinction is important for advancing Vision Zero and mitigating harmful racial disparities, as described by Marco Conner of Transportation Alternatives (1):

*Traffic safety violations are driving-offenses that are clearly defined and inherently dangerous, like texting while driving, speeding, drunk driving, and failing to yield to a vulnerable road user. For drivers caught committing traffic safety violations, there is little racial disparity in ticketing by police. Because such violations and their penalties are clearly defined, there is little room for subjectivity, giving police officers less discretion. Indeed, “the driver’s race (and gender) has no relevance to the likelihood of being stopped” for a traffic safety violation; rather, it is driving behavior that determines police enforcement of most traffic-safety laws with clear connections to dangerous driving.*

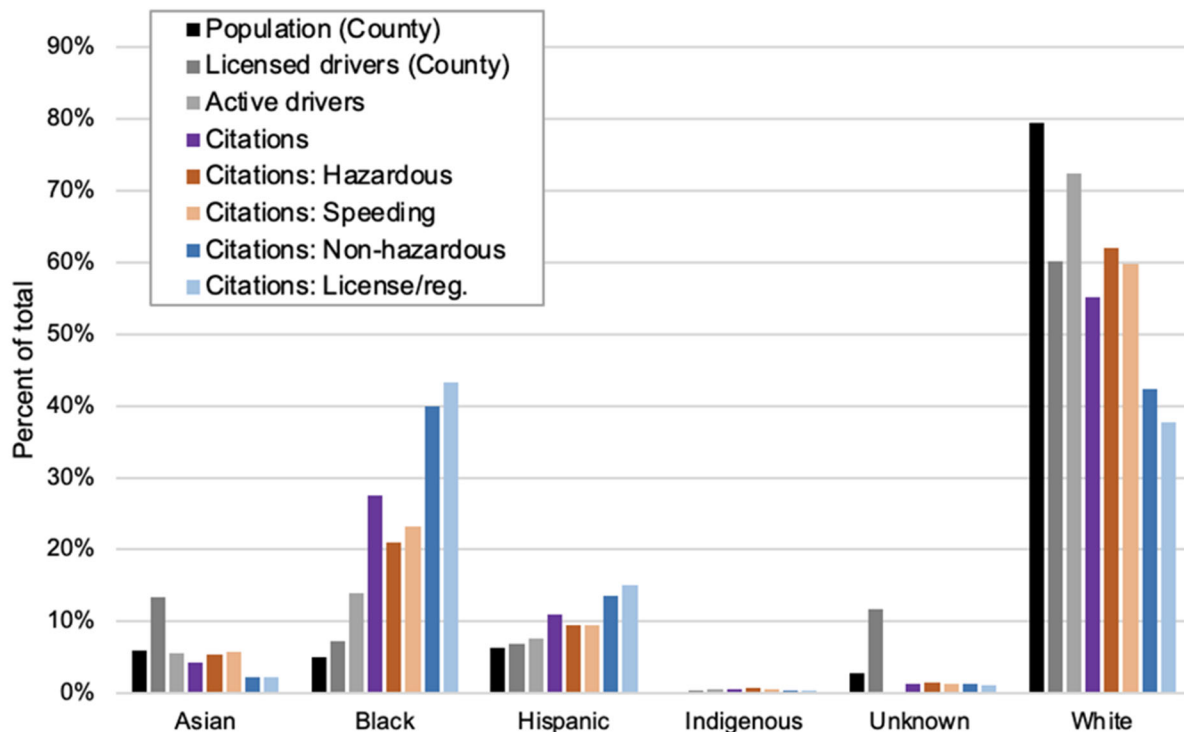
Racial disparities in traffic enforcement are a national narrative and not unique to Madison. However, Vision Zero Madison provides an opportunity to identify these disparities and provide a path to eliminating them. We recognize that traffic enforcement in Madison has resulted in—and continues to provide opportunities for—disproportionate impacts and harm to communities of color and lower income residents.

To understand these disparities, we looked at citation rates by race for different violations, compared to the overall population, licensed drivers, and estimated active drivers in Dane County. The total population is based on Census data, the number of licensed drivers is based on data from the Wisconsin DMV, and estimates of active drivers are derived from the number of not-at-fault drivers in crash data, using methods described by Alpert et al. (2).

As shown in the figure below, Black, Hispanic, and Indigenous drivers receive a larger relative share of citations than White drivers, particularly for non-hazardous violations. This disparity is somewhat smaller after accounting for the estimated number

of active drivers. For instance, Black residents account for just 5% of the total population, 7% of licensed drivers, and 14% of active drivers, but receive 28% of traffic citations and 40% of non-hazardous citations. In contrast, White drivers account for 80% of the total population, 60% of licensed drivers, and 72% of active drivers, but receive just 55% of traffic citations and 42% of non-hazardous citations.

Using estimates of active drivers, this means an average Black driver is nearly five times more likely, a Hispanic driver is three times more likely, and an Indigenous driver is 1.3 times more likely to receive a non-hazardous citation than an average White driver. While this might be due partly to biases in traffic enforcement, it is also the result of broader systemic disparities. For instance, the share of suspended or revoked licenses is 12% among Black drivers, 8% among Hispanic drivers, 6% among Indigenous drivers, and just 2% among White drivers. Moreover, research across the U.S., including media coverage from Wisconsin, indicates these suspensions are often for non-driving-related offenses like failure to pay a fine (3–5).



## Traffic Enforcement Prioritization

Based on the available data (2015-2019) and other information described above, there appear to be several critical safety issues in Madison for which traffic enforcement could play an important role. These offenses, which put drivers and other road users at risk, include:

1. **Driving while impaired or intoxicated.** Alcohol or drugs are a factor in 41% of fatal crashes and 19% of serious crashes.
2. **Speeding or driving too fast for conditions,** which accounts for 29% of fatal crashes and 14% of serious crashes.
3. **Failure to yield,** which accounts for 9% of fatal crashes and 21% of serious crashes. Half of these crashes involve a pedestrian or cyclist.

There are other traffic safety issues that MPD could actively enforce, but should not be a high priority. These offenses are less likely to put other road users

at great risk, they are more prone to biased enforcement, and they can be addressed through other countermeasures. They include:

1. **Failure to wear a seat belt,** which accounts for 17% of fatal crashes and 4% of serious crashes. Seat belt laws have been highly effective in reducing traffic deaths, but they are a secondary traffic enforcement issue. As such, encouraging seat belt use, whether through education and community partnerships should remain a priority.
2. **Bicycle and pedestrian infractions.** While cyclists and pedestrians account for 41% of fatal crashes and 31% of serious crashes, there is little evidence that bicycle or pedestrian infractions are significant contributors.

Other non-hazardous violations, such as license and registration violations, are not expected to improve traffic safety and do not fit within the Vision Zero framework. As the data show, citations for these offenses also exacerbate racial disparities. MPD should consider taking steps to de-prioritize these types of offenses.

1. Coordinate engineering, education, and enforcement activities so that MPD can focus traffic enforcement at times and locations to have the greatest impact on reducing unsafe driving and serious crashes

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	Identify priority times and locations for traffic enforcement and establish enforcement benchmarks to include in quarterly reports.				MPD	
1.2	Establish a formal interdepartmental team and leverage existing collaboratives to coordinate engineering, education, and enforcement, as they relate to Vision Zero. This effort should amplify traffic enforcement activities through media, community, and stakeholder engagement to maximize its impact.				MPD	City-wide



## 2. Limit the use of pretextual traffic stops and implement clear guidance on their appropriate use

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Develop standard operating procedures (SOPs) identifying criteria for pretextual stops (e.g., reasonable suspicion of criminal activity).				MPD	
2.2	Require documentation of pretextual stops in official police reports and data collection; include in the annual report beginning 2023.				MPD	

## 3. Prioritize hazardous driving behaviors (i.e., speeding and DUI) as the motivation for traffic enforcement and de-prioritize citations for non-hazardous and discretionary offenses (i.e., license and registration)

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1	Hazardous violations should account for 75% of citations by 2023 and 80% of citations by 2025.				MPD	
3.2	Provide guidance for the handling of non-hazardous violations				MPD	

## 4. Support non-citation outcomes for non-hazardous violations, and restorative justice for minor traffic offenses, along with programs to reinstate drivers' licenses.

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1	Provide department-wide guidance for expectations regarding non-citation outcomes for non-hazardous citations, including programs to assist in obtaining or reinstating driver's licenses.				MPD	MC, City-wide
4.2	Limit the use of license suspension and revocation to cases with repeated hazardous violations				MPD	
4.3	Identify and support key programs and stakeholders to significantly reduce racial disparities in driver's license status.				MPD	City-wide

## 5. Implement a training program for officers regarding traffic safety and implicit bias and hold officers accountable for instances or patterns of biased behavior

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
5.1	Develop curriculum to be presented at MPD's pre-service academy related to racial disparities in traffic enforcement and panel discussion on DWB in Madison.				MPD	

5.2	Develop curriculum to be presented at MPD's in-service training related to racial disparities in traffic enforcement and panel discussion on DWB in Madison.	MPD
5.3	Develop curriculum to be presented annually at an MPD's Supervisor Check-In related to effectively monitoring, coaching and documenting officers traffic enforcement outcomes.	MPD

## 6. Advocate for changes to state statutes and funding that would improve its ability to advance the goals of Vision Zero

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
6.1	Advocate for the ability to conduct automated traffic enforcement.				City-wide	
6.2	Advocate for funding to expand treatments court in support of operating while intoxicated (OWI) reduction				City-wide	
6.3	Explore other opportunities for state-level reform to advance Vision Zero.				City-wide	

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