

NMDOT SHSP

2026 STRATEGIC HIGHWAY SAFETY PLAN

NEW MEXICO DEPARTMENT OF TRANSPORTATION

A comprehensive strategy to achieve zero traffic deaths through the ***Target Zero*** initiative.

target zeroNM SAFE ROADS FOR ALL

JULY 2026

New Mexico DEPARTMENT OF TRANSPORTATION MOBILITY FOR EVERYONE

New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

Why the SHSP Matters

- Offers a roadmap to reduce crashes and serious injuries
- Encourages responsible road use for drivers, cyclists, and pedestrians
- Supports policies that prioritize roadway safety
- Builds a community mindset that values safe travel

Shiprock, New Mexico, USA (source: NMDOT)

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Unless otherwise stated, results of the analyses are based on data that was received from the New Mexico Department of Transportation. Crash data represents years 2020 to 2024 and was obtained from the state police and other enforcement agencies. The data was used "as is" for analysis purposes and should be interpreted accordingly.

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Acknowledgments

From Collaboration to Strategy: How NMDOT, Interagency Working Groups, and Executive Leaders Shaped the SHSP

New Mexico Department of Transportation (NMDOT) staff would like to thank and acknowledge those members and stakeholders who NMDOT staff worked alongside on a variety of different Interagency Working Group (IAWG) meetings throughout the development of the 2026 SHSP. Echoing the Responsibility is Shared principle of the Safe System Approach, these IAWG members were experts brought together from diverse agencies. These agencies covered law enforcement, NMDOT staff, NMDOT Traffic Safety Division staff, Metropolitan Planning Organizations (MPO)/Regional Transportation Planning Organizations (RTPO) staff, Statewide Transportation Improvement Program (STIP) members, engineering/planning staff, education, advocacy groups, consultants, school administrators, health care representatives, emergency services, construction, and Tribes, Pueblos, and Nations—all with the goal of sharing expertise and advancing roadway safety initiatives.

Out of nearly 1,500 invitations sent to IAWG members, about 500 were accepted, resulting in strong participation across 13 meetings that addressed a variety of SHSP and Emphasis Area topics. These IAWG meetings occurred throughout the SHSP development process and kept all stakeholders routinely informed and involved regarding the progress and direction of the 2026 NMDOT SHSP.

More than 50 Agencies helped shape this SHSP and its Emphasis Areas through 13 meetings addressing a wide range of traffic safety topics—thank you!

IAWG members were responsible for the following tasks:

- Developing interim performance goals
- Determining which strategies and countermeasures to investigate further
- Reviewing performance objectives
- Establishing and prioritizing a variety of strategies and programs
- Championing implementation of the SHSP
- Tracking progress



Partnering for Roadway Safety: Leadership in Action

An Executive Committee was formed that was comprised of NMDOT managers and other high-ranking staff. This group met virtually multiple times over the course of the project to evaluate progress, review data analysis, approve emphasis areas, and review countermeasures, strategies, programs initiatives, and policies.

Executive Committee: A Unified Approach to Roadway Safety

- David Quintana, NMDOT, Acting Cabinet Secretary
- Mo Moabed, NMDOT, Deputy Secretary
- Amy Whitfield, NMDOT, Special Director, Statewide Beautification and Target Zero
- Denise Peralta, PE, NMDOT, Executive Director of Strategic Infrastructure Development Divisions
- Jerry Valdez, NMDOT, Senior Executive Director of Special Projects
- David Harris, NMDOT, Executive Director of Modal Programs
- Angelica Trujillo, NMDOT, Tribal Liaison
- Jessica B. Cooper, NMDOT, Deputy Secretary of the Office of Business Support
- Manuelito Maestas, PE, NMDOT Acting Chief Engineer
- Kristine Mihelcic, NMDOT, Director of Communications
- Mallery Manzanares, NMDOT, Administrative Services Director

Thank You to the Interagency Working Groups

The New Mexico Department of Transportation extends its sincere appreciation to the Interagency Working Group members whose collaboration, expertise, and dedication were essential to the development of this SHSP and its Emphasis Areas.

Thank you for your partnership, leadership, and continued commitment to roadway safety in New Mexico.

New Mexico Oil and Gas Association
NM Dept. of Finance and Administration
NM Dept. of Health
NM Motorcycle Safety Program
NM911 Bureau
NMDOT - Multimodal Planning and Programs Bureau
NMDOT - Planning Division
NMDOT- Traffic Safety Division
North Central New Mexico Economic Development District
OnStation
Permian Road Safety Coalition
Permian Strategic Partnership

AAA New Mexico
Acoma Pueblo - Community Development Office
Albuquerque Ambulance Service
Albuquerque Public Schools
Bureau of Indian Affairs
Center for Health Protection, Public Health Division
City of Farmington
City of Las Cruces
City of Rio Rancho
City of Santa Fe
COG: Eastern Plains
COG: Mid-Region
COG: South Central
COG: Southwest New Mexico
Constructors Inc.

Pueblo de San Ildefonso
Pueblo de Sandia
Ramah Navajo
Regional Emergency Dispatch Authority
Safer New Mexico Now
Santa Fe Public Schools
Santa Fe Regional Emergency Communications Center
Socius Amica
Southwest Bike Initiative
University of New Mexico
Velo Cruces Inc.
Vulnerable Road Users - New Mexico

Devon Energy
Dona Ana Fire Rescue
Esperanza Bicycle Safety Education Center/ Albuquerque SRTS
FHWA
Las Cruces Public Schools/SRTS
NM Law Enforcement Liaisons
Mescalero Apache Tribe
Mountain States Constructors
MPO: El Paso
MPO: Mesilla Valley
MPO: Santa Fe
Navajo DOT

Acronyms

AEB	automated emergency braking
AI	artificial intelligence
APS	Automated Pedestrian Sensors
ATV	all-terrain vehicle(s)
BAC	blood alcohol concentration
BIA	Bureau of Indian Affairs
CRP	Carbon Reduction Program
DUI	driving under the influence
EA	Emphasis Areas
EMS	emergency medical service
FHWA	Federal Highway Administration
GHG	greenhouse gas
GPS	Global Positioning System
HAWK	High intensity Activated crossWalK
HFST	high-friction surface treatment
HHRR	High-Risk Rural Road
HIN	High Injury Network
HSIP	Highway Safety Improvement Program
HVE	High-visibility enforcement
IAWG	Interagency Working Group
IIJA	Infrastructure Investment and Jobs Act
ISA	Intelligent Speed Assistance
LED	light-emitting diodes
LIDAR	light detection and ranging
LRTP	Long Range Transportation Plan
MASH	Manual for Assessing Safety Hardware
NMDOT	New Mexico Department of Transportation
ODP	Older Drivers and Pedestrians
PDO	Property Damage Only
PHB	pedestrian hybrid beacons
PSCi	Proven Safety Countermeasures Initiative
ROV	Recreational Off-Highway Vehicle(s)
RRFB	rectangular rapid flashing beacons
RTPO	Regional Transportation Planning Organizations
SHSP	Strategic Highway Safety Plan
SMART	specific, measurable, action-oriented, reasonable, and time-bound
SRTS	Safe Routes to School
SSA	Safe System Approach
TraCS	Traffic and Criminal Software
USDOT	U.S. Department of Transportation
VMT	vehicle miles traveled
VRU	Vulnerable Road User

Executive Summary

As a core requirement of the Highway Safety Improvement Program, New Mexico's Strategic Highway Safety Plan (SHSP) serves as the State's unifying roadmap for advancing roadway safety efforts. The SHSP aligns agencies, partners, and resources around a shared goal: eliminating traffic fatalities and reducing serious injury crashes on New Mexico's roadways. The goal is advanced through data-driven decision-making, sustained stakeholder engagement, and strategic investment in proven safety strategies.

The 2026 SHSP represents a significant evolution in New Mexico's approach to traffic safety. Consistent with New Mexico's Target Zero initiative, the SHSP is grounded in the Safe System Approach (SSA). The SSA recognizes that traffic deaths and serious injuries are preventable, and that achieving safer outcomes depends on a redundant system of strategies and countermeasures supported by engaged partners who share responsibility for roadway safety. Target Zero and the SSA are new foundations of the 2026 SHSP, reinforcing a shift toward a proactive, human-centered, and system-wide approach that improves traffic safety for all road users, not just motorists. Together, these principles are intended to reverse the increases in fatalities and serious injuries and address other high priority safety needs, such as pedestrian and impaired driving crashes.

The 2026 SHSP identifies five data-driven emphasis areas (EAs) that address critical crash types and key roadway user behaviors: Human Behavior, Road/Lane Departure, Vulnerable Road Users, Intersections, and Tribal Lands. These EAs were validated through stakeholder input, including collaboration with the Interagency Working Groups, and reflect both statewide data and local perspectives.

New Mexico's EAs closely align with the five complementary elements of the SSA—Safe Roads, Safe People, Safe Speeds, Safe Vehicles, and Post-Crash Care. Viewing the EAs through a SSA lens enables the development of integrated, actionable strategies and countermeasures that address safety challenges from multiple angles. The EAs serve as the organizing framework for identifying, prioritizing, and implementing strategies that respond to New Mexico's most pressing roadway safety challenges.

The SHSP is carried out through a continuous cycle of planning, implementation, and evaluation. The planning phase identifies safety priorities and establishes goals and strategies. The implementation phase advances coordinated actions and countermeasures across all safety disciplines. The evaluation phase measures progress, assesses effectiveness, and informs future updates.

Together, these phases ensure that the SHSP remains strategic, collaborative, and focused on improving safety for communities and travelers across New Mexico. Every traveler—whether driving, riding, walking, or biking on New Mexico's roads—deserves to arrive safely. Reaching zero fatalities requires shared responsibility, with agencies, communities, and individuals each playing a role in improving roadway safety outcomes.



1. Introduction »

The goal of Target Zero is bold, yet attainable: **zero traffic-related deaths on all public roadways in New Mexico by 2050**.

Introduction

OUR VISION:

A transportation system where **every journey is completed safely**.

OUR GOAL:

Zero fatalities for all users by 2050.

This New Mexico Strategic Highway Safety Plan (SHSP) serves as a cornerstone of the New Mexico Department of Transportation's (NMDOT) Highway Safety Improvement Program and supports a comprehensive approach to eliminating traffic-related deaths through the Target Zero initiative.

This SHSP, which is influenced by peer states and national best practices, is data-driven and identifies strategies and implementation countermeasures that NMDOT will utilize over the next 5 years to advance the goal of reducing crashes and serious, or incapacitating, injuries. By combining community experiences, stakeholder feedback, and data analysis, this SHSP identifies practical actions and innovative solutions to make roads safer for all users today and into the future.

Purpose of the Strategic Highway Safety Plan

SHSPs are statewide, comprehensive safety plans that every state must develop under the federal Highway Safety Improvement Program (HSIP) (23 U.S.C. § 148) to systematically eliminate traffic fatalities and reduce serious injuries. To maintain eligibility for federal HSIP funding, states must update their SHSP at least every 5 years—this SHSP is a redevelopment of New Mexico's 2021 SHSP.

Each SHSP establishes statewide performance measures, engages a multidisciplinary array of stakeholders, identifies Emphasis Areas (EAs), and recommends evidence-based strategies and countermeasures. Despite the "highway" name, the plan covers safety improvements on all public roadways, regardless of the road's characteristics or volumes.

Safe System Approach

This revised SHSP incorporates the Safe System Approach (SSA) and embraces the principles and elements of SSA. The principles of the SSA help guide the Highway Safety Improvement Program. This aspirational mindset creates multiple layers of protection for when crashes happen and increases the emphasis on safety for people walking and biking. Rather than accepting that some fatalities are inevitable, it encourages collaboration between stakeholders and safety partners to proactively work toward zero traffic fatalities.

As shown on Figure 1-1, the SSA principles recognize that:

- **Death and serious injuries are unacceptable**
- **Humans make mistakes**
- **Humans are vulnerable**
- **Responsibility is shared**
- **Safety is proactive**
- **Redundancy is critical**

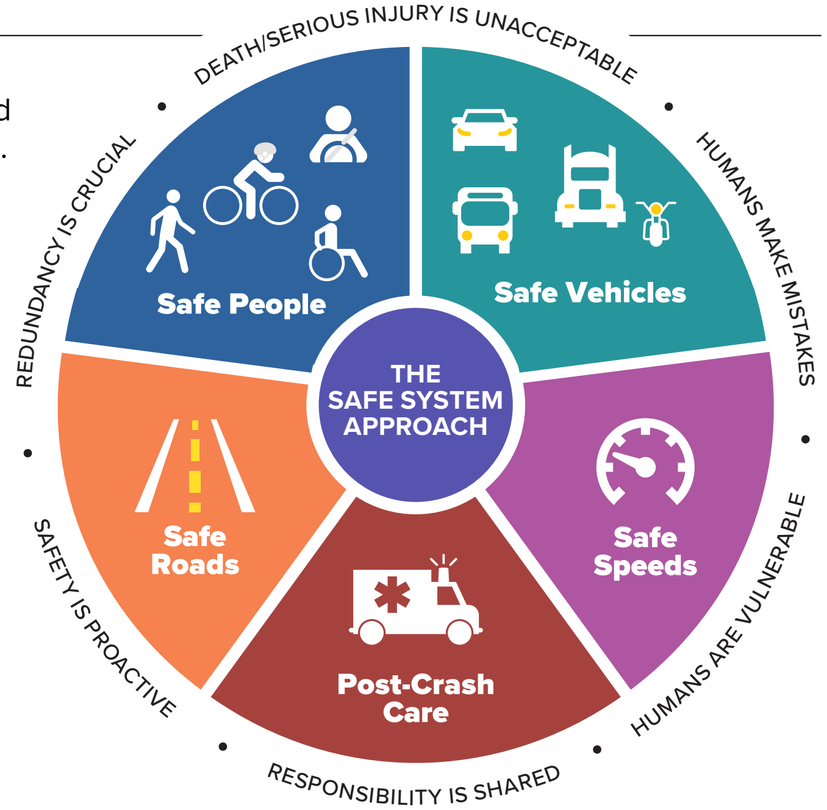


Figure 1-1. The Safe System Approach
(Adapted from USDOT 2025)

> By implementing the SSA, many states and cities around the country have been able to significantly reduce or eliminate traffic fatalities, as shown on page 1-15.



About Target Zero New Mexico

target zeroNM
SAFE ROADS FOR ALL

Target Zero is a transformative initiative for the NMDOT and is guided by the principles and elements of the SSA. Target Zero provides a roadmap to help coordinate all transportation safety work and processes underway in New Mexico (Highway Safety Plans, HSIP, Complete Streets Strategic Plan, State Rail Plan, NM Bike Plan, etc.) and sharpens NMDOT's focus on transportation safety in all our work.

Target Zero envisions a transportation system where every journey is completed safely, with zero driving-related deaths in our state.



Imagining a Zero-Fatality Future for New Mexico

Our vision of a transportation system where every journey ends safely—and where our state sees zero driving-related deaths—is truly within reach. Across the nation, there are powerful examples showing what's possible. The City of Hoboken, New Jersey, with a population of roughly 50,000, has reached a remarkable milestone: more than seven consecutive years without a single traffic-related fatality.

Over the past five years, several cities across the broader Southwest Region with populations over 50,000 have achieved similar success, recording zero traffic-related deaths for at least one full calendar year. These communities include Maricopa and Marana in Arizona; Castle Rock, Colorado; Indio, California; and Wylie, Texas.

Closer to home, the City of Albuquerque has launched its own Vision Zero initiative aimed at eliminating traffic-related fatalities on its roadways. New Mexico also has approximately eight municipalities with populations between 20,000 and 50,000—Farmington, Hobbs, Roswell, Alamogordo, Carlsbad, Clovis, Gallup, and Los Alamos.

Any one of these cities, or even several, has the potential to emerge as a statewide leader in roadway safety.

> *While deliberate action on everything from restriping high visibility crosswalks to implementing comprehensive road redesigns has aided our success we aren't stopping – we will continue to aggressively implement Vision Zero in every aspect of our major infrastructure projects.*
>
> — Mayor Ravi Bhalla, City of Hoboken, NJ

VISION ZERO IN ACTION

Several cities across the broader Southwest Region have successfully recorded zero traffic-related fatalities for an entire calendar year, demonstrating that Vision Zero outcomes are achievable.



1 Indio, CA

POPULATION
65.5K*

ACHIEVED ZERO TRAFFIC-RELATED FATALITIES IN:
2015, 2020, 2022 & 2023

2 Maricopa, AZ

POPULATION
85.6K*

ACHIEVED ZERO TRAFFIC-RELATED FATALITIES IN:
2020 & 2021

3 Marana, AZ

POPULATION
62.3K*

ACHIEVED ZERO TRAFFIC-RELATED FATALITIES IN:
2021

4 Castle Rock, CO

POPULATION
87.9K*

ACHIEVED ZERO TRAFFIC-RELATED FATALITIES IN:
2020, 2021 & 2022

5 Wylie, TX

POPULATION
65.5K*

ACHIEVED ZERO TRAFFIC-RELATED FATALITIES IN:
2020 & 2022

Albuquerque is pushing forward with Vision Zero to eliminate traffic deaths—setting an example for what's possible across the state. New Mexico's mid-sized cities—Farmington, Hobbs, Roswell, Alamogordo, Carlsbad, Clovis, Gallup, and Los Alamos—each have the potential to lead the way in safer streets and stronger communities.

* 2026 ESTIMATE, SOURCE: HTTPS://WORLDPOPULATIONREVIEW.COM/US-CITIES (2026)

Figure 1-2. Vision Zero in the Southwest Region.

2. Safety Trends »

Data analysis is essential for understanding New Mexico's traffic safety landscape and tailoring effective initiatives.

NEW MEXICO TRANSPORTATION SAFETY AT-A-GLANCE

5th Largest state in land area
Source: US Census 2021

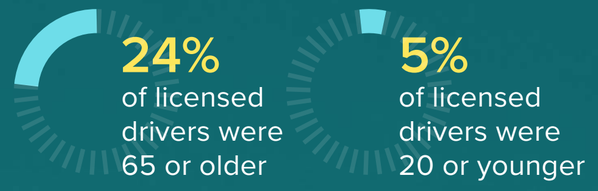
2.1M Residents Population ranks 36th of 50 states (2025 estimates)
Source: US Census 2024

76,350 Centerline miles of public roads

4th Highest in the United States with 13,303 annual vehicle miles traveled per capita
Source: FHWA 2025b

23 Federally recognized Native American Tribal nations call New Mexico home

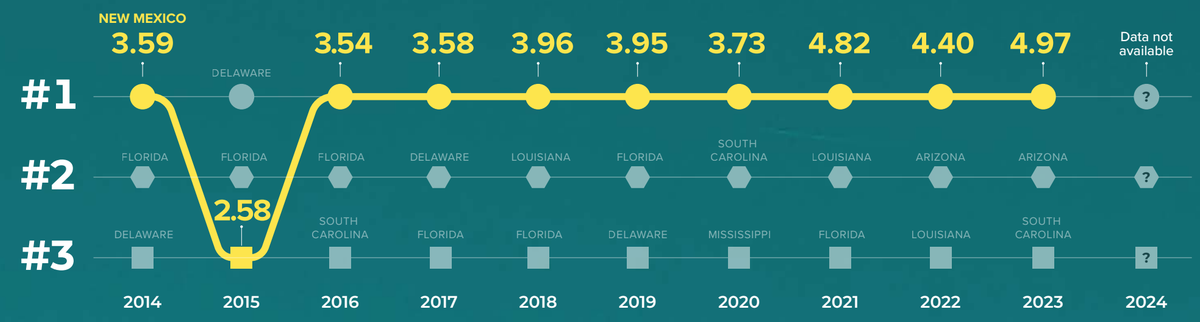
1.5M+ Licensed drivers in New Mexico (2023)



Source: FHWA 2026

National ranking of pedestrian fatalities per 100K population:

Data show that **New Mexico has led the nation in pedestrian fatalities per capita every year since 2016,** with a rate that remains consistently higher than the national average.



Source: NHTSA 2026a

NEW MEXICO VS. NATIONAL FATALITY RATE COMPARISON

per hundred million vehicles miles traveled

	2022	2023
New Mexico	1.74	1.55
National	1.34	1.26

In the most recently available two years of data, New Mexico has a fatality rate that is alarmingly higher than the national average.

Source: NHTSA 2026a

NEW MEXICO 2020-2024 TRAFFIC TRENDS

2,227 People lost their lives in traffic-related crashes

5,486 People survived crashes but suffered life-altering injuries

12%▲ Increase in fatalities

37%▲ Increase in serious injuries

The proportion of crashes that resulted in death or serious injuries increased by 2.6%▲

NEW MEXICO ANNUAL AVERAGE DATA OVERVIEW (2020-2024)

41,217 Traffic crashes

99,734 People involved

405 Fatal crashes

18,002 People injured

STATEWIDE CRASH DATA TRENDS (2015 TO 2024)







NEW MEXICO TRANSPORTATION SAFETY AT-A-GLANCE

FATALITIES AND OCCUPANTS* IN NM CRASHES: MOTORCYCLE OR ATV INVOLVEMENT

(2020 TO 2024)

Motorcycle riders/occupants account for only 1.3% of all those included in crashes, but represent 17.1% of all traffic fatalities.

FATALITIES



17.1% Motorcycle or ATV

82.9% Not Motorcycle/ ATV

OCCUPANTS*



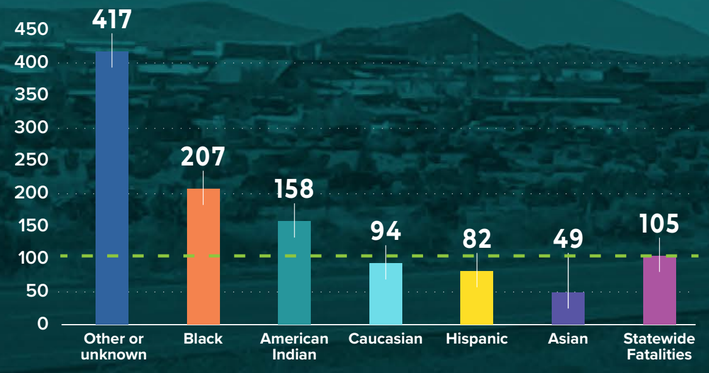
1.3% Motorcycle or ATV

98.7% Not Motorcycle/ ATV

*Excludes pedestrians, pedalcyclists, and any missing/unknown data

TRAFFIC FATALITIES BY RACE PER 100,000 (2020 TO 2024)

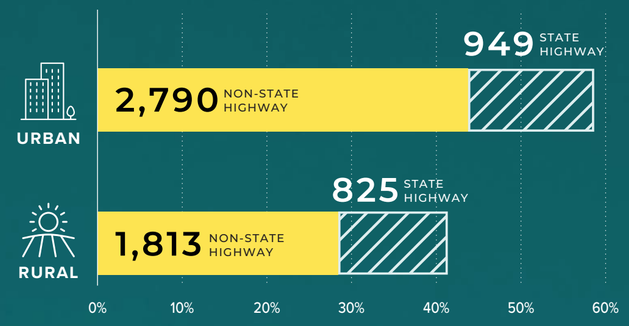
Traffic fatalities in New Mexico disproportionately affect Black and American Indian populations.



Source: Census Dots 2024

HOW CRASH LOCATION PLAYS A ROLE

The following figures show the number of fatal and serious injury crashes from 2020 to 2024 in New Mexico in rural and urban settings, as well as the number of crashes on the state highway system and the non-state highway system. This information is provided to add perspective, showing that a significant proportion of these crashes occur in both urban and rural areas, as well as on state and local roads.





28% Crashes on state highway

72% Crashes on non-state highway

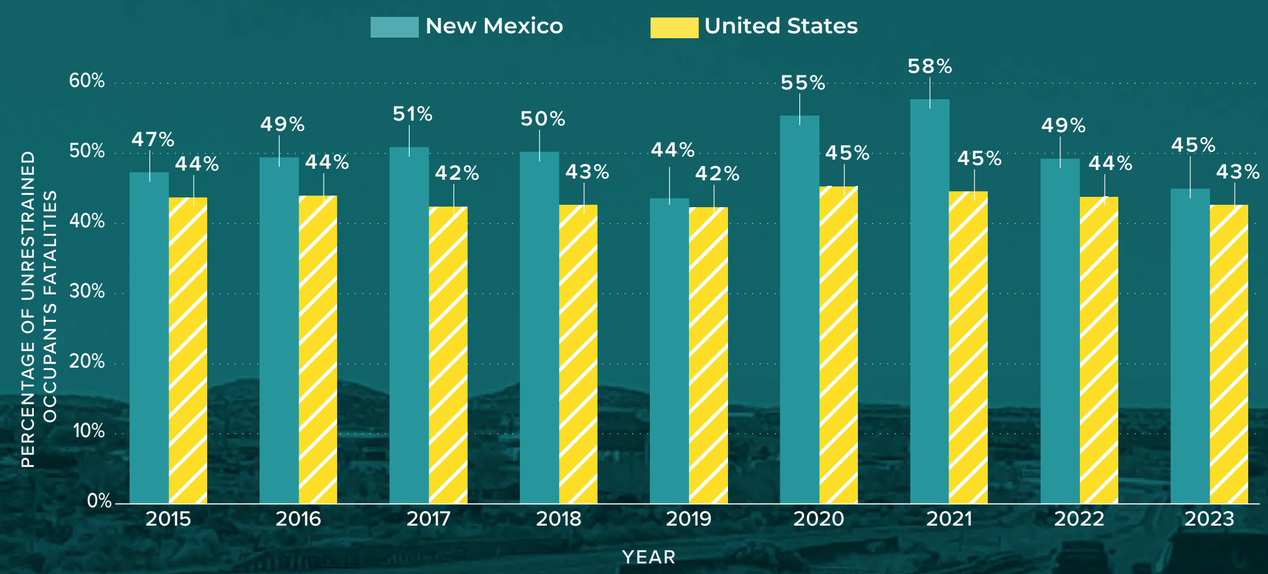


41% Crashes on rural road

59% Crashes on urban road

PERCENTAGE OF UNRESTRAINED OCCUPANTS FATALITIES

New Mexico consistently has a higher share of unrestrained occupant fatalities than the U.S. average, and the gap persists even as both trends rise around 2020 to 2021 and then decline.



Source: NHTSA 2026c

Note: Unrestrained occupants include unrestrained vehicle occupants and non-helmet use (motorcycles).

Disclaimer

The observations, findings, conclusions, and recommendations of this report are protected under 23 CFR 407, which states these materials shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in this report or documents associated with this review. Unless otherwise stated, results of the analyses are based on data that were received from the New Mexico Department of Transportation. Crash data represents years 2020 to 2024 and was obtained from the state police and other enforcement agencies. The data were used "as is" for analysis purposes and should be interpreted accordingly.

New Mexico Traffic Safety Initiatives

To eliminate traffic fatalities, reduce serious injuries, and improve road safety, NMDOT and its partners have launched several key initiatives focused on data-driven planning and public awareness. These initiatives include:

STATEWIDE PLANNING

- **Target Zero:** Eliminate traffic deaths by 2050 through data-guided investments and equity-focused safety improvements.
- **SHSP:** A dynamic safety framework addressing risks across all transportation modes.

target zero NM
SAFE ROADS FOR ALL

2026 NMDOT SHSP

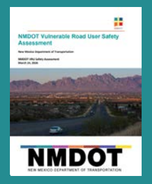
BEHAVIOR CHANGE CAMPAIGNS

- **Click It or Ticket:** Seatbelt enforcement campaign.
- **ENDWI:** Fights impaired driving with media outreach and enforcement.
- **JUSTDRIVE:** Promotes safe driving and compliance with distracted driving laws.
- **BKLUP:** Campaign to increase seatbelt use compliance.

Click It or Ticket Day & Night
bklup NMDOT
endwi NMDOT
justdrive NMDOT

VULNERABLE ROAD USER FOCUS

- **Vulnerable Road User (VRU) Safety Assessment:** Identifies high-risk areas for non-motorists.
- **Pedestrian Safety Month:** October campaign to raise pedestrian awareness.
- **Share the Road Ride:** Events promoting bicycle safety.
- **Look For Me:** Campaign to bring awareness to the public to elevate pedestrian safety.



2026 NMDOT VRU SAFETY ASSESSMENT

Share the Road
look forme

LOCAL EFFORTS

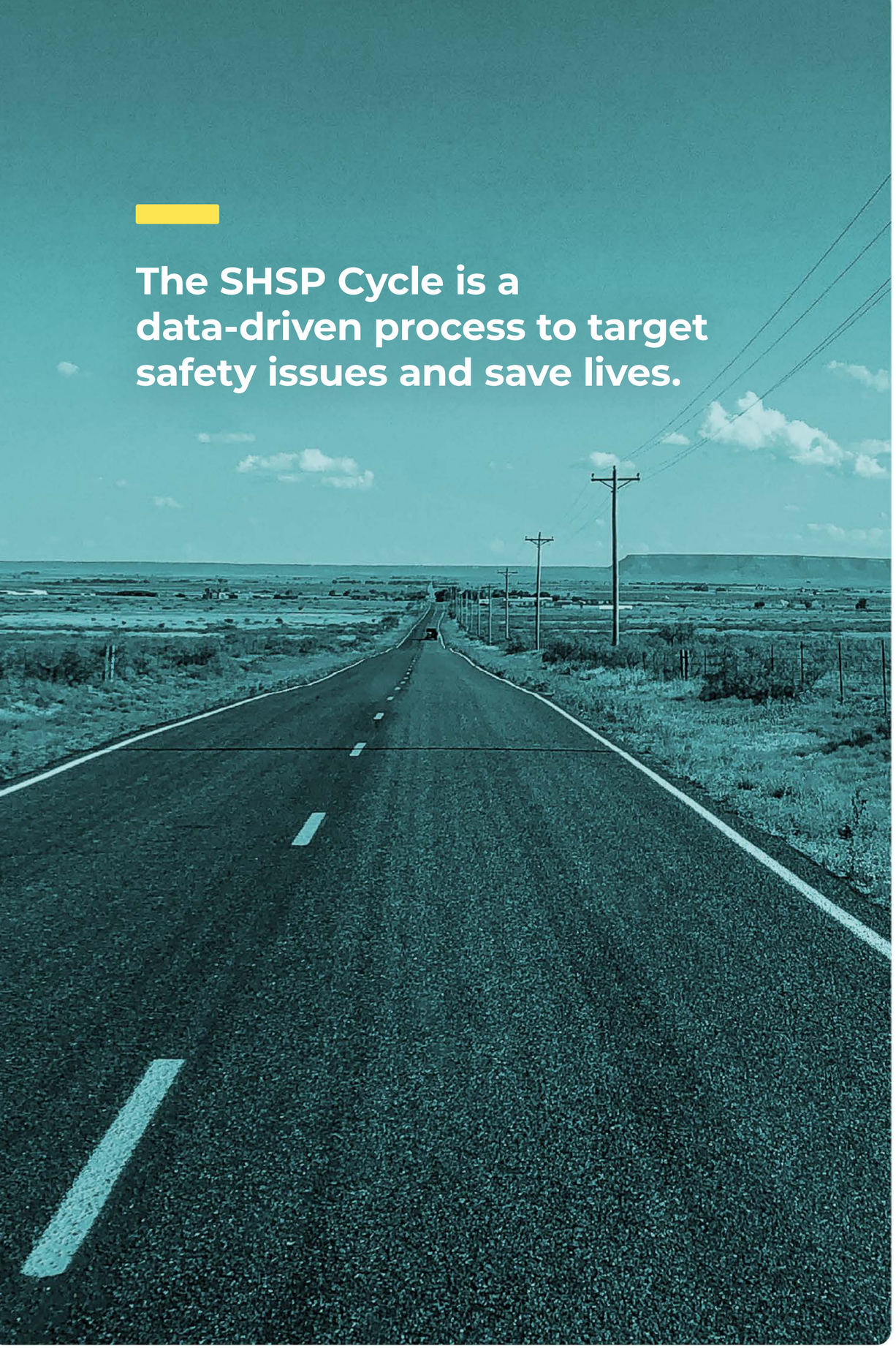
- **Vision Zero Albuquerque:** City plan to end traffic deaths by 2040.
- **Regional Partners:** Rio Metro and Mid-Region Council of Governments support pedestrian safety, especially in school zones.

ONE ALBUQUERQUE vision zero

Pedestrian Safety Month

3. SHSP Cycle »

The SHSP Planning Phase: A continuous, data-driven cycle that transforms insight into action—guiding the process from strategic planning through implementation and ongoing evaluation.



The SHSP Cycle

As New Mexico's statewide roadway safety plan and a core requirement of the Highway Safety Improvement Program (HSIP), the Strategic Highway Safety Plan (SHSP) establishes the goals, objectives, performance measures, and strategies that guide coordinated safety efforts across the State. The SHSP's overarching purpose is to eliminate traffic fatalities and reduce serious-injury crashes on New Mexico's transportation network.

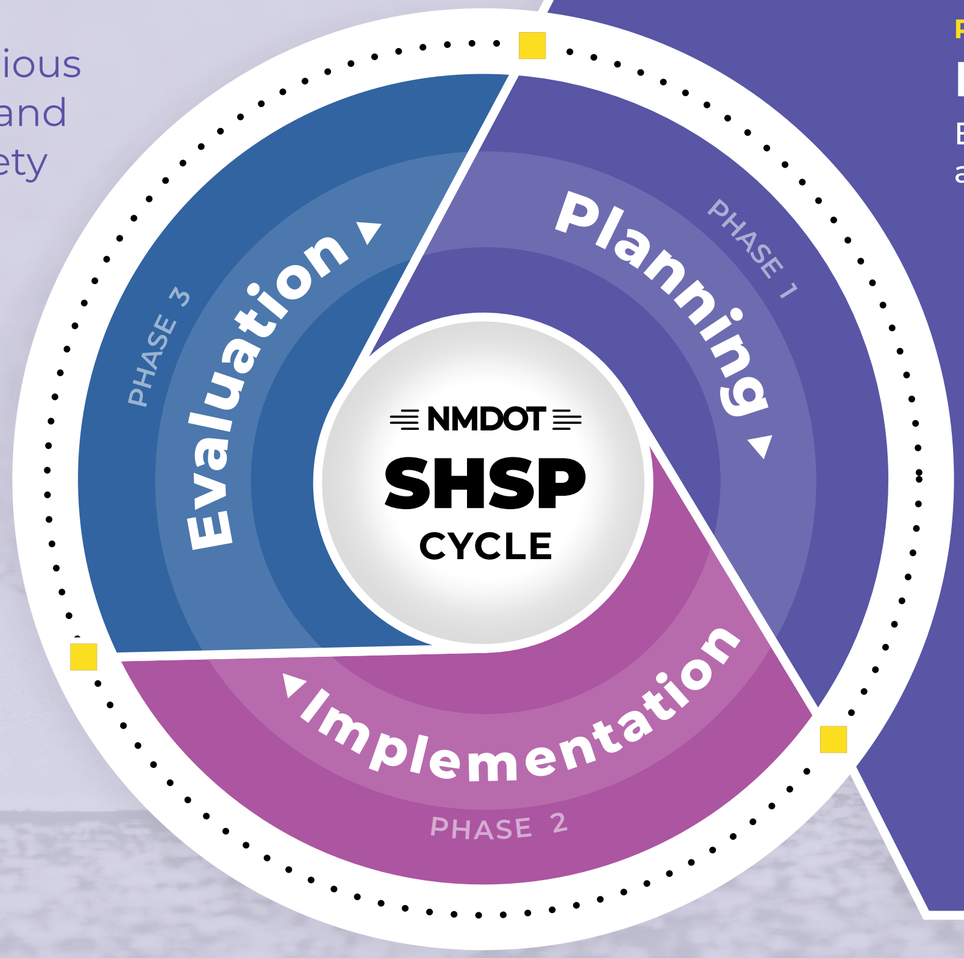
In alignment with the State's Target Zero commitment, the SHSP embraces the Safe System Approach, recognizing that roadway deaths and serious injuries are preventable and that responsibility for safety is shared across system designers, operators, users, and policymakers. Central to this approach is broad, meaningful stakeholder engagement that supports comprehensive, equitable, and sustainable safety solutions.

The SHSP is implemented through a continuous, data-driven cycle consisting of three interconnected phases: planning, implementation, and evaluation. The **planning phase** focuses on identifying safety challenges, analyzing data, and establishing priorities and emphasis areas. The **implementation phase** translates these priorities into coordinated strategies, programs, and countermeasures across engineering, enforcement, education, emergency response, and policy disciplines. The **evaluation phase** assesses progress and outcomes, measures effectiveness, and uses results to inform adjustments and future SHSP updates. Together, these phases provide the roadmap for advancing Target Zero and ensuring that New Mexico's roadway safety efforts remain strategic, adaptive, and results-focused.

Planning Phase

The SHSP Cycle illustrates the on-going process of planning, implementation, and evaluation. The planning phase establishes the foundation for the SHSP by using data, stakeholder input, and proven safety principles to identify key safety challenges and priorities. This phase defines emphasis areas, sets performance measures, and ensures alignment with Target Zero and the Safe System Approach to guide effective, evidence-based decision-making.

Roadway deaths and serious injuries are preventable and the responsibility for safety is shared across system designers, operators, users, and policymakers.



PHASE 1

Planning

Establishes the foundation of a data-driven SHSP.

Key activities include:

- Data Collection and Analysis
- Define Vision and Goal
- Identify Emphasis Areas
- Develop Strategies and Countermeasures
- Documentation

Figure 3-1. SHSP Cycle Overview and Planning Phase Key Activities

CONTINUOUS ACTIVITIES:

- Incorporate the **Safe System Approach**
- Coordinate with the **Active Transportation Safety Action Plan**
- Conduct **Public and Stakeholder Engagement**

Partner Engagement

This SHSP was developed through close coordination with state, regional, Tribal, and local traffic safety partners across New Mexico. The New Mexico Department of Transportation (NMDOT) remains committed to strengthening collaborative engagement among highway safety programs and a diverse range of stakeholders to advance equitable, data-driven solutions, address the unique safety needs of rural and Tribal communities, and align goals and resources to collectively eliminate traffic fatalities and reduce serious injuries statewide.

Together, these partners have defined and complementary roles within the SHSP framework, contributing expertise, resources, and leadership to support effective implementation and continuous improvement.

EXECUTIVE COMMITTEE

The Executive Committee met 3 times over the course of developing the SHSP to evaluate progress, review data analyses, approve Emphasis Areas, vet countermeasures, strategies, and policy recommendations, and to ensure the SHSP presents a unified approach to roadway safety.

INTERAGENCY WORKING GROUP

The Interagency Working Groups (IAWG) bring together experts from diverse organizations—NMDOT, MPO, RTPO, law enforcement, advocacy groups, engineering consultants, education administrators, health care professionals, construction, emergency services, planning agencies, and Tribal governments—to advance SHSP development. IAWG members identified interim performance goals, issues requiring additional investigation, and reviewed performance objectives. They established and prioritized a range of strategies, policies, behavior programs, programs, and implementation countermeasures and oversaw SHSP implementation and monitoring. Information from the IAWG meetings was shared on the project website.

SAFETY SUMMIT

New Mexico Transportation Safety Summits were held in 2024 and 2025, and brought NMDOT, Tribal, local, regional agencies, and consultants together under the banner Cutting-Edge Strategies in Transportation Safety Culture to share data-driven approaches, highlight transportation projects, and identify actionable roadway safety initiatives that helped shape recommendations in the SHSP while fostering the cross-jurisdictional collaboration needed for an evidence-based and implementable SHSP.

TRIBAL OUTREACH

The SHSP's Tribal outreach relies heavily on the NMDOT Tribal Liaison who maintains government-to-government relationships and conducts proactive outreach to integrate Tribal priorities into statewide planning. A half-day Tribal Transportation Safety Summit on September 16, 2025, convened Tribal leaders and agencies to share project highlights, data-driven safety strategies, and grant opportunities. Many Tribal representatives participated in IAWG meetings to identify targeted countermeasures for Tribal lands.

Safety Planning and Carbon Reduction



NMDOT Carbon Reduction Strategy

Transportation is the second largest source of greenhouse gas (GHG) emissions in New Mexico.

In response, NMDOT has developed a Carbon Reduction Strategy (NMDOT 2023) consistent with the Infrastructure Investment and Jobs Act (IIJA) and the Federal Highway Administration's (FHWA's) Carbon Reduction Program (CRP). NMDOT's Carbon Reduction Strategy outlines NMDOT's plan to reduce transportation emissions of GHG by reducing vehicle miles traveled (VMT), improving system efficiency, supporting multimodal travel, and integrating carbon considerations into transportation planning.

The Carbon Reduction Strategy focuses on reducing on-road GHG emissions and includes a broad set of activities that generally fall within the following four categories:

1. **Reduce VMT:** Facilitating the use of alternatives to single occupant vehicle trips, including public transportation facilities and services, pedestrian facilities, bicycle facilities, and shared or pooled vehicle trips.
2. **Reduce transportation emissions of vehicles:** Facilitating the use of vehicles or modes of travel that result in lower transportation emissions per person-mile traveled.
3. **Reduce emissions of NMDOT operations, including materials:** Facilitating approaches to the operations and construction of transportation assets, as well as improvements to facilities and organizational business practices that result in lower transportation emissions.
4. **Carbon sequestration:** Facilitating the development and implementation of projects that capture carbon dioxide through revegetation, mitigation, and restoration of natural and working lands.

SHSP and Its Benefits on Carbon Reduction

Traffic crashes are a major source of nonrecurring congestion and transportation system inefficiency. Severe crashes often result in lane closures, traffic diversions, emergency response delays, and extended vehicle idling, all of which increase fuel consumption and carbon emissions.

The 2026 NMDOT SHSP is developed to implement safety strategies to achieve the ultimate safety goal of eliminating fatalities and reducing serious injuries for all users and all transportation modes. While the SHSP is primarily focusing on eliminating traffic fatalities and reducing serious injuries, its safety-driven actions would improve system efficiency, reduce VMT, minimize congestion, and support safe multimodal transportation options.

The SHSP is consistent with the NMDOT's Carbon Reduction Strategy of reducing on-road GHG emissions. The SHSP identifies Emphasis Areas and outlines corresponding strategies and measures to improve safety of the transportation network in New Mexico. Implementing the SHSP would reduce congestion and delay caused by incident-related traffic disruptions, thus improving system reliability and travel time consistency. Vehicle fuel use and resulting emissions would also be reduced by eliminating stop-and-go driving conditions associated with crashes.

Roadway Improvements and System Efficiency

Roadway departure crashes are one of the most frequently observed crash types in fatalities and serious injuries in New Mexico, especially on rural roadways. It often results in extended lane closures and lengthy incident response/cleanup that causes undesirable vehicle emissions. The SHSP illustrates a shift to the Safe System Approach where strategies of infrastructure improvements under the "Safe Roads" element, such as using centerline and shoulder rumble strips, cable median barriers, and improving slope and ditches, reduce the frequency and severity of these crashes, thereby minimizing nonrecurring delay, vehicle idling, and detours that increase fuel consumption and emissions. By preventing disruptive incidents and maintaining consistent traffic flow on critical corridors, the SHSP delivers emission reductions aligning with NMDOT's Carbon Reduction Strategy.

Multimodal Safety Improvements and Vehicle Miles Traveled Reduction

Reducing VMT is a central objective of NMDOT's Carbon Reduction Strategy. The SHSP supports this goal through its emphasis on multimodal safety, including pedestrians, bicyclists, and transit users. Strategies and implementation countermeasures include approaches such as enhanced pedestrian crossings, separated bike lanes, and intersection redesigns to reduce conflict points and improve visibility. These measures would increase comfort and safety for nonmotorized users, as a result, making walking or biking a more attractive option. By making nonmotorized and transit travel safe and more viable, the SHSP encourages shifts away from single-occupancy vehicle travel, directly reducing VMT, fuel consumption, and GHG emissions.

Human Behavior-Related Safety Strategy and Emissions Reduction

The "Safe People" and "Safe Speeds" elements of the Safe System Approach address the Human Behavior-related EAs, such as impaired and distracted driving, speeding, unrestrained occupants, and younger and older drivers, and supports NMDOT's carbon reduction strategies. Strategies that discourage impaired, distracted, and aggressive driving/speeding promote smoother, more predictable driving patterns with fewer rapid accelerations, hard braking events, and excessive speeds, all of which increase vehicle emissions. Reductions in behavior-related crashes also decrease nonrecurring congestion, thereby limiting vehicle idling and stop-and-go traffic that contribute disproportionately to GHG emissions. In addition, education and enforcement initiatives targeting young and high-risk drivers encourage safe, more efficient driving habits over time, producing long-term emissions benefits across the vehicle fleet.



Data Integration and Performance-Based Planning

Both the SHSP and the Carbon Reduction Strategy rely on data-driven planning and performance measurement. Improved crash data systems, traffic monitoring, and corridor analysis allow NMDOT to identify locations where safety risks and emissions impacts intersect. This integrated approach enables NMDOT to prioritize projects with combined safety and carbon reduction benefits, and track performance measures related to congestion, reliability, and VMT. The coordinated data use strengthens both safety outcomes and emissions-reduction effectiveness.

Coordination with Clean Transportation Policies

NMDOT's Carbon Reduction Strategy complements statewide clean transportation policies, such as the clean fuel standards and vehicle electrification initiatives adopted by the State of New Mexico. While these policies address emissions at vehicle level, the SHSP complements them by reducing the need for unnecessary vehicle travel and inefficient driving conditions. Together, these policies and strategies ensure that cleaner vehicles operate on safe and more efficient roadways, maximizing the overall effectiveness of statewide carbon reduction efforts.

Closing the Transportation Safety Gap

Equity is central to the SHSP and Target Zero. New Mexico's roadways must be safe and accessible for everyone, including drivers, transit riders, roadway construction crews, people who walk, bike, roll, and people with disabilities.

Investments in sidewalks, safe crossings, separated bike lanes, well-lit and accessible transit stops, and first- and last-mile connections advance equity goals. These improvements reduce traffic exposure to people who cannot or choose not to drive and improve access to jobs, schools, health care, and essential services. Prioritizing active-transportation and transit safety in neighborhoods with limited vehicle ownership or constrained mobility expands opportunity and helps ensure safety benefits reach communities facing disproportionate impacts.

NMDOT uses data and community input to target safety investments where they will have the greatest impact and to design solutions that reflect local needs.

Equity Analysis

NMDOT's Vulnerable Road User equity analysis identified historically underserved areas to help prioritize safety improvements in areas where they will benefit people who are disproportionally impacted by VRU crashes or who have been harmed by transportation infrastructure, pollution, and unequal resource distribution in the past. The High Injury Network (HIN), which incorporates the equity analysis, is used for project funding evaluation.

Outreach and Engagement

NMDOT engages a broad range of voices to ensure planning and projects reflect community priorities and lived experience.

Countermeasures and Strategies

The EAs, especially Tribal lands and VRU, identify countermeasures to reduce risk for historically underserved groups. Key strategies include:

- Dedicated bicycle and pedestrian infrastructure
- Enhanced visibility and lighting
- New and improved safety infrastructure at high-risk Tribal locations
- Speed management and enforcement
- Culturally appropriate education and engagement programs



4. EA Analysis »

Prioritizing Critical Traffic Safety Challenges
So Everyone Gets Home Safe.

Emphasis Areas Analysis

Emphasis Area (EA) analysis is a required component of an SHSP, per (23 CFR 924.9(a)(3)(vii)). The 2026 New Mexico SHSP includes analysis of 2020 through 2024 crash data with a focus on identifying the appropriate EAs. Based on this EA analysis, the number of EAs reduced from 20 in the 2021 SHSP to five new, condensed EAs in the 2026 SHSP. Additionally, these new EAs align with the priorities of other state plans and are consistent with STIP priorities.

These EAs are critical, targeted traffic safety categories, identified by stakeholders and project team members through quantitative and qualitative processes. The quantitative analysis considered not only the best available crash data, but also utilized road safety audit findings, roadway, intersection, highway-rail crossing, vehicle, and occupant data. Based on a variety of different pieces from these datasets, the five new safety EAs include both infrastructure and behavior factors, none of which are mutually exclusive. These five EAs condense the 20 EAs shared in the 2021 NM SHSP with the goal of concentrating the focus on implementation of projects and programs to improve safety outcomes.

The following five subsections provide detailed descriptions of the EAs. Within each of these five EA subsections, crash data were analyzed, displaying trends for the number of fatalities and serious injuries among the specific EAs, which highlights progress in meeting prior SHSP reduction goals and objectives. Additional details related to the circumstances associated with each fatality and serious injury are also shown in each EA subsection. This data driven approach helps direct the state's safety resources to those infrastructure and behavioral initiatives that offer the greatest opportunity to save lives.

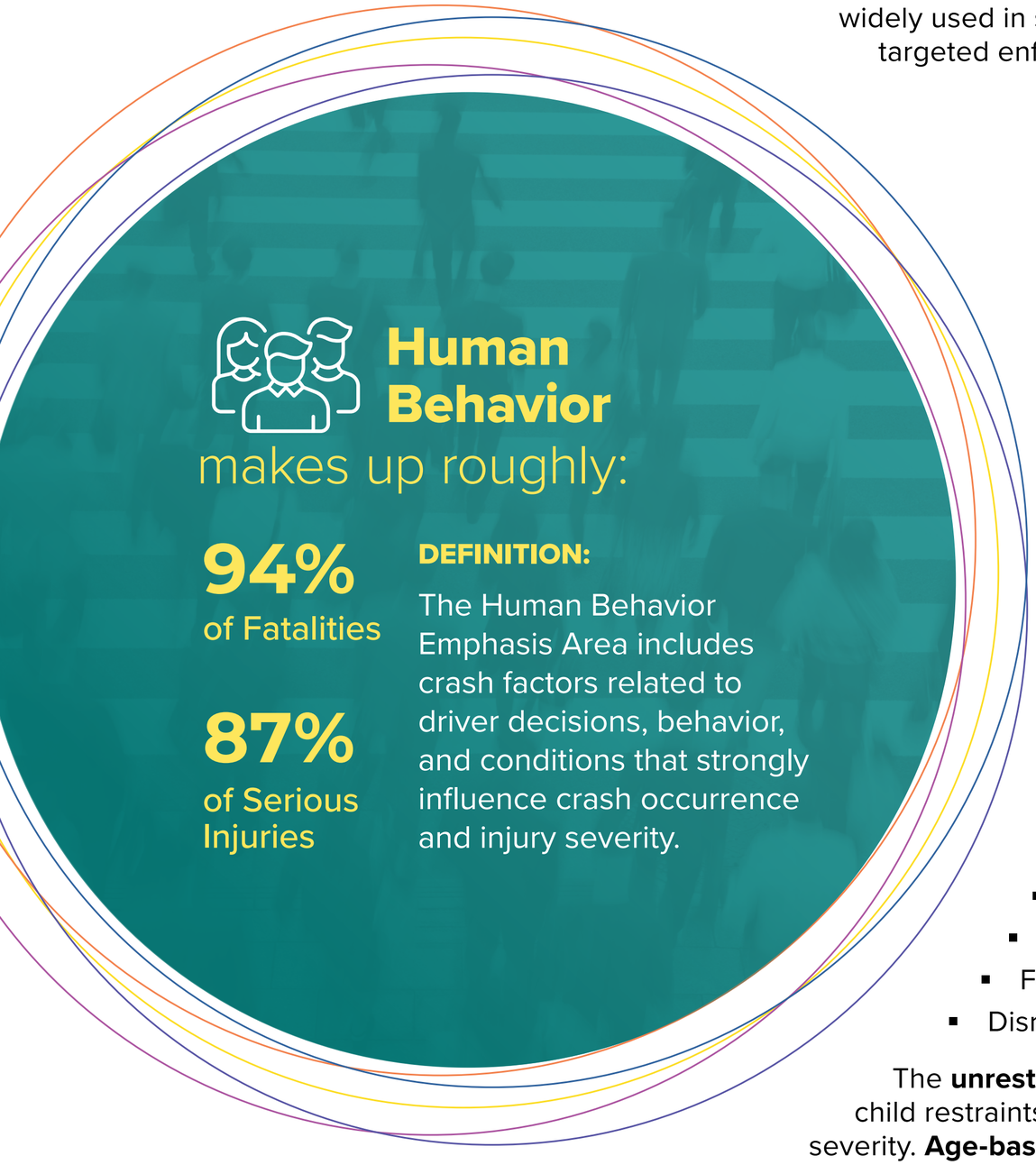
Each EA includes strategies and implementation countermeasures reviewed by the IAWGs. These strategies and countermeasures were developed with consideration of cost, effectiveness, and time to implement and the five EAs will help focus safety funding on projects advancing the goal of eliminating fatalities and reducing serious injury crashes on New Mexico's roadways.



NMDOT 2026 EAs

Human Behavior

The Human Behavior Emphasis Area (EA) includes crash factors related to driver decisions, behavior, and conditions that strongly influence crash occurrence and injury severity. These crash factors are widely used in safety planning because they represent behaviors that can be influenced through targeted enforcement, education, policy, and engineering strategies.



Human Behavior EA encompasses the following crash factors:

- **Impaired driving**
- **Distracted driving**
- **Sleepy or fatigued driving**
- **Speeding or aggressive driving**
- **Unrestrained occupants**
- **Older drivers (65 or older)**
- **Young drivers (ages 15 to 20)**

Impaired driving includes crashes where alcohol or drugs were identified as the primary contributing factor. **Distracted driving** encompasses crashes attributed to driver inattention and distraction-related behaviors, including cell phone use (handheld or hands-free), texting, passenger-related distractions, and other secondary activities that divert attention from the driving task. **Sleepy or fatigued driving** refers to crashes involving drivers reported as asleep or fatigued.

Speeding or aggressive driving captures behaviors such as:

- Excessive speed
- Driving too fast for conditions
- Failure to yield right-of-way
- Following too closely
- Disregarding traffic signals

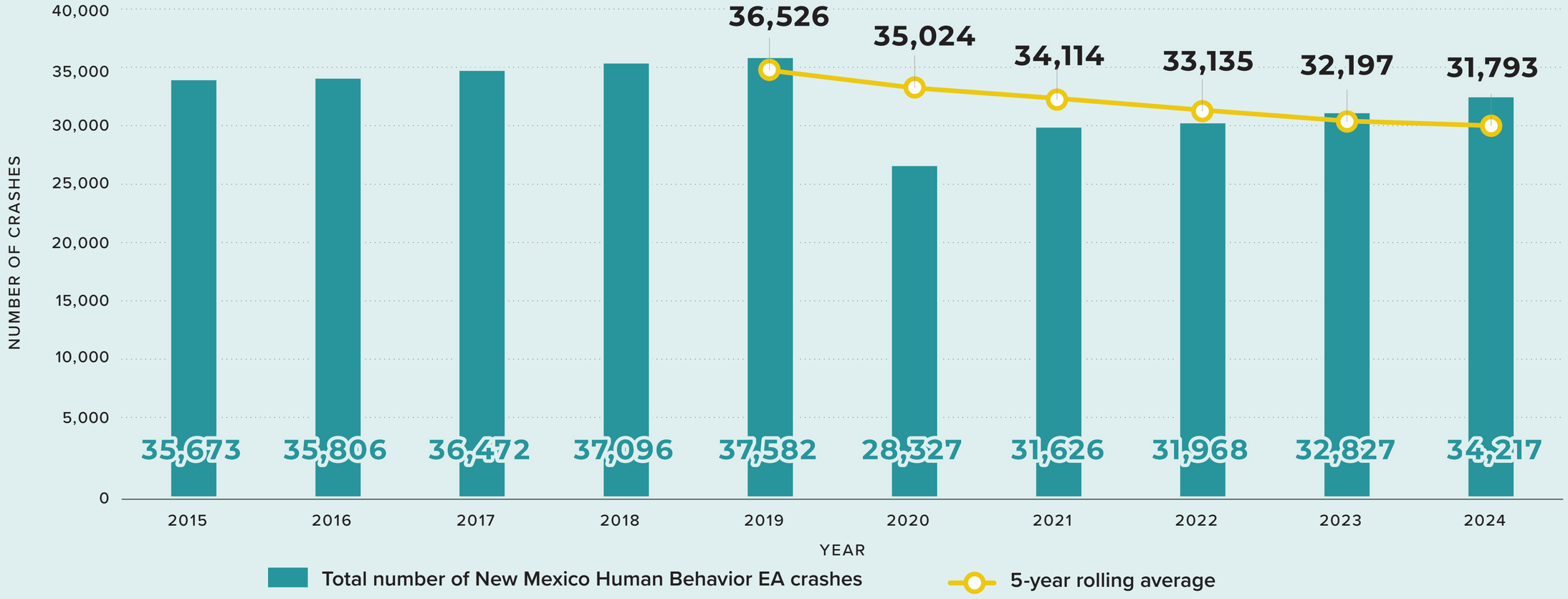
The **unrestrained occupant** category identifies crashes involving non-use of seat belts, child restraints, or helmets, recognizing restraint use as a critical determinant of injury severity. **Age-based subgroups** reflect increased risk due to limited experience among young drivers and age-related changes in perception and reaction among older drivers.

New Mexico Human Behavior EA Crash Trends (2015 to 2024)

Statewide in New Mexico, crashes involving the Human Behavior EA and related crash factors show a clear temporal pattern when examined across the 2015 to 2024 period. Total annual crashes remained relatively stable from 2015 through 2019, increasing from 35,673 crashes in 2015 to 37,582 crashes in 2019 (see Figure 4-1). However, the 5-year rolling average peaked in 2019 at approximately 36,526 crashes, reflecting sustained pre-COVID19 pandemic crash levels associated with human behavior factors.

A sharp decline occurred in 2020, when total Human Behavior EA crashes dropped to 28,327, aligning with reduced travel during the pandemic. Despite absolute crash counts remaining below pre-2020 levels in subsequent years, a gradual upward trend is evident from 2021 through 2024, with total crashes rising from 31,626 in 2021 to 34,217 in 2024. At the same time, the 5-year rolling average continued to decline, reaching approximately 31,793 by 2024, indicating that recent increases have not fully offset earlier reductions. Together, these trends suggest a partial rebound in human behavior-related crashes following the pandemic. Meanwhile, longer-term averages reflect a lower baseline than observed before 2020. This pattern underscores the continuing importance of targeted strategies addressing driver behavior as traffic volumes and travel patterns stabilize across New Mexico.

Figure 4-1. New Mexico Human Behavior EA crashes: Yearly trend and 5-year rolling average (2015 to 2024).



From 2020 to 2024, serious injuries and fatalities within the Human Behavior EA in New Mexico show an increase relative to the sharp decline observed in 2020, during the pandemic (see Figure 4-2). Serious injuries rise steadily across the post-2020 period, increasing from 762 in 2020 to 1,086 in 2024. Fatalities, while fluctuating year to year, remain consistently elevated compared to 2020, increasing from 369 to 430 over the same period. Overall, these patterns indicate a rebound in crash severity following 2020, with post-pandemic years experiencing higher levels of fatal and serious-injury outcomes associated with human behavior-related crashes.

> ...patterns indicate a rebound in crash severity following 2020, with **post-pandemic years experiencing higher levels of fatal and serious-injury outcomes** associated with human behavior-related crashes

Figure 4-2. Fatalities and serious injuries in the Human Behavior EA in New Mexico (2020 to 2024).

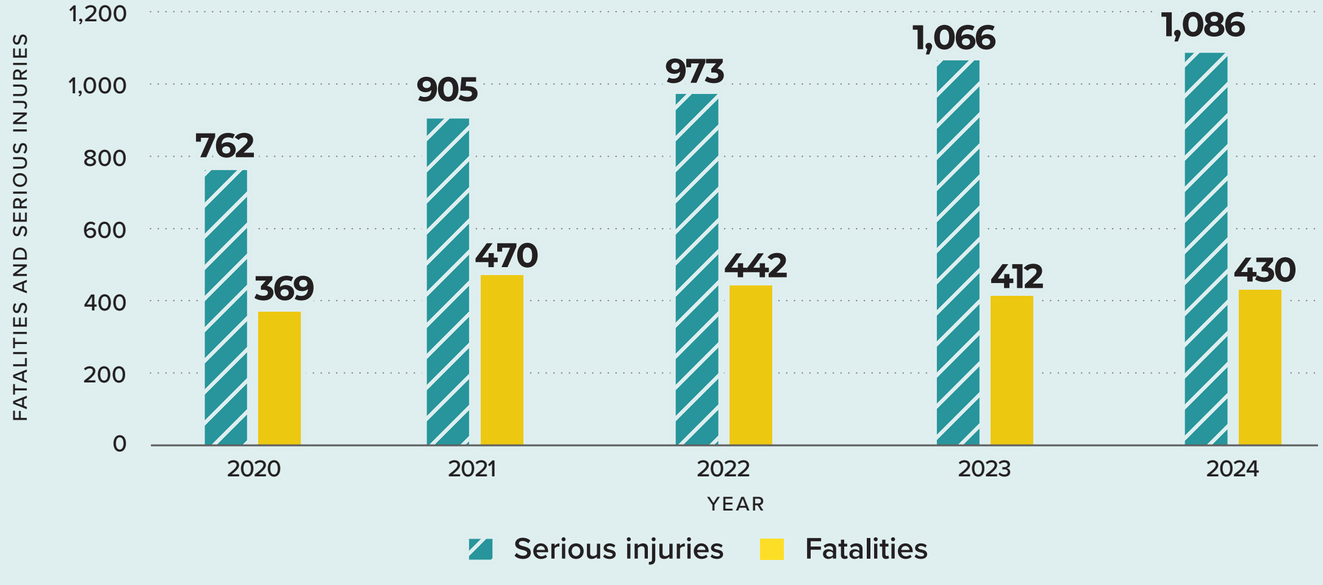


Figure 4-3. Percentage of fatalities and serious injuries by Human Behavior EA crash characteristics (2020 to 2024).

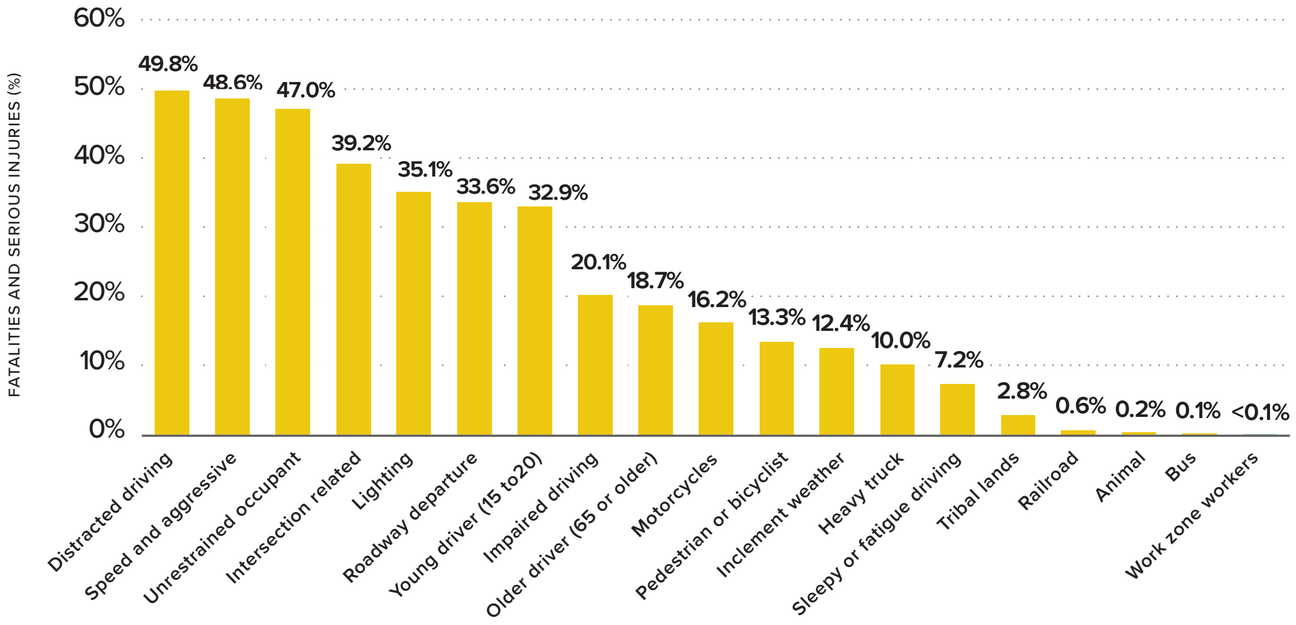


Figure 4-3 shows that speed- and behavior-related factors account for the largest share of fatalities and serious injuries within the Human Behavior EA in New Mexico between 2020 and 2024. Distracted driving, speeding and aggressive driving, and lighting-related conditions each contribute to nearly half of all fatal and serious injury crashes, highlighting their dominant role in severe crash outcomes. Unrestrained occupant, intersection-related, and roadway departure crashes also represent substantial shares. In contrast, age-related factors and impaired driving account for moderate but meaningful proportions, while sleepy- or fatigue-related crashes comprise a relatively small share.

> Overall, the distribution emphasizes that **driver behavior—particularly distraction and speed—remains the primary contributor** to severe crashes statewide, **underscoring the need for targeted enforcement, education, and roadway design strategies addressing these behaviors.**

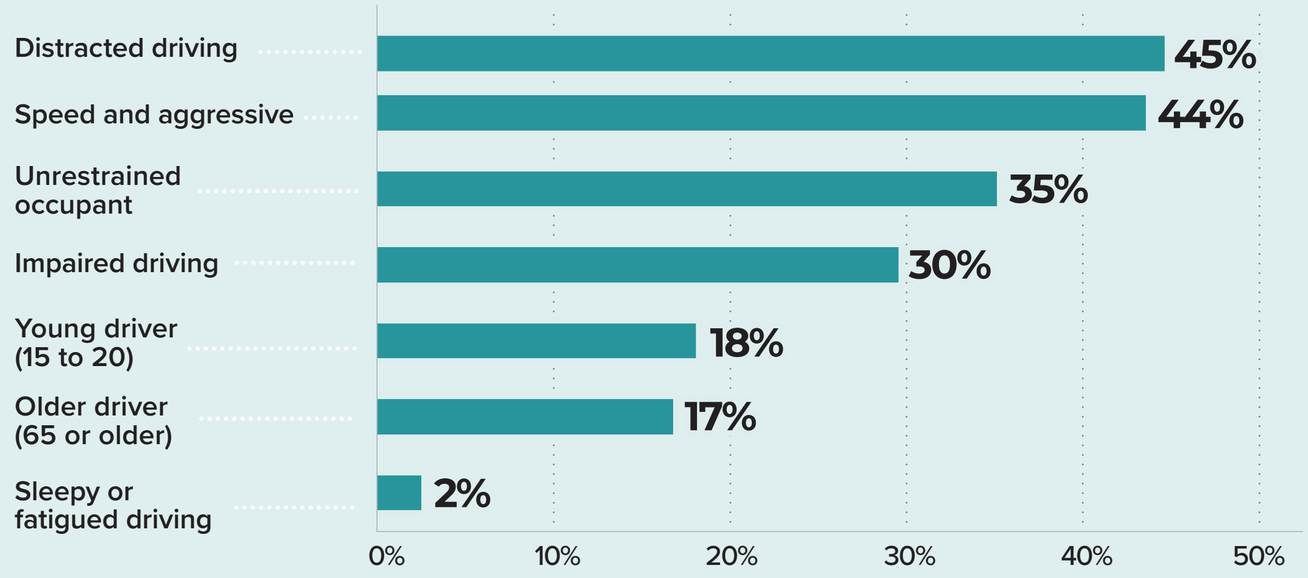
Statewide Fatalities and Serious Injuries by Human Behavior Crash Factors (2020 to 2024)

Figure 4-4 illustrates the percentage of statewide fatalities and serious injuries in New Mexico from 2020 to 2024 in which each Human Behavior EA crash factor was present. Distracted driving (45%) and speeding and aggressive driving (44%) are the most frequently identified factors among fatal and serious injury crashes, followed by unrestrained occupants (35%) and impaired driving (30%).

Age-related factors—young drivers (18%) and older drivers (17%)—represent smaller but notable shares, while sleep- or fatigue-related driving accounts for a relatively small proportion (2%).

Categories are not mutually exclusive, as a single crash may involve multiple human behavior factors; the percentages reflect the relative prevalence of each factor rather than exclusive attribution.

Figure 4-4. Distribution of statewide fatalities and serious injuries by Human Behavior crash factors in New Mexico (2020 to 2024).

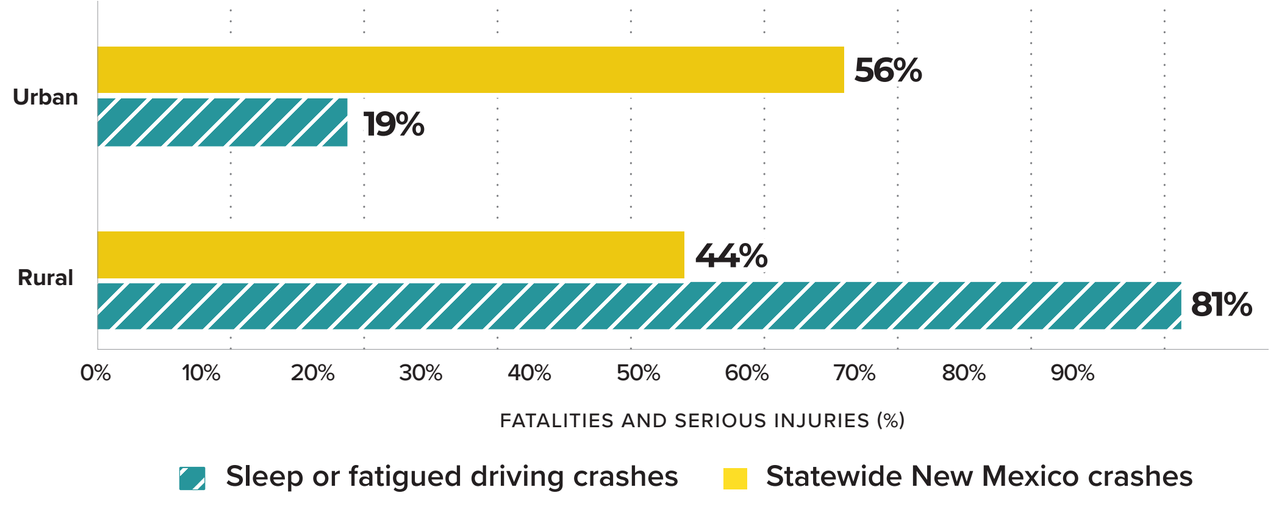


Roadway Type Distribution of Impaired- or Fatigue-Related Fatalities and Serious Injuries Compared to Statewide Crashes (2020 to 2024)

To investigate more, from 2020 to 2024, sleepy or fatigued driving-related fatalities and serious injuries are disproportionately concentrated on rural roadways in New Mexico (81%), compared with 44% of all statewide fatal and serious injury crashes occurring on rural roads (Figure 4-5).

> This contrast indicates that **fatigue-related crashes are more likely to result in severe outcomes in rural settings** than in urban areas.

Figure 4-5. Distribution of Human Behavior fatalities and serious injuries by roadway type: impaired or fatigued driving crashes vs. statewide New Mexico crashes (2020 to 2024).

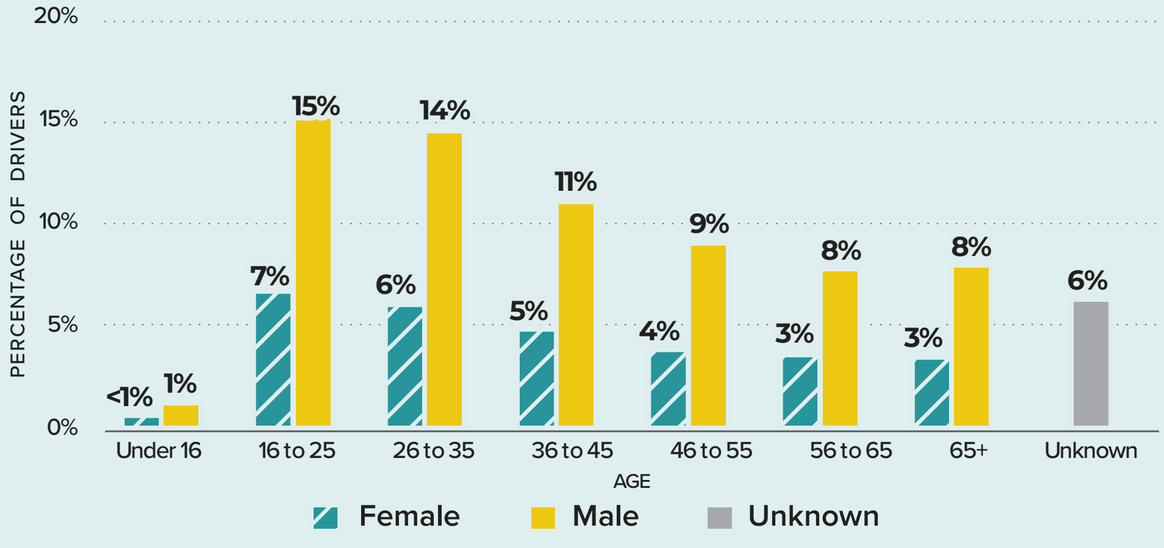


Distracted Driving Fatal and Serious Injury Crashes by Driver Age and Gender

Figure 4-6 shows that male drivers account for a higher share of distracted driving–related fatal and serious injury crashes across all age groups from 2020 to 2024. The highest shares occur among drivers aged 16 to 35, particularly males, indicating elevated risk among younger distracted drivers. Female involvement is consistently lower across age groups. A noticeable portion of crashes is classified under unknown age or gender, reflecting limitations in reported driver information, such as incidents involving unidentified drivers (e.g., hit-and-run events).

> **…male drivers account for a higher share of** distracted driving-related **fatal and serious injury crashes** across all age groups between 2020 and 2024

Figure 4-6. Human Behavior EA: age and gender distribution of drivers involved in distracted driving fatal and serious injury crashes (2020 to 2024).

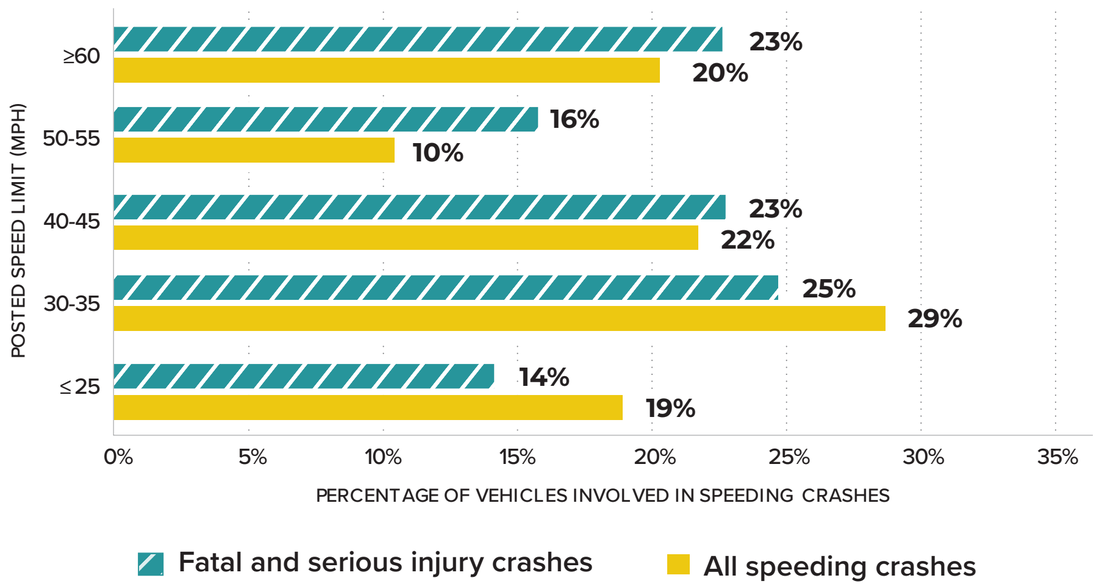


Speeding-Related Fatal and Serious Injury Crashes by Posted Speed Limit

Figure 4-7 compares the distribution of speeding-related crashes across posted speed limits for fatal and serious injury crashes versus all speeding crashes in New Mexico from 2020 to 2024. While a substantial share of all speeding crashes occurs on roadways posted at 30 to 35 mph (29%) and 40 to 45 mph (22%), fatal and serious injury speeding crashes are disproportionately represented on higher-speed roadways, particularly those posted at 50 to 55 mph (16%) and 60 mph or higher (23%). In contrast, roadways with posted speed limits of 25 mph or less account for a smaller share of severe outcomes. This pattern indicates that higher-speed facilities present a substantially elevated risk of fatal and serious injuries when crashes occur, even though fewer total crashes occur on these roadways. These same facilities that target higher-speed traffic are designed to allow drivers greater comfort (wide lanes, paved shoulders, straight roads) with increased speeds. Drivers potentially get to a comfort level that surpasses the roadway design's intent, resulting in even higher speeds.

> **…higher-speed** facilities present a **substantially elevated risk** of fatal and serious injuries when speeding occurs

Figure 4-7. Human Behavior: distribution of posted speed limit of speeding-related fatal and serious injury crashes vs. all speeding crashes (2020 to 2024).

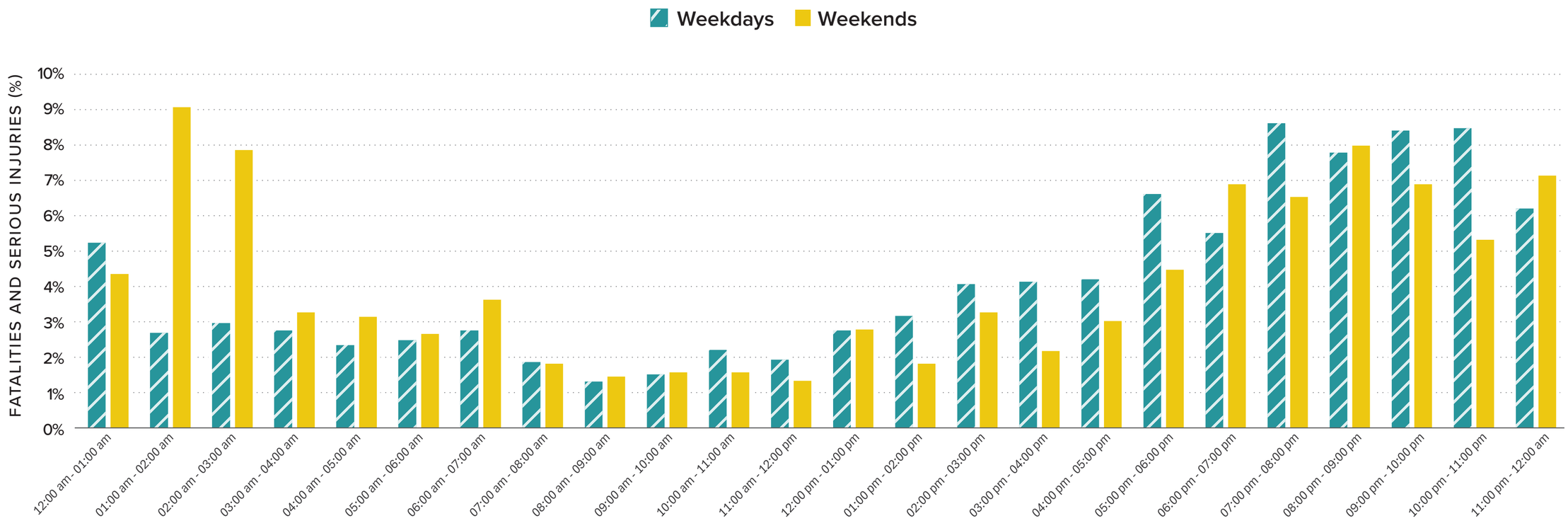


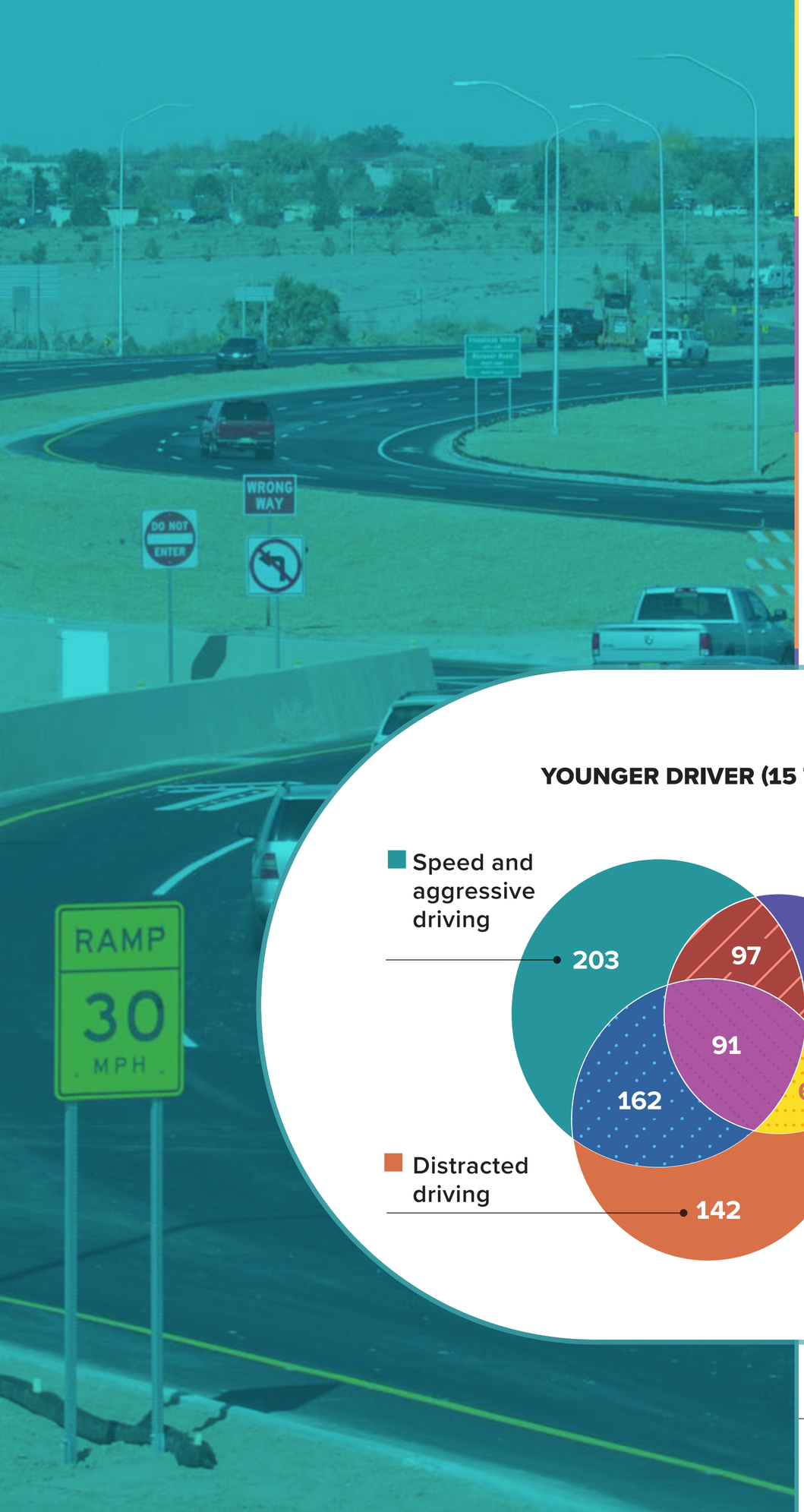


Hourly Patterns of Impaired-Driving Fatal and Serious Injury Crashes

As shown in Figure 4-8, the hourly distribution of fatal and serious injuries in impaired-driving crashes differs between weekdays and weekends from 2020 to 2024. On weekends, severe impaired-driving outcomes are concentrated during the early-morning hours between 1 a.m. and 3 a.m., accounting for a larger share of fatalities and serious injuries than during the same hours on weekdays. This late-night weekend peak aligns with later bar-closing times, suggesting increased exposure to impaired-driving risk following the end of nighttime alcohol service. Weekday impaired-driving fatalities and serious injuries are more concentrated during the evening hours between approximately 5 p.m. and 11 p.m., with comparatively lower shares observed overnight. Together, these observed patterns highlight distinct weekday and weekend risk windows and underscore the importance of tailoring enforcement and prevention strategies to known high-risk time periods.

Figure 4-8. Human Behavior: hourly distribution of fatal and serious injuries in impaired-driving crashes: weekdays vs. weekends (2020 to 2024).



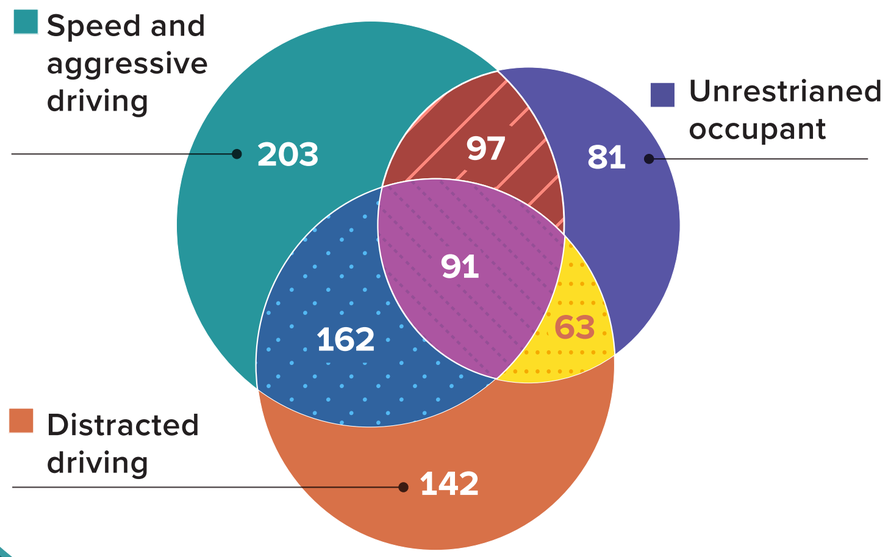


Leading Contributing Factors in Fatal and Serious Injury Crashes by Driver Age Group

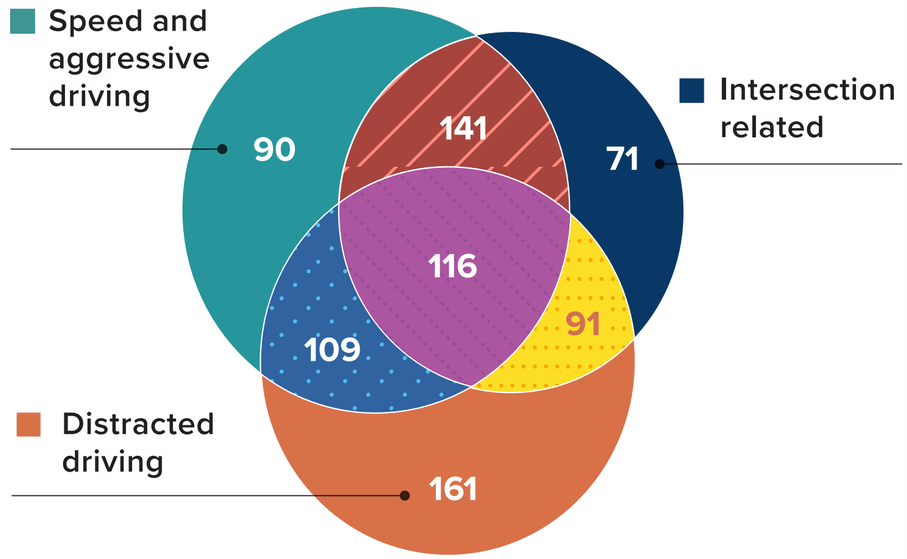
Figure 4-9 displays the three most frequently observed contributing factors in fatal and serious injury crashes for young drivers (15 to 20) and older drivers (65 or older). For both age groups, speeding or aggressive driving and distracted driving appear among the top three contributing factors, highlighting their central role in severe crash outcomes. For young drivers, unrestrained occupant behavior also ranks among the top contributing factors, whereas older drivers more frequently exhibit intersection-related contributing factors, reflecting differences in crash risk mechanisms between the two age groups.

Figure 4-9. Key contributing factors in fatal and serious injury crashes involving young and older drivers (2020 to 2024).

YOUNGER DRIVER (15 TO 20)



OLDER DRIVER (65 OR OLDER)

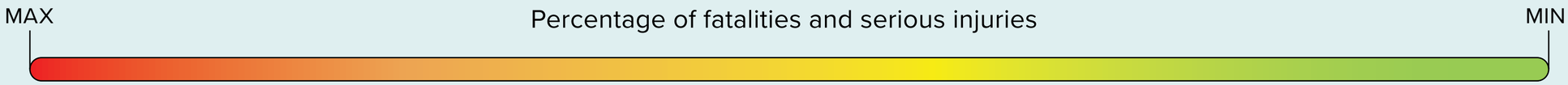


Unrestrained Occupant Fatalities and Serious Injuries by Age and Seating Position

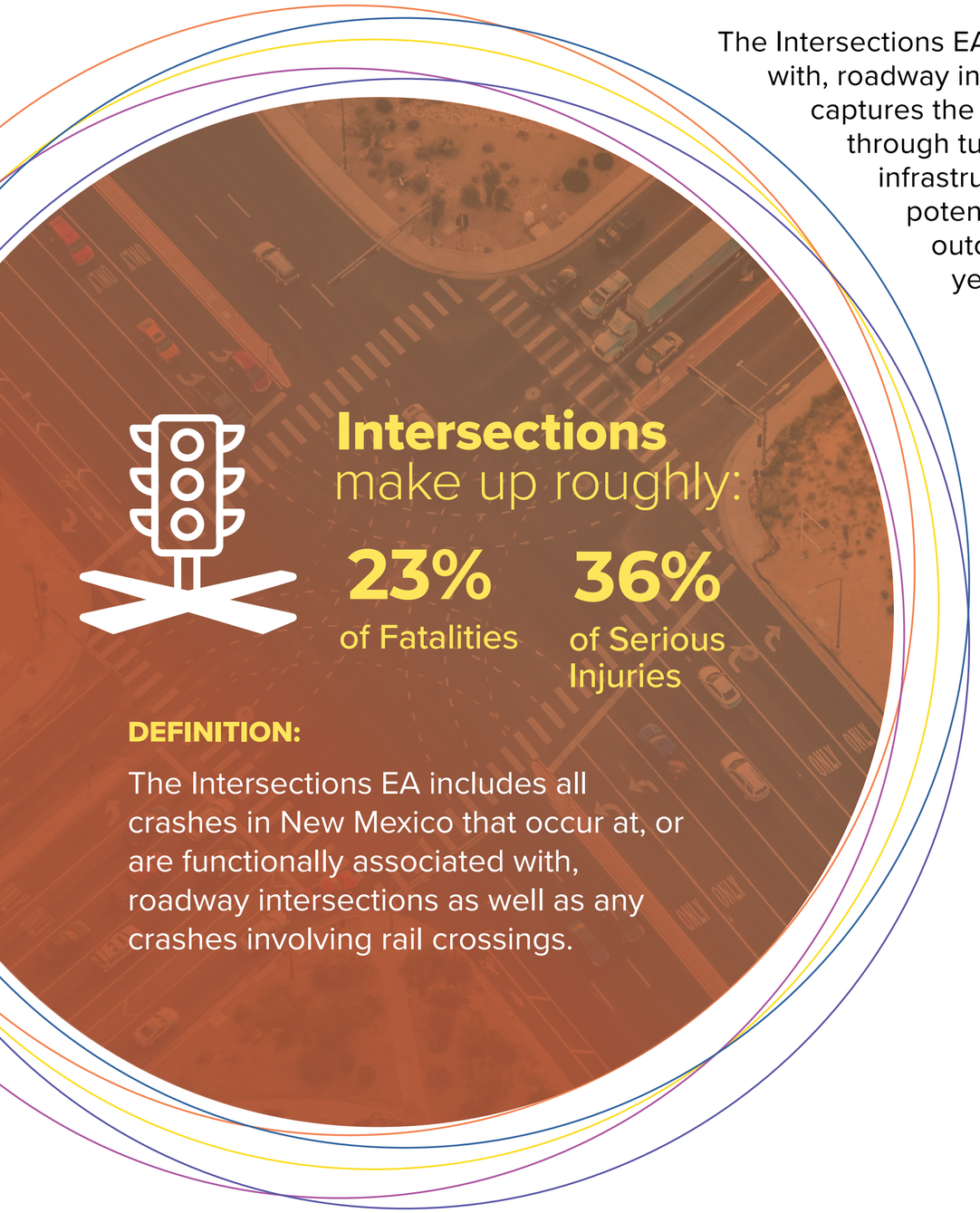
Table 4-1 shows the distribution of unrestrained occupants who were killed or seriously injured in crashes from 2020 to 2024, by age group and seating position at the time of the crash. Across nearly all age groups, unrestrained occupants seated in the driver (left-front) position account for the largest share of fatal and serious injury outcomes, particularly among drivers aged 16 to 25 and 26 to 35, highlighting elevated risk associated with non-use of restraints among younger drivers. Motorcycle drivers also represent a notable share of unrestrained fatalities and serious injuries, especially among younger and middle-aged groups, reflecting the inherent vulnerability of motorcyclists. Smaller but still meaningful shares occur among right-front vehicle passengers, motorcycle passengers, and other seating positions across age groups, indicating that lack of occupant protection contributes substantially to severe injury outcomes regardless of age or seating position.

Table 4-1. Human Behavior: Distribution of fatalities and serious injuries among unrestrained occupants by age group and seating position (2020 to 2024).

Age	Sitting position at the time of the crash				
	Vehicle driver (left front)	Vehicle passenger (right front)	Motorcycle driver	Motorcycle passenger	Other
Under 16	0.2%	0.9%	0.5%	0.2%	5.0%
16 to 25	13.7%	4.0%	3.3%	0.4%	4.7%
26 to 35	11.7%	3.7%	3.6%	0.2%	2.7%
36 to 45	7.9%	1.5%	4.1%	0.41%	1.9%
46 to 55	5.5%	0.8%	3.3%	0.4%	1.1%
56 to 65	4.9%	0.7%	2.9%	0.3%	0.6%
65+	4.7%	0.9%	1.2%	0.1%	0.7%
Unknown age	0.3%	0.2%	–	–	0.6%



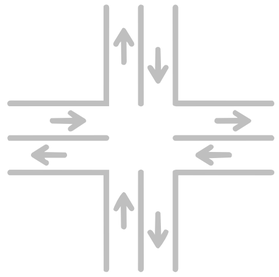
Intersections

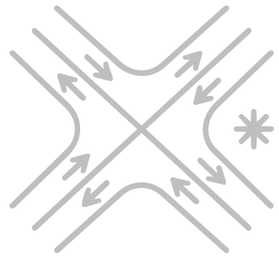


The Intersections EA includes all crashes in New Mexico that occur at, or are functionally associated with, roadway intersections as well as any crashes involving rail crossings. This grouping captures the full range of conflict points created where travel paths intersect—whether through turning movements, crossing and merging maneuvers, or interactions with rail infrastructure. Because these locations involve complex user behaviors and multiple potential collision angles, Intersections EA crashes are more likely to result in severe outcomes. Note that rail-related crash definitions were updated in 2023, affecting year-to-year comparisons.

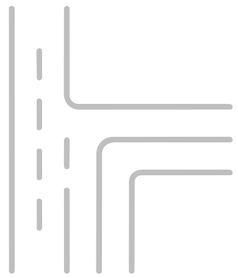
Any crash where the "Roadway – Related to Junction" is equal to intersection or intersection related; the "Intersection Type" is equal to four-way, five-way or more, L-intersection, Y-intersection, roundabout/traffic circle; or the "Traffic Control Device" is equal to stop sign, traffic signals, yield sign, or all-way stop, as well as crashes involving rail crossings or trains/locomotives.

INTERSECTION TYPE


Four-way


Five-way or more


L-Intersection


L-Intersection

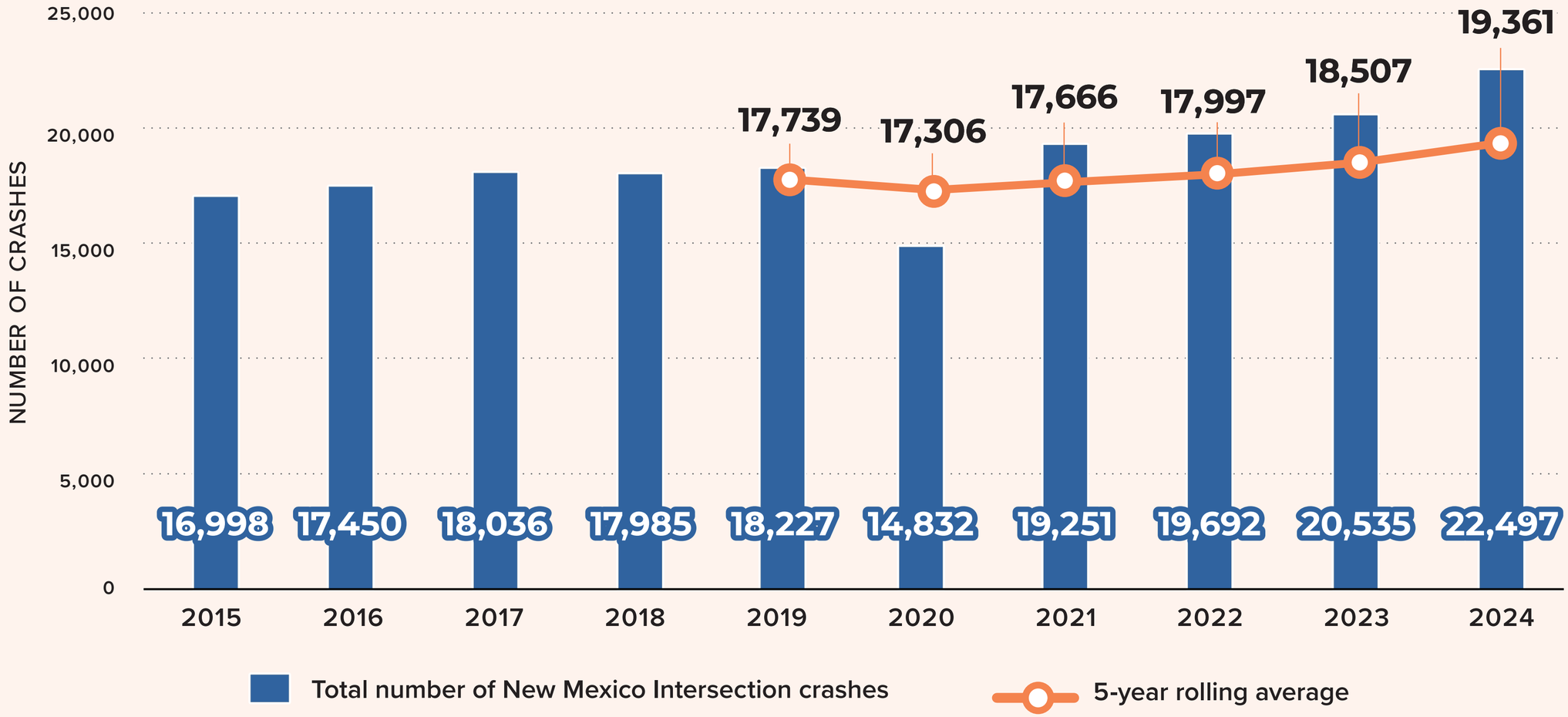

Y-Intersection


Roundabout / Traffic circle

In fact, 34% of all fatalities and serious injuries statewide fall within this EA, while 46% of all New Mexico crashes are classified as Intersections EA events during the 5-year period from 2020 to 2024. As shown on Figure 4-10, New Mexico Intersections EA crashes increased from 16,998 in 2015 to 18,227 in 2019 (an increase of approximately 7%), dropped sharply to 14,832 in 2020 (-18.6% vs. 2019), and then increased each year to reach 22,497 in 2024 (+52% vs. 2020; +32% vs. 2015). The 5-year rolling average mirrors this pattern—dipping from 17,739 in 2019 to 17,306 in 2020 before climbing steadily to 19,361 in 2024, indicating a sustained upward trend that smooths year-to-year variation. Overall, the post-2020 growth suggests a persistent increase in Intersections EA crashes in New Mexico.

With nearly half of all crashes (46%) and over one-third of fatalities and serious injuries (34%), **intersections remain a critical emphasis area,** showing sustained post-2020 growth in crash frequency.

Figure 4-10. New Mexico Intersections EA crashes: yearly trend and 5-year rolling average (2015 to 2024).



To understand the severity of these outcomes, Figure 4-11 presents the fatalities and serious injuries for the Intersections EA in New Mexico from 2020 to 2024.

Serious injuries increased steadily over the period, rising from 257 in 2020 to a peak of 534 in 2023, before slightly decreasing to 498 in 2024. Fatalities also fluctuated but remained consistently lower than serious injuries, increasing from 67 in 2020 to 140 in 2022, dipping to 103 in 2023, and rising again to 143 in 2024. Overall, Figure 4-11 highlights a clear upward trend in these most severe outcomes, with 2023 and 2024 showing the highest combined burden of fatalities and serious injuries across the 5-year period.

Figure 4-11. Fatalities and serious injuries in the Intersections EA in New Mexico (2020 to 2024).

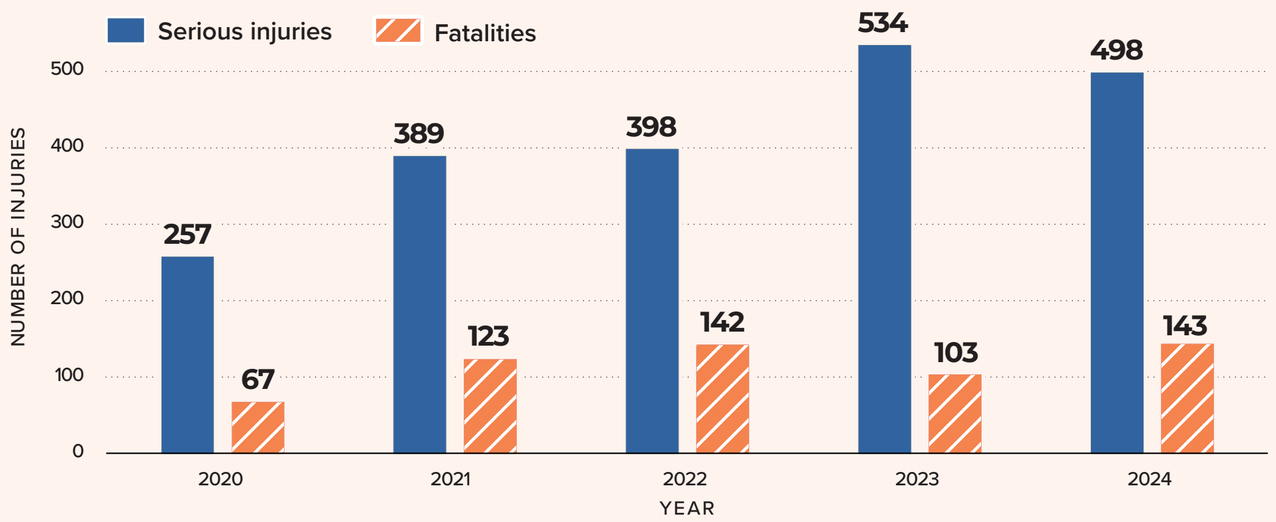
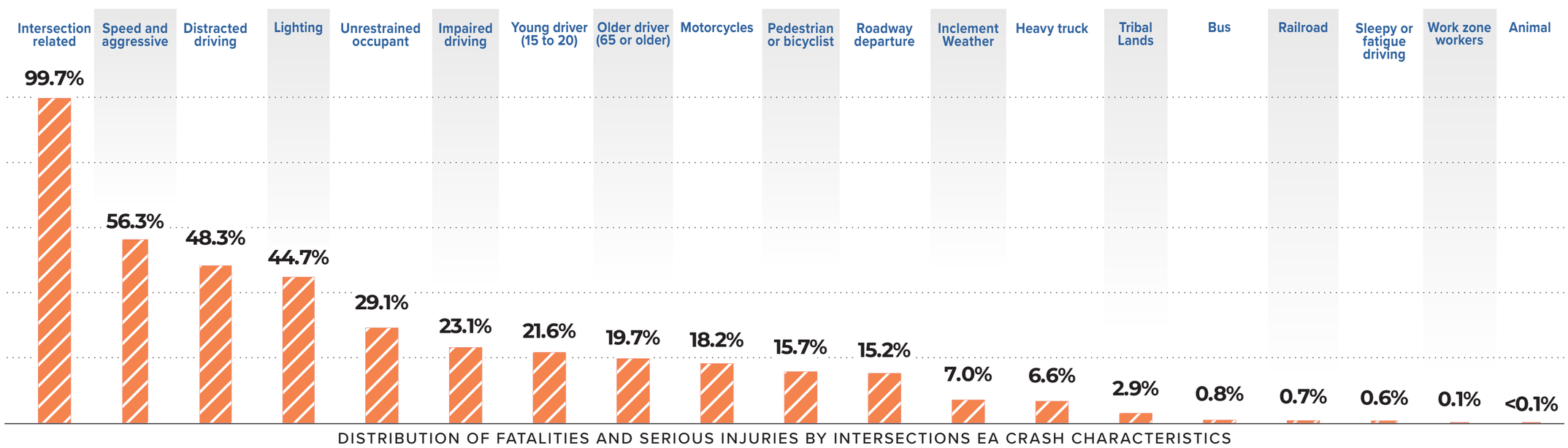


Figure 4-12 shows that intersection-related crashes are the defining feature of the Intersections Emphasis Area, accounting for 99.7% (2,646 cases) of all fatal and serious-injury outcomes from 2020 to 2024. While much smaller in magnitude, railroad-related crashes are also present (0.7%) and are included because EA characteristics are not mutually exclusive.

Within this EA, behavioral factors dominate severity outcomes. The most prevalent contributor is speeding or aggressive driving (56%), followed by distracted driving (48%) and lighting-related conditions (45%). Other notable contributors include unrestrained occupants (29%) and alcohol- or drug-impaired driving (23%). Young drivers (ages 15–20) and older drivers (65+) are each involved in roughly one-fifth of cases. Roadway-departure crashes account for 15% of outcomes.

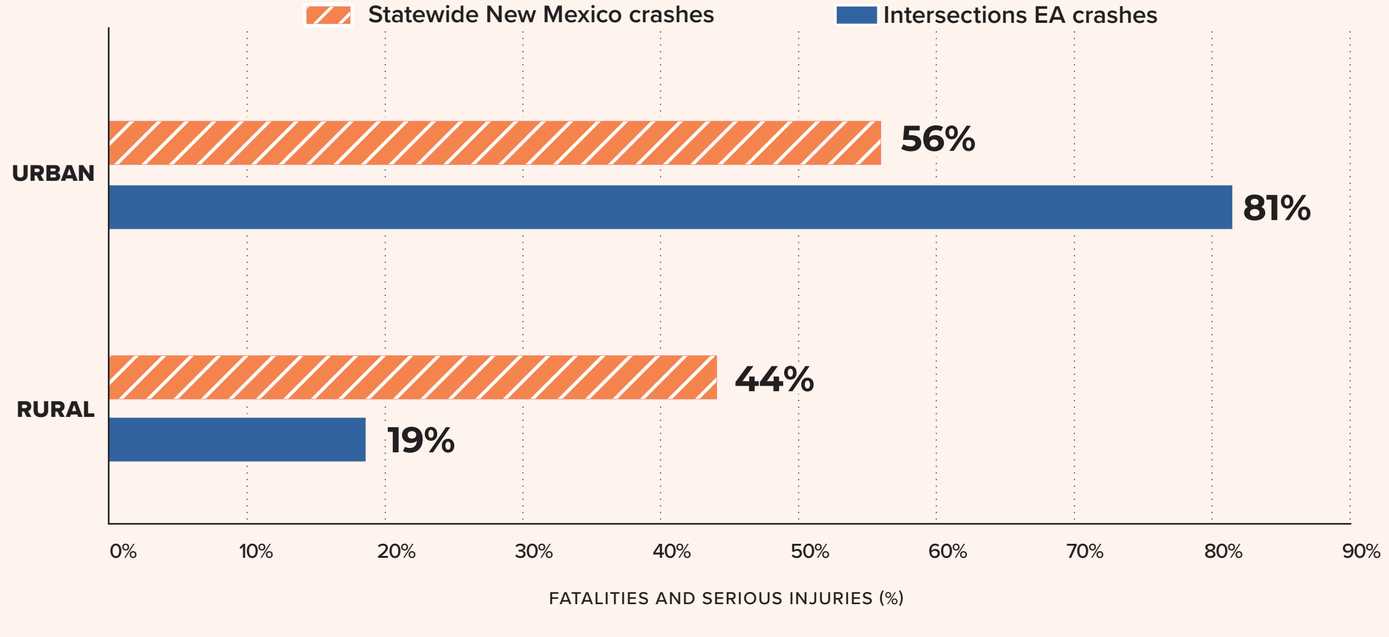
Environmental and vehicle-related factors contribute smaller shares, including inclement weather (7%), heavy trucks (6.6%), and Tribal lands (2.9%), with very small contributions from buses, railroad, fatigue, work zone workers, and animal-related crashes. Percentages exceed 100% because multiple characteristics may be present in a single crash.

Figure 4-12. Percentage distribution of fatalities and serious injuries by Intersections EA crash characteristics (2020 to 2024).



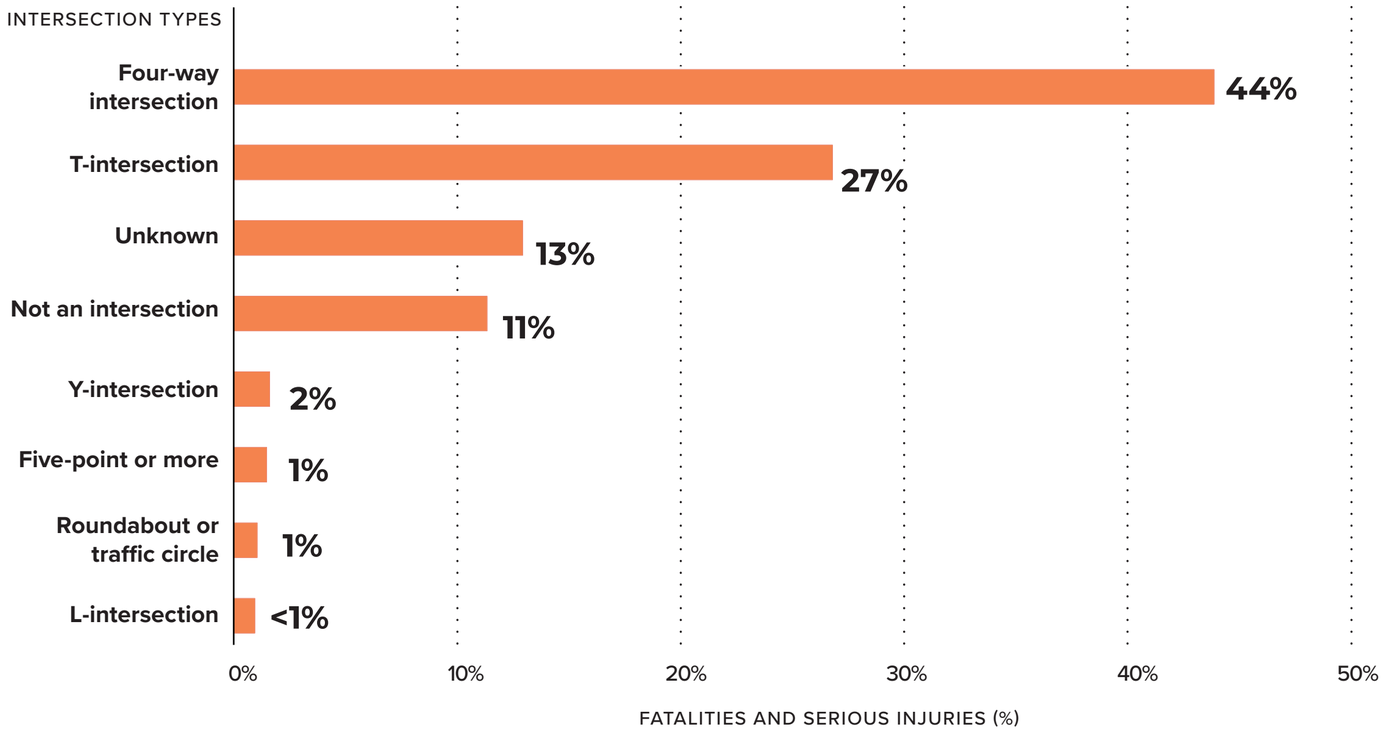
Expanding the analysis beyond crash characteristics, Figure 4-13 explores how roadway type influences the distribution of fatal and serious-injury outcomes. For Intersections EA crashes, a large majority (81%) of fatal and serious-injury outcomes occur on urban roads, with only 19% occurring on rural roads. In contrast, the statewide pattern is more balanced, with 56% of severe outcomes on urban roads and 44% on rural roads. This comparison shows that severe Intersections EA crashes are disproportionately concentrated in urban areas, unlike the broader statewide trend where rural crashes make up a larger share.

Figure 4-13. Distribution of fatalities and serious injuries by road type for Intersections EA crashes vs. statewide New Mexico crashes (2020 to 2024).



Expanding the analysis to intersection form, Figure 4-14 shows that most fatal and serious-injury outcomes in the Intersections EA occur at four-way and T-intersections, which account for 44% (1,164) and 27% (711), respectively—71% combined. Smaller shares occur at unknown intersection types (13%, 343) and Not an Intersection locations (11%, 301), indicating some severity outside clearly identified intersection forms. Less common configurations make up only a small fraction: Y-intersections (2%, 43), five-point or more (1%, 39), roundabout/traffic circle (1%, 28), and L-intersections (<1%, 25). Overall, the distribution underscores that traditional four-leg and T-intersections dominate severe outcomes over 2020 to 2024, while roundabouts and other uncommon layouts contribute minimally.

Figure 4-14. Distribution fatalities and serious injuries in Intersections EA crashes (2020 to 2024) by intersection types.





With a clear upward trend—showing sustained post-2020 growth in crash frequency—intersections remain a critical emphasis area, .

Additionally contextualize these severe crashes, Figure 4-15 shows the age and gender distribution of drivers involved in fatal and serious-injury crashes within the Intersections Emphasis Area from 2020 to 2024. Driver involvement is highest among those aged 16 to 25, representing 7% of females and 15% of males, and remains relatively high among ages 26 to 35 (7% female, 13% male) and 36 to 45 (5% female, 10% male). Involvement generally declines with age, with drivers aged 46 and older each accounting for approximately 4% to 8% of involvement, while drivers under 16 show minimal representation (less than 1%). Drivers with unknown age account for a small share, representing 6% of males and a negligible share of females. Overall, the figure indicates greater involvement among younger drivers and consistently higher male representation across all age groups in severe intersection crashes.

Most fatal and serious-injury outcomes in the Intersections EA occur at four-way and T-Intersections, which account for 44% (1,164) and 27% (711), respectively—71% combined.

Figure 4-15. Age and gender distribution of drivers in fatal and serious injury Intersections EA crashes (2020 to 2024).

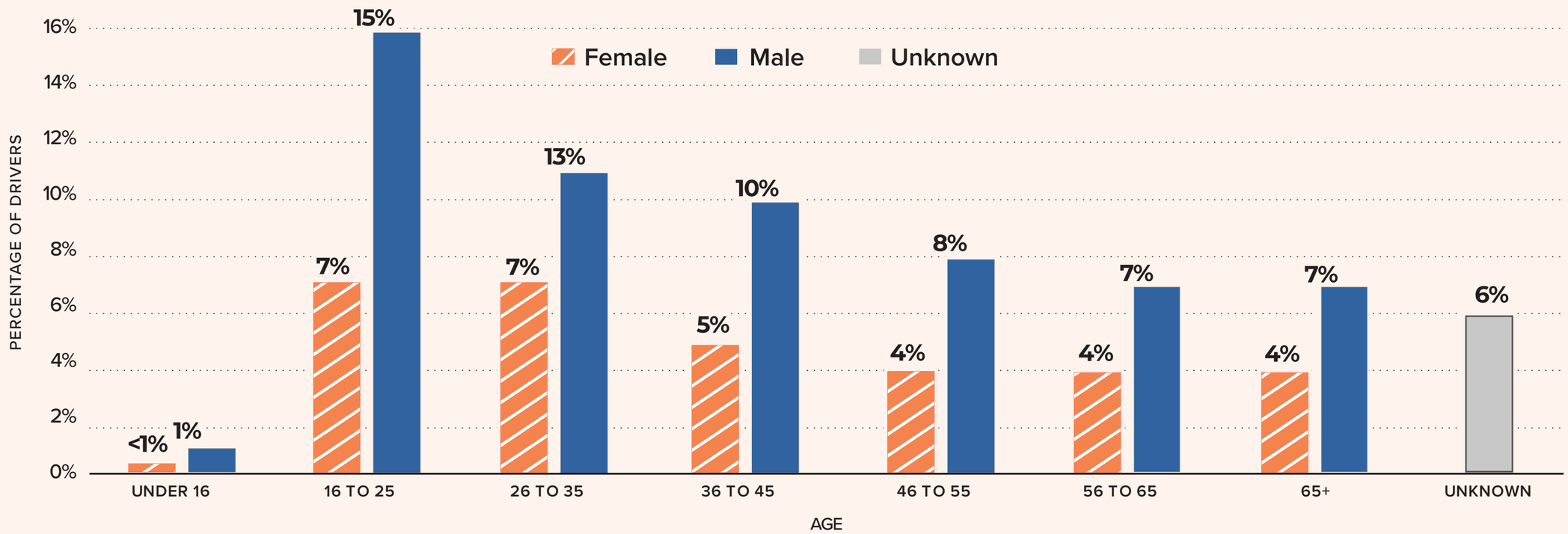


Figure 4-16 shows the distribution of intersection control types associated with vehicles involved in fatal and serious injury Intersection EA crashes. Signalized control accounts for the largest share (48%), followed by uncontrolled locations (24%) and stop-controlled intersections (19%). Smaller proportions involve other or unknown control (6%), no passing zone control (3%), and yield control (1%).

Overall, Figure 4-16 indicates that while severe crashes occur under all uncontrolled and control intersection types, they are most concentrated at signalized intersections.

Figure 4-16. Intersection control device types for the vehicles involved in fatal and serious injury Intersections EA crashes (2020 to 2024).

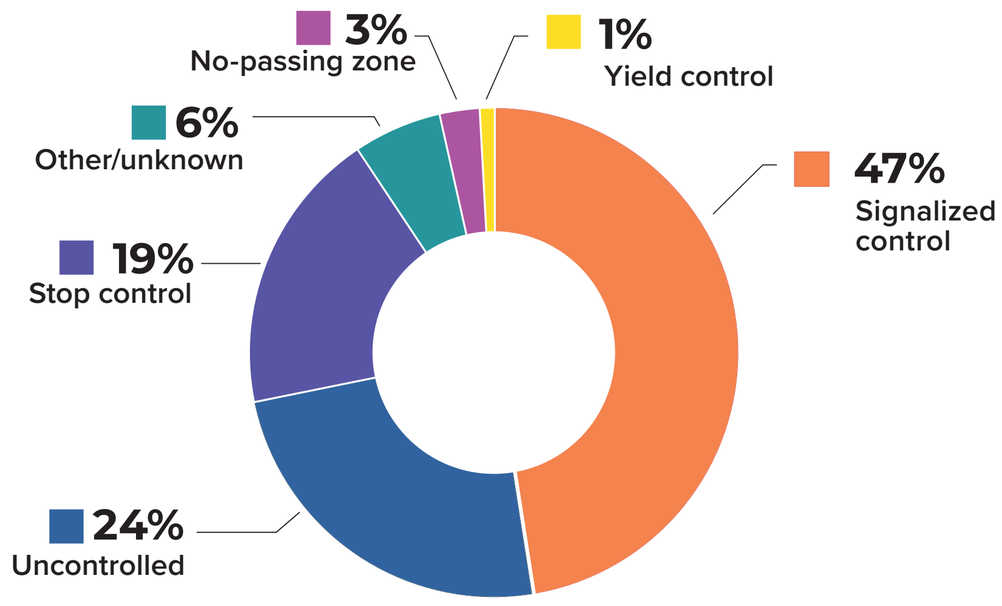


Figure 4-17 shows that among vehicles involved in fatal and serious injury Intersection EA crashes, going straight accounts for most actions (56%), followed by left-turn movements (16%). Smaller portions involve stopping or parked positions (8%), lane movements (6%), other or unknown actions (7%), reckless or wrong-way behaviors (4%), and right-turn movements (3%). These results suggest that countermeasures targeting straight through and left-turn movements offer the greatest potential for reducing severe intersection outcomes.

Figure 4-17. Vehicles action involved in fatal and serious injury Intersections EA crashes (2020 to 2024).

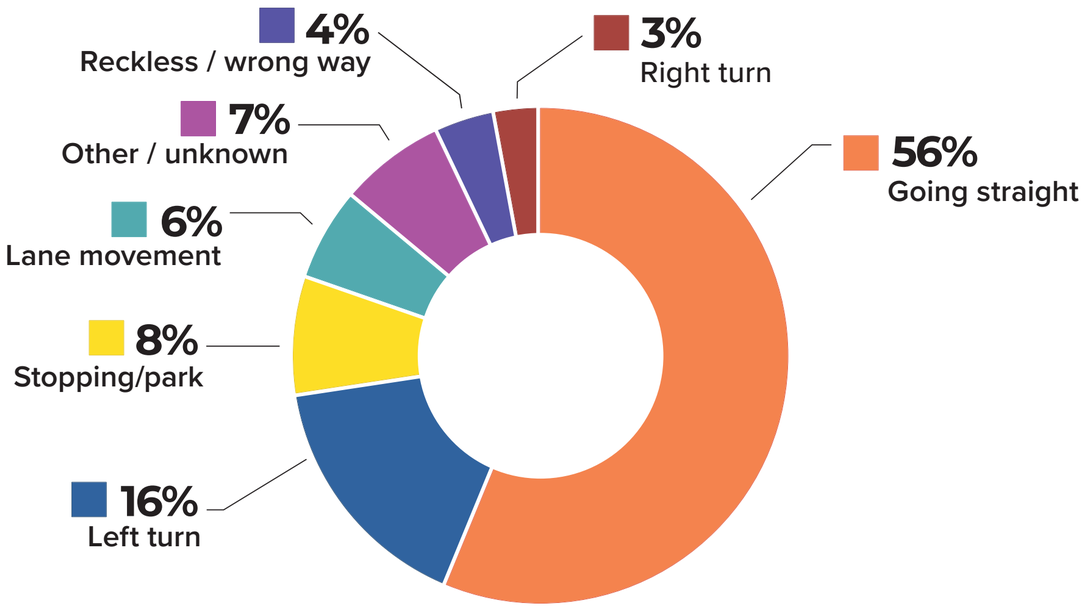
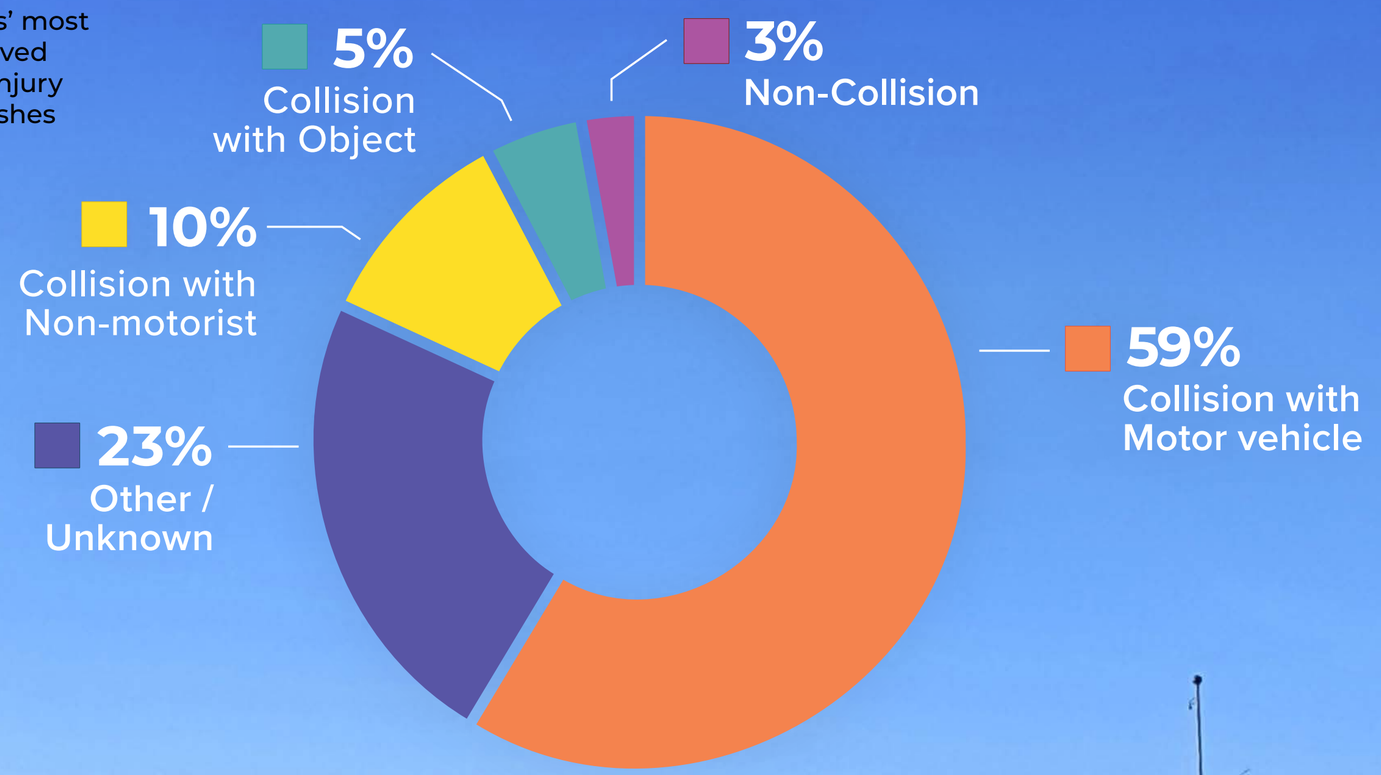
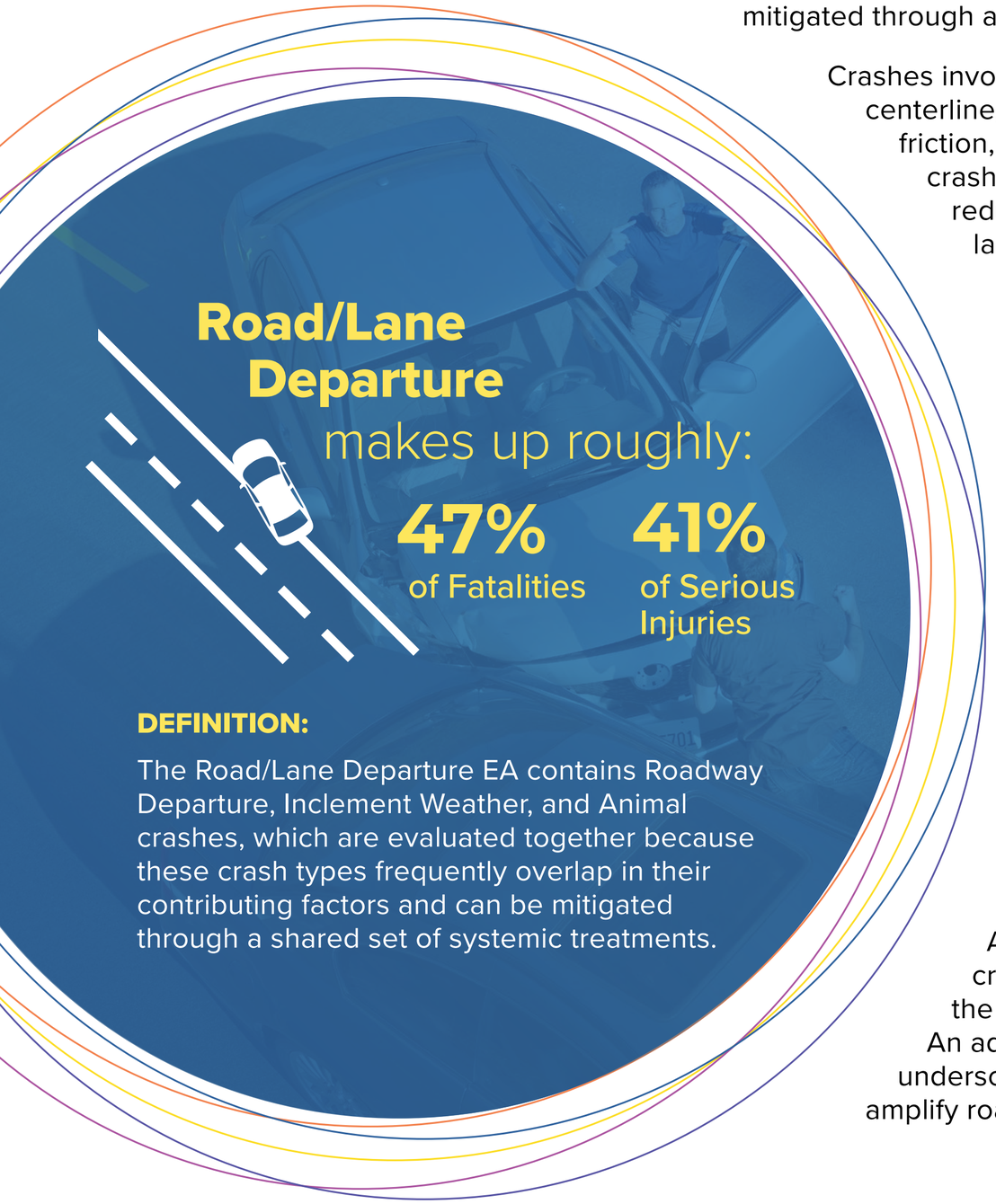


Figure 4-18 highlights that most severe intersection crashes involve crashes with motor vehicles (59%), followed by a sizable share classified as other or unknown (23%). Smaller portions involve non-motorists (10%), objects (5%), or non-collision events (3%). Overall, the results indicate that vehicle-to-vehicle conflicts are the primary contributors to serious intersection outcomes, with vulnerable road user crashes playing a smaller but important role.

Figure 4-18. Vehicles' most harmful events involved in fatal and serious injury Intersections EA crashes (2020 to 2024).



Road/Lane Departure



The Road/Lane Departure EA contains Roadway Departure, Inclement Weather, and Animal crashes, which are evaluated together because these crash types frequently overlap in their contributing factors and can be mitigated through a shared set of systemic treatments.

Crashes involving roadway departure—where a vehicle crosses an edge line, road edge, centerline, or otherwise leaves the intended travel lane—are often influenced by visibility, friction, or driver-control issues. These same conditions are prevalent in inclement-weather crashes, where adverse weather such as rain, snow or ice, fog, dust, or high winds reduces pavement friction and sight distance, increasing the likelihood and severity of lane departure events.

Similarly, animal-related crashes, which occur when a vehicle encounters wildlife or domestic animals (often during dawn, dusk, or migration periods), can trigger sudden braking or swerving that results in secondary roadway departures. Because these three crash types share common risk mechanisms and can be addressed with corridor-level countermeasures—such as enhanced delineation, high-friction surface treatments (HFST), shoulder and clear-zone improvements, weather-responsive maintenance, vegetation management, and wildlife mitigation strategies—they are grouped into a single EA for consistent analysis, screening, and prioritization.

> Roadway departure, inclement weather, and animal-related crashes share common risk factors—visibility, friction, and driver response—and are most effectively addressed through coordinated, corridor-level strategies.

As shown on Figure 4-19, the overlap among Road/Lane Departure EA subgroup crashes from 2020 to 2024 demonstrates that roadway departure crashes represent the largest share, with 32,885 crashes occurring only as roadway departure events. An additional 6,411 crashes involved both roadway departure and inclement weather, underscoring how wet, icy, or low-visibility conditions contribute to loss of control and amplify road departure-related severity.

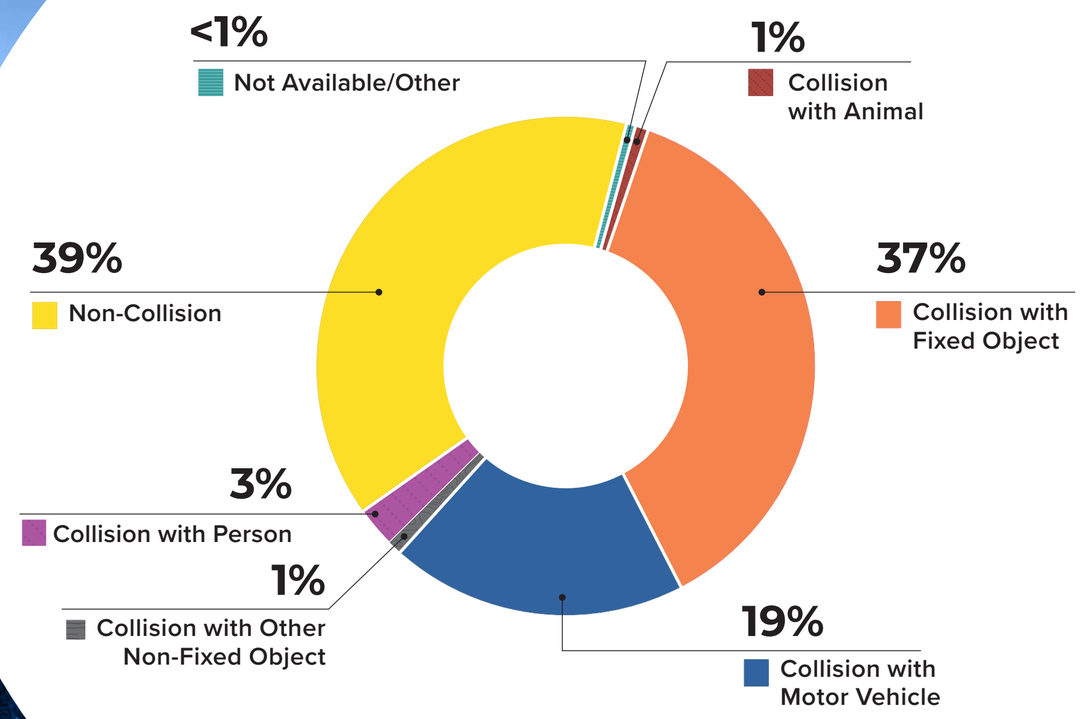
Adverse weather such as rain, snow or ice, fog, dust, or high winds reduces pavement friction and sight distance, increasing the likelihood and severity of lane departure events.



Inclement-weather–only crashes account for 12,169 cases, additionally highlighting the role of adverse weather in crash risk even without a departure component. Animal-only crashes, although much less common at 2,534 cases, still interact meaningfully with other crash factors: 135 crashes involved both animals and inclement weather, and 2 crashes involved both animals and roadway departure.

Together, these patterns demonstrate that a substantial portion of severe crashes arise from interacting crash mechanisms, reinforcing the value of analyzing roadway departure, weather-related, and animal-related factors within a unified EA rather than treating them as isolated crash types.

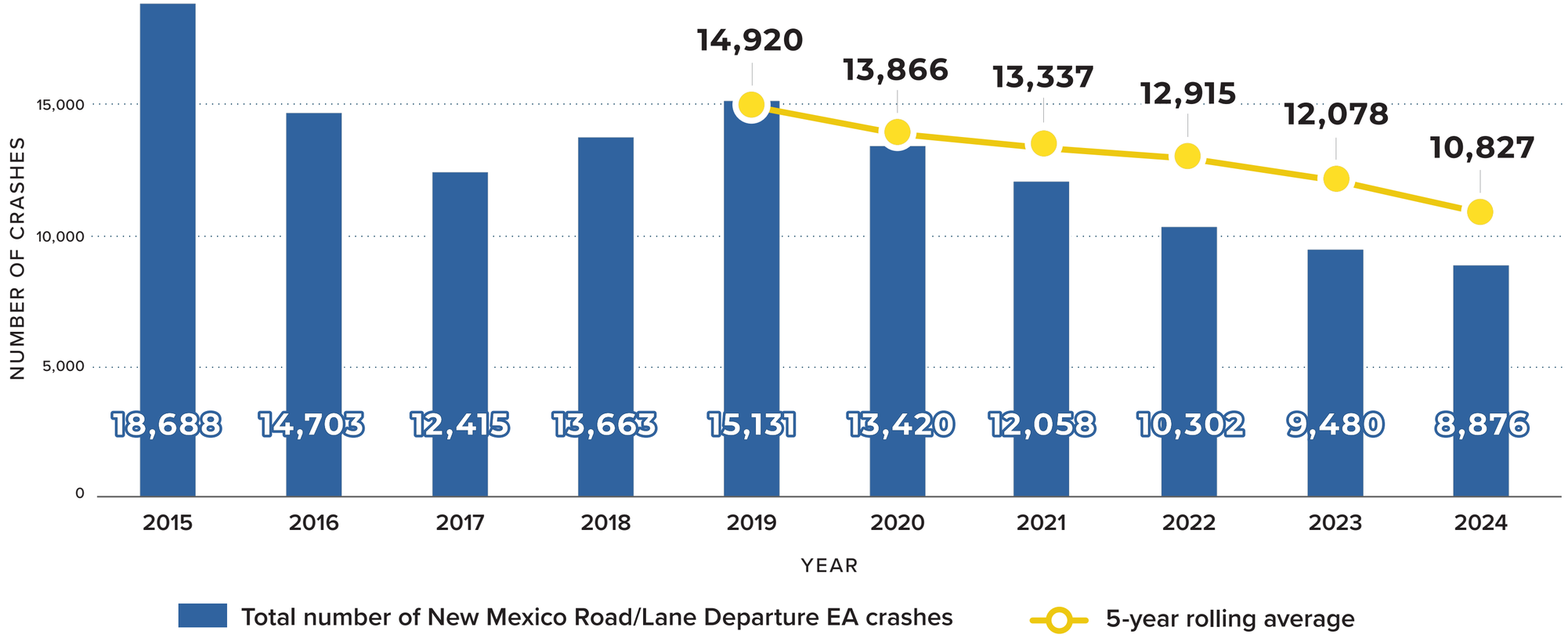
Figure 4-19. Overlap of Road/Lane Departure EA subgroups crashes (2020 to 2024).



As shown on Figure 4-20, there has been a clear and sustained decline in total crashes over the last decade with regard to Road/Lane Departure EA crashes. As shown in the trend data, total crashes in this EA decreased from 18,688 in 2015 to 8,876 in 2024, representing more than a 50% reduction. The 5-year rolling average, which smooths out year-to-year fluctuations and provides a clearer view of long-term patterns, peaked at 14,920 in 2019 before steadily decreasing to 10,827 in 2024. This downward trend suggests that systemic safety improvements, roadway delineation upgrades, winter maintenance strategies, and wildlife-collision mitigation efforts may be contributing to a broad reduction in the combined crash burden across this EA.

> ...there has been a clear and sustained decline in total crashes over the last decade with regard to Road/Lane Departure EA crashes.

Figure 4-20. New Mexico Road/Lane Departure EA crashes: Yearly trend and 5-year rolling average (2015 to 2024).

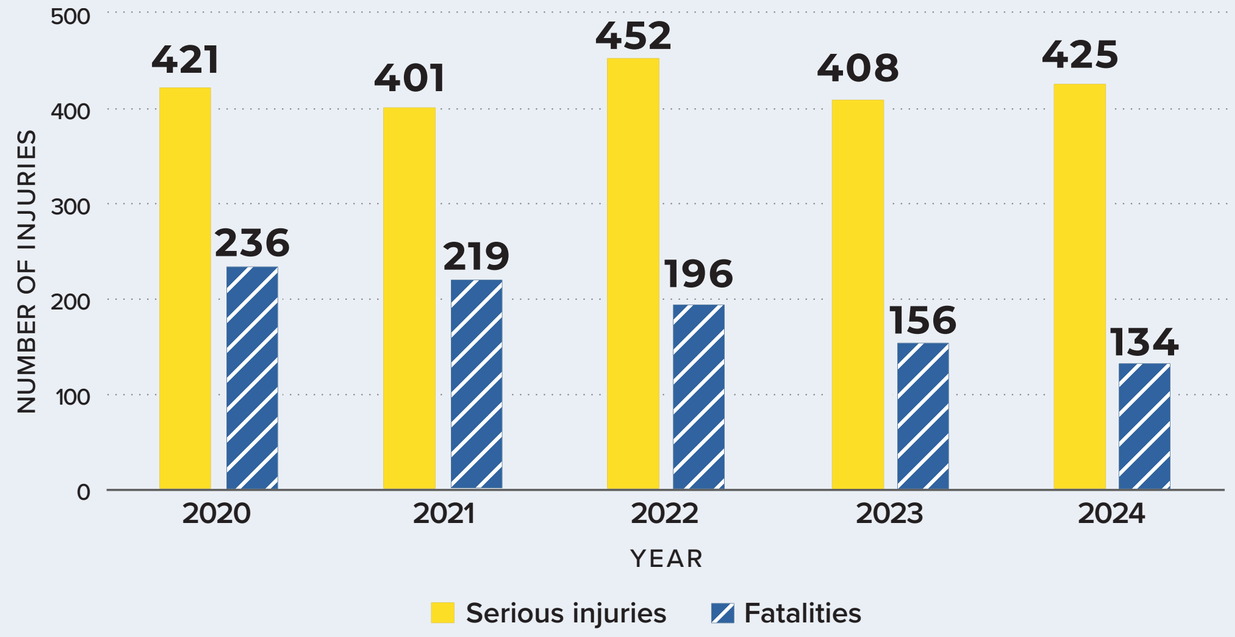




In addition to the steady decline in crash frequency, the Road/Lane Departure EA continues to exhibit a substantial share of the State's most severe outcomes (Figure 4-21). Between 2020 and 2024, fatalities decreased from 236 to 134, marking a reduction of more than 40% over 5 years. Serious injuries have remained relatively stable during this same period, fluctuating between 401 and 452 injuries per year, with 425 serious injuries recorded in 2024. Although the overall crash numbers in this EA have declined significantly, the persistent level of serious injuries underscores the need for continued investment in systemic roadway-departure countermeasures—such as enhanced delineation, high-friction treatments, winter maintenance strategies, and clear-zone improvements.

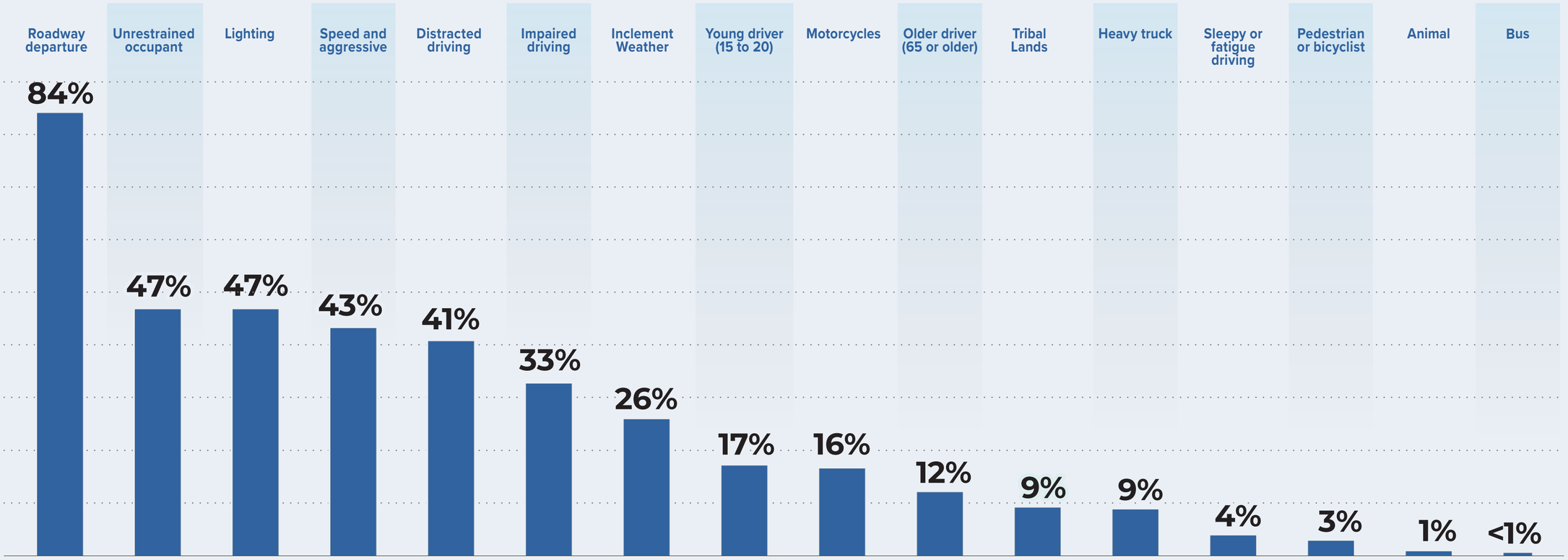
> Between 2020 and 2024, **fatalities decreased from 236 to 134,** marking a reduction of more than 40% over 5 years.

Figure 4-21. Fatalities and serious injuries in the Road/Lane Departure EA in New Mexico (2020 to 2024).



An examination of the crash characteristics associated with fatalities and serious injuries in the Road/Lane Departure EA reveals that roadway departure itself is the dominant factor, contributing to 84% of all severe outcomes between 2020 and 2024 (Figure 4-21). This highlights the inherently high-risk nature of leaving the travel lane, particularly when combined with behavioral or environmental factors. Nearly half of the severe crashes involved unrestrained occupants (47%) and occurred under non-daylight conditions (47%), underscoring the importance of occupant protection and nighttime visibility. Aggressive and speeding behaviors (43%), as well as distracted driving (41%), remain critical contributors, reflecting the strong role of driver behavior in lane departure severity. Impairment due to alcohol or drugs (33%) and inclement weather conditions (26%) also represent substantial portions of the severe crash profile. Younger drivers (17%), motorcycles (16%), and older drivers (12%) each account for meaningful shares, indicating the influence of user vulnerability. Other characteristics, such as those in Tribal lands (9%), involving heavy trucks (9%), fatigued driving (4%), bicycles or pedestrians (3%), animal encounters (1%), and buses (<1%), represent smaller proportions but nonetheless highlight scenarios where targeted countermeasures can yield safety benefits. Together, these distributions emphasize that while roadway departure is the central mechanism of harm, crash severity is shaped by a combination of roadway conditions, driver behavior, and situational factors.

Figure 4-22. Percentage distribution of fatalities and serious injuries by Road/Lane Departure EA crash characteristics (2020 to 2024).



When comparing roadway types, the Road/Lane Departure EA shows a distinctly different pattern from the statewide distribution of all crashes. For severe outcomes within this EA , 60% of fatalities and serious injuries occur on rural roadways, compared with only 44% for fatal and serious injury crashes statewide (Figure 4-23). This reflects the greater severity typically associated with rural roadway environments, where higher travel speeds, limited lighting, longer emergency response times, and roadside hazards increase the risk and consequences of Road/Lane Departure events. In contrast, urban roadways account for 40% of the severe crashes in this EA, substantially less than the 56% share observed for all statewide crashes. This comparison highlights that while most New Mexico crashes occur in urban settings, the most severe roadway-departure outcomes are disproportionately concentrated on rural roads, reinforcing the need for targeted rural safety strategies such as enhanced delineation, shoulder improvements, and clear-zone treatments.

Figure 4-23. Distribution of fatalities and serious injuries by roadway type for Road/Lane Departure EA crashes vs. all New Mexico crashes (2020 to 2024).

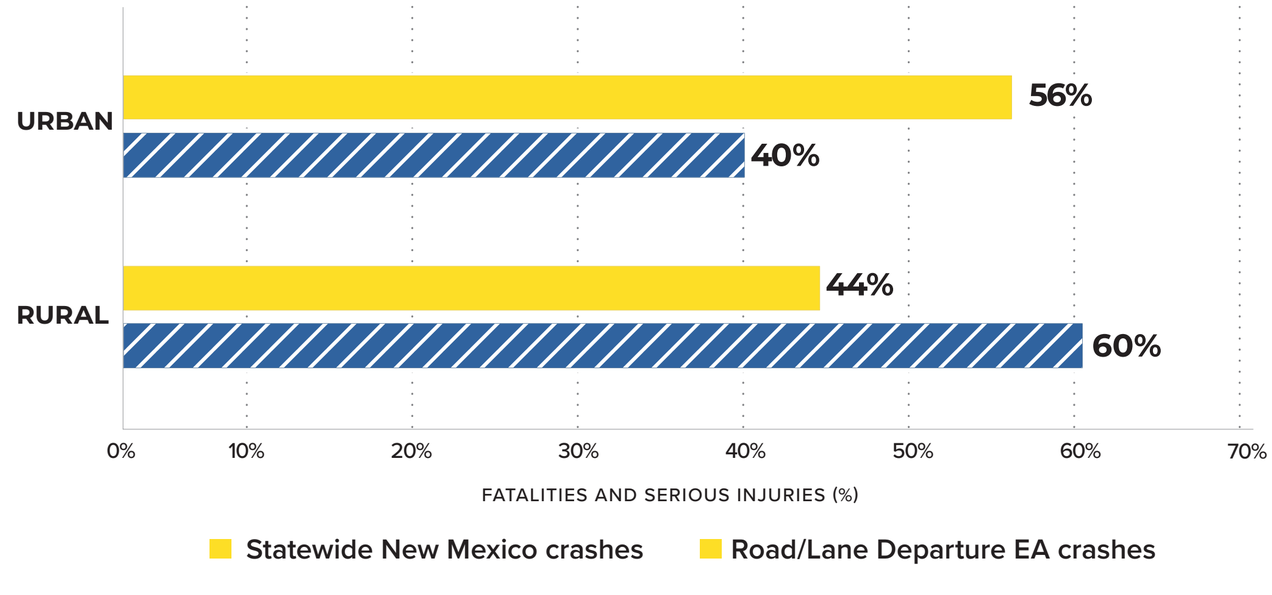


Figure 4-24 shows that fatalities and serious injuries in the Road/Lane Departure EA follow a pattern similar to statewide crashes in daylight (52.1% vs. 52.0%), but important differences emerge at night. Roadway-departure severe crashes occur more often on dark, unlighted roadways (28.7% compared with 25.0% statewide) and less often in dark, lighted areas (11.7% vs. 16.2%). Dawn/dusk and unknown lighting conditions remain low and nearly identical in both datasets. Overall, the results indicate that while daylight accounts for about half of all severe crashes, unlighted nighttime conditions pose a disproportionately higher risk for Road/Lane Departure crashes, reinforcing the importance of nighttime visibility improvements—such as enhanced pavement markings, delineation, and roadway lighting—on corridors prone to departure-related severity.

> **Roadway-departure severe crashes occur more often on dark, unlighted roadways** (28.7% compared with 25.0% statewide) and less often in dark, lighted areas (11.7% vs. 16.2%).

Figure 4-24. Distribution of fatalities and serious injuries in Road/Lane Departure EA crashes (2020 to 2024) by lighting conditions.

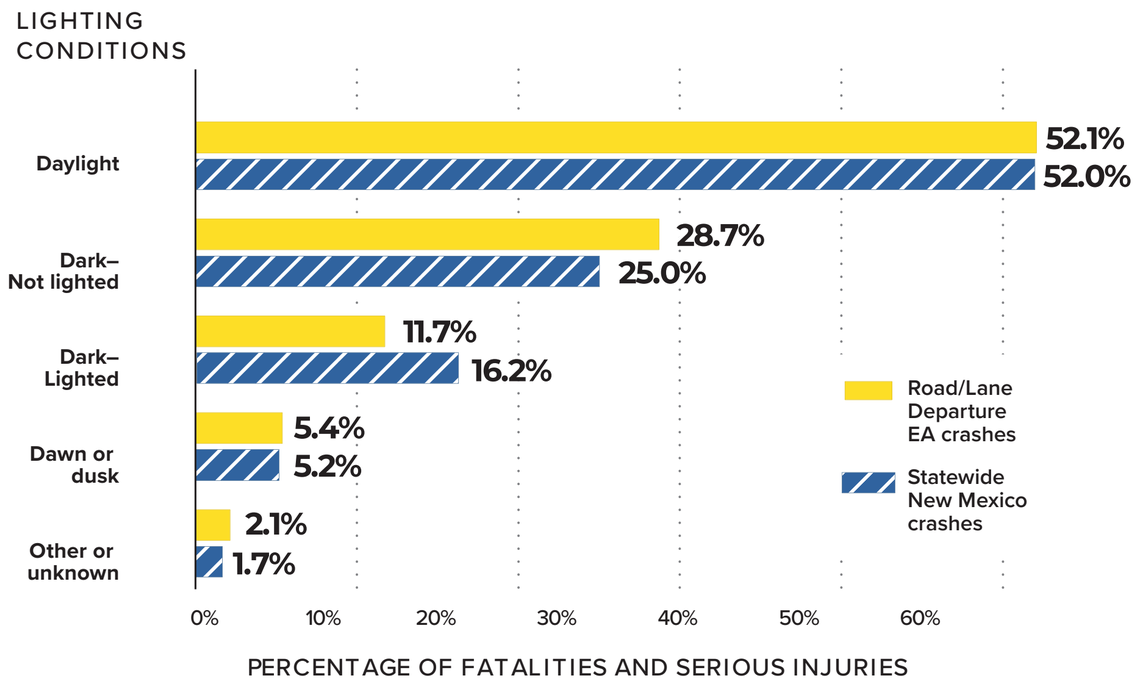
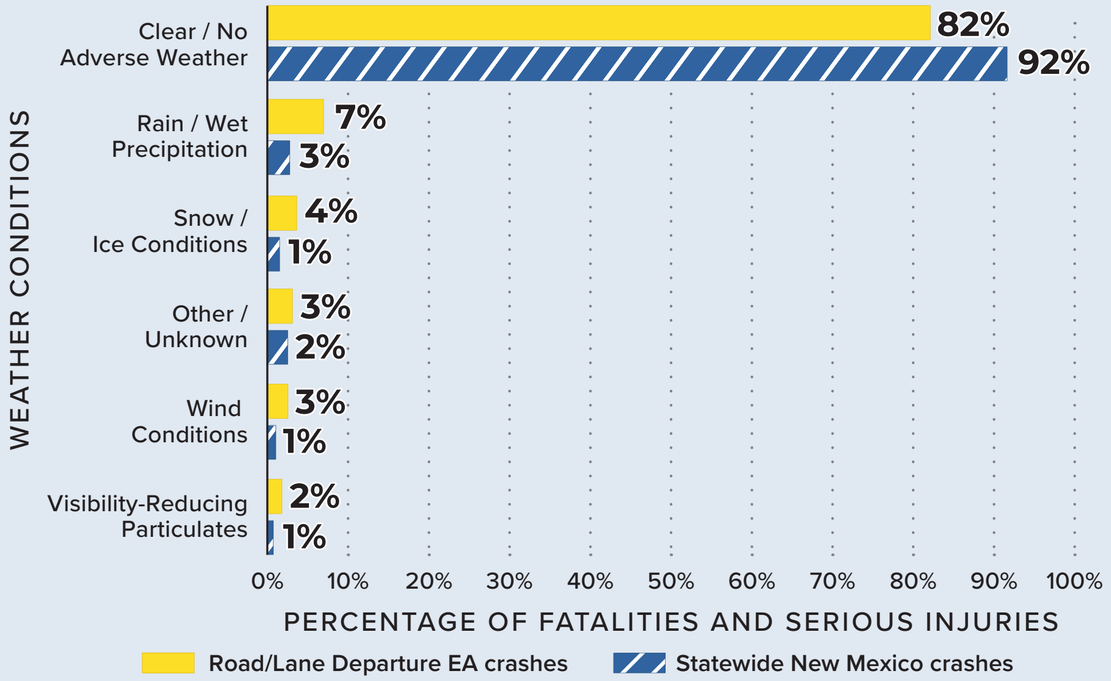


Figure 4-25 shows that while most severe outcomes occur in clear/no-adverse weather for both datasets, the Road/Lane Departure EA has a smaller clear share (82% vs. 92% statewide) and a correspondingly larger share in adverse conditions compared to statewide crashes. In the EA, severe crashes occur more often during rainy/wet weather (7% vs. 3%), snow/ice (4% vs. 1%), wind (3% vs. 1%), and visibility-reducing particulate events/conditions (2% vs. 1%), with other/unknown conditions slightly higher than statewide crashes as well (3% vs. 2%).

This pattern indicates that Road/Lane Departure crashes are disproportionately weather-sensitive, consistent with the effects of reduced friction and visibility on departure risk and severity. Practically, the results support targeted countermeasures on weather-prone corridors—e.g., HFSTs, proactive winter maintenance/anti-icing, drainage, enhanced markings/delineation/retroreflectivity, weather-responsive speed warnings, and wind/blowing-dust management.

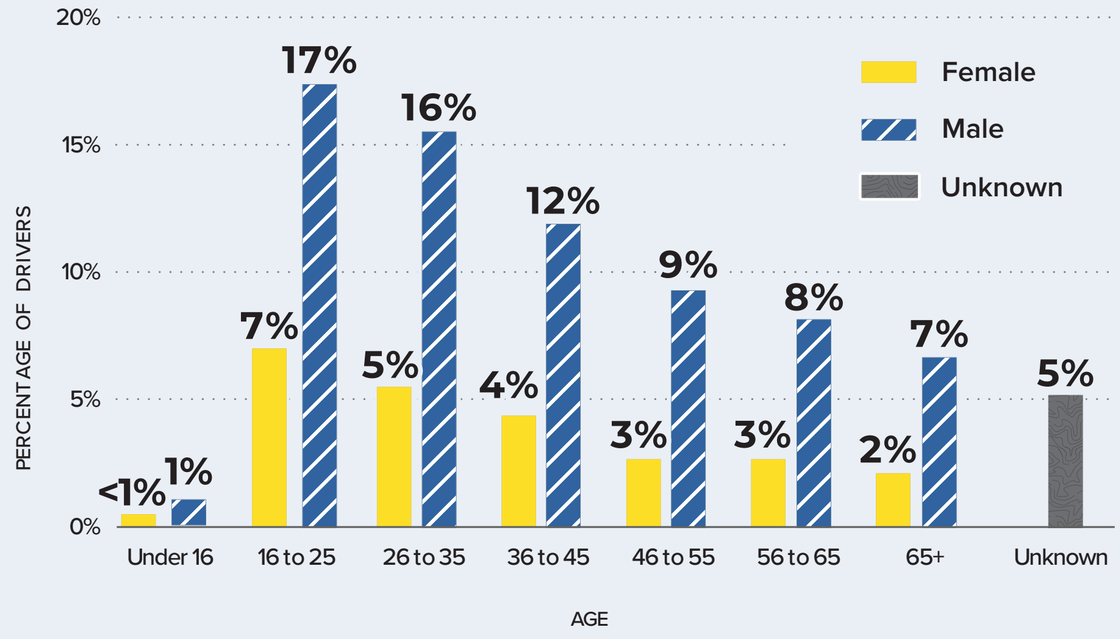
Figure 4-25. Distribution of fatalities and serious injuries in Road/Lane Departure EA crashes (2020 to 2024) by weather conditions.



As shown on Figure 4-26, the age–gender distribution of drivers involved in fatal and serious-injury road/lane-departure crashes is skewed toward male drivers, particularly young adults. Drivers aged 16 to 25 account for 17% of males and 7% of females, while those aged 26 to 35 represent 16% of males and 5% of females. Male involvement remains higher than female involvement across all older age groups, though participation gradually declines with age for both genders. Drivers under 16 are rarely represented (less than 1%), while drivers with unknown age or gender account for approximately 5% of cases. Overall, the pattern highlights a concentration of severe roadway-departure crashes among younger male drivers, suggesting that targeted strategies addressing speed, impairment, and roadway conditions may be particularly effective for this demographic.

> … the age–gender distribution of drivers involved in fatal and serious-injury roadway/lane-departure crashes is skewed toward male drivers, particularly young adults

Figure 4-26. Age and gender distribution of drivers involved in fatal and serious injury Road/Lane Departure EA crashes (2020 to 2024).

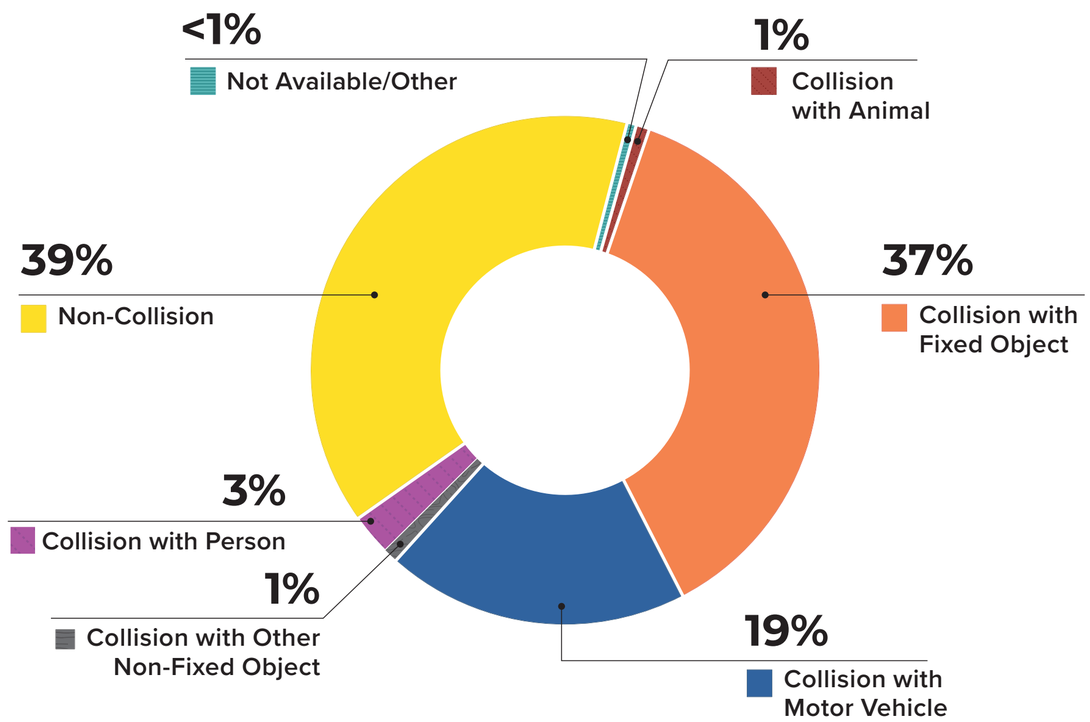


Severe Road/Lane Departure crashes are dominated by non-collision mechanisms—such as overturns, ditch/embankment, or run-off-road events—which account for 1,183 crashes (39%), and by collisions with fixed objects—trees, poles, barriers, culverts—at 1,135 crashes (37%) (Figure 4-27). Together these crashes comprise 76% of fatal and serious injuries, underscoring that leaving the travel way and striking roadside features are the primary severity drivers.

Collisions with another motor vehicle contribute 586 crashes (19%), consistent with re-entry or centerline-crossing sequences after the initial departure. Smaller shares include collision with a person (82 crashes; 3%) and collision with an animal or other non-fixed object (26 crashes each; 1%), with other/not available accounting for 10 crashes (<1%).

The pattern points to priority countermeasures that prevent departure (enhanced center/edgelines, rumble strips, HFST at curves, speed management) and mitigate consequences when departure occurs (clear-zone/shoulder improvements, hazard removal or shielding, and targeted median treatments to reduce re-entry/head-on risk).

Figure 4-27. First harmful event type in fatal and serious injury Road/Lane Departure EA crashes (2020 to 2024).

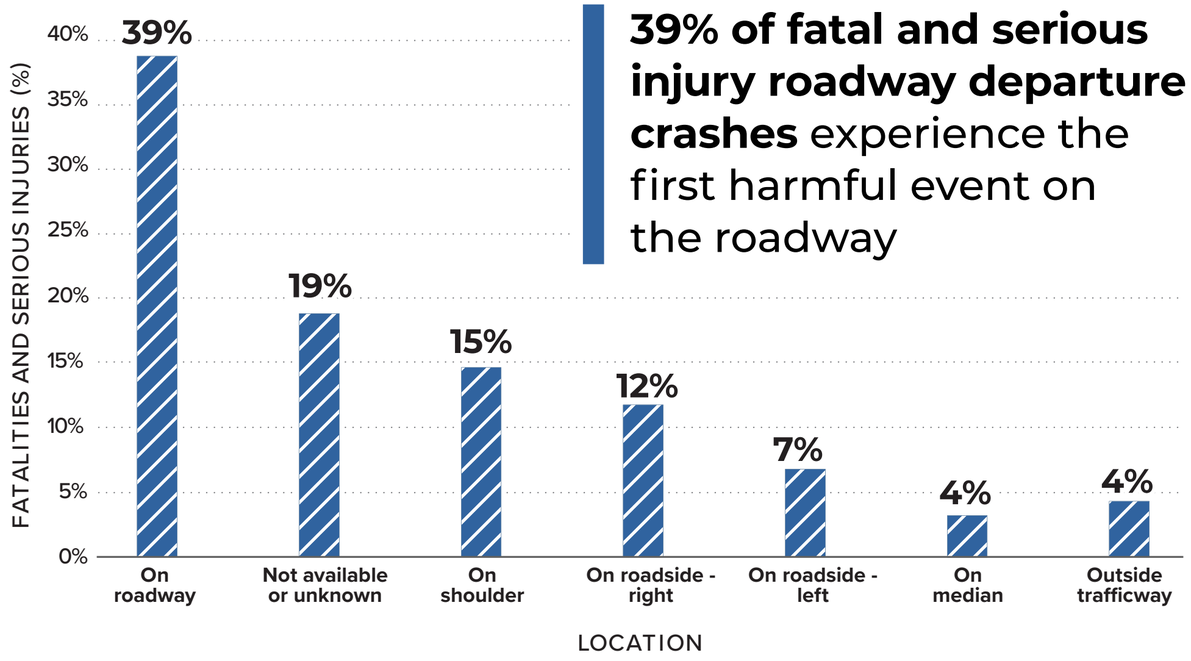


Building on the distribution of first harmful event types, the location of the first harmful event provides additional insight into how and where roadway-departure severity unfolds. As shown on Figure 4-28, 39% of fatal and serious-injury roadway-departure crashes experience the first harmful event on the roadway, indicating that many severe events begin with loss of control before leaving the travel lane.

Another substantial share occurs on the shoulder (15%) or on the right roadside (12%), reflecting typical departure paths toward the outside of the travel lane. Smaller but meaningful proportions occur on the left roadside (7%), on the median (4%), or outside the trafficway (4%), consistent with both right- and left-side departures and with secondary impacts following overcorrection or re-entry.

Approximately 19% of cases fall into unknown or not-specified location categories but the dominant pattern shows that the majority of severe outcomes initiate either on the roadway itself or immediately upon leaving it, reinforcing the importance of treatments that improve lane control, shoulder recoverability, and roadside safety.

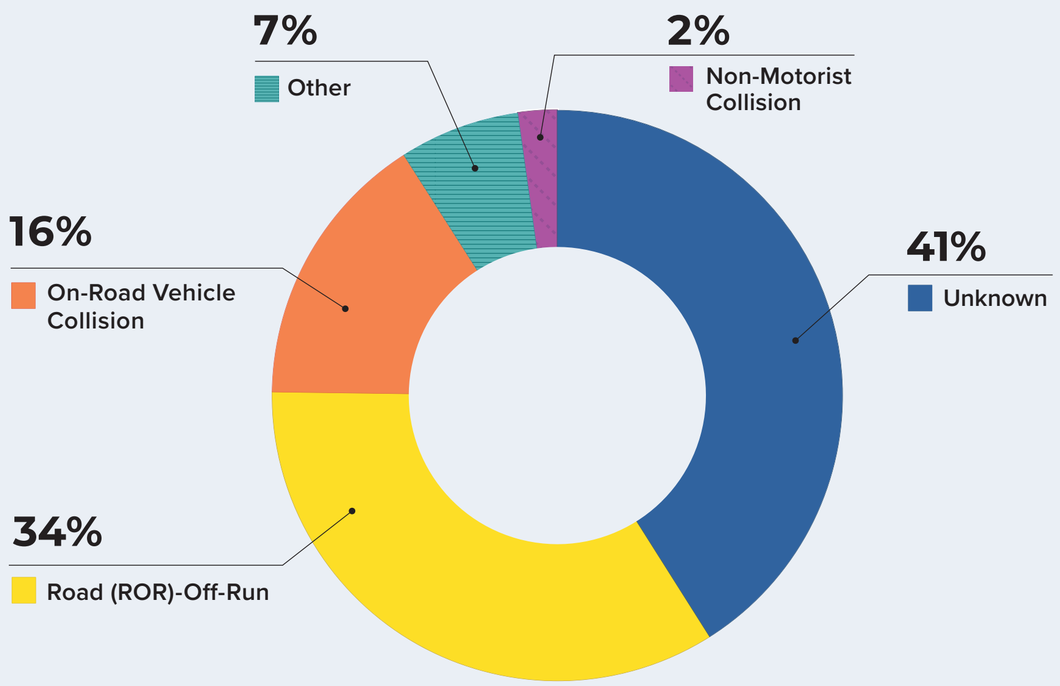
Figure 4-28. Distribution of fatalities and serious injuries in Road/Lane Departure EA crashes (2020 to 2024) by first harmful event location.



Finally, examining the most harmful event distribution shows how severity manifests within road/lane departure crashes. As illustrated on Figure 4-29, Vehicles' most harmful events in fatal and serious injury Road/Lane Departure EA crashes (2020 to 2024). Figure 4-29, Unknown events represent the largest share at 41%, underscoring limitations in reporting or uncertainty when multiple harmful events occur. Among the classified categories, Run-off-road events make up the largest proportion at 34%, reinforcing that impacts with fixed objects, embankments, parked vehicles, or rollovers continue to be the predominant mechanisms leading to fatal and serious injuries once a departure occurs. On-road vehicle collisions account for 16%, reflecting secondary crash dynamics such as re-entry into traffic or interactions with other vehicles. Non-motorist collisions comprise 2%, while other events represent 7%, capturing less frequent non-collision mechanical failures, cross-median events, and miscellaneous collision types.

Together, these results show that while the initial departure often occurs on or near the roadway, the most severe consequences typically arise once the vehicle reaches the roadside environment, reinforcing the need for countermeasures that both prevent departure and reduce roadside hazard exposure.

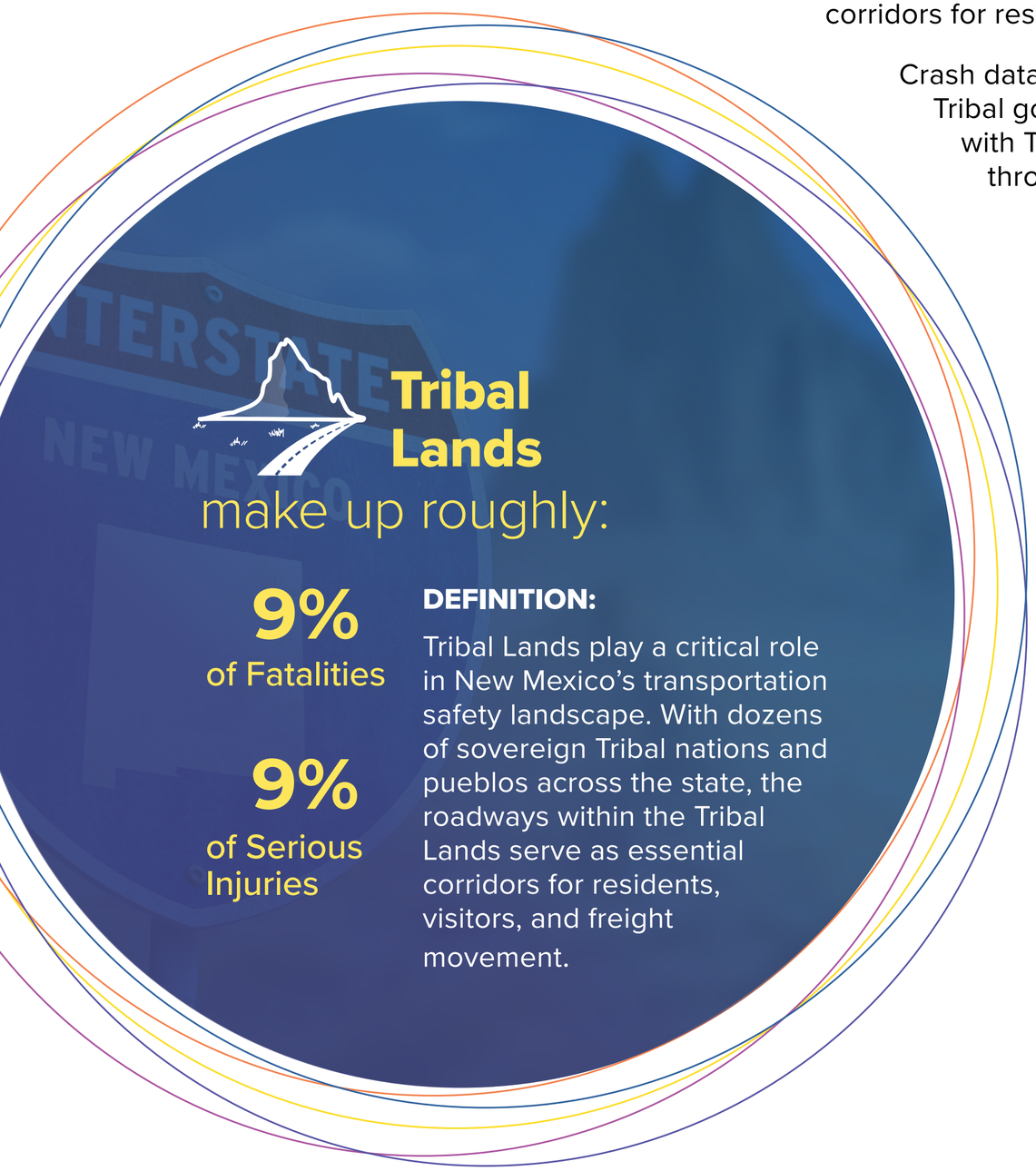
Figure 4-29. Vehicles' most harmful events in fatal and serious injury Road/Lane Departure EA crashes (2020 to 2024).



Tribal Lands

Tribal Lands play a critical role in New Mexico's transportation safety landscape. With 23 sovereign Tribal nations and pueblos across the state, the roadways within the Tribal Lands serve as essential corridors for residents, visitors, and freight movement.

Crash data for crashes occurring on Tribal Lands is voluntarily provided to NMDOT by Tribal governments. NMDOT remains committed to fostering collaborative partnerships with Tribes to improve crash data reporting and support the sharing of additional data through consultation and agreements that recognize and respect tribal sovereignty.



Of New Mexico's 76,350 centerline miles of roadway, approximately 6,070 miles—about 8%—fall under Bureau of Indian Affairs or Tribal jurisdiction.

The New Mexico Strategic Highway Safety Plan defines a Tribal Lands crash as any crash that takes place on federally recognized Native American reservation land (as identified by responding officer) and did not occur on a rural interstate route. Crashes that are considered for the Tribal Lands emphasis area are not required to include a member of a Tribal or Native American entity—the crash must only *occur* on roadways *within* the federally recognized Native American reservation lands.

Understanding crash patterns, contributing factors, and roadway conditions within Tribal jurisdictions is therefore vital for:

- Identifying disparities
- Supporting Tribal transportation safety planning
- Guiding coordinated strategies that improve safety outcomes for all road users

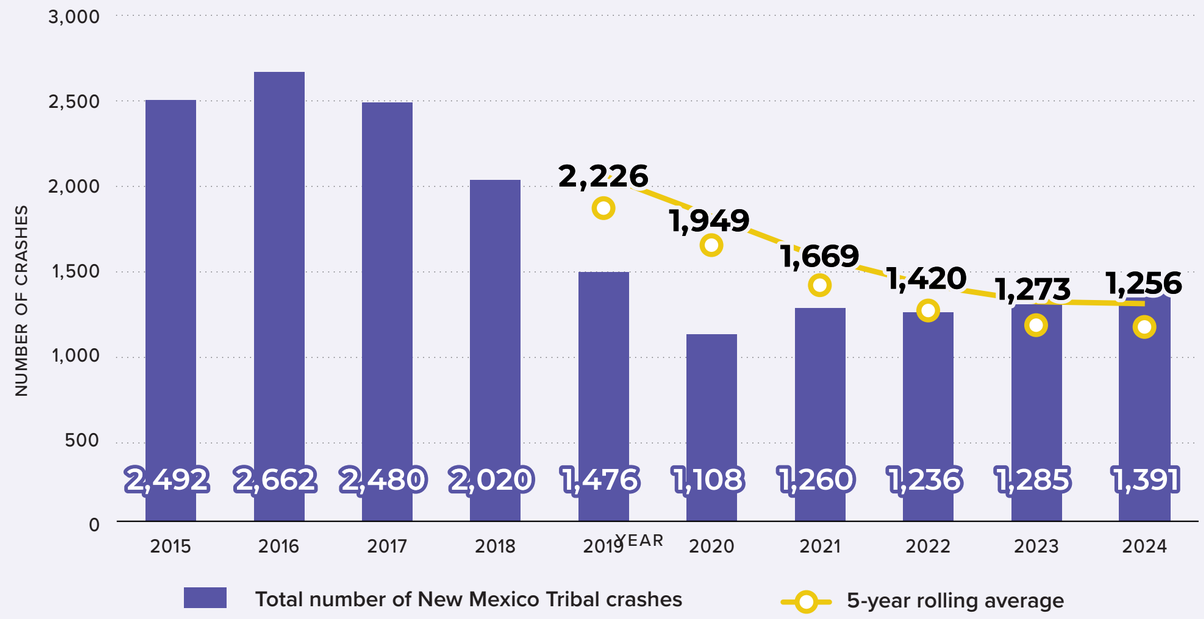


Total crashes on Tribal Lands in New Mexico have decreased substantially since the mid-2010s (Figure 4-30). Annual crashes declined from 2,492 in 2015 and a peak of 2,662 in 2016 to 1,285 in 2024, representing a 48% reduction overall.

The 5-year rolling average dropped from 2,226 in 2019 to 1,256 in 2024 (a 44% decline). After reaching the lowest annual total in 2020 (1,108 crashes), annual crash totals have stabilized between 1,260 and 1,391 from 2021 to 2024, indicating a flattening trend that still remains less than earlier observed levels.

> Although the fatality burden has declined from its 2021 spike, **severe outcomes remain disproportionately elevated for Tribal communities.**

Figure 4-30. New Mexico Tribal Lands crashes: Yearly trend and 5-year rolling average (2015 to 2024).



In addition to the overall decline in total crashes, recent years reveal important patterns in the number of fatalities and serious injuries on Tribal Lands (Figure 4-31). From 2020 through 2024, Tribal Lands experienced a total of 342 serious injuries and 186 fatalities, reflecting both year-to-year fluctuations and persistent safety challenges that remain despite reductions in crash frequency. Serious injuries peaked in 2022 (86) before declining in 2023 and rising slightly again in 2024. Fatalities were highest in 2021 (58), followed by a downward trend through 2023 and a modest increase in 2024.

Native Americans account for only about 11% of New Mexico's population (US Census 2024) yet represented approximately 17% of the state's traffic fatalities in 2024, underscoring ongoing inequities reflected in roadway safety outcomes. These patterns highlight the continued need for strong collaboration with Tribal governments to address the risk factors most commonly linked to severe outcomes—such as impaired driving, unrestrained occupants, roadway departure, and speed—while also strengthening Tribal safety data systems to support more targeted, data-driven countermeasures.

An examination of contributing factors associated with Tribal-land fatalities and serious injuries reveals that several behavioral and roadway-related issues (Figure 4-32). Nearly half of all severe outcomes involve unrestrained occupants (48%), impaired driving (47%), and roadway departure crashes (47%), underscoring the relationship of high-risk behaviors and high-risk environments on roadways on Tribal Lands.

Additional factors contributing to a substantial share of severe injuries include lighting conditions (45%), speeding and aggressive driving (45%), and distracted driving (42%), reflecting the continued influence of risky driving behaviors on crash severity. Vulnerable road users account for a smaller but still meaningful portion of severe outcomes—bicyclists and pedestrians (10%)—while older drivers (17%) and younger drivers (21%) also represent notable shares. Other features such as Intersection related (15%), inclement weather (12%), heavy trucks (10%), and motorcycle crashes (9%) contribute to smaller fractions of severe outcomes, while factors like bus-related and animal-related crashes make up less than 1% each. Together, these findings illustrate the importance of targeting behavioral safety, occupant protection, speed management, and roadway departure mitigation in Tribal areas to reduce the most severe crash outcomes.

Figure 4-31. Fatalities and serious injuries trends on New Mexico's Tribal Lands (2020 to 2024).

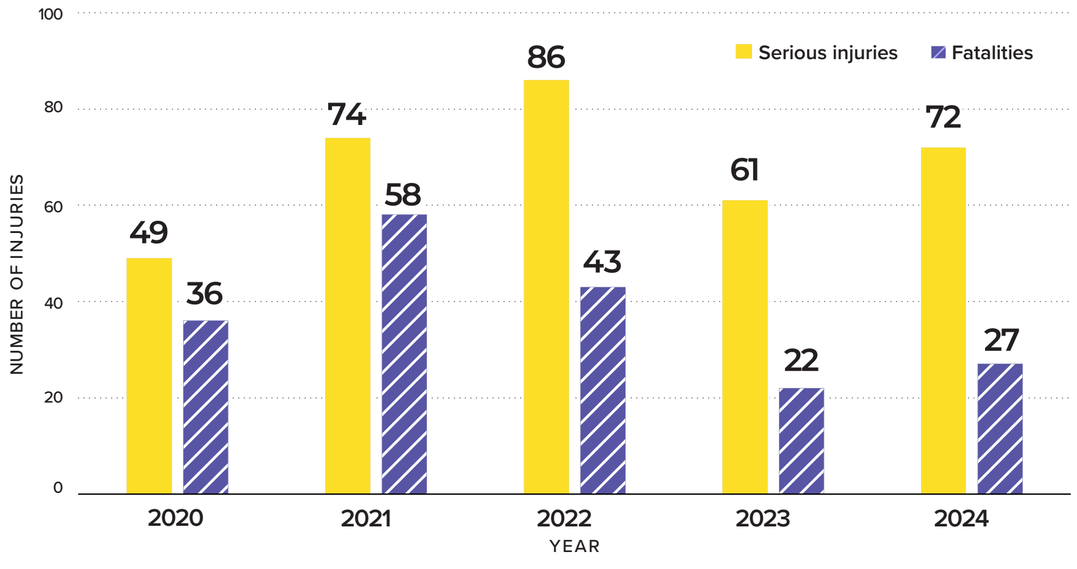
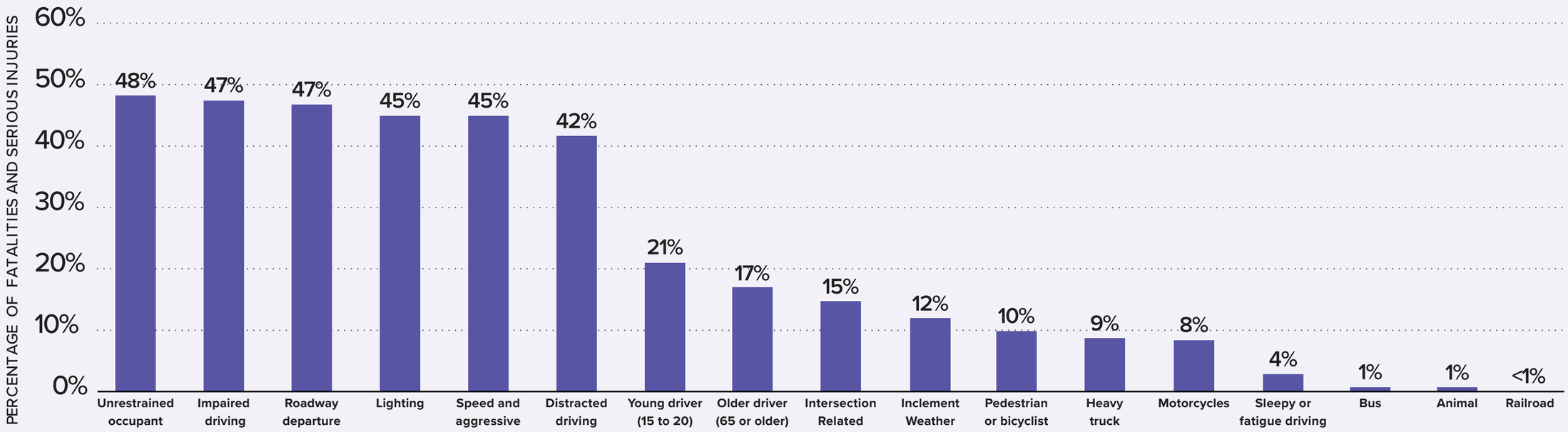


Figure 4-32. Crash characteristics percentage for fatalities and serious injuries on Tribal Lands (2020 to 2024).

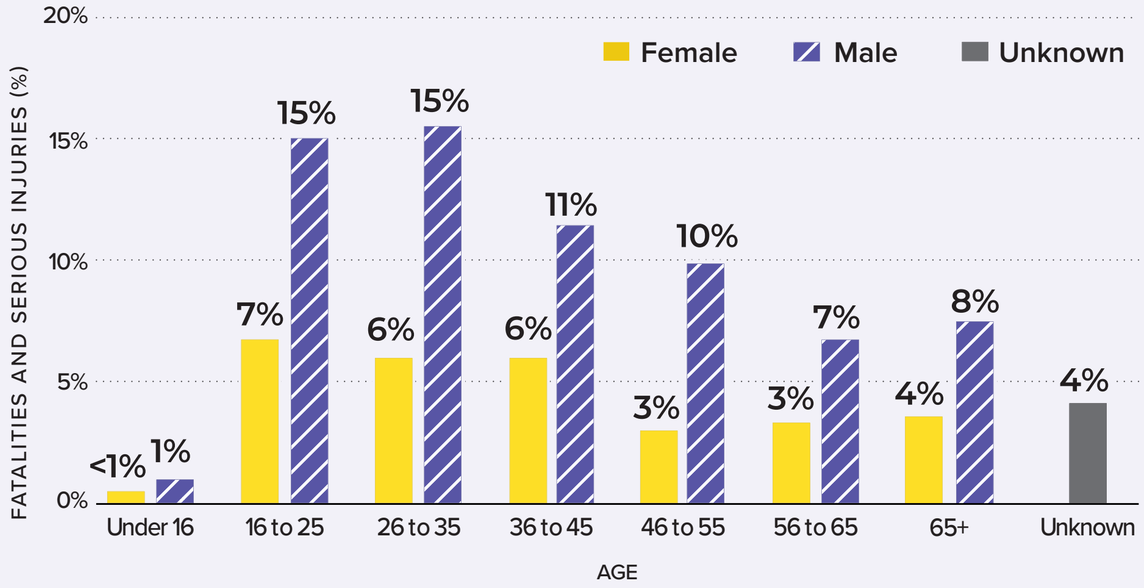


Note: ATV = all-terrain vehicle(s)

Analysis of drivers involved in fatal and serious injury crashes on Tribal Lands from 2020 to 2024 shows that males are overrepresented across all age groups, particularly among younger drivers (Figure 4-33). The highest proportions occur among ages 16–25 and 26–35, where males account for 15% of severe outcomes in each group, compared with 7% and 6% for females, respectively. Male involvement remains elevated through ages 36–45, while older drivers (65+) account for smaller shares. Overall, the data indicate that younger and middle-aged male drivers (ages 16–45) experience the greatest burden of fatal and serious injury crashes on Tribal Lands, highlighting the need for targeted behavioral and enforcement-based safety strategies.

> Overall, the data indicate that **younger and middle-aged male drivers (ages 16–45)** experience the greatest burden of fatal and serious injury crashes on Tribal Lands...

Figure 4-33. Age and gender distribution of drivers involved in fatal and serious injury crashes on Tribal Lands (2020 to 2024).



Alcohol-only involvement accounts for 26% of severe outcomes on Tribal Lands, versus 15% statewide, while combined alcohol-and-drug involvement is 14% on Tribal Lands compared with 7% statewide. Drug-only involvement is similar in both areas (7%). These patterns highlight elevated alcohol-related risk on Tribal Lands and support the need for targeted, culturally responsive safety strategies developed in partnership with Tribal governments.

> Impairment-related fatalities and serious injuries show **higher alcohol involvement on Tribal Lands** compared with statewide New Mexico crashes (Figure 4-34).

Figure 4-34. Percentage of fatalities and serious injuries in alcohol- and drug-involved crashes: Tribal Lands vs. statewide New Mexico (2020 to 2024).

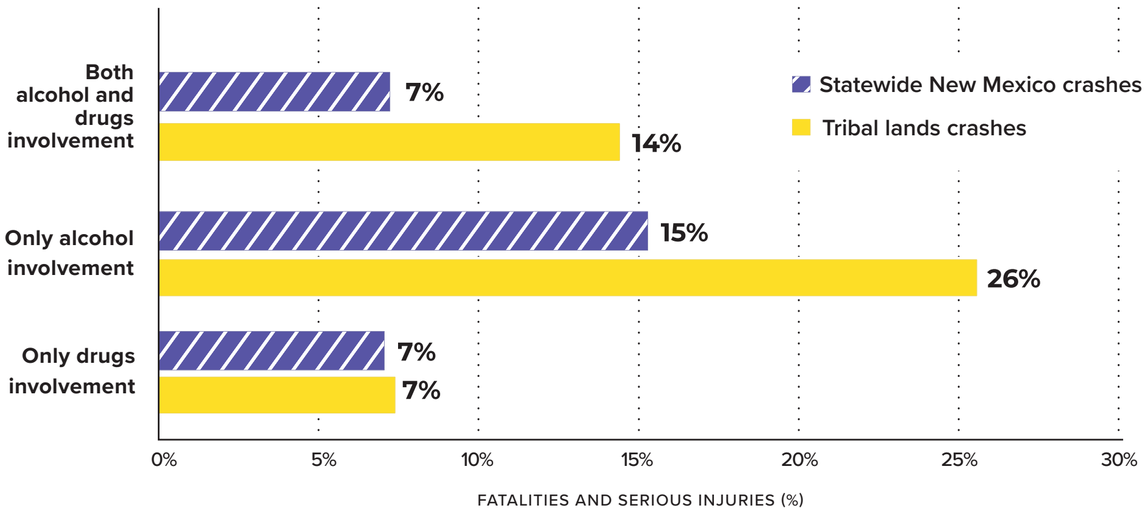
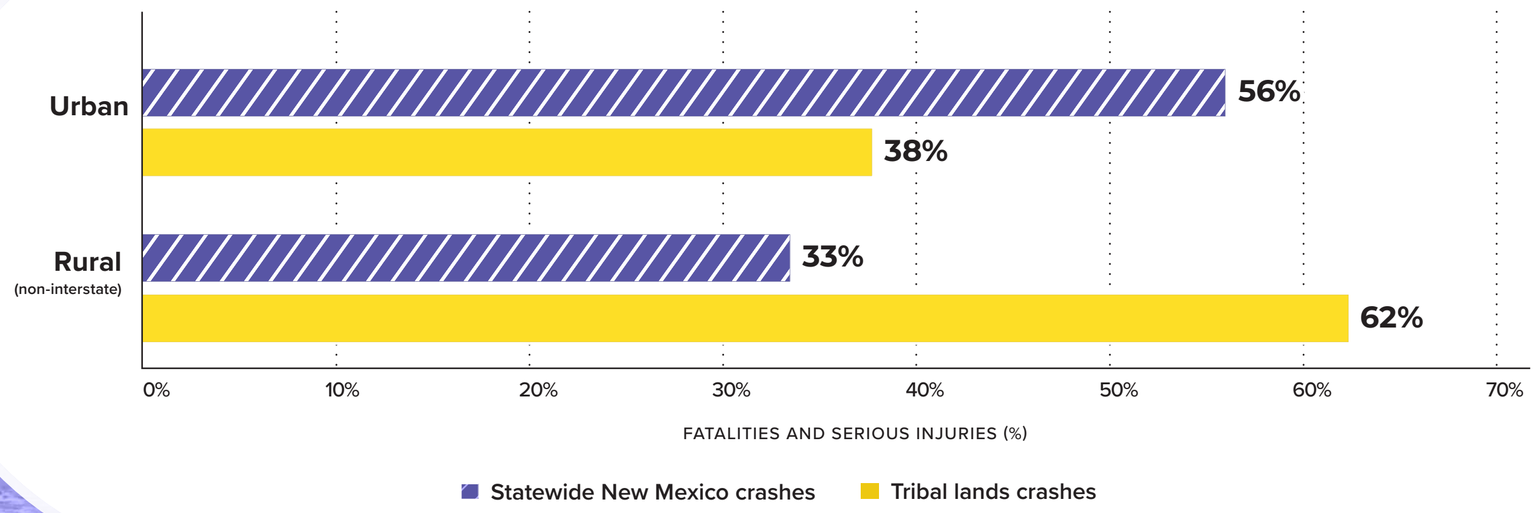


Figure 4-35 shows that fatalities and serious injuries on Tribal Lands are heavily concentrated on rural, non-interstate roadways. Nearly two-thirds (62%) of severe outcomes on Tribal Lands occur on rural roads, compared with 33% statewide, while urban areas account for a smaller share of Tribal land severe crashes (38% versus 56% statewide). This contrast highlights the critical importance of rural roadway safety countermeasures in Tribal areas (refer to *Section 5, Sub-section: Tribal Lands* for a complete list of Tribal Lands strategies and implementation countermeasures), including strategies addressing roadway departure, impaired driving, limited lighting, and emergency response challenges that disproportionately affect survivability in rural locations.

Figure 4-35. Percentage of fatalities and serious injuries in urban and rural non-interstate crashes: Tribal Lands vs. all New Mexico crashes (2020 to 2024).



Vulnerable Road Users



In New Mexico, the Vulnerable Road User (VRU) Emphasis Area (EA) is defined to focus on roadway users who experience a disproportionately high risk of severe injury or fatality in traffic crashes due to their limited physical protection compared to occupants of enclosed motor vehicles.

For the purposes of this analysis, VRUs include

- pedestrians
- bicyclists
- work zone workers on foot, and
- motorcycle related users, encompassing riders and occupants of motorcycles, all-terrain vehicles (ATVs), mopeds, scooters, and recreational off-highway vehicles (ROVs).

This EA recognizes that these users are particularly exposed to serious harm in traffic environments characterized by higher operating speeds, limited separation between travel modes, and complex vehicle–user interactions.

Crashes involving VRUs are a critical safety concern statewide, as even low-severity vehicle conflicts can result in serious or fatal outcomes for these users. The elevated risk faced by VRUs is influenced by a combination of roadway design, land use context, traffic volume and speed, and the availability of facilities such as sidewalks, bike lanes, protected crossings, and clearly delineated work zones. As a result, VRU crashes tend to be concentrated in specific corridors and locations where infrastructure does not adequately accommodate all users or where exposure to vehicular traffic is high.

To ensure consistent identification and analysis of VRU safety outcomes, this study applies defined criteria and query logic to capture crashes involving pedestrians, bicyclists, work zone workers, and motorcycle related users within the VRU EA. The following sections describe the detailed definitions and methodological approaches used to classify each VRU category, providing transparency and consistency across the analysis period.

For additional information on VRU's, visit Appendix B for the latest VRU Safety Assessment Report.

Figure 4-36 illustrates the yearly trend in the total number of New Mexico VRU EA crashes from 2015 to 2024, along with the corresponding 5-year rolling average. Annual crash counts remained relatively stable between 2015 and 2019, fluctuating between 2,049 and 2,113 crashes per year. A noticeable decline occurred in 2020, when total VRU EA crashes dropped to 1,795, followed by a gradual increase through 2021 and 2022. Crash counts continued to increase in 2023 and reached the highest level in the analysis period in 2024, with 2,138 crashes. The 5-year rolling average reflects this pattern, decreasing from approximately 2,080 crashes in 2019 to a low of about 1,945 in 2023, before increasing slightly to approximately 1,954 in 2024. Overall, the figure indicates a post-2020 recovery and recent increasing trend in VRU EA crashes in New Mexico.

> Crash counts continued to increase in 2023 and reached the highest level in the analysis period in 2024, with 2,138 crashes.

Figure 4-36. New Mexico VRU EA crashes: Yearly trend and 5-year rolling average (2015 to 2024).

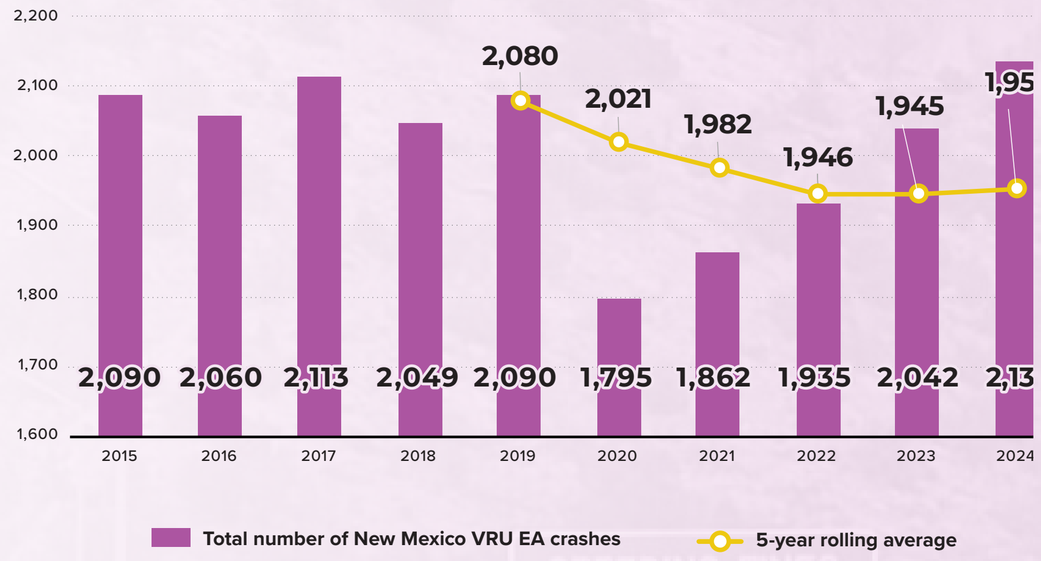


Figure 4-37 presents the number of fatalities and serious injuries within the New Mexico VRU EA from 2020 through 2024. Serious injuries increased steadily over the period, rising from 260 in 2020 to 354 in 2023, before leveling slightly to 350 in 2024. Fatalities also increased overall, from 145 in 2020 to a peak of 175 in 2023, followed by a small decrease to 170 in 2024. Despite year-to-year fluctuations, both serious injuries and fatalities show an upward trend relative to 2020, indicating increasing severity outcomes among VRU EA crashes in recent years.

Figure 4-37. Fatalities and serious injuries in the VRU EA in New Mexico (2020 to 2024).

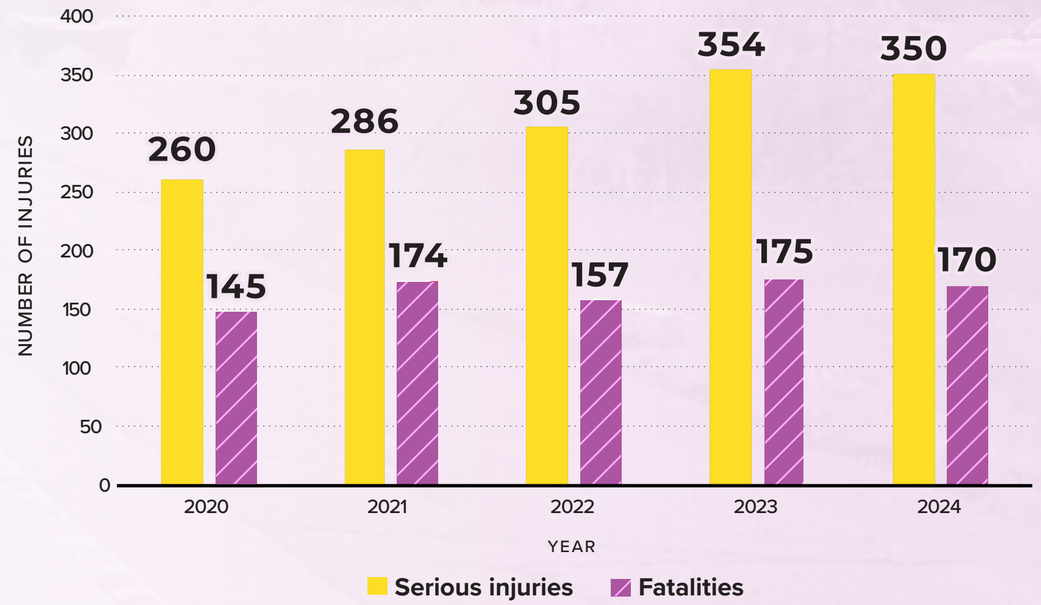


Figure 4-38. Percentage distribution of fatalities and serious injuries by VRU EA crash characteristics (2020 to 2024).

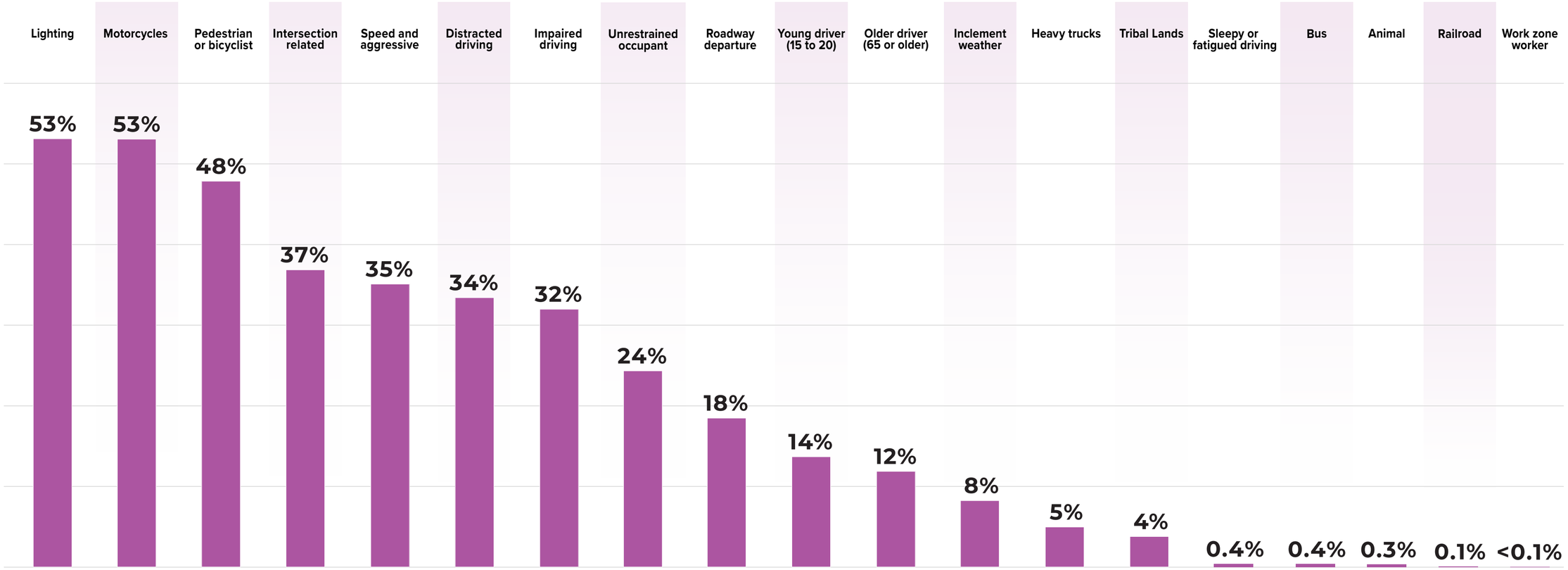


Figure 4-38 shows the percentage distribution of fatalities and serious injuries within the New Mexico VRU EA by key crash characteristics for the 2020 to 2024 period. Crashes involving vulnerable road users themselves make up a substantial share of severe outcomes, with motorcycle crashes accounting for 53.1% of VRU fatalities and serious injuries, and pedestrian or bicyclist involvement present in 47.9% of severe crashes. Work zone worker crashes accounted for less than 0.1% of fatalities or serious injuries during the analysis period.

Beyond VRU involvement, several crash factors were frequently present in severe VRU crashes, most notably lighting-related conditions, which appeared in the largest share (53.2%). Intersection-related crashes accounted for 36.9% of fatalities and serious injuries, while speed and aggressive driving (35.1%), distracted driving (33.5%), and impaired driving (32.0%) were also prominent contributors. Lower-percentage categories included unrestrained occupants (24.4%), roadway departures (18.5%), young drivers ages 15 to 20 (13.7%), and older drivers age 65 and older (11.9%). Environmental and contextual factors such as inclement weather (8.3%), heavy truck involvement (5.0%), and crashes on Tribal lands (3.8%) represented smaller shares, while sleepy or fatigued driving, bus involvement, animal-related crashes, and railroad crashes accounted for less than 0.1% negligible or no observed fatalities or serious injuries.



Figure 4-39 presents the share of total statewide fatalities and serious injuries on New Mexico that involve each VRU EA subgroup from 2020 to 2024. Crashes involving motorcycles accounted for the largest share of severe outcomes, representing 16% of all VRU EA fatalities and serious injuries statewide. Pedestrians and work zone workers comprised the next largest share at 13%, reflecting continued vulnerability among nonmotorized road users and workers exposed to traffic. Bicyclists represented a smaller share of severe outcomes, accounting for 2% of fatalities and serious injuries during the analysis period. Overall, the figure highlights notable differences in severity burden across VRU subgroups, with motorcyclists and pedestrians accounting for the majority of severe VRU outcomes in New Mexico.

Figure 4-39. Distribution of statewide fatalities and serious injuries across VRU EA crash types in New Mexico (2020 to2024).

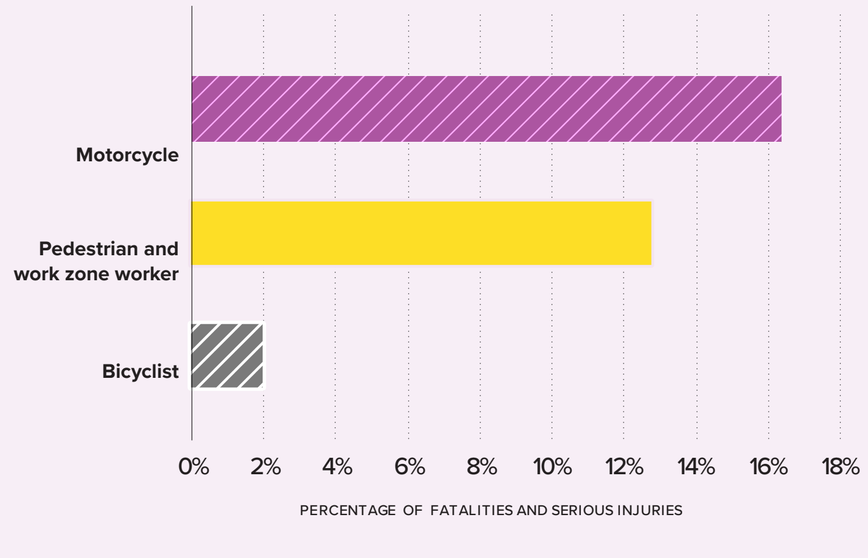


Figure 4-40 compares the distribution of fatalities and serious injuries by roadway type for VRU crashes and all statewide crashes in New Mexico from 2020 to 2024. VRU crashes resulting in fatalities or serious injuries were disproportionately concentrated on urban roadways, which accounted for 73% of VRU severe outcomes, compared to 56% of severe outcomes statewide. In contrast, rural roadways accounted for a smaller share of VRU fatalities and serious injuries (27%) relative to their share of statewide severe crashes (44%). This comparison highlights the heightened concentration of severe VRU crashes in urban environments, where higher exposure, greater interaction between vehicles and vulnerable users, and more complex traffic conditions are present.

Figure 4-40. Distribution of fatalities and serious injuries by roadway type for VRU EA driving crashes vs. statewide New Mexico crashes (2020 to 2024).

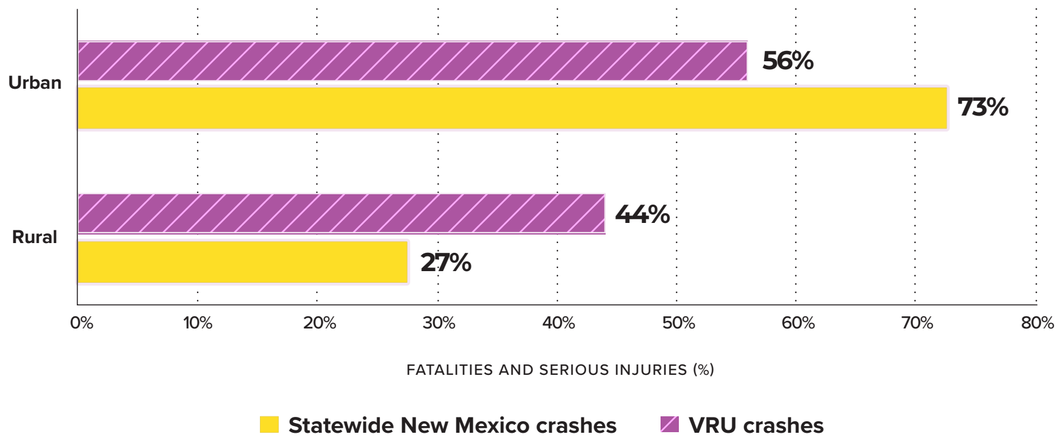


Figure 4-41 illustrates the age and gender distribution of VRUs who sustained fatal or serious injuries in New Mexico between 2020 and 2024. Severe outcomes are concentrated among individuals ages 16 to 45, with the highest shares observed in the 26 to 35 and 36 to 45 age groups. Across all age groups, males accounted for a substantially higher share of fatalities and serious injuries than females, while female involvement remains relatively consistent and lower. Individuals younger than age 16 and age 65 and older represented smaller shares of VRU fatalities and serious injuries, while records with unknown age or sex accounted for a minimal portion of the total. Overall, the figure highlights pronounced age- and sex-related disparities in severe VRU outcomes, with young and middle-aged adults experiencing the greatest burden.

Figure 4-41. Age and gender distribution of VRU EA fatalities and serious injuries (2020 to 2024).

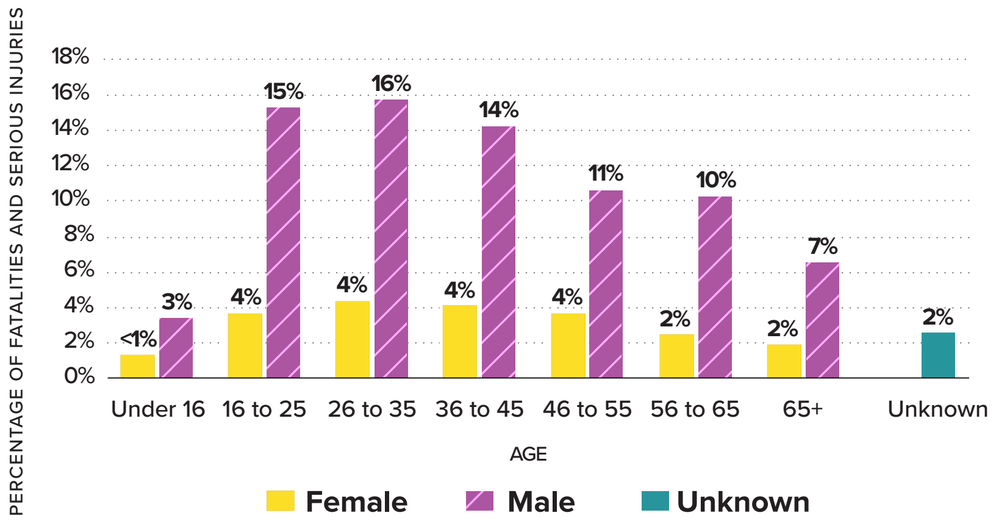
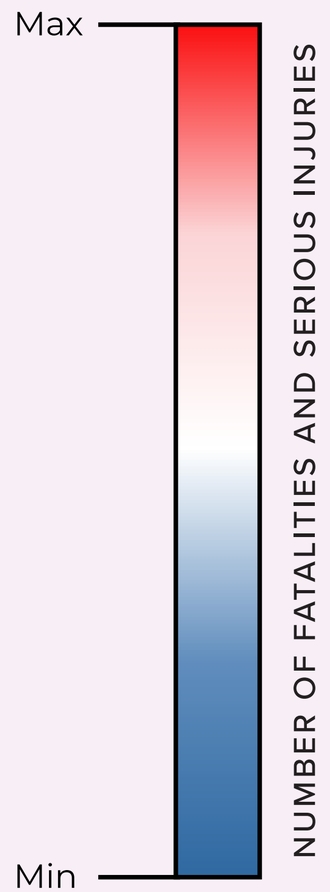




Figure 4-42 illustrates clear temporal patterns in pedestrian and bicyclist fatalities and serious injuries by month and hour. Severe crashes are uncommon during overnight and early morning hours but increase steadily throughout the day, with concentrations occurring during late afternoon and evening periods that generally coincide with sunset and reduced visibility. These evening peaks shift later in warmer months and earlier in late fall and winter, reflecting changes associated with daylight saving time. Seasonally, higher counts are observed from May through October, while winter months show lower totals across most hours. Overall, the figure highlights elevated risk during periods of increased pedestrian and bicyclist activity combined with declining light conditions, underscoring the importance of targeted visibility, speed management, and driver awareness strategies.

Figure 4-42. VRU EA: Distribution of pedestrian and bicyclist fatalities and serious injuries by month and hour of day (2020 to 2024).

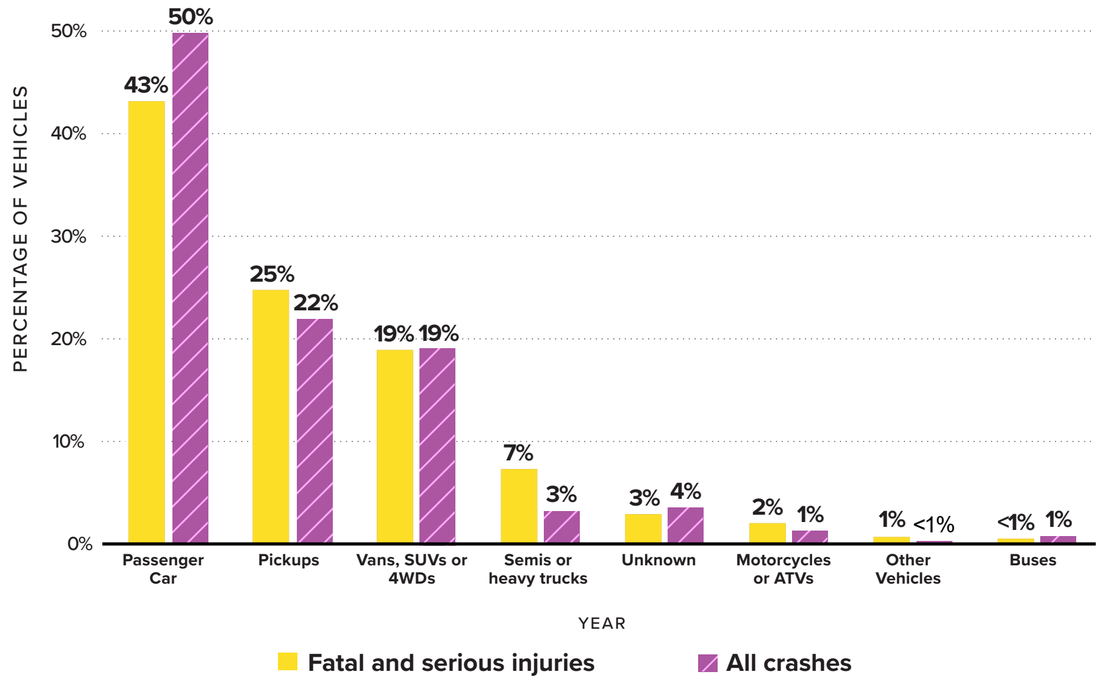
	00:00 am - 01:00 am	01:00 am - 02:00 am	02:00 am - 03:00 am	03:00 am - 04:00 am	04:00 am - 05:00 am	05:00 am - 06:00 am	06:00 am - 07:00 am	07:00 am - 08:00 am	08:00 am - 09:00 am	09:00 am - 10:00 am	10:00 am - 11:00 am	11:00 am - 12:00 pm	12:00 pm - 01:00 pm	01:00 pm - 02:00 pm	02:00 pm - 03:00 pm	03:00 pm - 04:00 pm	04:00 pm - 05:00 pm	05:00 pm - 06:00 pm	06:00 pm - 07:00 pm	07:00 pm - 08:00 pm	08:00 pm - 09:00 pm	09:00 pm - 10:00 pm	10:00 pm - 11:00 pm	11:00 pm - 12:00 am
January	6	4	2	0	4	1	2	1	0	5	0	3	1	0	0	1	5	7	11	15	3	7	8	4
February	2	4	5	0	1	4	3	1	1	0	0	1	0	0	4	3	1	4	11	10	7	7	4	6
March	4	2	3	0	1	2	3	1	1	0	2	2	2	2	3	2	3	4	4	11	14	13	10	3
April	3	0	2	4	2	2	2	0	2	2	0	1	3	3	1	6	3	6	0	5	18	4	5	4
May	2	4	1	1	3	2	2	2	1	4	0	3	2	0	4	4	3	2	5	2	9	13	10	5
June	7	5	2	0	5	3	2	0	4	1	2	2	2	3	3	0	3	3	4	3	10	13	9	4
July	3	5	1	1	3	0	0	2	7	2	2	2	2	3	0	4	0	3	5	6	4	9	8	11
August	8	3	1	2	4	5	8	7	0	2	0	5	7	1	3	8	3	4	2	1	13	11	5	5
September	5	0	2	3	3	2	3	3	2	1	1	3	5	1	1	7	3	4	4	13	14	13	13	1
October	4	1	5	2	0	6	7	2	2	1	4	3	2	1	4	3	5	1	7	20	15	9	7	3
November	2	1	0	2	3	1	4	3	0	1	4	4	2	1	1	4	2	21	17	10	5	9	2	11
December	3	5	1	1	0	2	4	1	1	3	3	1	3	2	2	4	1	16	13	12	11	7	6	1



As shown on Figure 4-43, passenger cars account for the largest share of vehicles involved in pedestrian and bicycle crashes, representing approximately 50% of all crashes and roughly 43% of fatal and serious injury crashes. Pickups and vans/SUVs/4WDs also constitute a substantial portion of involvement, jointly accounting for roughly 44% of fatal and serious injury crashes (25% pickups and 19% vans/SUVs/4WDs). Semis and heavy trucks represent a comparatively small share overall, but their involvement is higher in fatal and serious injury crashes (7%) than in all crashes (3%), indicating a disproportionate severity when these vehicles are involved. Other vehicle types—including motorcycles, buses, unknown vehicles, and other vehicles—each account for a relatively small percentage of pedestrian and bicycle crashes.

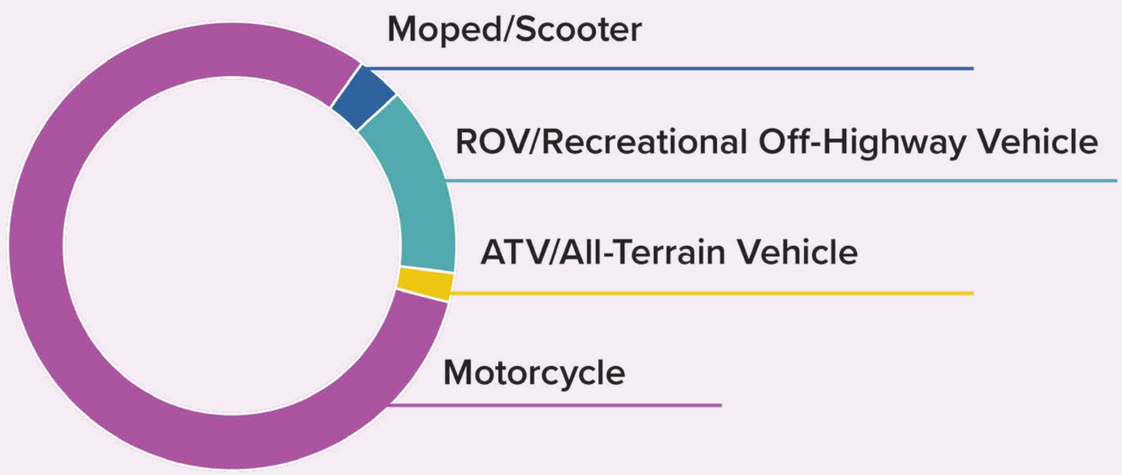
...passenger cars account for the largest share of vehicles involved in pedestrian and bicycle crashes, representing approximately 50% of all crashes and roughly 43% of fatal and serious injury crashes.

Figure 4-43. VRU EA: Distribution of vehicles involved in pedestrian and bicyclist crashes: fatal and serious injury crashes vs. all crashes (2020 to 2024).



As discussed previously, motorcycle EA crashes include crashes involving riders and occupants of motorcycles, ATVs, mopeds, scooters, and ROVs. Motorcycles alone account for the overwhelming majority of fatalities and serious injuries within this group, comprising 81% of severe outcomes (Figure 4-44). ATVs represent 14%, indicating a notable share despite lower overall exposure. ROVs account for a smaller portion at 3%, while mopeds and scooters contribute the smallest share at 2%. Overall, the distribution highlights that conventional motorcycles drive most of the severe injury burden within this EA.

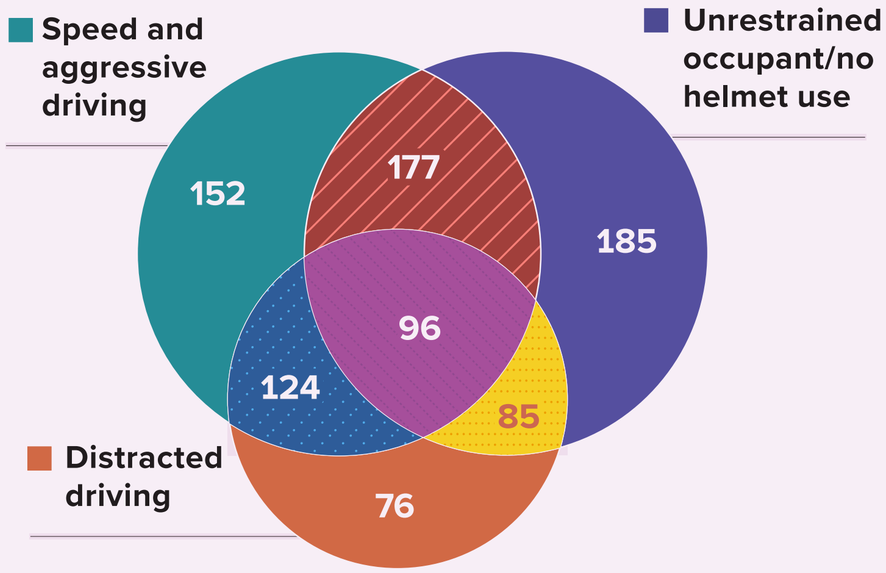
Figure 4-44. VRU EA: Distribution of fatalities and serious injuries by motorcycle EA subgroups, New Mexico (2020 to 2024).



Analysis of motorcycle EA fatal and serious injury crashes shows speed or aggressive driving and unrestrained occupants are the most prominent factors, frequently occurring both independently and in combination (Figure 4-45). Distracted driving also emerges as a significant contributing factor, often overlapping with speed-related behaviors and lack of restraint use. The large, shared intersections among these factors indicate that severe crashes in this EA are rarely attributable to a single issue, but rather reflect compounding risk behaviors occurring simultaneously, underscoring the importance of integrated strategies that address speeding, restraint use, and driver attention together.

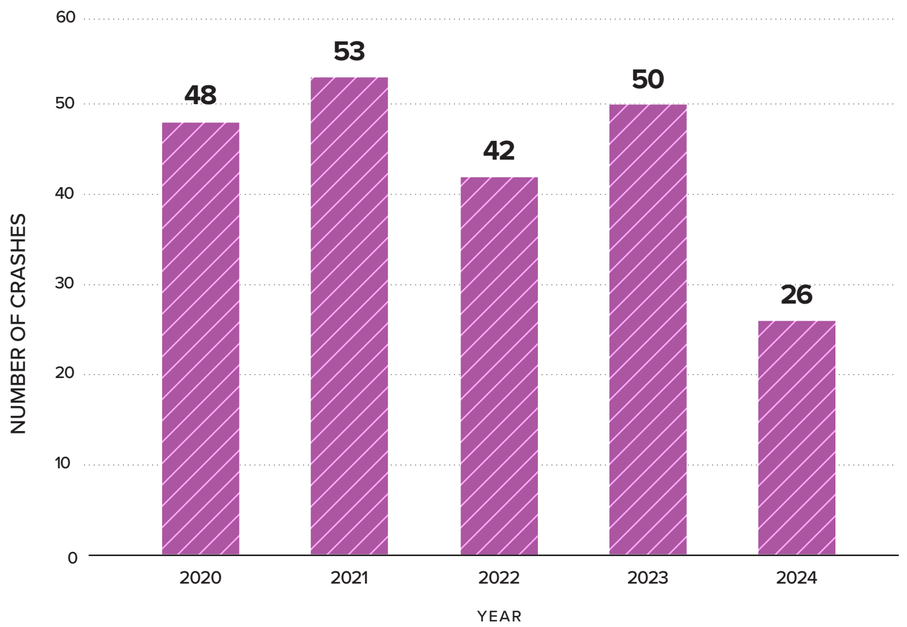
> **...severe crashes in this EA are rarely attributable to a single issue,** but rather reflect compounding risk behaviors occurring simultaneously...

Figure 4-45. VRU EA: Overlap of key factors in motorcycle fatal and serious injury crashes (2020 to 2024).



In the VRU definition, the focus is limited to work zone worker crashes; however, when considering work zone crashes more broadly—including all crashes occurring within a designated work zone area regardless of worker presence—a different pattern emerges. As shown on Figure 4-46, the number of work zone crashes in New Mexico fluctuated between 2020 and 2023, ranging from 42 to 53 crashes annually, before declining to 26 crashes in 2024. The highest number of crashes occurred in 2021, followed by a decrease in 2022 and a temporary increase in 2023. Overall, this trend highlights that work zone crash risk extends beyond worker-involved incidents and underscores the importance of maintaining safety measures for all roadway users traveling through work zones.

Figure 4-46. VRU EA: Trend in work zone crashes in New Mexico (2020 to 2024).



5. EA Strategies »

Strategy and Implementation Countermeasures Recommendations: Implementing proven safety countermeasures, programs, and policies into real-world actions that leads to safe mobility for everyone.

Strategy and Implementation Countermeasures

Key Elements Informing Strategy Development and Emphasis Area Prioritization

The Safe System Approach (SSA) emphasizes five complementary elements—**Safe Roads, Safe People, Safe Speeds, Safe Vehicles,** and **Post-Crash Care**—that together provide a comprehensive roadmap for addressing traffic safety risk. These elements serve as the foundation for developing and organizing strategies and countermeasures that respond to New Mexico's most pressing traffic safety challenges.

Strategies and recommended improvements were informed by statewide crash trends, state and federal data sources, road safety audit findings, and extensive input from Interagency Working Group (IAWG) outreach meetings, which included Statewide Transportation Improvement Program members, conducted as part of the 2026 SHSP update – prioritizing low-cost and systemic strategies and improvements that can significantly eliminate roadway fatalities and reduce serious injuries. Given the diverse professional backgrounds of IAWG participants, the resulting set of strategies is intended to be broadly applicable and flexible, all while focused on maximizing effectiveness of the improvements. Additionally, the strategies included in the following sub-sections aim to be **SMART**: **S**pecific to a roadway environment, produce **M**easurable differences, are **A**ction-oriented, have **R**easonable costs and level of efforts for implementation, and are **T**ime-bound. These strategies are not limited to a single intersection, roadway segment, or jurisdiction; rather, they represent actions and improvements that may be implemented by municipalities, RTPOs, Tribal entities, and other agencies, and in some cases may be applied systemically to achieve wider safety benefits.

Implementation feasibility varies by context. Some strategies may not be appropriate for every location and should be evaluated using a context sensitive approach that considers roadway function, surrounding land uses, traffic patterns, and community needs. Implementation costs range from relatively low-cost measures to more resource intensive investments, with timelines that may span from weeks to multiple years depending on scope, complexity, and funding availability.

Emphasis Areas, defined by crash types and roadway user behaviors, were largely identified through analysis of statewide data trends. These Emphasis Areas represent priority areas for intervention, which must be identified on HSIP applications for Safety Committee review, will help focus stakeholder efforts on the shared objective of eliminating traffic fatalities and reducing serious injuries across all roadway users.

Authoritative, evidence-based resources—including the Federal Highway Administration's *Proven Safety Countermeasures* and the National Highway Traffic Safety Administration's *Countermeasures That Work*—were used to inform the recommended strategies and actions. These resources document proven approaches that have demonstrated effectiveness in reducing fatalities and serious injuries across a range of roadways and community contexts. IAWG members were encouraged to prioritize **low cost, high impact** strategies that can be implemented efficiently and scaled as needed to respond to urgent safety concerns.

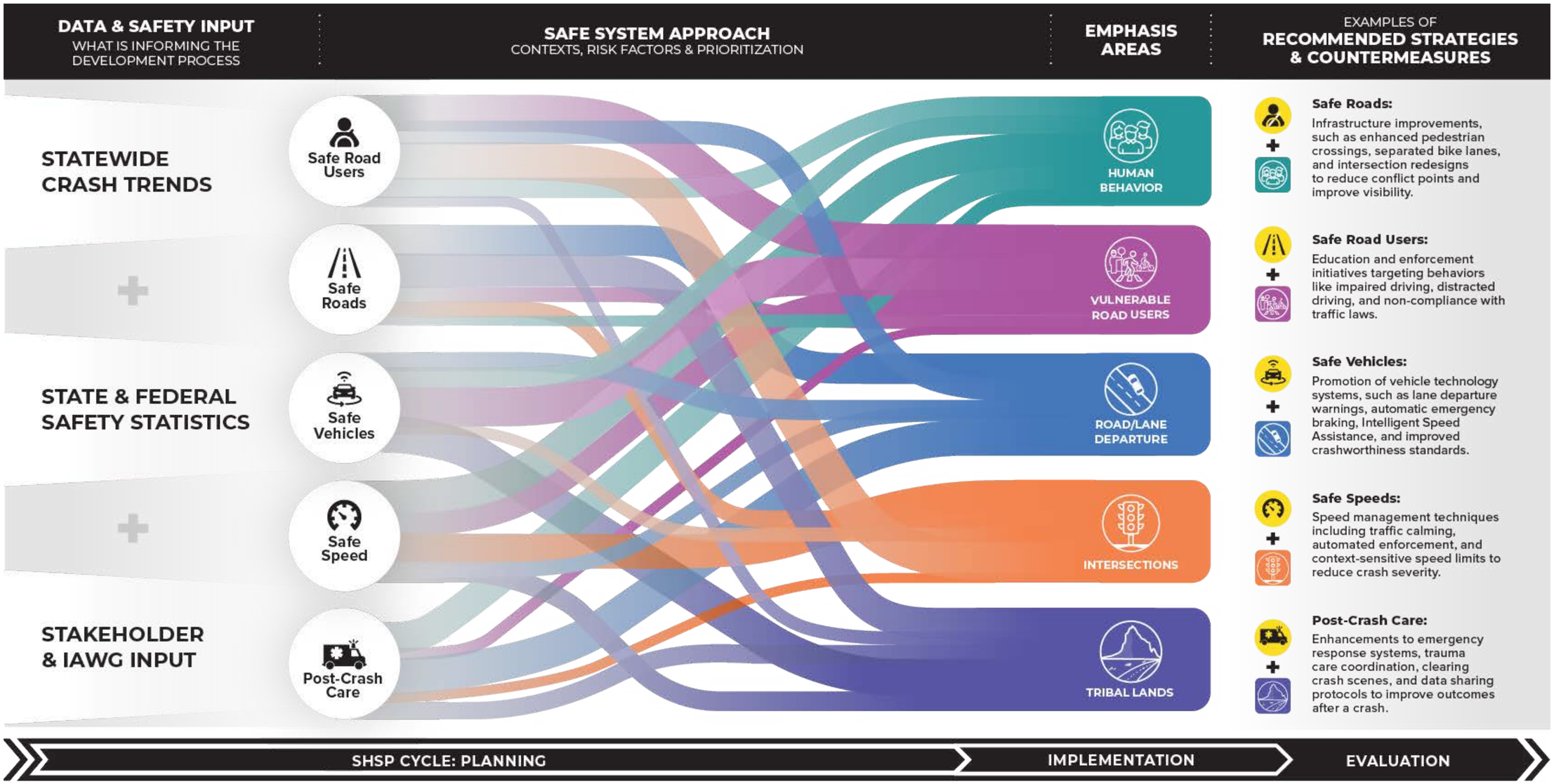
The strategies outlined in this SHSP are not intended to replace engineering studies, feasibility analyses, or formal design processes. Any countermeasure applied at a specific location should be evaluated within its unique context and implemented using professional engineering judgment and established design standards.

Prioritization Framework

Figure 5-1 illustrates how statewide crash trends, state and federal statistics, and stakeholder input are evaluated through the Safe System Approach to inform the development of strategies and countermeasures and guide the prioritization of SHSP Emphasis Areas.

Statewide data trends, safety statistics, and stakeholder input are evaluated through the Safe System Approach to inform evidence-based strategies and countermeasures, which in turn guide the prioritization of SHSP Emphasis Areas.

Figure 5-1. NM's SHSP Emphasis Area Prioritization Framework



The following content offers a comprehensive overview of practical actions and innovative strategies designed to make roads safer for everyone. Grounded in data-driven analysis and enriched by community insights and stakeholder feedback, the SHSP focuses on five key elements.

For each Emphasis Area, the SHSP outlines tailored strategies, countermeasures, programs, and policies and laws. These are organized according to the five SSA key elements: Safe People, Safe Speeds, Safe Vehicles, Safe Roads, and Post-Crash Care.

Human Behavior

Strategy and Implementation Countermeasure aligned with SSA Key Elements

SAFE ROADS

Design context-based self-enforcing roads

- Implement speed management or visual friction infrastructure, i.e., landscaping
- Implement road diet reconfigurations
- Implement calming measures in high-conflict areas, including school zones (speed humps, narrower lanes, etc.)
- Install dynamic speed feedback signs
- Narrow lanes through towns and communities for traffic calming
- Transitional zone warnings (warning signs at rural-to-urban transitions)

Incorporate safety proven design elements

- Provide 5-foot-wide paved shoulders
- Install rumble strips and other attention devices
- Install wrong-way driving prevention infrastructure
- Implement enhanced roadway delineation (for example, larger edge lines with reflective beads)

Install enhanced safety infrastructure

- Provide enforcement support infrastructure (high-visibility enforcement locations, infrastructure supporting enforcement)
- Provide warning systems and detection technology (real-time warning systems in aggressive driving hotspots, wrong-way and reckless driver detection systems, warning signs at rural-to-urban transitions, enhanced lighting in high- driving under the influence [DUI] areas)
- Provide traffic calming infrastructure (gateway treatments, roundabouts, chicanes)
- Provide driver fatigue countermeasures (additional rest stops, rumble strips, and alert signs)

Improved visibility and delineation systems

- Pedestrian crossing enhancements (crosswalk visibility improvements, overhead lighting, rectangular rapid flashing beacons (RRFB)/ pedestrian hybrid beacons (PHB)/High intensity Activated crossWalK (HAWK) signals, school zone crosswalk enhancements)
- Roadway delineation (enhanced reflectivity on roadway markings)
- Curve safety treatments (paved shoulders, rumble strips, guardrails, chevron signs)
- Dynamic warning and visibility systems (dynamic warning systems, high-visibility lighting in pedestrian/bicyclist corridors)

SAFE PEOPLE

Institutional policy programs

- Targeted community outreach (rural communities, marginalized populations, cultural initiatives, high-crash areas)
- Behavior-specific education (speed awareness, impaired driving, distracted driving, fatigue awareness, child restraint/ seat belt safety)
- General public awareness campaigns (media buys, public information, "Just Drive" initiatives, zero tolerance education)
- Specialized education and social norming (young driver programs, vehicle technology, professional driver awareness, social norming campaigns, community-based interventions)
- Implement requirements for periodic retesting and establish a more rigorous process for obtaining a driver's license.
- Public education on new infrastructure (roundabouts and diverging diamond interchanges)

Targeted Behavioral Programs

- Driver education and impairment prevention (youth/young driver education, speed awareness courses, DUI prevention, cannabis/alcohol education, fatigue management, free classes for license renewal and retesting support)
- Enforcement & judicial programs (high-visibility enforcement campaigns, Drug Court programs, judicial education, mandatory anger management)
- Screening & intervention (expanded screening and referral to treatment, seat belt observation surveys)
- Passenger safety programs (Child passenger safety/restraint, education on correct restraint use)
- Targeted seasonal campaigns for wildlife-vehicle collision prevention (fall migration periods)
- Distracted driving data improvements (Improve data collection methods and reporting for distracted driving)

Institutional Progressive Enforcement & Regulatory Programs

- Targeted community outreach (Bilingual child passenger safety events, cultural outreach programs, family education, private-host parties awareness, family safe driving agreements)
- Enforcement/sanction policies (high blood alcohol concentration [BAC] sanctions, DUI offender license plate sanctions, drink service limits, server intervention training)
- Legislative/regulatory policies (open container prohibition, BAC limit reduction, cell phone ban, license renewal testing, BAC test refusal elimination, restraint policy research, cannabis-impaired driving penalties)
- Workplace/employer policies (distraction policies, employer partnerships, workplace safety initiatives, corporate safety programs, fatigue management)

High-Risk User Interventions

- Targeted education campaigns for specific groups
- Behavioral modification programs
- Repeat offender programs
- Specialized intervention programs

SAFE SPEEDS

Data-Driven Speed Management

- Speed Zone Mapping & Context-Based Limits: Mapping high-speed areas using traffic data, setting speed limits based on roadway context, and managing speeds near high-risk locations (entertainment districts, high-distraction areas)
- Enhanced penalty legislation: Support legislation to strengthen penalties for racing or excessive speeding (25+ mph exceeding the speed limit)
- Rural speed-related crash data: Collect and analyze rural crash data focused on speed factors (e.g., excessive speed, speed variance, roadway design) to guide rural speed management strategies

Automated and Enhanced Enforcement Systems

- Officer training & certification (Standardized Field Sobriety Testing, Drug Recognition Expert certification, ARIDE training, re-offense/felony identification)
- Automated enforcement technology (red light cameras, confirmation lights, speed measuring devices for work zones)
- Enforcement operations (Primary enforcement for rear passengers, high-visibility enforcement, seatbelt checkpoints, nighttime belt enforcement)
- Legal/judicial processes Improvements: (impairment recognition, DUI prosecution, court education for re-offense identification)

Context-Sensitive Speed Solutions

- Warning systems in complex traffic areas
- Speed management in location-specific contexts (Automated speed governors, Intelligent Speed Assistance, etc.)
- Speed reduction in high-pedestrian areas: Use self-enforcing street designs, pedestrian refuges, traffic calming, and integrated engineering/enforcement solutions to reduce speeds
- Speed limit reduction for commercial motor vehicles on freeways to 65 to 70 mph

Integrated Enforcement Programs

- Targeted timing enforcement (enhanced enforcement during high-risk times, nighttime belt enforcement, 100 days & nights of summer enforcement, coordinated nighttime enforcement)
- High-visibility enforcement (HVE) (Highly publicized enforcement campaigns, cell phone law enforcement, DWI enforcement campaigns, additional funding for HVE)
- Specific violation enforcement & associate penalties (Speed detection measures, primary enforcement for rear passengers, seatbelt checkpoints, repeat speed offender focus, saturated enforcement for aggressive driving/speeding/distraction)
- Enforcement support systems (Law enforcement liaisons, strengthened speed citation adjudication, multi-focused enforcement strategies)

SAFE VEHICLES

Advanced Driver Assistance Systems (ADAS)

- Crash avoidance technologies
- Advanced occupant protection systems
- Intelligent speed adaptation systems
- Support connected vehicle warnings for aggressive maneuvers

Vehicle Monitoring Technologies

- Driver monitoring systems (distracted, impaired, fatigued, etc.)
- Vehicle-based compliance monitoring
- Encourage use of vehicle telematics to monitor driving behavior
- Speed governing technology for fleet vehicles

Safety Compliance Enforcement

- Standardize targeted inspection blitz efforts of commercial vehicles by state police and ports of entry staff

Safety Compliance Technologies

- Enhanced seat belt reminder systems
- Phone use prevention technology
- Encourage technology to eliminate cell phone use while driving
- Tax incentives for replacing outdated vehicles with newer vehicles that have safety features

POST-CRASH CARE

Enhanced Emergency Response Protocols

- Specialized crash response protocols for high-risk corridors (DUI crash response protocols, road rage incident protocols, enhanced extraction procedures)
- Emergency response optimization (emergency response routing based on speed risk areas)

Emergency Responder Training Program

- Enhanced detection training for responders
- Training for emergency responders on handling aggressive drivers
- Specialized trauma care protocols

Crash Data Management System

- Data collection for speed-related crashes
- Multi-factor crash documentation
- Child safety restraint observation survey
- Improve crash data reporting to provide more timely information (post-crash review teams)

Multiagency Coordination Framework

- Healthcare & substance abuse support with coordinated post-incident programs
- Emergency services integration
- Repeat offender monitoring and progressive enforcement
- Judicial system improvements (Improve court awareness and communication)

Intersections

Strategy and Implementation Countermeasure aligned with SSA Key Elements

SAFE ROADS

Design protected intersection features

- Advanced Infrastructure: Protected intersections, setback stop lines, dedicated signal phases.
- Separated Facilities: Physically separated bike lanes, pedestrian refuge islands (min. 8 ft), raised crosswalks.
- Accessibility Features: Accessible pedestrian signals, countdown timers with audio, tactile guidance systems.
- Conflict Reduction: Daylighting for corner visibility, prohibit right-turn on red, dedicated pedestrian phases and roundabout, and reduce curb radius to slow turns and shorten crossings.

Improve intersection visibility and lighting

- Smart Lighting: Adaptive LEDs based on weather, time, and traffic.
- Intersection Highlighting: Overhead lights, backlit signs, lit medians.
- Retroreflective Features: High-visibility markings, signal hardware, and signal backplates in high-conflict areas.
- Emergency Lighting: Backup systems and portable units.

Install advanced warning signs and enhanced pavement markings

- Multi-language Support: Bilingual, international symbol usage.
- Enhanced Visibility Materials: Wet-weather markings, LED pavement markers, thermoplastics with glass beads.
- Intersection Identification: Advanced intersection signs, overhead guide signs, street name signs.
- Behavioral Cues: Colored, rumble strips, optical illusions

Redesign high-risk intersections

- Enhanced Visibility: Central, approach lighting systems, enhanced pavement markings.
- Pedestrian Accommodations: Pedestrian, tactile guidance systems, enhanced crossing signals.
- Cyclist Integration: Separated, dedicated cyclist signals, bike boxes at entries for positioning.
- Accessibility Features: ADA-compliant, audible crossing signals, tactile strips for guidance.

SAFE PEOPLE

Enhance intersection safety education campaigns

- Age-Specific Programs: Senior refresher courses (intersection focus), teen education with peer mentoring, tech updates for middle-aged drivers.
- Community Partnerships: School traffic safety programs, employer-led training, healthcare outreach for at-risk groups, and education on risky behaviors (texting while stopped at intersections, etc.).
- Professional Development: Continuing education for engineers, specialized training for law enforcement and emergency responders.
- Multilingual Resources: Multi-language materials, culturally tailored messaging, community liaison support.

Implement targeted enforcement at high-risk intersections

- Automated Enforcement: Red light, speed, and wrong-way detection.
- Behavioral Intervention: Warnings, education, and diversion programs.
- Equity Considerations: Engage communities in enforcement decisions, reinvest fines into local safety improvements, and offer fair alternatives to monetary penalties.
- Intersection Performance Monitoring: Track enforcement impact, adjust strategies by results, share intersection safety data transparently.

Provide specialized training for high-risk drivers

- Age and Medical Condition Programs: Senior vision/reaction checks, medication impact education, training for medical conditions, adaptive equipment guidance.
- Commercial Driver Training: Truck/bus safety, delivery hazards, periodic retraining.
- High-Risk Behavior: Courses for aggressive, impaired, and distracted driving.
- Skill-Based Training: Hazard perception, emergency maneuvers, vehicle technology & weather training.

Develop public awareness programs about common intersection crashes

- Crash & Seasonal Education: Training on left-turn and rear-end crashes, pedestrian visibility, winter driving, and holiday safety.
- Media & Cross-Platform Integration: Social media campaigns, crash videos, safety apps, real-time alerts, influencer outreach, and crowdsourced reports.
- Targeted Messaging: Gender-, age-, and occupation-specific materials using behavioral psychology.
- Evaluation & Improvement: Surveys, community feedback, message updates, and coordination with enforcement.

SAFE SPEEDS

Install speed management features approaching intersections

- Physical Speed Control Devices: Install rumble strips, and lane narrowing to physically slow vehicles before intersections.
- Geometric & Environmental Design: Where appropriate, apply curves, chicanes, and landscaping to encourage appropriate driver speed and increased attention.
- Visual Communication Tools: Use signs, countdown markings, and multimodal pavement symbols to inform and guide drivers near intersections.
- Context-Sensitive Design Strategies: Customize intersection treatments for rural-urban transitions, business zones, residential areas, transit corridors, etc.

Implement automated speed enforcement at high-risk intersections

- Advanced Detection: Multi-lane speed tracking, red light camera integration, night vision, and license plate recognition.
- Community & Equity: Public input on camera placement, safety-focused revenue use, transparent policies, and fair penalties.
- Progressive Enforcement: Warnings for minor violations, scaled fines, safety education, and first-time offender diversion.
- Monitoring & Legal Framework: Program evaluations, fast citation processing, clear appeals, and court coordination.

Use dynamic speed feedback signs

- Adaptive Feedback: Speed-based messaging, weather-responsive guidance, traffic-adaptive signals, and color-coded alerts.
- Multimodal & Behavioral: Feedback for various vehicle types, motorcycle detection, positive reinforcement, and peer comparisons.
- Data & Analytics: Anonymous speed tracking, effective monitoring, predictive modeling, and public access to data.
- Community & Maintenance: Public involvement, custom messaging, solar-powered signs, and vandal-resistant designs.

Create speed transition zones before intersections

- Graduated Speed Zones: Step-down speed limits with clear signs, distance-based reductions, and enforcement at transitions.
- Physical & Gateway Features: Spaced treatments, gateway markers, landscaping for speed cues, and standardized transitions.
- Signage & Communication: Clear zone markings, advance warnings, intersection distance info, and consistent visual cues.
- Integrated Mobility Safety: Speed control, transit sync, bike/ped protection, and community enforcement programs (e.g., neighborhood speed watch, reporting apps, partnerships with law enforcement).

SAFE VEHICLES

Promote intersection crash avoidance technologies

- Driver Assistance Systems: Intersection warnings, emergency breaking, blind spot alerts, and motorcycle detection.
- Tech Incentives: Insurance discounts, fleet safety requirements, public awareness, and aftermarket programs.
- Commercial Vehicle Focus: Safety tech for trucks, buses, delivery, emergency vehicles, and motorcycles.
- Monitoring & Improvement: Effectiveness reviews, crash data analysis, tech upgrades, and retrofit programs.

Support red light violation warning systems

- Infrastructure & Communication: Signal timing broadcasts, approach warnings, vehicle detection, and real-time traffic integration.
- Behavioral Education: Peer messaging, positive reinforcement, driver training, and warning system education.
- Technology & Analytics: Predictive violation detection, behavior analysis via machine learning, and crash reduction tracking.
- Commercial & Emergency Vehicles: Fleet monitoring, driver scoring, emergency alerts (preemption), and responder coordination.

Implement vehicle-to-infrastructure communication

- Deployment & Integration: Roadside units at high-risk intersections, signal integration, emergency vehicle comms, traffic center coordination.
- Real-Time Data: Traffic updates, intersection status, weather and construction info, predictive traffic tools.
- Privacy & Reliability: Encrypted channels, anonymous data, cybersecurity protocols, and reliability audits.
- Scalability & Performance: Phased rollout, cost-effective solutions, expansion partnerships, crash reduction tracking, and cost-benefit analysis.

Promote automated emergency braking systems

- Regulatory Support: Automated emergency braking (AEB) standards for fleets, new vehicles, retrofits, and regulation alignment.
- Intersection Systems: AEB for crashes, pedestrian/cyclist detection, turning-conflict avoidance, and signal sync.
- Commercial Safety: AEB for trucks/buses, delivery safety, and driver training.
- Performance Monitoring & Improvement: Analyze crash data, assess reliability of intersection safety systems, recommend tech upgrades, educate on AEB system maintenance, and conduct system testing.

POST-CRASH CARE

Optimize emergency response routes to high-crash intersections

- Route Planning: GIS-based analysis, traffic pattern review, redundant routing, and coordination across fire, police, and EMS.
- Real-Time Optimization: Dynamic GPS routing, live traffic monitoring, and integration with traffic management centers.
- Multiagency Coordination: Mutual aid planning, resource sharing, unified command, and cross-agency training.
- Performance & Community Planning: Response time tracking, route effectiveness, land use for access, and public education on right-of-way.

Develop intersection-specific crash response plans

- Site Planning: High-risk intersection plans, geometry, hazards, and equipment needs.
- Agency Command: Unified structure, clear roles, communication, and joint training.
- Incident Management: Traffic control, alternate routes, public info, and coordination.
- Medical Response: Trauma centers, landing zones, mass casualty, and hazmat protocols.

Improve crash data collection at intersections

- Data collection: Crash reconstruction studies
- Real-Time Communication: Integration with traffic systems, automatic alerts, agency data sharing, and mobile terminals.
- Accuracy & Standardization: Standardized reporting, quality assurance, timeliness protocols, and multiagency data agreements.
- Predictive Analytics: Machine learning for crash prediction, pattern recognition, video analysis, and near-miss detection.

Enhance coordination between emergency responders

- Communication: Interoperable radios, unified platforms, real-time sharing, and dispatch tracking.
- Training: Joint exercises, cross-agency familiarization, and standardized protocols.
- Resources: Mutual aid, equipment sharing, specialized planning, and mobile command units.
- Performance: After-action reviews, continuous improvement, and best practice sharing.



Road/Lane Departure

Strategy and Implementation Countermeasure aligned with SSA Key Elements

SAFE ROADS

Signing and Delineation

- Deploy oversized curve warning signs with enhanced retroreflective sheeting
- Install dynamic curve warning systems with speed and weather-responsive capabilities.
- Implement chevron alignment signs with spacing based on curve radius and deploy post-mounted delineators with optimal spacing and height configurations.
- Install wet-reflective edge line markings with enhanced durability materials.

Roadside Safety Treatments

- Deploy MASH-compliant guardrail systems with energy-absorbing end treatments and install impact attenuators at non-removable fixed object locations.
- Create recoverable slopes with 1V:4H or flatter grading requirements and provide improved slope/ditches to prevent rollovers.
- Implement systematic fixed object removal within clear zone boundaries and remove or relocate fixed objects at high-risk locations (e.g., within towns/communities, move poles and mast arms away from the curb closer to the right-of-way line).
- Deploy enhanced drainage structures with traversable design features and install breakaway sign supports, meeting current crash testing criteria.
- Implement wildlife-vehicle collision mitigation measures such as wildlife fencing and wildlife crossing structures (e.g., overpasses or underpasses) to reduce animal-vehicle crashes.

Install Systems for Inclement Weather Concerns

- Implement motorist warning systems on highway ramps, bridges, and/or roadway segments to alert drivers to high-risk conditions such as snowy/icy/wet pavement, low visibility, and high winds.
- Explore the use of dynamic message signs and/or variable speed limit signs in select areas to modify the speed limit according to weather and pavement conditions.

Lighting and Visibility

- Implement enhanced delineation with retroreflective raised markers.
- Implement fog warning systems with visibility detection capabilities.
- Deploy prismatic retroreflective sign sheeting meeting ASTM International standards.
- Install LED-enhanced signs with automated activation systems.

Integrated Roadway Departure Prevention Strategy

- Warning and Alert Systems: Install shoulder and centerline rumble strips, zigzag pavement markings at curves, speed reduction markings, in-road reflectors, and warning signs for steep grades to alert drivers before they leave their lane.
- Road Surface Enhancement: Apply high-friction surface treatments at critical curves, improve pavement drainage, deploy automated skid resistance monitoring, implement winter anti-icing protocols, and install 6-inch edge lines for better visibility.
- Physical Barriers and Recovery Areas: Construct paved shoulders with safety edges, install high-tension cable median barriers, establish 30-foot clear recovery zones, and tag utility poles with reflective markers to provide safer crash outcomes.
- Strategic Traffic Management: Provide passing lanes and acceleration/deceleration lanes based on crash data analysis, sight distance, and traffic volume to reduce aggressive driving and head-on collisions from unsafe passing maneuvers.
- Strategic installation of wildlife crossings: Game fence and crossing areas.

SAFE PEOPLE

Comprehensive Rural Road Safety and Run-Off-Road Prevention Program

- Advanced Vehicle Control and Recovery Training: Implement comprehensive simulator-based training that combines hands-on recovery techniques with emergency maneuver practice, including curve negotiation skills and controlled environment exercises to build muscle memory for critical situations.
- Seasonal Risk Management and Environmental Awareness: Deploy year-round programs that address seasonal hazards including animal collision avoidance training, night driving strategies with vision limitation management, and weather-specific rural road navigation techniques.
- Real-World Application and Case Study Integration: Conduct comprehensive road departure awareness programs using actual rural crash data and case studies, combined with on-site training at high-risk rural locations to provide context-specific learning experiences.
- Continuous Monitoring and Adaptive Response Systems: Establish ongoing assessment programs that track participant performance, monitor rural crash trends, and adapt training content based on emerging risk patterns and technological advances in vehicle safety systems.
- High-Risk Driver Interventions
- Establish targeted young driver programs with progressive skill development and monitoring (ATV safety with age-appropriate operation policies and education).
- Implement older driver assessments with functional ability evaluation and adaptation strategies.
- Deploy commercial driver training with specific roadway departure prevention techniques.
- Create intensive repeat offender programs with behavior monitoring and skill enhancement.

Impaired and Distracted Driving Prevention

- Implement fatigue management programs with recognition and countermeasure training.
- Deploy enhanced drug/alcohol programs with impairment recognition and prevention.
- Create interactive distraction countermeasures training with behavior assessment.
- Implement behavior modification programs using data-driven feedback and monitoring.
- Expand access to ride-sharing options in rural areas.

SAFE SPEEDS

Curve Speed Management

- Install advisory speed systems with curve geometry and roadway condition detection technology.
- Deploy dynamic warning signs with real-time speed and weather condition integration.
- Implement speed feedback displays with data collection and violation pattern analysis.
- Install automated enforcement systems with high-resolution detection and violation documentation.
- Implement speed enforcement cameras on high-risk horizontal curves.

High-Risk Location Speed Management

- Implement data-driven enforcement using crash history and risk factor analysis.
- Deploy site-specific countermeasures based on detailed safety assessments and crash patterns.
- Conduct comprehensive speed zone reviews using engineering and crash data analysis.
- Install traffic calming measures with verified speed reduction effectiveness.

Reduce Vehicle Speeds

- Construct self-enforcing roadways with narrower lanes, speed humps, chicanes, dynamic speed feedback signs, road diets, speed tables, etc.
- Implement behavioral campaigns that reduce vehicle speeds like public education advertisements and enforcement campaigns.
- Conduct comprehensive review of speed limit setting policies and statutes.
- Evaluate legislative changes needed to prioritize safety in speed limit determination.

Integrated Speed and Infrastructure Design

- Develop design standards that balance infrastructure safety with speed management.
- Implement self-enforcing design elements (narrow lanes, visual cues) on wider shoulder roads.
- Create speed transition zones when moving from high-speed roads to lower-speed roads (transverse rumble strips, in-road pavement marking warnings, etc.).
- Use targeted speed enforcement on high-design roads with crash history.

SAFE VEHICLES

Lane Departure Prevention Systems

- Lane Drift Alerts: Warns you with vibrations or sounds when you accidentally drift out of your lane.
- Auto Lane Correction: Automatically steers you back into your lane and applies the brakes if needed.
- Lane Keeping Helper: Continuously keeps your car centered in the lane with gentle steering adjustments.
- Road Edge Detection: Uses multiple sensors to recognize where the road ends to prevent run-offs.

Driver Assistance Features

- Collision warnings: Warns drivers about potential crashes ahead and automatically brakes if you don't respond.
- Driver alertness monitor: Watches your eyes and driving patterns to detect if drivers are getting drowsy or distracted.
- Night vision helper: Uses heat sensors to spot people or animals in the dark that you might not see.
- Smart cruise control: Automatically maintains safe distance from other cars and can stop/start in traffic.

Tire and brake safety systems

- Tire pressure alerts: Constantly check tire pressure and warn you when it's too low or high.
- Better braking systems: Prevents wheel lockup and distributes braking power evenly to all wheels.
- Smart brake warnings: Predicts when drivers need to brake based on road conditions.
- Slip prevention: Monitors road surface and adjusts traction control to prevent sliding.

Emergency response technologies

- Auto crash alerts: Automatically calls for help and reports crash severity and location.
- Precise location tracking: Pinpoints your exact location even in areas with poor Global Positioning System (GPS) signal.
- Emergency calling: Automatically contacts emergency services and sends crash details.
- After-crash safety: Activates safety features after a crash to protect occupants and warn other drivers.

POST-CRASH CARE

Scene Management and Access

- Establish crash classification protocols to determine appropriate response levels.
- Deploy upstream warning systems and queue detection to prevent secondary crashes.
- Implement weather-specific response protocols and monitoring systems.
- Develop guidelines for providing additional breaks in median cable barrier installations for emergency medical services and police access.

Quick Clearance Protocols

- Coordinate air-ground medical response with designated landing zones and protocols.
- Develop integrated trauma center networks with transfer agreements and communication systems.
- Establish evidence-based transport decision criteria and tracking systems.
- Implement resource allocation and sharing systems across jurisdictions.

First Responder Training

- Develop specialized rural response tactics and off-road operations protocols.
- Provide advanced life support training for extended transport scenarios.
- Execute crash command structures for multiagency coordination.
- Implement comprehensive safety protocols for scene operations and hazard mitigation.

Rural Emergency Response Strategies

- Optimize response times through strategic resource placement and routing.
- Position resources based on data-driven deployment models and coverage analysis.
- Enhance communication systems with redundant networks and interoperability.
- Map and maintain strategic access points for emergency response.
- Develop incident management plans for non-TMA areas.



Tribal Lands

Strategy and Implementation Countermeasure aligned with SSA Key Elements

SAFE ROADS

Enhance Tribal roadway design and delineation for local conditions

- Install rumble strips, wide edge lines, tactile markings at curves, and cable barriers to help drivers stay in their lane.
- Upgrade pavement markings (retroreflective, wet-weather visible, durable materials).
- Enhance curve delineation with advance warnings, chevrons, and delineators.
- Apply road diets (reduce/narrow lanes, repurpose for multimodal use).

Improve roadside safety features on Tribal roads

- Widen shoulders and improve recovery areas (beveled edges, drainage, guardrails, crash cushions).
- Remove or relocate roadside obstacles and fixed objects within clear zones and increase road maintenance to manage vegetation.
- Install pedestrian facilities (sidewalks, shared-use paths with pedestrian-scale lighting).
- Install roadway lighting (LED/solar at intersections, crossings, community hubs).

Install/upgrade safety infrastructure at high-risk Tribal locations

- Install raised medians to separate traffic and provide pedestrian refuge.
- Apply high-friction surface treatments on curves, intersections, and high-crash segments.
- Provide high-visibility pedestrian crossings, refuge islands, and grade-separated crossings.
- Install pedestrian hybrid beacons (HAWK signals) at uncontrolled crossings.

Develop planning documents for safety improvements

- Conduct road safety audits and recommend improvements.
- Coordinate with Tribal agencies on safety projects and outreach.
- Create and utilize data tools, like crash maps and safety databases, and establish mechanisms for sharing crash data with agencies while respecting Tribal sovereignty.
- Identify funding opportunities and re-evaluate safety countermeasures (NMDOT Highway Safety Improvement Program, etc.).

SAFE PEOPLE

Implement comprehensive education programs

- Seat belt use education.
- Safety education and testing (safe driving skills refresher classes).
- Partner with local health professionals to teach parents about proper car seat and booster seat use.
- Create youth-focused driving safety programs in Tribal schools.

Develop Tribal community engagement programs

- Social-norming campaigns.
- Education campaigns for bike safety.
- Media campaigns.
- Community-led efforts to identify safety concerns and solutions through walking audits and digital reporting platforms.

Support Tribal safety policy development

- Laws and agency policies that promote safety (Ensure consistent speed law enforcement on state roads through Tribal lands, more DUI checkpoints, etc.).
- Develop Tribal transportation safety plans with community input.
- Establish Tribal community traffic safety committees.
- Adopt model traffic codes tailored to Tribal needs.

Create culturally appropriate programs

- Car seat checks and distribution events.
- Training: The Tribal Injury Prevention Resource Center offers Child Passenger Safety (CPS) Technician, SNAP, and other injury prevention trainings.
- Use storytelling and traditional communication methods to share safety messages.
- Develop materials in Tribal languages to promote road user safety.

SAFE SPEEDS

Implement speed management systems near Tribal gathering places

- Automated/mobile enforcement.
- Install turn lanes.
- Implement access management by consolidating or relocating driveways.
- Install pedestrian refuge islands near gathering areas.

Enhance speed awareness through Tribal community channels

- Driver awareness of appropriate speeds.
- Implement radar speed feedback signs or speed-monitoring trailers.
- Conduct marketing campaigns to raise awareness of the dangers of speeding.
- Host community events or workshops focused on speed safety education.

Install speed control infrastructure on Tribal roads

- Gateway monuments: include culturally appropriate signage for speed limits & penalties within Tribal lands.
- Install transverse rumble strips before intersections or curves.
- Use textured pavement or colored road surfaces to signal speed zones.
- Install school zone markings and flashing beacons near Tribal schools.

Deploy automated enforcement with Tribal approval

- Use speed cameras in high-risk areas with Tribal consent and oversight.
- Integrate automated enforcement data into Tribal safety planning.
- Ensure transparency and community engagement in enforcement decisions.

SAFE VEHICLES

Promote safety technology adoption in Tribal communities

- Systems for impaired driving (e.g., ignition interlocks, alcohol detection systems).
- Systems for distracted/drowsy driving (e.g., driver monitoring systems).
- Tax incentives for replacing outdated vehicles with newer vehicles with enhanced safety features.
- Community workshops to raise awareness of safety tech and how to use it.

Support vehicle inspection programs on Tribal lands

- Vehicle inspection programs for proper car seat installation.
- Regular vehicle safety checks for brakes, tires, and lights.
- Mobile inspection units for remote Tribal areas.
- Partnerships with local mechanics or service centers to offer free or discounted inspections.

Encourage safety feature implementation for Tribal vehicles

- Equip Tribal fleet vehicles with automatic emergency braking and lane departure warning.
- Install telematics systems to monitor driver behavior and vehicle performance.
- Retrofit older Tribal vehicles with basic safety upgrades (e.g., seat belt reminders).
- Prioritize safety features in procurement policies for Tribal transit and service vehicles.

Partner with Tribal stakeholders

- Collaborate with Tribal councils and transportation departments to identify safety needs.
- Engage Tribal law enforcement in promoting vehicle safety and enforcing standards.
- Work with governments, schools and youth programs to educate on vehicle safety.
- Coordinate with Tribal health services to integrate vehicle safety into public health efforts.

POST-CRASH CARE

Improve emergency response systems in Tribal lands

- Develop clear crash site protocols and responder training.
- Assess and optimize emergency notification, dispatch, and response procedures (support adoption of the incident management software led by DPS).
- Identify and prepare landing sites for medical helicopters.

Enhance communication infrastructure in remote Tribal areas

- Strengthen emergency communication by expanding coverage and ensuring reliable backup systems in rural areas.
- Address gaps in coverage for emergency communication systems.
- Install and maintain emergency notification call boxes.
- Implement or update addressing systems on Tribal lands.

Coordinate emergency services with Tribal first responders

- Train community members in first aid, CPR, and trauma care; support volunteer teams and coordinate with emergency services.
- Ensure qualified clinic staff, emergency readiness, ongoing training, and coordination with regional care.

Develop culturally appropriate response protocols

- Train responders in crash scene safety, efficient procedures, and multiagency coordination.
- EMS patient evaluation and care protocols: standardize patient evaluation, triage, and culturally sensitive care procedures.
- Cultural sensitivity in emergency response: Train responders in Tribal customs, traditional healing, and leadership coordination.



Vulnerable Road Users

Strategy and Implementation Countermeasure aligned with SSA Key Elements

SAFE ROADS

Install dedicated pedestrian/bicycle infrastructure

- Better transit access and safer crossings to transit stops.
- Refuge islands, raised crosswalks, raised medians, elevated crossings, and high-visibility-marked crosswalks.
- Improved sidewalks, crossings, curb extensions, and bike/pedestrian connections.
- Separated and intersection bike lanes; upgraded bike facilities.
- Enhance visibility and lighting
- Add lighting along key routes and intersections.
- Crosswalk Enhancements: Add in-street/on-pavement pedestrian messages, HAWK signals, RRFBs, PHBs, yield signs, pavement markings, and bike crossing markings.
- Accessibility Features: Install Automated Pedestrian Sensors (APS), countdown timers, and ADA-compliant elements.
- Enhance Road Visibility: Daylight intersections and clear overgrown vegetation.

Create separated/protected paths and crossings

- Physical Separation: Use bollards, fencing, protected bike lanes, and roundabouts/mini-roundabouts with separate cycle paths, particularly on principal arterial roads.
- Time Separation: Add Leading Pedestrian Intervals (LPIs), exclusive phases, longer crossing times, and protected phasing.
- Grade-separated Crossings: Build pedestrian bridges/ tunnels with bike access.

Implement infrastructure and geometric improvements

- Install advanced yield signage and pavement markings in advance of crosswalks.
- Infrastructure-based Detection: Use in-road light-emitting diodes (LEDs) and bike loop detectors.
- Traffic Control: Use diverters, street closures, and all-way stops for calming or no right turn on red.
- Roadway Reconfiguration: Apply road diets, slip lane removals, roundabouts, access control, and traffic calming.
- Design and maintain pedestrian facilities to provide continuous unobstructed travel paths.

Create/update standards and policies with VRU focus

- Faster Implementation: Use low-cost, temporary calming tools and quick-build programs.
- Hotspot Evaluation: Identify VRU hotspots and assess effective countermeasures.
- Design for All People: Require all projects include safety for every road user.
- VRU Prioritization: Apply safety-focused design in high-risk areas with proven strategies, including access management.

SAFE PEOPLE

Comprehensive VRU safety education programs

- Youth Programs: Provide school-based education about pedestrian safety near walkable destinations and crossing guard certification.
- Launch incentive programs and safety campaigns to promote walking/biking and helmet use.
- VRU Education: Promote road rules (safe biking and walking), communication, helmet use, and VRU visibility.
- Adult Education: Teach drivers about VRU behavior (yielding responsibilities of drivers) and laws in driver training programs.

Enforcement and legal framework enhancement

- Helmet use enforcement/encouragement for youth cyclists.
- Crosswalk enforcement operations (e.g., pedestrian decoy operations).
- Targeted Enforcement: Focus progressive enforcement by location, visibility, with police collaboration.
- Training Programs: Train law enforcement on VRU laws, crash reporting, and work zone safety.

Public awareness and community outreach

- Share clear safety info with diverse and high-risk communities: Include outreach to all populations (English and non-English speaking).
- Communication Campaigns & Engagement Events: Raise awareness of crash risks and promote safe driving and tech benefits.
- Visibility Promotion: Run campaigns for high-visibility clothing and VRU conspicuity.

School and institutional programs

- Safe Routes to School (SRTS): Expand SRTS and improve school zone safety.
- Provide safety toolkits to school and parent groups.
- Engage local advocacy groups to co-deliver VRU training and outreach.
- Institutional Partnerships: Collaborate with schools, tourism, and commercial operators.

SAFE SPEEDS

Speed limit establishment and management

- Speed Limit Optimization: Set context-based speeds and reduce statutory limits.
- Zone-specific Limits: Create low-speed zones and allow local speed setting.
- Policy Development: Provide training, update policies, and develop plans for speed management.

Speed enforcement and automated systems

- Automated Enforcement: Use speed/red light cameras in high-risk VRU areas.
- Enhanced Enforcement: Target speeding in VRU zones and strict compliance with pedestrian safety laws, including “jaywalking” violations.
- Expand automated enforcement with equity focus.

Speed management devices and infrastructure

- Physical Devices: Add humps, chicanes, rumble strips, and narrow lanes near VRUs.
- Feedback Systems: Install speed signs and dynamic warnings.
- Self-enforcing Design: Use roadway geometry to naturally slow traffic.

SAFE VEHICLES

Specialized vehicle safety

- Emergency Response: Use crash alerts and wrong-way detection systems.
- Work Zone Protection: Improve vehicle safety features for construction zones.
- ADAS Features: Include cruise control, emergency braking, and blind spot alerts for VRUs.
- Transit Safety: Add bus alarms, stop announcements, and better stop design.

Advanced VRU detection and communication technology

- Proximity Alerts: Add blind spot and low-speed detection systems.
- Predictive Collision Avoidance: Analyze VRU behavior and integrate with infrastructure.
- Surcharges on registration or other impact fees for vehicles that are so heavy & tall/high off the ground that their impact on VRU safety is greater.
- Multi-sensor Detection: Use 360-degree cameras, radar, and light detection and ranging (LIDAR) with artificial intelligence (AI) VRU recognition.

VRU-focused vehicle design and safety standards

- Lighting Systems: Improve mirrors, lighting, and turn signals for VRU safety.
- Regulatory Compliance: Require VRU crash testing and incentivize safety.
- Fleet Modifications: Add safety features to delivery and transit vehicles.
- VRU-safe Vehicle Design: Use impact-absorbing bumpers, exterior airbags for pedestrians, and improved vehicle height/geometry/etc.

Intelligent vehicle operation and driver support systems

- Driver Monitoring: Detect fatigue/ distraction and enable VRU sensitivity modes.
- Autonomous Protocols: Prioritize VRUs in vehicle programming and emergency stops.
- Adaptive Safety Systems: Learn from near-misses and integrate emergency medical service (EMS) response.

POST-CRASH CARE

Emergency response optimization

- Response Protocols: Protect responders and improve crash scene safety.
- Public Awareness: Train road users on post-crash actions.
- Infrastructure Enhancement: Add signs and signal preemption for emergency vehicles.
- Technology Integration: Enhance crash alerts and emergency communication.

Medical care and trauma protocols

- Healthcare Coordination: Partner with hospitals and EMS for unified care.
- Specialized Care: Create VRU-specific trauma protocols and improve care.

Enhance crash data collection and analysis

- Crash Data: Improve VRU crash reporting and data collection.
- Demographics: Include vulnerable communities in data analysis.
- Data Integration: Link medical and crash data for better insights.
- Research and Evaluation: Analyze crash types and use AI for predictions.

Information sharing and coordination

- Data Utilization: Use data to guide decisions and support local safety efforts.
- Multiagency Coordination: Share data across agencies and advocacy groups.
- Continuous Improvement: Track progress, apply new strategies, and report VRU safety stats.
- Provide more timely crash data to law enforcement.

6. SHSP In Action »

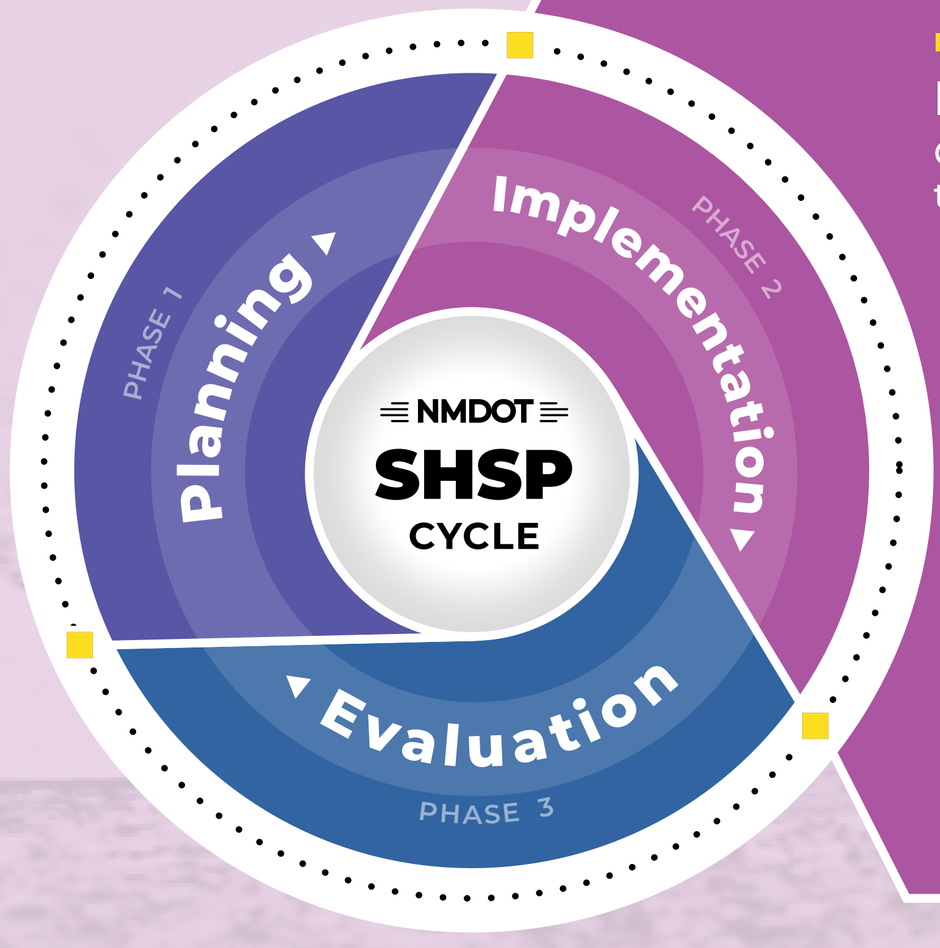
The SHSP Implementation and Evaluation Phase: From Strategy to Action—Preparing for the Future Through Continuous Improvement in Roadway Safety.

Implementation Phase

The SHSP Cycle illustrates the on-going process of planning, implementation, and evaluation. The implementation phase, through the HSIP, is continuous and focuses on translating the SHSP's strategies into action through coordinated programs, projects, and countermeasures designed to eliminate traffic fatalities and reduce serious-injury crashes.

This phase emphasizes cross-disciplinary collaboration with stakeholders and the Safety Committee–who act as safety champions for implementation–to advance engineering, enforcement, education, emergency response, and policy solutions that address identified priorities and support sustained safety improvements.

For action steps moving forward, effective implementation requires leadership, collaboration, coordination, and resources, and depends on the shared commitment of a broad range of partners, including IAWG's, state agencies, counties, Tribes, cities, MPOs and RTPOs, private organizations, communities, and advocacy groups.



PHASE 2

Implementation

Cross-agency collaboration to activate strategies.

Key activities include:

- Integrate SHSP priorities into HSIP, Highway Safety Plans (HSP), RTPO/MPO, and tribal/local transportation plans
- Capital programs and project selection
- Coordinate across all safety arenas: **Responsibility is Shared!**
- Track implementation progress

CONTINUOUS ACTIVITIES:

- Incorporate the **Safe System Approach**
- Coordinate with the **Active Transportation Safety Action Plan**
- Conduct **Public and Stakeholder Engagement**

Figure 6-1. SHSP Cycle Overview and Key Activities during the Implementation Phase.

Implementation Approach

New Mexico's implementation approach for the SHSP focuses on expanding the state's capacity to carry out a complete, data-driven roadway safety management process while building on the strong foundations established during SHSP development.

The state aims to elevate safety leadership by continuing collaboration and strengthening connections with members of the NMDOT Safety Committee and the Interagency Working Group, strengthening these relationships into a network of partners committed to a shared vision of safer roads. Activities such as periodic meetings, collaborative target-setting discussions, and shared approaches to tracking progress will help keep partners engaged, informed, and aligned.

Within this structure, the NMDOT **Safety Committee** plays a guiding role. The Committee – made up of DOT department leads, managers, directors, and Bureau chiefs – oversees the HSIP process and meets quarterly to review HSIP funding applications and Road Safety Audit requests. By continuing to mature the HSIP into a stable, sustainable, data-driven, stakeholder informed program that learns to utilize benefit/cost capabilities of ASSHTOWare Safety Tool, New Mexico will strengthen its ability to deliver meaningful roadway safety performance outcomes. Other partners contributing, directly and indirectly, to the implementation of the SHSP include:

The **NMDOT** can continue to use the SHSP to guide statewide safety planning efforts and support federal funding requests for projects that focus on eliminating traffic fatalities and reducing serious injuries. The SHSP also serves as a foundational tool as NMDOT continues to integrate Safe System Approach principles into project development, prioritization, and selection.

The **Department of Public Safety (DPS)** can support behavioral safety strategies, lead enforcement efforts, and continue collecting, analyzing, and sharing crash data essential for tracking trends, measuring progress, and evaluating safety initiatives.

The **Taxation and Revenue Department** can help build a shared culture of safety by shaping driver licensing processes so that all drivers learn and internalize the expectations and responsibilities that support safe travel. The department will also serve as a key partner in advancing behavioral safety programs.

The **Public Education Department** can support behavior-focused programs and initiatives that promote traffic safety, including efforts such as Safe Routes to School that prioritize the safety of children and youth across New Mexico.

The **Indian Affairs Department** can incorporate traffic safety into programs that support the well-being of Indigenous peoples in New Mexico and will work to strengthen state-Tribal relationships in support of SHSP implementation, with attention to culturally appropriate and community-driven strategies.

The **Center for Pedestrian and Bicyclist Safety (CPBS)** operates as a Tier-1 University Transportation Center with funding provided by the US DOT. Like this 2026 NM SHSP, CPBS's aims to eliminate pedestrian and bicyclist fatalities through a variety of methods, including research education for roadway users.

> This approach emphasizes leveraging existing processes to create a more seamless, coordinated, adaptable, and effective statewide safety roadmap.

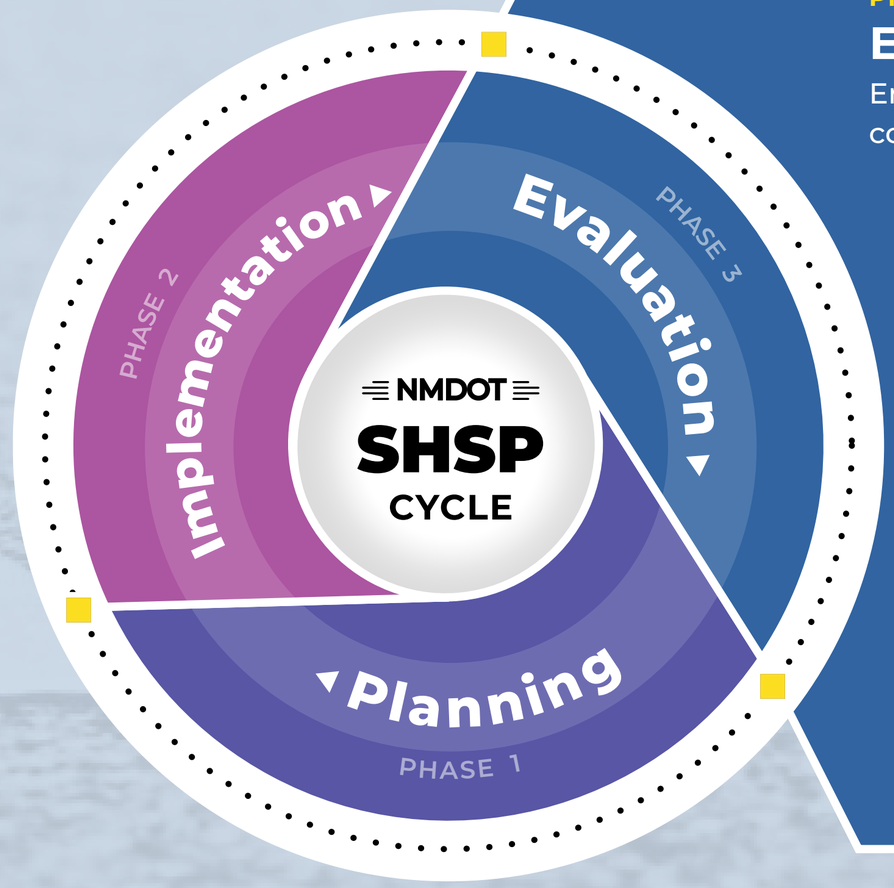
Evaluation Phase

The SHSP Cycle illustrates the on-going process of planning, implementation, and evaluation. The evaluation phase assesses progress toward SHSP goals by tracking performance measures, reviewing outcomes, and identifying opportunities to strengthen roadway safety efforts.

Findings from this phase inform adjustments to strategies and priorities, helping the SHSP remain adaptive, accountable, and responsive. As New Mexico's safety landscape evolves, recommendations may be refined to reflect new insights, emerging challenges, and advances in roadway safety practice.

The NMDOT Highway Safety Improvement Program team will lead this evaluation process, supporting continuous improvement across agencies and throughout the statewide safety program. This evaluation will be completed on a continuous basis as part of the HSIP annual processes.

The performance evaluation will measure the SHSP's effectiveness in improving statewide traffic safety outcomes. In accordance with federal requirements, New Mexico will track progress using the five mandated FHWA safety performance measures.



PHASE 3

Evaluation

Ensures accountability and continuous improvement.

Key activities include:

- Monitor established safety performance measures, including:
  - Number of fatalities
  - Rate of fatalities
  - Number of serious injury
  - Rate of serious injuries
  - Number of non-motorized fatalities and serious injuries
- Evaluate number of emphasis areas-related fatalities and serious injuries
- Assess progress made on implemented strategies
- Use findings to adjust strategies, refine emphasis areas, and improve future SHSP updates

CONTINUOUS ACTIVITIES:

- Incorporate the **Safe System Approach**
- Coordinate with the **Active Transportation Safety Action Plan**
- Conduct **Public and Stakeholder Engagement**

Figure 6-2. SHSP Cycle Overview and Evaluation Phase Key Activities.

Safety Performance Measures

Performance evaluation measures the SHSP's effectiveness in improving statewide traffic safety outcomes. In accordance with federal requirements, New Mexico will track progress using the five mandated FHWA safety performance measures:

#1 FATALITIES:
The number of persons killed in crashes on all public roads.

#2 SERIOUS INJURIES:
The number of persons seriously injured in motor vehicle crashes on all public roads.

#3 FATALITY RATE:
The number of persons killed in crashes per 100 million VMT.

#4 SERIOUS INJURY RATE:
The number of persons seriously injured in crashes per 100 million VMT.

#5 NONMOTORIZED FATALITIES AND SERIOUS INJURIES:
The number of pedestrians and bicyclists killed or seriously injured in crashes involving a motor vehicle on all public roads.

Targets are set annually with a goal to achieve Target Zero by eliminating fatalities by 2050. Formal annual reporting on these targets occurs through the HSIP Annual Report, the State's official mechanism for documenting progress toward federally required safety targets. Findings from the SHSP evaluation will be shared with the Safety Committee to inform future updates and support continuous improvement of New Mexico's roadway safety program.

These measures will be used to assess statewide safety trends and determine progress toward long-term goals. One recommendation focused on evaluation is to continue the Interagency Working Groups to review updated data to understand outcomes within each Emphasis Area and identify where additional docus or adjustments may be needed.

Through implementation of the 2021 SHSP and the launch of the Target Zero initiative, NMDOT has undertaken targeted efforts to improve roadway safety across New Mexico. Despite these endeavors, significant challenges remain that NMDOT must address to sustain momentum toward Target Zero. Guided by this SHSP, NMDOT will build on its successes and pursue new, innovative strategies to work towards zero traffic-related deaths on New Mexico's roadways by 2050.

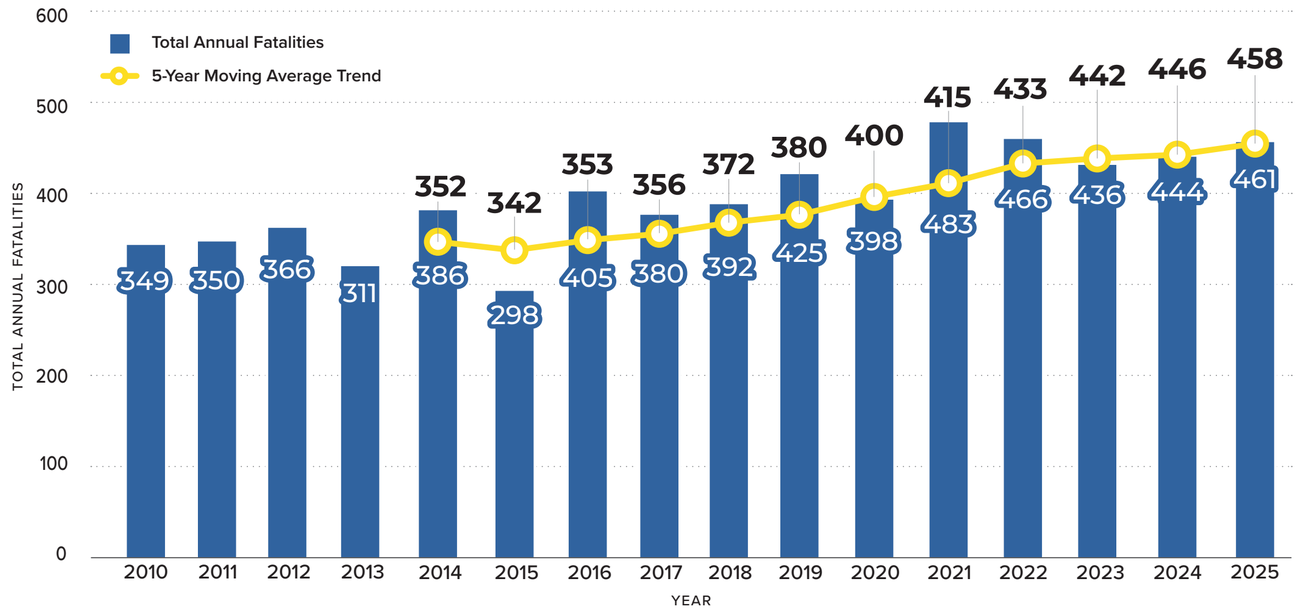
Performance Evaluation Results

As part of the 2026 SHSP, New Mexico is adopting the Safe System Approach and Target Zero in efforts to reach zero fatalities by 2050. Although the trends across the five performance measures do not indicate significant progress or reductions in recent years, there is opportunity to re-evaluate and re-focus statewide efforts and programs to ensure significant progress in the upcoming years, resulting in more trips ending safely on New Mexico's roadways.

ANNUAL FATALITIES

Although the trends in fatalities have been changing only slightly, the 5-year rolling average trend has been consistently increasing.

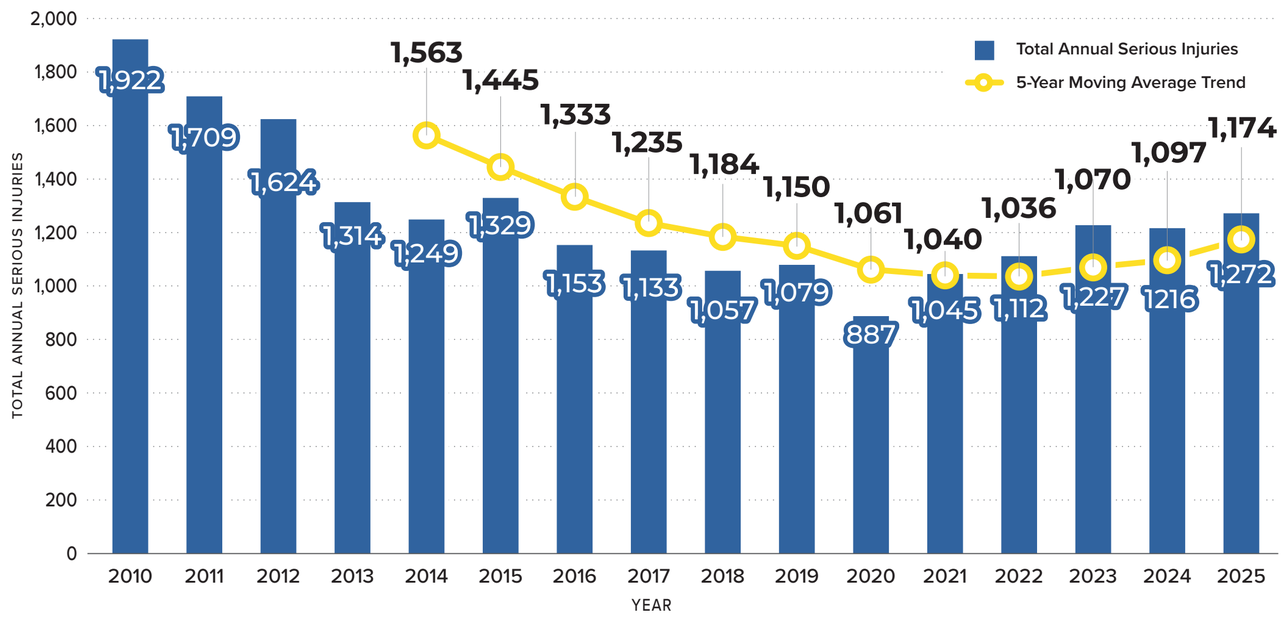
Figure 6-3. Fatalities by year.



ANNUAL SERIOUS INJURIES

For many years in the 2010s the frequency of serious injuries had been showing a promising and consistent decline. However, that observation has turned into a slightly increasing 5-year rolling average since around 2022.

Figure 6-4. Serious injuries by year.

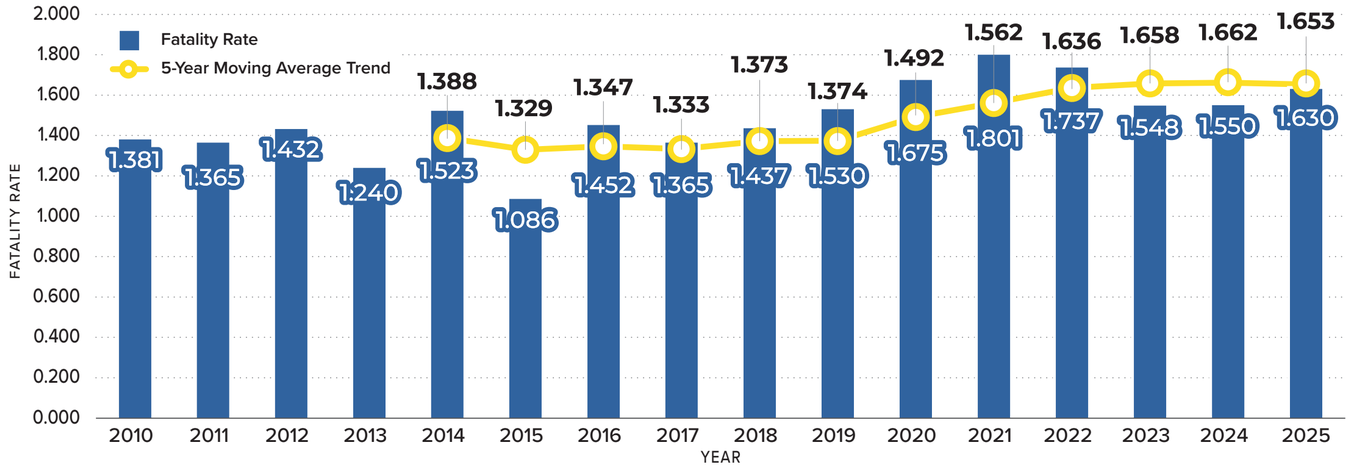


Data Source: NMDOT

ANNUAL FATALITY RATE

When viewed as a 5-year rolling average since 2022, the fatality rate has been relatively steady or flat.

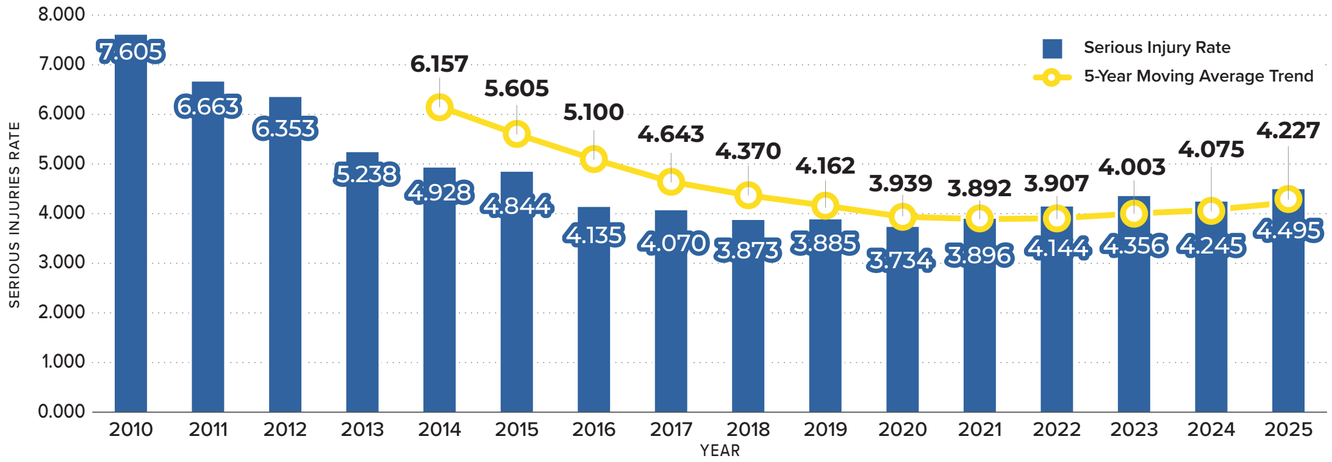
Figure 6-5. Fatality Rate by year.



ANNUAL SERIOUS INJURY RATE

Similar to the annual number of serious injuries, the rate of serious injuries experienced many years in the 2010's with a promising and consistent decline. However, that observation has turned into a slightly increasing 5-year rolling average over the last few years of data.

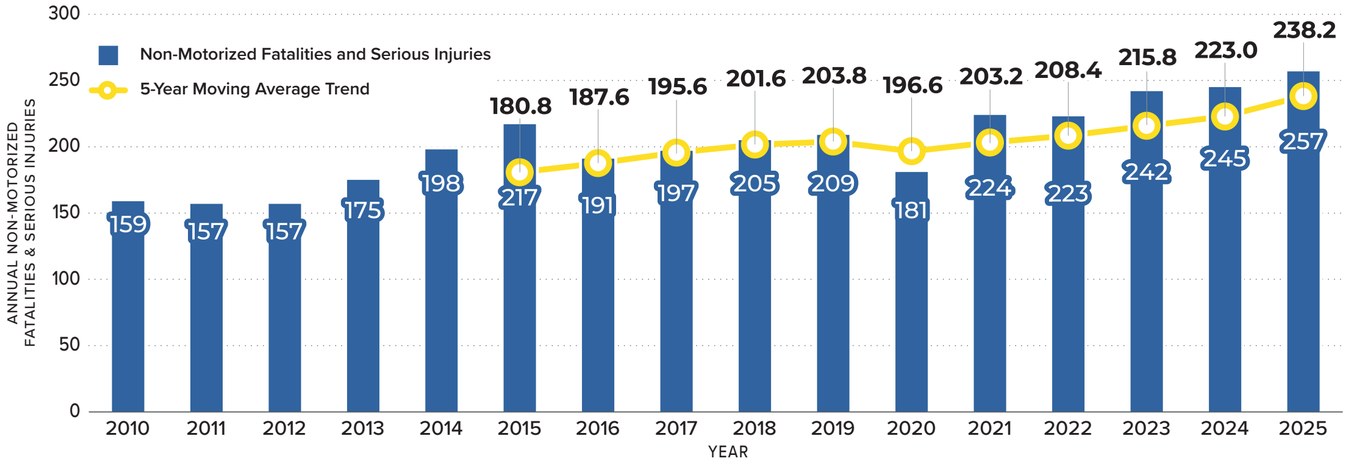
Figure 6-6. Annual Serious Injuries Rate.



ANNUAL NONMOTORIZED FATALITIES AND SERIOUS INJURIES

New Mexico's frequency of fatalities and serious injuries for nonmotorized users shows a 5-year rolling average that has generally been increasing since 2015.

Figure 6-7. Nonmotorized fatalities and serious injuries.



Data Source: NMDOT

Safety Performance Special Rules

Special Rules ensure HSIP funds target roadway segments or user groups with disproportionately high rates of fatalities and serious injuries—such as high-risk rural roads, older drivers and older pedestrians, and VRUs. In the spring of 2025, Federal Highway Administration (FHWA) completed the calendar year 2023 Special Rules determination and found the High-Risk Rural Road and Vulnerable Road User Special Rules applied to New Mexico. In addition, New Mexico did not meet or make significant progress on the five safety performance targets, which triggered further required corresponding actions from the state.



HIGH-RISK RURAL ROADS

New Mexico defines candidate High-Risk Rural Roads (HRRR) as any roadway functionally classified as rural major collector, rural minor collector or a rural local road/street. This definition is aligned with 23 U.S.C. 148(g)(1).

The HRRR Special Rule applies if the fatality rate on the candidate rural roads in New Mexico increases over the two most recent five-year periods for which data is available, using five-year rolling averages. An example of this is comparing the statewide HRRR fatality rate from 2017 through 2021 to the statewide HRRR fatality rate from 2019 through 2023. It is important to note each of these five-year intervals are spaced out by two years.

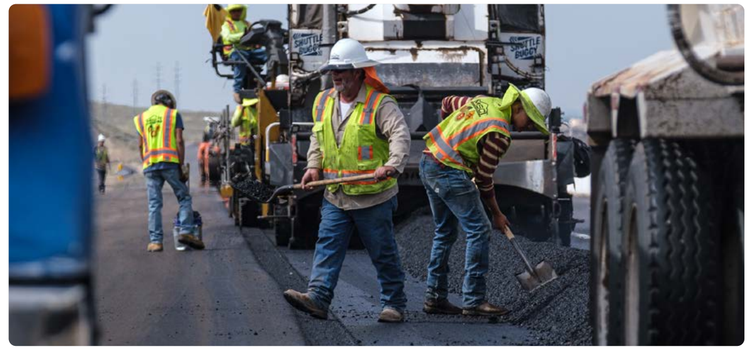
If the State is subject to the rule, then New Mexico is required to obligate an amount equal to 200% of its FY 2009 HRRR set-aside funds to HRRR in the amount of $1,887,424. From the calendar year (CY) 2023 State Safety Performance Target Assessment and HSIP, the HRRR Special Rule applies in New Mexico because the fatality rate on rural roads increased from the CY 2017-2021 average to the CY 2019-2023 average.



OLDER DRIVERS AND PEDESTRIANS

In accordance with 23 U.S.C. 148(g)(2), the Older Drivers and Pedestrians (ODP) Special Rule applies if traffic fatality and serious injury rates per capita for drivers and pedestrians aged 65 years and older in New Mexico increases over the most recent two-year period for which data is available, using five-year averages.

FHWA mandates that if the ODP Special Rule applies, then the SHSP must include strategies to address the increases in those ODP rates, including recommendations from the FHWA publication Handbook for Designing Roadways for the Aging Population. As an additional step of evaluating ODP rates, New Mexico could conduct analysis to determine if it is older driver rates or older pedestrian rates that contribute more to the overall ODP rate increase. This helps the State focus on implementing countermeasures and improvements that are specific to older drivers, older pedestrians, or both. However, the traffic fatalities and serious injuries per capita for drivers and pedestrians age 65 and older decreased from the CY 2017-2021 average to the CY 2019-2023 average, hence, the ODP Special Rule does not apply.



VULNERABLE ROAD USER SAFETY

"A **vulnerable road user** is a non-motorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedal cyclist as defined in the ANSI D16.1-2007. (Refer to 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A vulnerable road user may include people walking, biking, or rolling. Please note that a vulnerable road user:

- Includes a highway worker on foot in a work zone, given they are considered a pedestrian.
- Does not include a motorcyclist."

The VRU Safety Special Rule (23 U.S.C. 148(g)(3)) applies when the statewide annual VRU fatalities represents at least 15% of the statewide annual traffic fatalities.

If the VRU Special Rule applies, then New Mexico is required to obligate at least 15% of the next fiscal year HSIP funds allocated under 23 U.S.C. 104(b)(3) to address the safety of vulnerable road users. At the publication of this Plan, the VRU Safety Special Rule applies because the total annual fatalities for VRUs is equal to or greater than 15% of total annual traffic fatalities in New Mexico in CY 2023.

7. Looking Ahead»

Preparing for the Future: Building Safe Roads Through Smarter Planning.

Preparing for the Future

To advance the goal of eliminating fatalities and reducing serious injuries on all public roads in the State of New Mexico, transportation safety must be integrated more deliberately into every stage of the planning and engineering process. This section highlights key areas of consideration—encompassing themes, programs, and emerging technologies—that offer strong potential for shaping future traffic safety strategies.

Strategies, countermeasures, and safety-focused initiatives shared earlier in this plan are organized by different emphasis areas and SSA elements. However, there are additional high-level opportunities to proactively improve traffic safety in New Mexico. These include a variety of programs, policies, projects, and technologies that can help maximize future resources and address existing and emerging system needs.

DATA:
Crash data records/accuracy; improving data collection methodologies; explore different types of data to explain the whole story

SAFETY ANALYSIS:
Additional/continued in-depth safety analysis to identify safety issues on state and non-state-owned public roadways (Road Safety Assessments/Audits, AASHTOWare, Safety Performance Functions, Highway Safety Manual applications, High Injury Networks, etc.)

OPERATIONS & RESPONSE:
Transportation Systems Management and Operations, Traffic Incident Management

EMERGING TECHNOLOGIES:
Monitor and prepare for impacts of new vehicle technologies, including Automated Vehicle and Connected Vehicle technology

RESEARCH ADVANCEMENT:
Continue monitoring emerging research on effective strategies for improving roadway safety

MULTIMODAL SAFETY:
Promote transit systems and bike and pedestrian infrastructure as safety solutions

INTEGRATED PLANNING:
Strengthen relationship between land use, planning & safety

STRATEGIC PARTNERSHIPS:
Partner with advocates and special interest groups to implement policy changes, multidisciplinary stakeholders

FUNDING OPPORTUNITIES:
Capitalize on funding opportunities



Zero fatalities

it’s our shared commitment.

Every traveler—whether driving, riding, walking, or biking on New Mexico’s roads—deserves to arrive safely. Reaching zero fatalities requires all of us.

Everyone has a role.
Everyone can take action.

Join us!

Working Together to Create a Culture of Safety

The commitments we make in transportation safety will resonate through future generations, fostering a culture where safety is prioritized. We have an opportunity—and a responsibility—to make a significant difference in our state and drive the number of traffic deaths toward zero. We all have a role in creating a safe transportation network for all road users. Together we can make progress each year. Here is what you can do to help:

#1 **Road users/individuals:** Practice safe behaviors, whether you are driving, walking, biking, or using another mode of travel. Stay attentive and avoid distractions. Avoid unnecessary risks and be aware of other road users.

#2 **Families:** Teach children at a young age about the importance of safety, monitor the driving behaviors of family members for changes in vision, physical abilities, and cognition, and speak up in a caring way, when appropriate. Encourage open discussions about road safety.

#3 **Educators and school administrators:** Incorporate traffic safety education from grade school through high school and engage parents in promoting road safety.

#4 **Community organizations:** Promote a safety culture by engaging with local and elected officials, Tribal leaders, and businesses. Work with local leaders and businesses to foster a safety-focused culture and promote community-wide safety initiatives and multimodal transportation options.

#5 **Employers and businesses/military bases:** Implement/adopt workplace policies that encourage safe driving among employees, support additional transportation options, and support traffic safety awareness programs.

#6 **Vehicle manufacturers and technology innovators/Vehicle and technology providers:** Develop, refine and incorporate advanced safety features in vehicles and roadside systems to reduce human error and enhance road safety.

#7 **Emergency responders and healthcare providers/professionals:** Continually enhance the responsiveness to crashes and the quality of care for crash victims to reduce the severity of injuries from traffic incidents.

#8 **Engineering and planning professionals:** Plan and design streets, roads and intersections with safety considerations for all road users, including multimodal options. Implement infrastructure improvements with proven safety strategies that minimize crash risks.

#9 **Metropolitan and regional planning organizations and local agencies:** Provide resources, support safety initiatives, and foster communication among stakeholders to enhance road safety.

#10 **Law enforcement:** Enforce traffic laws, demonstrate and encourage safe driving behavior. Work within the community to establish a safety culture and work with local governments to identify and reduce risks. Engage in community outreach to promote the importance of safe driving. Participate in high-visibility education and enforcement campaigns.

#11 **State, local or Tribal government:** Adopt rules and policies that promote safety and make multimodal transportation and land use decisions to support safe communities for all residents. Maintain and enhance roadway infrastructure to improve safety for all road users. Promptly address hazards like potholes and ensure the visibility and effectiveness of traffic signals, signage, and VRU infrastructure.

#12 **Elected officials:** Advocate for and support legislation and policies that prioritize road safety. Lead by example and engage with the community on safety issues.

#13 **Judicial system professionals:** Ensure fair, consistent and effective penalties are applied for traffic violations to deter dangerous driving behaviors. Participate in training related to traffic safety.

#14 **Insurance companies:** Provide strong financial incentives for safe driving practices.

Zero fatalities isn't just a goal—it's our shared commitment.

Traffic Safety Innovations: Lessons from Peer State Successes

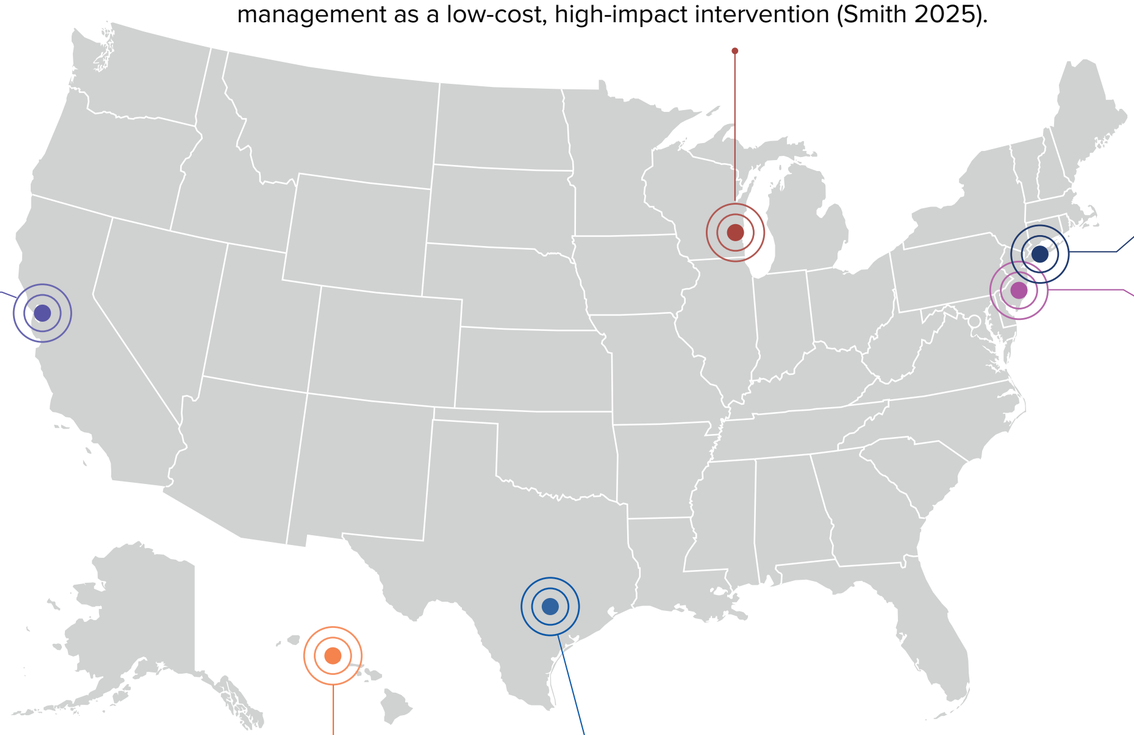
Several states and cities across the United States have already implemented innovative strategies from the bullet list above, which have demonstrated measurable success in reducing crash frequency and severity. These city/state-specific examples provide actionable insights that NMDOT can consider adopting to strengthen its own traffic safety programs.

NEXT GENERATION 911

NG911 systems enable text, video, and photo transmission to emergency dispatchers, improving situational awareness and coordination. This technology enhances trauma care outcomes by reducing response times and improving communication (NGA911 2025).

SPEED MANAGEMENT – MADISON, WISCONSIN

Madison's "20 is Plenty" campaign reduced neighborhood speed limits citywide, resulting in a 58% drop in fatalities and a 41–44% reduction in crashes in pilot areas. This highlights the effectiveness of speed management as a low-cost, high-impact intervention (Smith 2025).



VISION ZERO INFRASTRUCTURE – NEW YORK CITY

Through its Vision Zero program, New York City has completed over 1,200 safety projects since 2014, including separated bike lanes, raised crosswalks, and curb extensions. These improvements have contributed to a 45% reduction in pedestrian fatalities, demonstrating the impact of systemic infrastructure improvements through systematic implementation (NYCDOT 2024).

HIGH INJURY NETWORK TARGETING – SAN FRANCISCO

San Francisco uses crash data to identify and prioritize its most dangerous corridors through a High Injury Network approach. By focusing investments on areas with the highest injury rates, the city ensures that resources deliver the greatest safety impact (Ferrier 2018).

VISION ZERO SUCCESS – HOBOKEN, NEW JERSEY

Hoboken has achieved zero traffic deaths for 8 consecutive years by prioritizing complete streets, speed reduction, and community engagement. This success demonstrates that eliminating fatalities is achievable, even in dense urban environments (McMurray 2024).

STATEWIDE SPEED MANAGEMENT – HAWAII

Hawaii enforces relatively low statewide speed limits and supplements them with speed safety cameras. These measures help reduce high-speed crashes and associated fatalities (HDOT 2026, Spectrum 2025).

CRASH DATA PROMPTNESS AND TRANSPARENCY – TEXAS

Texas mandates that all crashes be reported electronically, with records made publicly accessible within 48 hours. This rapid reporting improves transparency, supports timely analysis, and enables quick data-driven enforcement and engineering decisions (TxDOT 2026).

8.

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Appendices

Appendix A – FHWA Compliance Checklist

APPENDIX A – SHSP PROCESS APPROVAL CHECKLIST

The Highway Safety Improvement Program (HSIP) requires states to have an updated Strategic Highway Safety Plan (SHSP) every 5 years, which is approved by the Governor or Governor's designee. For a state's update to be considered in compliance with the Federal Highway Administration (FHWA), the SHSP update process must include many different pieces.

Appendix A's SHSP Process Approval Checklist is a tool to help FHWA Division Offices assess the completeness of New Mexico's 2026 SHSP update. The factors outlined represent the required process elements, as outlined in the HSIP statute (*United States Code* Title 23, Section 148 [23 U.S.C. 148]) and in the implementing regulations (*Code of Federal Regulations* Title 23, Part 924 [23 CFR 924]).

This checklist consists of three columns:

A. **SHSP Requirements:** This column lists the key SHSP requirements, by topic area, for the SHSP and the specific reference in the HSIP statute or regulation.

B. **Indicators:** This column provides indicators that the State meets the different requirements.

C. **Location within SHSP:** This column provides a 'shortcut' for the Division Office representative to identify where each required piece can be found within the 2026 New Mexico SHSP. In most cases, a section number and subsection title is provided. This column also includes an empty checkbox, which can be used to indicate the requirement has been identified within the SHSP and satisfies the necessary requirements.

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
CONSULTATION		
23 U.S.C. 148(a)(11); 23 CFR 924.9 (a)(3)(ii) An SHSP update shall… Be developed by the State DOT in consultation with safety stakeholders.	1. The State conferred with stakeholders early in the SHSP update process, considered their input before decision making, and routinely informed them about actions taken regarding SHSP development.	☐ **Acknowledgements Section**; **Section 3,** Sub-section: Partner Engagement; **Section 4**, Sub-section: EA Analysis
23 U.S.C. 148(a)(11)(A); 23 CFR 924.3 Safety stakeholder means, but is not limited to: • A highway safety representative of the Governor of the State; • Regional transportation planning organizations and metropolitan planning organizations, if any; Representatives of major modes of transportation; • State and local traffic enforcement officials; • A highway-rail grade crossing safety representative of the Governor of the State; • Representatives conducting a motor carrier safety program under section 31102, 31106, or 31309 of title 49; • Motor vehicle administration agencies; • County transportation officials; • State representatives of non-motorized users; and • Other Federal, State, tribal, and local safety stakeholders.	2. There was local and Tribal involvement. 3. Stakeholders from a variety of disciplines were involved and representatives from all “4 E’s” (engineering, enforcement, education, and emergency response) participated in the development of the SHSP. 4. Stakeholders’ concerns were given adequate consideration. 5. If a stakeholder was not consulted during the SHSP update process, is there a satisfactory explanation for its absence.	☐ **Section 3,** Sub-section: Partner Engagement ☐ **Section 3,** Sub-section: Partner Engagement ☐ **Section 4,** Sub-section: EA Analysis ☐ **N/A** – the project team did not exclude any stakeholders from participating in the SHSP development process.

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
DATA		
23 U.S.C. 148(d)(1)(B); 23 CFR 924.9 (a)(3)(vi) An SHSP update shall… Analyze and make effective use of safety data to address safety problems and opportunities on all public roads and for all road users	1. The State has used the best available safety data to identify critical highway safety problems (i.e., emphasis areas) and safety improvement opportunities on all public roads. ✓ Safety data means crash (e.g., fatality and serious injury), roadway, and traffic data on a public road, and, includes, in the case of a railway-highway grade crossing, the characteristics of highway and train traffic, licensing, and vehicle data.	☐ **Section 4**, Sub-section: EA Analysis **Section 4**, Sub-section: EA Analysis
	2. Safety analysis tools, (e.g., the HSM Safety Analyst, IHSDM) and methods (e.g., trend analyses, benefit/cost analysis) were used to help identify safety issues and to determine strategies for improvements.	☐ **Section 7,** Sub-section: Preparing for the Future
23 U.S.C. 148 (a)(11)(D) An SHSP update shall… Consider the safety needs of, and high-fatality segments of, all public roads including non-State-owned public roads and roads on tribal land.	3. SHSP emphasis areas and strategies address State and non-State-owned public roads and roads on Tribal land, when applicable.	☐ **Section 4,** Sub-section: Tribal Lands EA **Section 5,** Sub-section: Tribal Lands EA
	4. The State engaged local and Tribal agencies in the SHSP update process.	☐ **Section 3,** Sub-section: Partner Engagement
	5. The data analysis included data for non-State-owned roads and roads on Tribal land.	☐ **Section 4,** All Emphasis Area sub-sections
	6. There are specific emphasis areas or strategies targeting the safety needs of non-State-owned roads and roads on Tribal land. If not, did the data warrant the exclusion?	☐ **Section 4,** Sub-section: Tribal Lands EA **Section 5,** Sub-section: Tribal Lands EA
23 CFR 924.9 (a)(3)(vii) An SHSP update shall… Identify key emphasis areas and strategies that have the greatest potential to reduce highway fatalities and serious injuries and focus resources on areas of greatest need.	7. The SHSP includes emphasis areas and strategies based on data with the greatest potential to reduce highway fatalities and serious injuries.	☐ **Section 4,** Sub-section: EA Analysis
	8. High priority was given to those strategies that can significantly reduce roadway fatalities and serious injuries in the SHSP emphasis areas.	☐ **Section 5,** All Emphasis Area sub-sections
	9. The State considered systemic improvements and low-cost countermeasures.	☐ **Section 5,** All Emphasis Area sub-sections

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
	DATA	
23 U.S.C. 148 (d)(1)(B) An SHSP update shall… Take into consideration, with respect to updated strategic highway safety plans— • the findings of road safety audits • the locations of fatalities and serious injuries • the locations that do not have an empirical history of fatalities and serious injuries, but possess risk factors for potential crashes • rural roads, including all public roads, commensurate with fatality data • motor vehicle crashes that include fatalities or serious injuries to pedestrians and bicyclists • the cost-effectiveness of improvements • improvements to rail-highway grade crossings safety on all public roads, including non-State-owned public roads and roads on tribal land.	10. A variety of data (as listed in column A) and safety programs were analyzed, reviewed, and considered when determining SHSP Emphasis Areas and strategies in the updated SHSP. Below are some examples: 11. The State considered the findings of road safety audits (RSA). RSA findings should be analyzed in the aggregate to identify common countermeasure recommendations for systemic improvements. 12. The State used its safety data systems to identify hazardous locations, sections, and elements that are a danger to all road users, including vehicle occupants and non-occupant users of the roadway (e.g., pedestrians and bicyclists), and to identify fatalities and serious injuries on all public roads by location. 13. The State considered the systemic approach in the SHSP development process, e.g., the State identified/considered low cost countermeasures that can be deployed widely across the system. 14. The State conducted a benefit/cost analysis associated with countermeasures (e.g., crash reduction, etc.), expressed in monetary terms, to the cost of implementing the countermeasures, and to help it prioritize countermeasures or projects and optimize the return on investment. 15. The State considered the relative risk of fatalities and serious injuries at railway-highway grade crossings compared to other high-risk areas of roadway safety in the State. States could accomplish this by evaluating the number and rates of fatalities and serious injuries at railway-highway grade crossings compared to other potential emphasis areas or priority areas. In addition, when evaluating the risks at crossings, States should review the inventory and collision data (inventory data include the location of the crossing, volumes of highway and train traffic over the crossing, and physical elements of the crossing).	☐ **Section 2,** Sub-section: NM Traffic Safety Initiatives **Section 4,** Sub-section: EA Analysis ☐ **Section 4,** Sub-section: EA Analysis Intro **Section 5,** Sub-section: Strategies and Implementation Countermeasures ☐ **Section 4,** Sub-section: EA Analysis Intro ☐ **Section 5,** All Emphasis Area sub-sections ☐ **Section 6,** Sub-section: Implementation Approach ☐ **Section 4,** Sub-section: Intersections

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
	DATA	
	16. The State coordinated its data analysis with other agencies (within State, local, and Tribal jurisdictions). 17. The State considered whether motor vehicle-related bicycle or pedestrian fatalities or serious injuries have increased; if so, an emphasis area or strategy to address the problem could be included in the SHSP.	☐ **Section 3,** Sub-section: Partner Engagement ☐ **Section 4,** Sub-section: VRU EA **Appendix B**
	PERFORMANCE MANAGEMENT	
23 CFR 924.9 (a)(3)(v) An SHSP update shall … Adopt performance-based goals that: • Are consistent with safety performance measures established by FHWA in accordance with 23 U.S.C. 150; and • Are coordinated with other State highway safety programs	1. The SHSP goals are consistent with 23 U.S.C. 150 and are based on analysis of crash and other safety data. 2. The SHSP includes multiyear objectives, which encourages monitoring of the status and progress of SHSP implementation efforts. 3. The SHSP objectives are SMART (specific, measurable, action-oriented, reasonable and time bound). 4. The State involved the State Highway Safety Office and other relevant agencies in the development of SHSP goals and objectives to create consistency among safety plans and programs. 5. The State considered how the goals and objectives can be adopted by other agencies.	☐ **Section 1,** Introduction **Section 6,** Sub-section: Performance Evaluation ☐ **Section 6,** Sub-section: Implementation Approach ☐ **Section 5,** Sub-section: Strategies and Implementation Countermeasures ☐ **Acknowledgments Section** ☐ **Section 5**, Sub-section: Strategies and Implementation Countermeasures

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
MULTIDISCIPLINARY APPROACH AND COORDINATION		
23 U.S.C. 148(a)(11)(C); 23 CFR 924.9 (a)(3)(viii) An SHSP update shall … • Address engineering, management, operations, education, enforcement, and emergency services elements of highway safety as key features when determining SHSP strategies.	1. The State considered the highway safety elements of engineering, education, enforcement and emergency medical services (the 4 E's) when determining strategies to address SHSP emphasis areas.	☐ **Acknowledgements Section** **Section 5,** Sub-section: Strategies and Implementation Countermeasures
	2. The State has multidisciplinary, "4 E," representation on SHSP committees and emphasis area teams.	☐ **Section 3,** Sub-section: Partner Engagement
23 U.S.C. 148(a)(11)(E); 23 CFR 924.9 (a)(3)(ix) An SHSP update shall… Consider the results of State, regional, local, and tribal transportation and highway safety planning processes and demonstrate mutual consultation among partners in the development of transportation safety plans.	3. The State coordinated with other planning processes, including but not limited to, the State's Highway Safety Improvement Program (HSIP), Highway Safety Plan (HSP), Commercial Vehicle Safety Plan (CVSP), Statewide Transportation Plan, Metropolitan Transportation Plans, local road safety plans, tribal safety plans, etc.	☐ **Section 1,** Sub-section: About TZ NM
	4. There is a process to align high level goals, performance measures, strategies and objectives among the plans.	☐ **Section 6,** Sub-section: Implementation Phase and Implementation Approach
	5. The State considered how the SHSP emphasis areas compare with the priorities of the other plans or processes.	☐ **Section 4,** Sub-section: EA Analysis Intro
	6. The State considered how the other plans and processes will play a role in implementing the SHSP.	☐ **Section 6,** Implementation Phase
23 U.S.C. 148 (a)(11)(H); 23 CFR 924.9(c) The SHSP must be consistent with 23 U.S.C. 135(g), which pertains to the Statewide Transportation Improvement Program (STIP).	7. Consistency with 23 U.S.C. 135(g) is demonstrated, for example, by showing that the SHSP and STIP were developed cooperatively by the same planning partners.	☐ **Acknowledgements Section**
	8. The State considered how the emphasis areas and strategies in the SHSP will be implemented through the statewide transportation planning and programming process.	☐ **Section 5,** Introduction

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
MULTIDISCIPLINARY APPROACH AND COORDINATION		
	9. The State plans to implement the SHSP through the HSIP.	☐ **Section 6,** Sub-Section: Implementation Phase
	10. There is a process in place to ensure that HSIP projects identified in the STIP are consistent with and address SHSP priorities.	☐ **Section 4,** Introduction
23 CFR 924.9 (a)(3)(x) An SHSP update shall … Provide strategic direction for other State and local/tribal transportation plans, such as the HSIP, the Highway Safety Plan, and the Commercial Vehicle Safety Plan.	11. State, local, and Tribal entities were actively involved in the SHSP update process and the development of the goals, priorities, and strategies for the plan.	☐ **Section 1,** Sub-section: About TZ NM **Section 3,** Sub-section: Partner Engagement
	12. Other plans and programs will incorporate the goals, emphasis areas, and strategies of the SHSP as appropriate.	☐ **Section 6,** Sub-section: Implementation Phase and Implementation Approach
IMPLEMENTATION		
23 CFR 924.9 (a)(3)(xi) An SHSP update shall … Describe the process and potential resources for implementing strategies in the emphasis areas.	1. The SHSP references how the strategies will be implemented, such as through annual safety plans and programs (e.g., the HSP, CVSP, HSIP), regional safety coalitions, local agencies, etc.	☐ **Section 6,** Sub-section: Implementation Phase and Implementation Approach
	2. The SHSP references resources to help implement the SHSP; this can include the agency or champion that will implement the strategy and/or the funding source that may be considered for implementing the strategy.	☐ **Section 6,** Sub-section: Implementation Phase and Implementation Approach
23 CFR 924.11 (c) The SHSP update shall include or be accompanied by actions that address how the SHSP emphasis area strategies will be implemented.	3. The State developed action steps for the strategies in the SHSP, which are included as an appendix or in a supplemental document (such as an emphasis area action or implementation plan).	☐ **Section 6,** Sub-section: Implementation Phase and Implementation Approach
	4. The action steps or plans include the agency and/or person that will champion implementation of the action, the resources and timeframe for completion.	☐ **Section 6,** Sub-section: Implementation Approach

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
EVALUATION		
23 CFR 924.13 (a)(2) The HSIP evaluation process shall include… An evaluation of the SHSP as part of the regularly recurring update process to: • Confirm the validity of the emphasis areas and strategies based on analysis of current safety data; and • Identify issues related to the SHSP's process, implementation, and progress that should be considered during each subsequent SHSP update.	1. The State conducted a review of current data to determine the appropriate emphasis areas. The data analysis either confirmed the validity of the emphasis areas or they were modified based on the results.	☐ **Section 4,** Sub-section: EA Analysis
	2. The State evaluated its progress in meeting SHSP goals and objectives (e.g., reductions in the number and rate of crashes, fatalities and serious injuries in the SHSP's emphasis areas).	☐ **Section 4,** Sub-section: EA Analysis Introduction
	3. Strategies and actions were reviewed to determine their effectiveness, to help the State determine if it should modify strategies in the SHSP update. For example, project level evaluations can be consulted to see if it had the desired impact.	☐ **Section 5** Introduction
	4. New research and data were considered in strategy selection.	☐ **Section 5,** Sub-section: Strategy and Countermeasure Recommendations
	5. During the development of the SHSP update, attention was given to what will be measured and how progress will be determined for the period of the current SHSP.	☐ **Section 6,** Sub-section: Performance Evaluation
	6. The State has in place mechanisms for regularly tracking SHSP implementation and monitoring progress.	☐ **Section 6,** Sub-section: Evaluation Phase
	7. An SHSP evaluation is planned as part of the State's next SHSP update.	☐ **Section 6,** Sub-section: Evaluation Phase
	8. The State's evaluation process is documented in the SHSP update.	☐ **Section 6,** Sub-section: Evaluation Phase

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
EVALUATION		
23 U.S.C. 148 (a)(1) **HIGH RISK RURAL ROAD** - The term 'high risk rural road' means any roadway functionally classified as a rural major or minor collector or a rural local road with significant safety risks, as defined by a State in accordance with an updated State strategic highway safety plan.	1. The updated SHSP includes the State's definition of "High Risk Rural Road." This must be included even if the State is not subject to the special rule. GUIDANCE LINK	☐ **Section 6,** Sub-section: Safety Performance Special Rules
23 U.S.C. 148 (g)(2) **OLDER DRIVERS AND PEDESTRIANS** – If traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, that State shall be required to include, in the subsequent Strategic Highway Safety Plan of the State, strategies to address the increases in those rates, taking into account the recommendations included in the publication of the Federal Highway Administration entitled 'Highway Design Handbook for Older Drivers and Pedestrians' (FHWA-RD-01-103) dated May 2001, or as subsequently revised.	2. If the State meets the special rule, the SHSP update includes strategies to address the increases in older driver and pedestrian traffic fatalities and serious injuries, if applicable. GUIDANCE LINK	☐ **Not applicable**
23 CFR 924.9 (a)(3)(iii) An SHSP update shall… Provide a detailed description of the update process.	1. The updated SHSP includes a detailed description of the SHSP update process. The description includes a discussion of: ✓ Consultation ✓ Coordination ✓ Data-driven emphasis areas and strategies ✓ Performance-based approach ✓ Strategy selection ✓ Implementation and evaluation process	☐ **Section 3,** Sub-section: The SHSP Cycle **Section 5,** Sub-section: Strategy and Countermeasure Recommendations

SHSP REQUIREMENTS	INDICATORS	LOCATION WITHIN SHSP
ADMINISTRATIVE		
23 CFR 924.9 (a)(3)(i) An SHSP update shall… Be completed no later than 5 years from the date of the previous approved version.	1. The SHSP update was completed within 5 years from the date of the previous approved version.	☐ **Section 1,** Sub-section: Introduction
23 U.S.C. 148(a)(11)(G); 23 CFR 924.9 (a)(3)(iv) An SHSP update shall… Be approved by the Governor of the State or a responsible State agency official that is delegated by the Governor.	2. SHSP is signed by the Governor or a responsible State agency designated by the Governor. ✓ Signature could be in SHSP document (e.g., in cover letter) or in a transmittal letter.	☐ **Letter** from the person with signing authority or designated agency

Appendix B – VRU Safety Assessment

NMDOT Vulnerable Road User Safety Assessment

New Mexico Department of Transportation

NMDOT VRU Safety Assessment
May 28, 2026



NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

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Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ABQ	Albuquerque
ADA	Americans with Disabilities Act
CMF	Crash Modification Factor
eSTIP	(Electronic) Statewide Transportation Improvement Program
FHWA	Federal Highway Administration
GIS	Geographic Information System
HIN	High Injury Network
HSIP	Highway Safety Improvement Program
IIJA	Infrastructure Investment and Jobs Act
LPI	Leading Pedestrian Interval
MIRE	Model Inventory of Roadway Elements
MPH	Miles Per Hour
MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NM	New Mexico
NM Bike Plan	New Mexico *Prioritized Statewide Bicycle Network Plan*
NMDOT	New Mexico Department of Transportation
NW	Northwest
PHB	Pedestrian Hybrid Beacon
RC	Rural corridor
RI	Rural intersection
RRFB	Rectangular Rapid Flashing Beacon
RTPO	Regional Transportation Planning Organization
SHSP	Strategic Highway Safety Plan
SSA	Safe System Approach
TIP	Transportation Improvement Program
UC	Urban corridor
UCR	Uniform Crash Report
UI	Urban intersection
US	United States
VMT	Vehicle Miles Traveled
VRU	Vulnerable Road User
VRUSA	Vulnerable Road User Safety Assessment

Table 0-1
KABCO Injury Scale

KABCO rating	Definition
K	Killed
A	Incapacitated: Carried from scene
B	Visible injury
C	Complaint of injury, but not visible
O	No apparent injury

The KABCO Injury Scale is used in the New Mexico Uniform Crash Report (UCR). The scale corresponds to the severity of the injuries as assessed by law enforcement responding to investigate the scene.

1 Introduction

What Is a Vulnerable Road User?

"A vulnerable road user is a nonmotorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist/bicyclist as defined in the ANSI D16.1-2007. (See 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A vulnerable road user may include people walking, biking, or rolling. Please note that a vulnerable road user:

- Includes a highway worker on foot in a work zone, given they are considered a pedestrian.
- Does not include a motorcyclist."

Federal Highway Administration, October 21, 2022

This Vulnerable Road User Safety Assessment focuses on pedestrians and bicyclists, often referred to as pedalcyclists, as the broader definition provided above is compressed into the two categories in the state's reporting systems. In this context, the vulnerability of legal roadway users is in relation to occupants of motor vehicles, who are more protected from the impacts of a vehicle crash.

1.1 Purpose of the VRU Safety Assessment

As of the latest finalized available data (2023), New Mexico has the highest pedestrian fatality rate in the nation, a ranking held by New Mexico for nine of the ten years. Due to the fact that most roadways are designed and built with a vehicle-centric mindset, the safety of pedestrians and all vulnerable road users (VRUs) needs to become more of a priority. In an effort to address the high rate of vulnerable road user fatalities and injuries nationwide, the Infrastructure Investment and Jobs Act (IIJA) added requirements to the Highway Safety Improvement Program, including that "All States are required to develop a Vulnerable Road User Safety Assessment as part of their Highway Safety Improvement Program (HSIP) in accordance with 23 U.S.C. 148(l)." To improve the safety performance outcomes for vulnerable road users, and to meet the IIJA requirements, the New Mexico Department of Transportation (NMDOT) developed this safety assessment.

Specifically, this safety assessment:

- Documents the current state of VRU safety
- Identifies areas of especially high risk
- Analyzes who is most likely to be in a VRU-involved crash
- Prioritizes and categorizes specific corridors and intersections for improvements
- Proposes recommendations for VRU safety improvements

FHWA Requirements

The Infrastructure Investment and Jobs Act (IIJA), passed by the US Congress and signed into law in 2021, added a new requirement for state departments of transportation to conduct a Vulnerable Road User Safety Assessment (VRUSA) every five years. Anchored in the Safe System Approach (SSA, see Figure 1-1), this assessment must use a data-driven process to identify high risk areas and incorporate equity and demographic considerations into the analysis. Official guidance for the VRUSA recommends the use of a high injury network (HIN), predictive, or systemic analyses to identify high risk areas.

Figure 1-1
Safe System Approach



The SSA is a framework developed by the Federal Highway Administration (FHWA) and is built upon the idea that roadway fatalities and serious injuries are not inevitable but are preventable. Decisions around how we build our communities and design our streets, and our own driving behaviors, all have significant impacts on the safety of our roads. By addressing every aspect of a crash, the SSA strives to both prevent crashes from occurring in the first place, and to minimize the harm to those involved when crashes do occur.

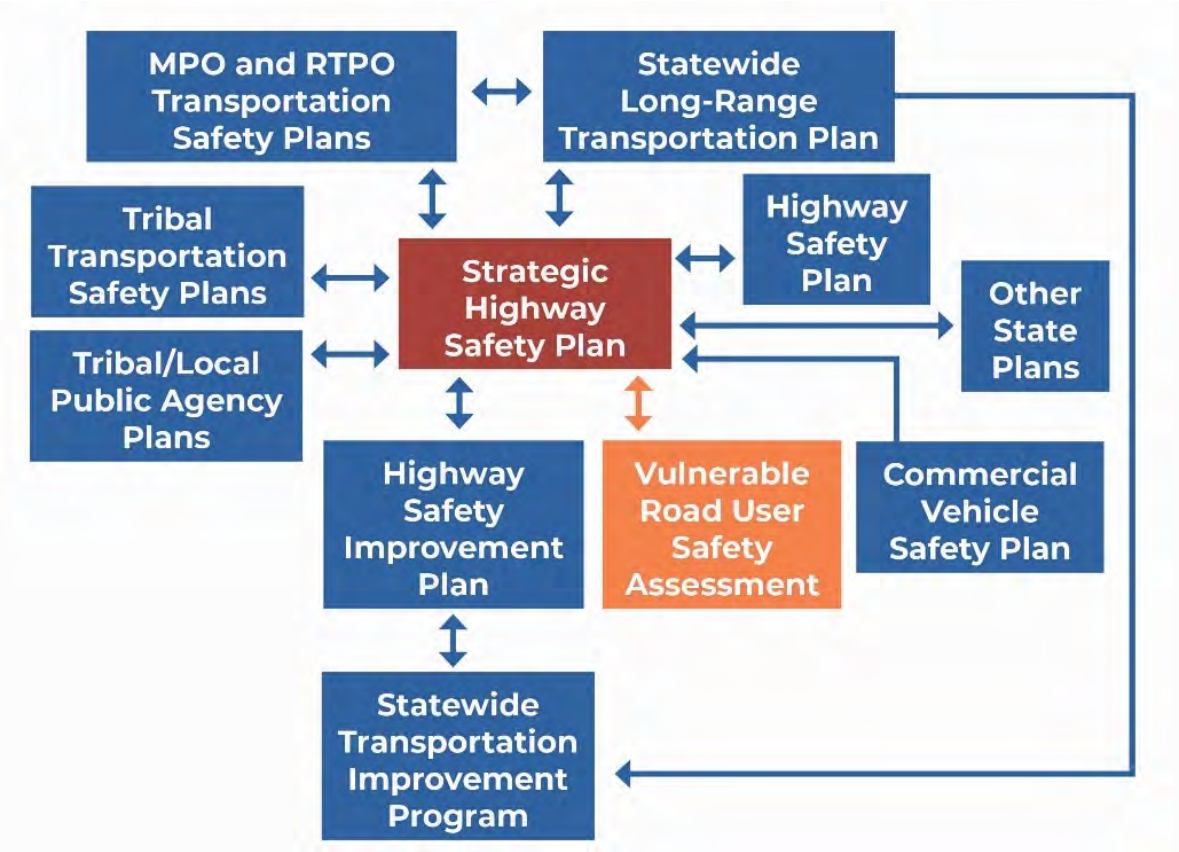
NMDOT used the SSA framework to develop this VRU Safety Assessment.

1.1.1 How This Plan Will Be Used

The purpose of the VRUSA is to conduct an in-depth analysis of the state of VRU safety in New Mexico and identify high risk areas and opportunities for improvement. The IIJA and FHWA require the VRUSA to be incorporated into the Strategic Highway Safety Plan (SHSP), which is focused on improving safety outcomes for transportation system users. The relationships between those plans can be seen in Figure 1-2 below.

The SHSP is a comprehensive statewide safety plan which provides a framework for reducing fatalities and serious injuries. Analyses and recommendations from the VRUSA will be included in the redeveloped 2026 NMDOT SHSP document. Additionally, since VRU's are an Emphasis Area within the SHSP, this report will be included as an Appendix to the 2026 SHSP. For more information about related NMDOT plans, reference Appendix E, for a document and plan review summary.

Figure 1-2
Transportation Plan Relationships



In addition to the VRUSA requirement, the IIJA created a VRU Special Rule where states in which more than 15% of all roadway fatalities are VRUs must spend no less than 15% of their Highway Safety Improvement Program (HSIP) funds on projects that benefit VRUs. The VRU Special Rule applies to New Mexico as determined by FHWA on an annual basis. The identification and prioritization of high-risk areas in this safety assessment will help guide the state's investment of funds to corridors and intersections that will most benefit VRU safety. The analysis results may also aid Metropolitan Planning Organization (MPO), Regional Transportation Planning Organization (RTPO), and Tribal and local public agency prioritization and investment. Using an initial typology framework of intersections and corridors, a suite of proven safety countermeasures is also available in this VURSA for reference, which may benefit engineers and planners as they develop project plans for these priority locations. Additional typology elements, other than intersections and corridors, are urban versus rural and major intersection versus minor intersection.

1.2 NMDOT's Approach to the Safe System, Complete Streets, and Proven Safety Countermeasures

New Mexico's most recent long-range statewide transportation plan, *New Mexico 2045 Plan*, includes Complete Streets strategies. Specifically, this plan recommends updating guidance manuals and processes to incorporate Complete Streets principles.

The *Complete Streets Strategic Plan* provides guidance for how to institutionalize complete streets throughout the state in a context-sensitive manner. The goal is to build roadways that are designed with all travel modes in mind.

The 2018 *New Mexico Prioritized Statewide Bicycle Network Plan* (NM Bike Plan) builds on the *New Mexico 2045 Plan* by placing more emphasis on improving bike facilities. The NM Bike Plan discusses Complete Streets in terms of the economic development and safety benefits, and it includes a few safety countermeasures in its design guidelines such as road diets, lane narrowing, and the use of rumble strips, especially on rural highways.

The 2021 *Pedestrian Safety Action Plan* recommends a number of proven safety countermeasures to make roads safer for pedestrians, including the installation of Pedestrian Hybrid Beacons (PHBs) and the implementation of Leading Pedestrian Intervals (LPIs) statewide. The plan goes further by recommending the development of an entire countermeasure quick-build guide. There are many more proven safety countermeasures in the *Pedestrian Safety Action Plan*, many of which would benefit all VRUs.

The 2021 SHSP includes a section which discusses the national Toward Zero Deaths effort, a precursor to the US Department of Transportation's adoption of the Safe System Approach. NMDOT also launched the *Target Zero Initiative* to coordinate transportation safety work across the state. The SHSP is a major component and requirement of the Highway Safety Improvement Program, where it acts as the primary mechanism for providing a comprehensive framework that aims to reduce fatalities and serious injuries on all roadways. It also serves as a guide for where the state can direct resources to make progress toward Target Zero.

NMDOT will be developing an Active Transportation Plan that will focus on pedestrians, bicyclists and other active modes. The projects and recommendations from the plan will help improve safety outcomes for VRUs.

1.3 Safety Performance Measures

The 2024 NMDOT Performance Measure Target Report provides an update on the state's progress on roadway safety through the tracking of the following performance measures:

- Number of total fatalities
- Number of serious injuries
- Fatality rate: fatalities per 100 million vehicle miles traveled (VMT)
- Serious injury rate: serious injuries per 100 million VMT
- Number of non-motorized fatalities and serious injuries

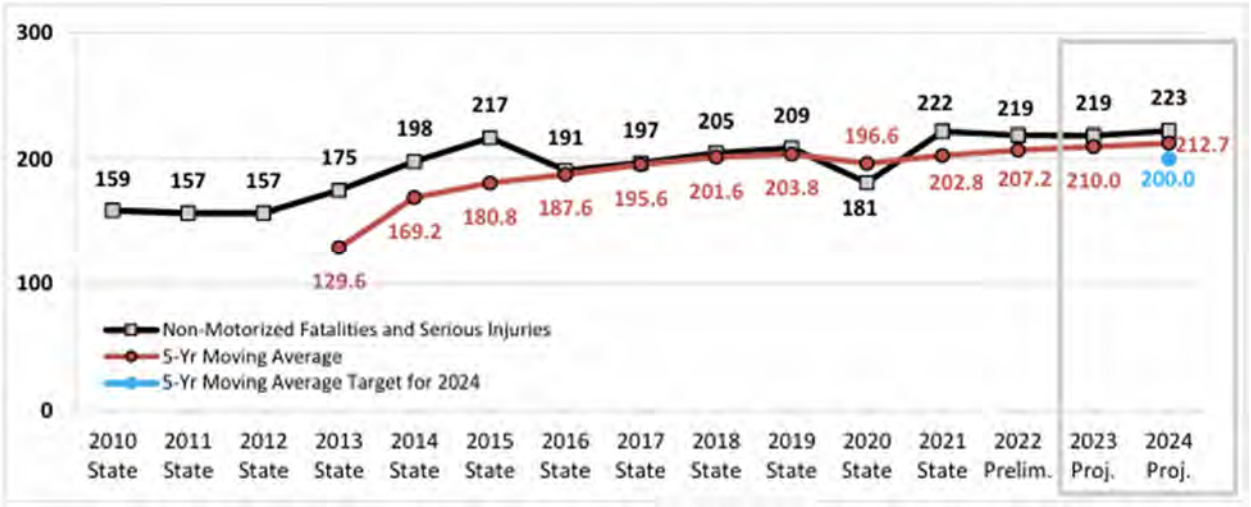
NMDOT is required by federal law to establish targets for these safety performance measures, in coordination with statewide stakeholders. These safety performance targets are set with the aspiration to achieve actual numbers that are *under* the target. Actual numbers that are calculated to be *above* the

targets indicate that improvements were not made statewide and the actual trends are not headed towards zero quickly enough, as desired by NMDOT and statewide stakeholders. These five performance measures are the minimum requirement but do not provide a full picture of the state of safety in New Mexico. NMDOT uses these targets as a measurement of progress towards zero fatalities as part of the Target Zero Initiative.

Over the last several years, the methodology has slightly changed but is generally developed as a projection based on historic crash data, potential safety impacts of planned projects, and other factors. Safety performance targets for non-motorized road users (pedestrians and pedalcyclists) have remained steady over the past four years, as shown in Figure 1-3. This measure combines both fatalities and serious injuries for non-motorized users.

In general, the number of non-motorized fatalities and serious injuries has remained steady since 2016, hovering around 200 fatalities and serious injuries each year. In 2020, the number of fatalities and serious injuries was below the target amount of 204. Since then, the number has been considerably higher than the set targets. Based on preliminary data from 2024, it is expected the number of non-motorized fatalities and serious injuries will be higher than the target, continuing the increasing trend.

Figure 1-3
2024 NMDOT Non-Motorized Safety Targets



NMDOT 2020 Target for Number of Non-motorized Fatalities and Serious Injuries: 204.0
NMDOT 2021 Target for Number of Non-motorized Fatalities and Serious Injuries: 196.6
NMDOT 2022 Target for Number of Non-motorized Fatalities and Serious Injuries: 190.6
NMDOT 2023 Target for Number of Non-motorized Fatalities and Serious Injuries: 199.4

2 Data

2.1 What We Analyzed and How

2.1.1 Crash Data Used

The crash data used for this analysis came from the New Mexico Statewide Traffic Records System database, which included 470,600 crashes from 2013 to 2023. At the time of writing this report, the 2023 crash data was still in a preliminary status. These crashes occurred on both state- and locally-owned roadways. Law enforcement officers complete the crash reports, including details regarding date and time of the collision, demographic information, crash characteristics, location, and roadway characteristics.

This analysis focused on crashes that involved either a pedestrian or a bicyclist and resulted in either a fatality (denoted as a "K" crash in the KABCO rating system), or serious injury ("A" crash). These are the outcomes as measured at the scene of the crash and reported by the responding officer. Crashes are measured by the most severe outcome that resulted from the crash for any involved party. There were 2,213 pedestrian- or bicyclist-involved KA crashes analyzed in the crash data. In all but 71 of the crashes, the bicyclist or pedestrian was the party with the most severe outcome, which was a KA crash rating.

The analysis also relied heavily on NMDOT's roadway data. This data included attributes such as speed limit and annual average daily traffic (AADT). Supplemental data from public data sources, local governments, and Replica, a private data vendor, was also used to ensure a more accurate and comprehensive data set. Crash data was combined with the roadway data using geographic information system (GIS), which provided context on the road conditions on which the crash occurred.

2.1.2 Data Limitations

The provided crash data, derived from the completed UCRs, includes many fields to describe the crash; however, oftentimes there were empty fields on the crash reports, creating some challenges to understanding all of the crash details. Fields with significant quantities of insufficient information were excluded from the crash analyses.

The crash data also lacks some pertinent information entirely. One example of this, which is important to VRU-related data analysis, is the distinction of non-motorist types. The crash data includes pedestrians and pedalcyclists as a mode of transportation but does not mention anything about other wheeled conveyance like skateboards, wheelchairs, or rollerblades.

Additionally, at a statewide level, NMDOT does not have some roadway context data that would be useful for this assessment, such as the presence of sidewalks or crosswalks at crash locations. Another limitation of the roadway data is the lack of statewide design speed data. FHWA guidance identifies design speed data as a required element of the VRU Safety Assessment but currently NMDOT does not have this data.

Other important behavioral data was unavailable, such as if a bicyclist was wearing any type of reflective clothing at the time of a collision that occurred at night.

2.1.3 How We Used the Data

The project team used the data set to analyze historical crash trends, develop a crash severity index and create a High Injury Network (HIN). The HIN helps identify high-priority safety improvement project locations and categorizes the locations by roadway typology.

Historical Crash Trends

Key findings from the historical crash trends analysis are provided in the Pedestrian Safety Analysis and Bicyclist Safety Analysis sections that follow. However, the full Historical Crash Trends Memo and detailed data can be reviewed in Appendix C. The memo outlines key statistics and identifies relationships between multiple variables. The analysis separated pedestrian and bicyclist crashes to identify trends unique to each mode, and it includes the following variables:

Demographics

- Age of vulnerable road user
- Gender of vulnerable road user
- Race/ethnicity of vulnerable road user
- Local or out-of-state driver

Date/Time

- Month of year
- Day of week
- Time of day
- Lighting conditions

Crash Characteristics (Primary Crash Factor)

- Alcohol involvement (both driver and vulnerable road user)
- Drug involvement (both driver and vulnerable road user)
- Hit-and-run
- Vehicle turning movements
- Using bicycle infrastructure (bicyclist crashes only)

Location

- At intersection or along the roadway (non-intersection)
- Near transit
- Near signal
- Urban or rural
- Within Tribal lands

- Population density of crash area

Roadway Characteristics

- Functional classification
- Number of lanes
- Speed limit
- AADT

2.1.4 Equity Data and Analysis

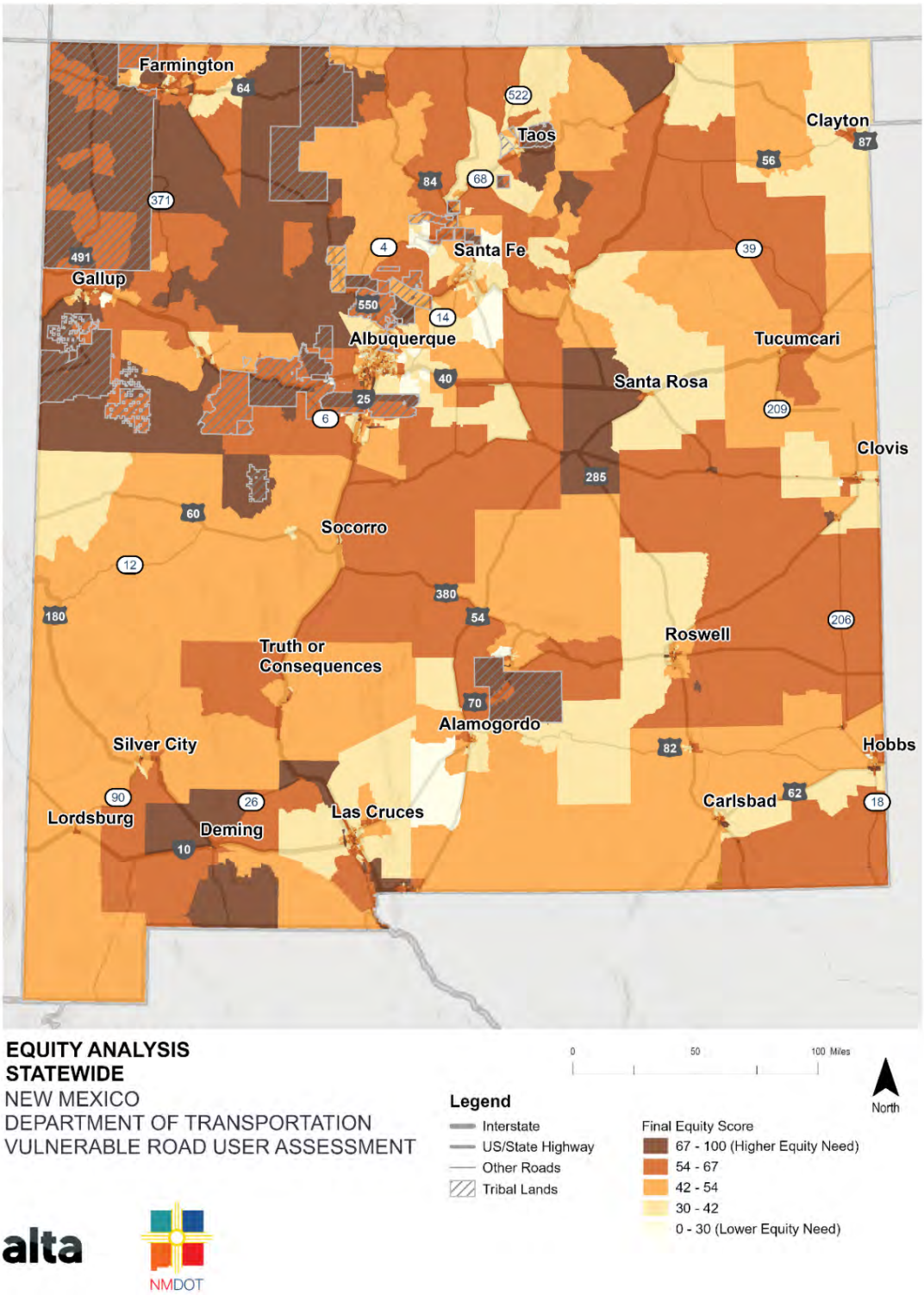
The VRUSA equity analysis identified areas of historically underserved communities across the state of New Mexico. This data and analysis were incorporated into the High Injury Network, to prioritize safety improvements in areas where they will benefit people who are disproportionally impacted by vulnerable road user crashes or who have been harmed by transportation infrastructure, pollution, and unequal resource distribution in the past. The factors were weighted according to the parenthetical values next to each factor. The analysis included several variables, including:

- Low-income households (20%) – Source: American Community Survey (2022)
- Youth and senior populations (15%) – Source: American Community Survey (2022)
- No vehicle access (10%) – Source: American Community Survey (2022)
- Race and ethnicity (10%) – Source: American Community Survey (2022)
- Educational attainment (10%) – Source: American Community Survey (2022)
- Flood risk (5%) – Source: FEMA National Risk Index (2019)
- Air quality (10%) – Source: EJScreen.epa.gov
- Economic opportunity (10%) – Source: Opportunity Atlas
- Coronary heart disease (5%) – Source: CDC PLACES (2021)
- Limited English proficiency (5%) – Source: American Community Survey (2022)

We combined the equity analysis score with the crash severity index score, described in Section 3, to create a final prioritization score for corridors and intersections located on the HIN. By combining equity and severity scores, the analysis prioritized locations with both high safety needs and high populations of underserved communities. Statewide and Albuquerque region maps of the equity scores are available below in Figures 2-1 and 2-2. A digital, zoomable, navigable map of the equity scores and HIN is also online NMDOT: Planning Division GIS Hub, then scrolling down to the Interactive Mapping Applications and choosing the “NM Vulnerable Road User” tool from the available list of resources.

Figure 2-1 Source: American Community Survey, 2022[1]

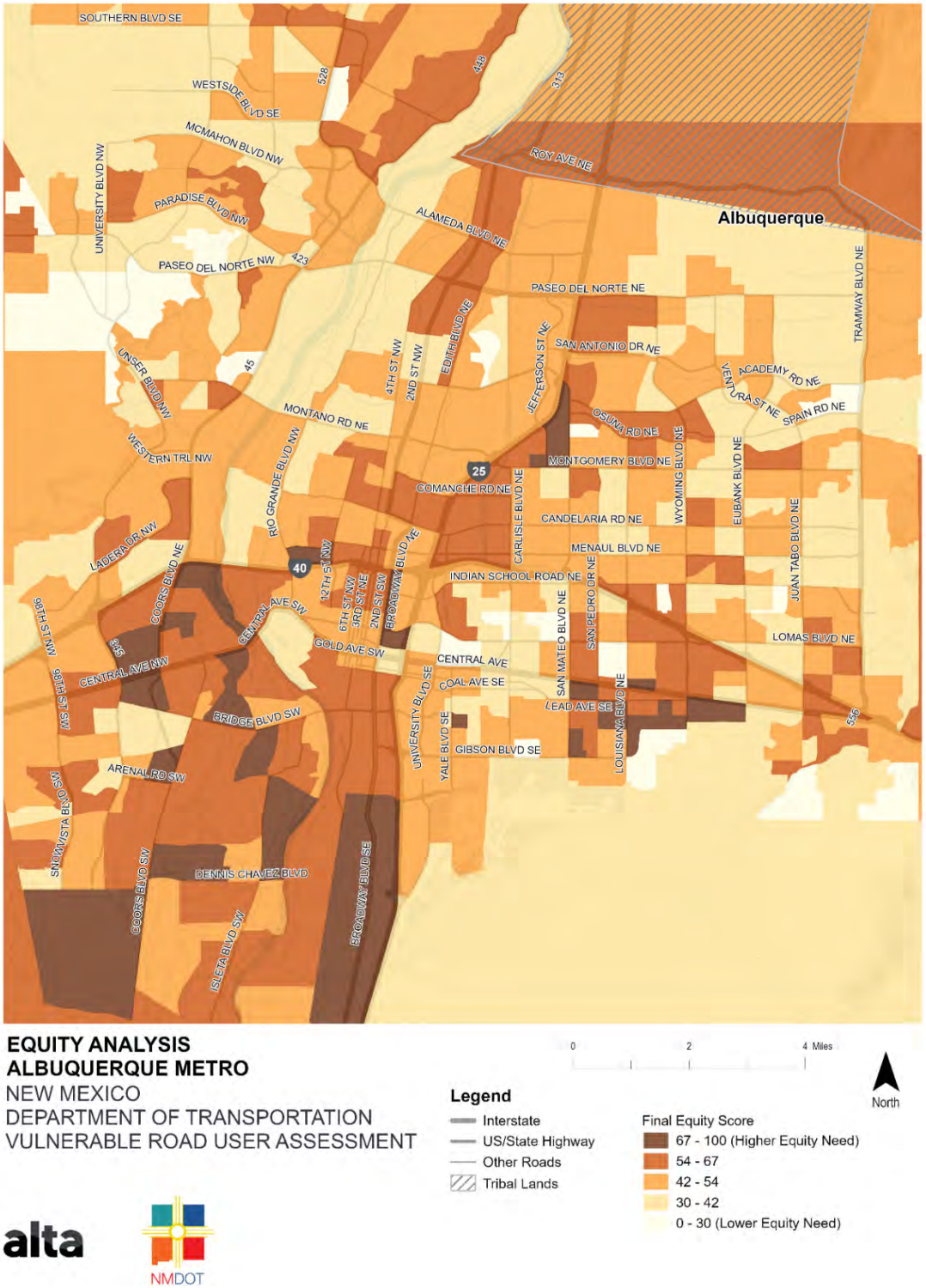
Equity Analysis – Statewide



[1] https://data.census.gov/table?q=New+Mexico+2022

Figure 2-2 Source: American Community Survey, 2022[2]

Equity Analysis – Albuquerque Metro Area



[2] https://data.census.gov/table?q=New+Mexico+2022

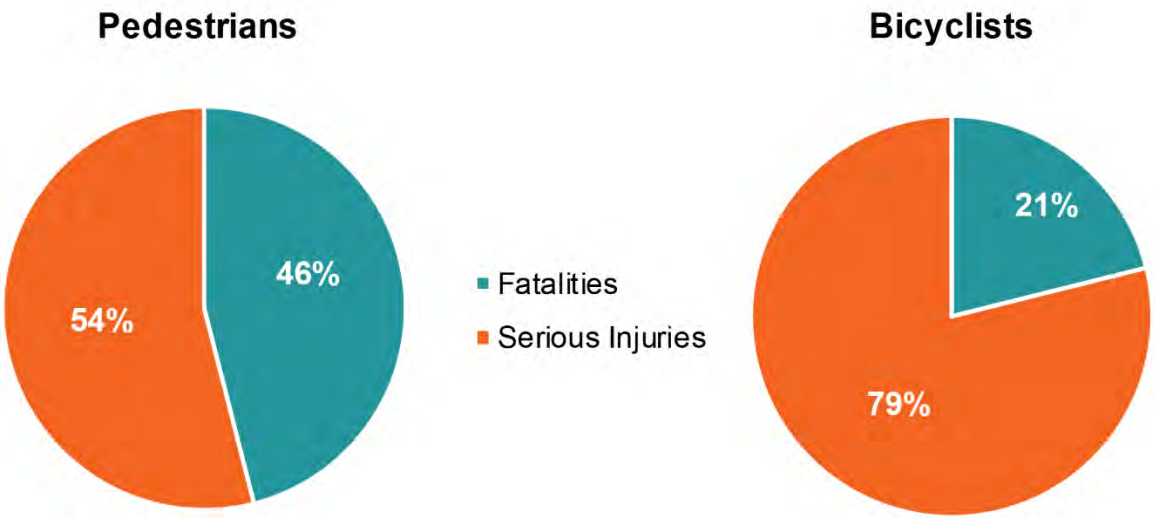
2.2 State of Vulnerable Road User Safety in New Mexico

In this section (2.2), the crash data analysis includes vulnerable road user-involved KA crashes, unless otherwise specified. For brevity, references may just refer to"crashes" rather than "vulnerable road user-involved KA crashes."

From 2013 to 2023, there were 3,917 people killed in traffic-related crashes and an additional 9,941 seriously injured. Of those fatalities and serious injuries, 2,213 were people walking or biking in New Mexico—1,886 pedestrians and 327 bicyclists. Comparing the trend of vulnerable roadway users to the overall safety performance in New Mexico, the number of fatalities and serious injuries of vulnerable road users has been relatively constant, fluctuating between roughly 170 and 230 over the last 10 years. While the trend of number of fatalities has been slowly but steadily increasing since 2013, the trend for overall serious injuries in New Mexico is similar to vulnerable road users where it is generally flat since 2016.

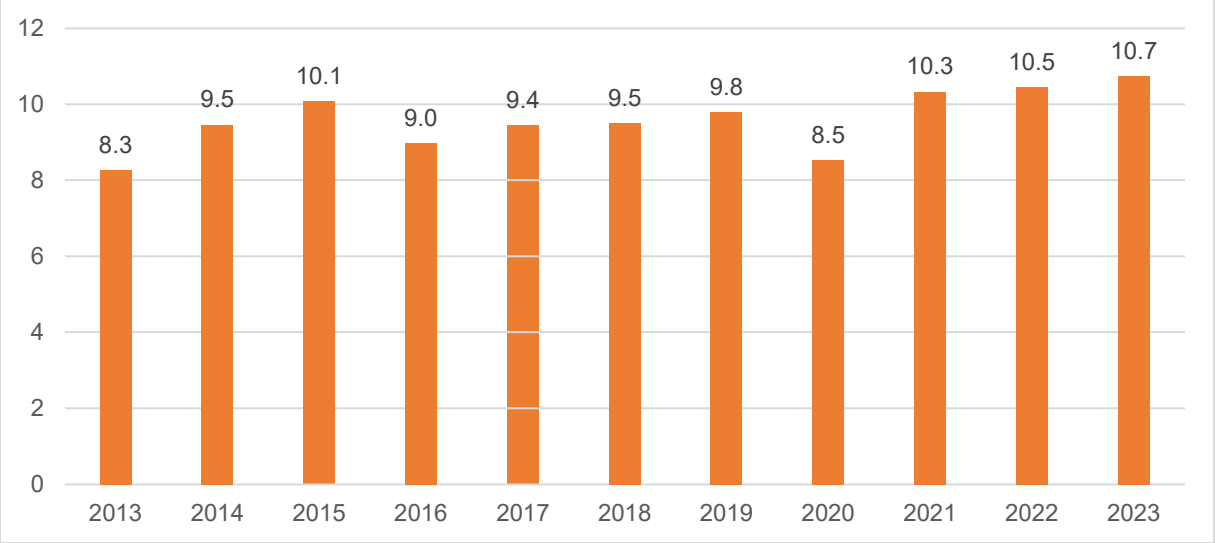
As mentioned in the Data Limitations section, the structure of the New Mexico crash data does not allow for persons in other wheeled conveyance (wheelchair, rollerblades, skateboard, etc.) to be identified. Due to this, Figures, 2-3 through 2-7 show safety outcomes for the vulnerable road user types that *can* be identified in statewide crashes. Figure 2-3 shows the percentage of serious injuries and fatalities for each mode.

Figure 2-3
Vulnerable Road User-Involved KA Crashes in New Mexico (2013-2023)



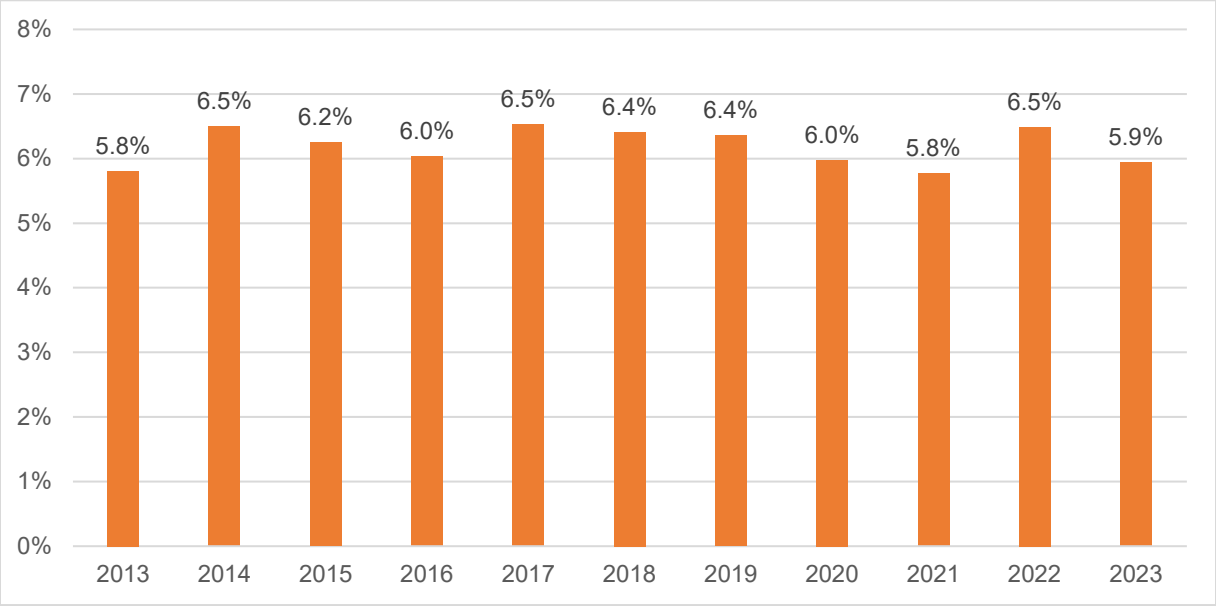
Adjusted for population growth, the rate of vulnerable road user-involved KA crashes has increased over time as depicted in Figure 2-4 below showing the rate of KA crashes per 100,000 people in New Mexico.

Figure 2-4
Vulnerable Road User-Involved KA Crash Rate per 100,000 People



As a percentage of all KABC crashes (crashes that resulted in, at minimum, a possible injury) in New Mexico, the share that involve a vulnerable road user has hovered between 5.8% and 6.5% as shown in Figure 2-5.

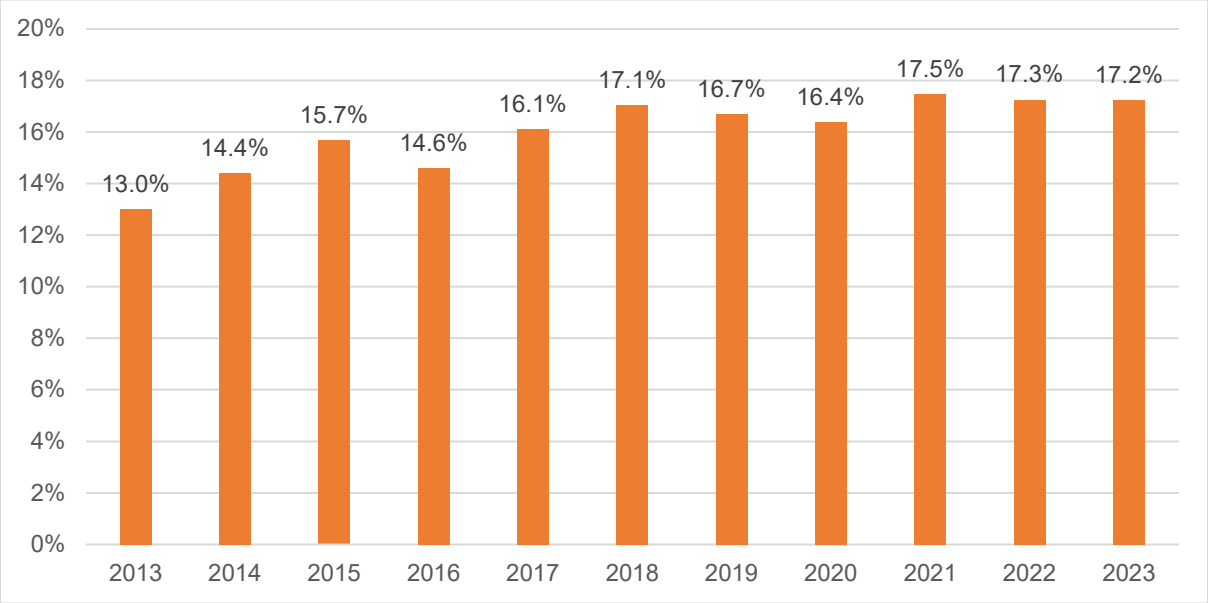
Figure 2-5
Vulnerable Road User-Involved KABC Crashes as a Percentage of All KABC Crashes



However, when reviewing only KA crashes for all users (crashes that resulted in a fatality or serious injury), the share of crashes that involved a vulnerable road user has increased substantially, from 13% to 17.2% from 2013 to 2023, shown in Figure 2-6. The ratio of vulnerable road user-involved KA crashes as a share of all crashes peaked at 17.5% in 2021.

Figure 2-6

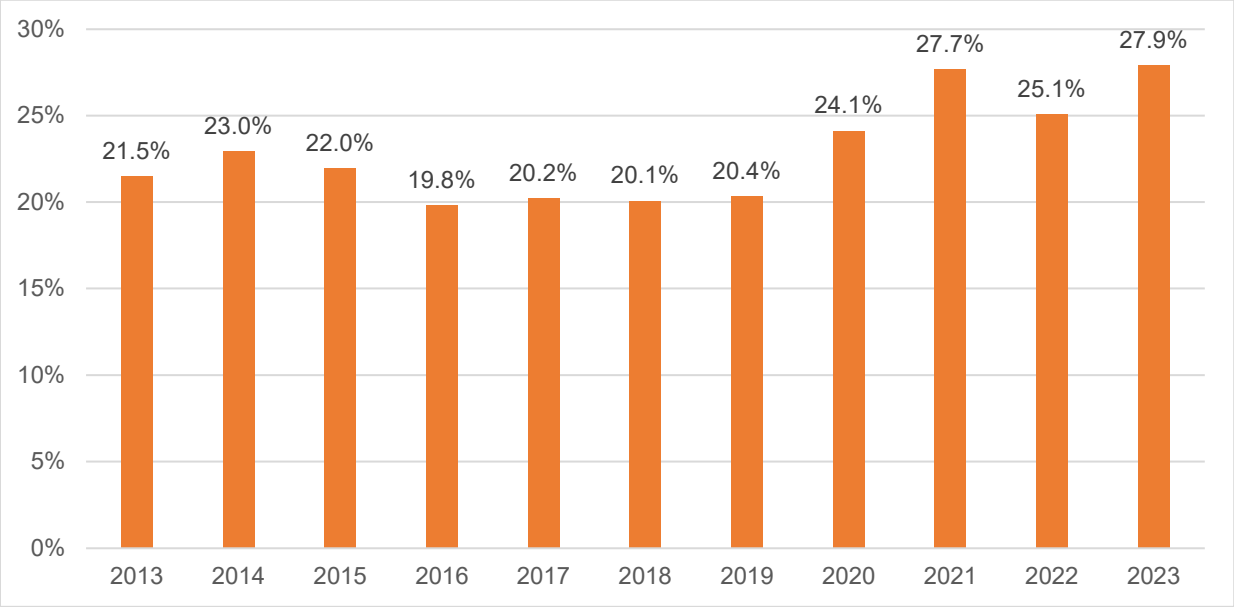
Vulnerable Road User-Involved KA Crashes as a Percentage of All KA Crashes



When a vulnerable road user is involved in a crash, they are now more likely to be killed or seriously injured—about a one in four chance—then they were in 2013. The increasing severity of KA-involved crashes can be seen in Figure 2-7 below.

Figure 2-7

Percentage of Vulnerable Road User-Involved Crashes Resulting in a Fatality or Serious Injury (%)



2.3 Pedestrian Safety Analysis

In this section (2.3), the crash data analysis includes pedestrian-involved KA crashes, unless otherwise specified. For brevity, references may just refer to"crashes" of "KA crashes," rather than "pedestrian-involved KA crashes."

A full analysis of KA crash factors derived from historical crash data is available in Appendix C. Table 2-1 provides a summary of key findings from the historical crash review. Over the 10-year evaluation period, the rate of pedestrian-involved KA crashes has increased significantly from 7.0 per 100,000 people to 9.0 per 100,000 people.

Table 2-1

Pedestrian-Involved KA Crashes

Year	K Crashes	Fatality (K) Crash Rate Per 100K People	A Crashes	Serious Injury (A) Crash Rate Per 100K People	Total KA Crashes	KA Crash Rate per 100K People
2013	52	2.5	92	4.4	144	**7.0**
2014	74	3.6	93	4.5	167	**8.0**
2015	52	2.5	122	5.9	174	**8.3**
2016	75	3.6	83	4.0	158	**7.6**
2017	79	3.8	95	4.6	174	**8.3**
2018	82	3.9	88	4.2	170	**8.1**
2019	83	4.0	92	4.4	175	**8.4**
2020	80	3.8	66	3.1	146	**7.0**
2021	104	4.9	86	4.1	190	**9.0**
2022	93	4.4	104	4.9	197	**9.3**
2023	94	4.4	97	4.6	191	**9.0**
TOTAL	**868**		**1,018**		**1,886**	

2.3.1 Who Is Most Impacted by Pedestrian-Involved KA Crashes

Figure 2-8
Pedestrian-Involved Crash Victim Demographics (2013-2023)



Race/Ethnicity

The UCR reports the race of the victim, as identified by the responding police officer. People identified as Native American/American Indian are by far the most overrepresented in KA pedestrian crashes in proportion to their share of the overall population in New Mexico. Despite Native American/American Indian individuals representing 8.3% of the New Mexico population according to the 2023 American Community Survey, they make up 22.8% of KA crash victims. Excluding the "Other" category, the remaining races/ethnicities were either underrepresented or proportional in KA pedestrian crashes to their overall state population, as can be seen in Table 2-2.

When completing US Census forms, people are asked to indicate if they are of Hispanic or Latino origin, as well as their race. As such, the percentages in Table 2-2 do not add up to 100% for the 2023 Population column. However, "Hispanic" as a category is mutually exclusive of other racial descriptors on the UCR Form and in the crash data.

Table 2-2

Race/Ethnicity of Victims in Pedestrian-Involved KA Crashes (2013-2023)

Race/Ethnicity	KA Crashes	% of KA Crash Victims	2023 Population
American Indian	465	22.8%	8.3%
Asian	7	0.3%	1.7%
Black	68	3.3%	1.7%
White (not Hispanic)[1]	500	24.5%	35.9%
Hispanic[2]	511	25.0%	48.6%
Other[3]	490	24.0%	3.8%
Total	**2,041**		

**Source 2023 American Community Survey*
(1)People who indicated they were white but NOT Hispanic or Latino
(2)People who indicated they were Hispanic of any race.
(3)People who indicated they were "some other race" or "two or more races"

Gender

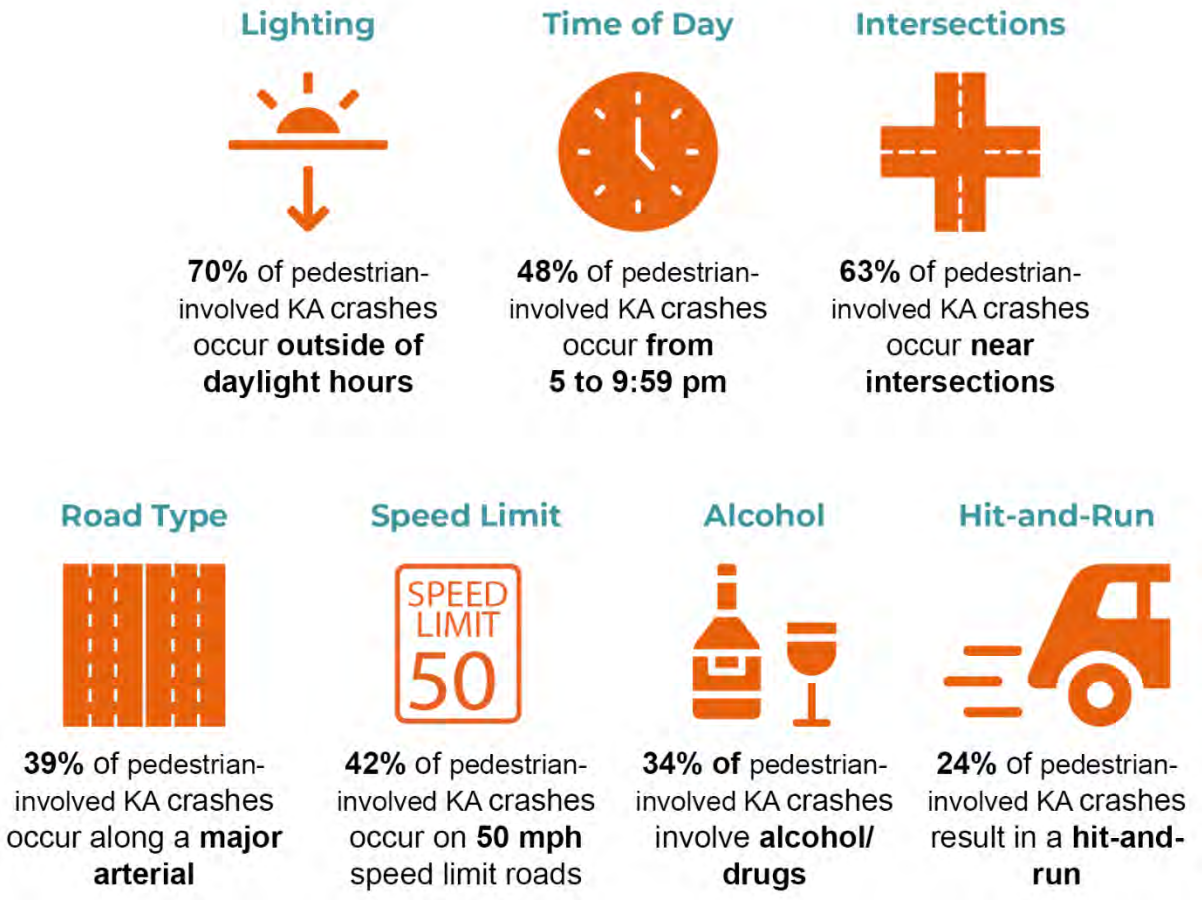
Based on the 10-year data assessment period, men make up 72% of all victims in pedestrian-involved KA crashes.

Age

People ages 35 to 49 make up the highest percentage of victims in pedestrian-involved KA crashes at 26%. However, those aged 25 to 34 are the most disproportionately likely to be a victim, in relation to their share of the overall population, which is 13% of the population of New Mexico, according to the US Census ACS 2023 5-Year estimates.

2.3.2 Common Pedestrian-Involved KA Crash Factors

Figure 2-9
Pedestrian-Involved Crash Factors (2013-2023)



Temporal Factors

Lighting and Time of Day

Only 30% of pedestrian-involved KA crashes occur in broad daylight. Crashes that occur at night are almost evenly split between roadway conditions described as “lighted” and “not lighted.” In these instances, “lighted” would largely be considered crashes that occur at night along roadways that have street lighting, while “not lighted” would be at night with no presence of street lighting.

When analyzing time of day by month, the period from 5 to 9:59 p.m. is the most common for pedestrian-involved KA crashes: 48% of KA crashes occur within this time window. However, an additional pattern emerges when time of day is cross tabulated by month. The hour most likely for crashes to occur follows the change in sunset time across the year. In January, crashes are most likely at 6 p.m. In June, crashes are most likely at 9 p.m. In December, crashes are most likely at 5 p.m. Sunset appears to be a large factor in pedestrian-involved KA crashes. This may be due to streetlights activating later in the twilight hours, making pedestrians less visible, or it may be due to a low-horizon sun obscuring driver visibility. Tinted windows could also exacerbate these factors. When analyzing crashes during the 5 to 9:59 p.m.

time frame, crashes are slightly more likely to occur when the vehicle is traveling west (20%), compared to when the vehicle is traveling east (17%).

Roadway Factors

Intersections

There is no set definition for what constitutes inside or outside of an intersection, which results in crash data inconsistencies. NMDOT's Model Inventory of Roadway Elements (MIRE)-compliant roadway data can improve the accuracy of crash reporting and intersection identification by providing a unique identifier and inventory of roadway assets. With the presence of these unique data points, intersection-related crashes will be more accurately identified. Additionally, by September of 2026, the collection and updating of MIRE elements should be complete. Moving forward, we will have a better dataset to identify crashes that are intersection-related.

Based on the data that is currently included in the crash reports, it shows about 63% of pedestrian-involved KA crashes occur near intersections. Of crashes at intersections, 40% occurred where a major arterial intersects with a local roadway despite these types of intersections representing only 3.6% of all intersections in the state.

Correlated with this statistic, 17% of pedestrian-involved KA crashes occur within 100 feet of a transit stop. Only 0.8% of New Mexico's centerline miles are within this distance of transit stops.

Along the Roadway (non-intersection crashes)

Pedestrian-involved KA crashes are most likely to occur along a major arterial (39% of crashes occur here). However, the higher the roadway classification, the more disproportionate the number of crashes is in relation to the percentage of centerline miles of that classification in New Mexico. For example, 24% of KA crashes occur on an interstate; however, they represent only 1.8% of New Mexico's centerline miles. Local roads are 78% of the centerline miles in the state, but only 11% of crashes occur on local roads.

Also, roads with a speed limit of 50 miles per hour (MPH) or higher contained the highest proportion of KA crashes along the roadway, at 42%. These roads represent only 13% of the centerline miles in New Mexico.

Behavioral Factors

Alcohol

Alcohol was not involved in 66% of pedestrian-involved KA crashes. In 2.7% of pedestrian-involved KA crashes, the driver had imbibed alcohol. In 32% of pedestrian-involved KA crashes, the pedestrian had imbibed alcohol.

Drugs

The consumption of drugs was not involved in 85% of pedestrian-involved KA crashes. In 1.2% of pedestrian-involved KA crashes, the driver was impaired by drugs. In 14% of pedestrian-involved KA crashes, the pedestrian was impaired by drugs. In 0.2% of crashes, both the driver and pedestrian were impaired by drugs.

Hit-and-Run

Twenty-four percent of pedestrian-involved KA crashes result in a hit-and-run.

2.4 Bicyclist Safety Analysis

In this section (2.4), the crash data analysis includes bicyclist-involved KA crashes, unless otherwise specified. For brevity, references may just refer to"crashes" of "KA crashes," rather than "bicyclist-involved KA crashes."

A full analysis of bicyclist-involved KA crash factors derived from historical crash data is available in Appendix C. Below is a summary of key findings from the historical crash review.

Shown in Table 2-3, the rate of KA crashes has increased from 1.3 per 100,000 people to 1.7 per 100,000 people between 2013 and 2023. Over that time, the average rate was 1.4. While this is a relatively low number compared to pedestrian crash rates, it does not reflect a safer environment for biking in the state. New Mexico is developing and improving the biking network but it still lacks connectivity and people may not feel safe biking. Because of a low sample size, there are limitations to any conclusions to be drawn from the analysis.

Table 2-3
Bicycle-Involved KA Crashes

Year	K Crashes	Fatality (K) Crash Rate Per 100K People	A Crashes	Serious Injury (A) Crash Rate Per 100K People	Total KA Crashes	KA Crash Rate per 100K People
2013	3	0.1	24	1.2	27	**1.3**
2014	4	0.2	27	1.3	31	**1.5**
2015	7	0.3	29	1.4	36	**1.7**
2016	4	0.2	25	1.2	29	**1.4**
2017	2	0.1	22	1.1	24	**1.2**
2018	11	0.5	18	0.9	29	**1.4**
2019	9	0.4	21	1.0	30	**1.4**
2020	8	0.4	25	1.2	33	**1.6**
2021	6	0.3	22	1.0	28	**1.3**
2022	4	0.2	20	0.9	24	**1.1**
2023	11	0.5	25	1.2	36	**1.7**
TOTAL	**69**		**258**		**327**	

2.4.1 Who Is Most Impacted by Bicyclist-Involved KA Crashes

Figure 2-10
Bicyclist-Involved Crash Victim Demographics (2013-2023)



Race/Ethnicity

Rates of biking vary among people of different races. People who identified as white on the crash report are the highest share of victims in KA crashes at 44%. This was followed by people identified as Hispanic (making up 27% of KA crash victims), and then "Other" (making up 17% of KA crash victims). The US Census reports that, in 2023, 35.9% of the population of New Mexico identified as white non-Hispanic, and 48.6% of people identified as Hispanic or Latino of any race.

Please note that there is a disparity between how the UCR and the US Census measure race and ethnicity. The UCR reports the race of the victim as identified by the police officer. The US Census reports the race and ethnicity of an individual as indicated by themselves. On the US Census, a person can indicate they are of Hispanic or Latino origin, as well as their race. However, "Hispanic" as a category is mutually exclusive of other racial descriptors on the UCR Form and in the crash data.

Gender

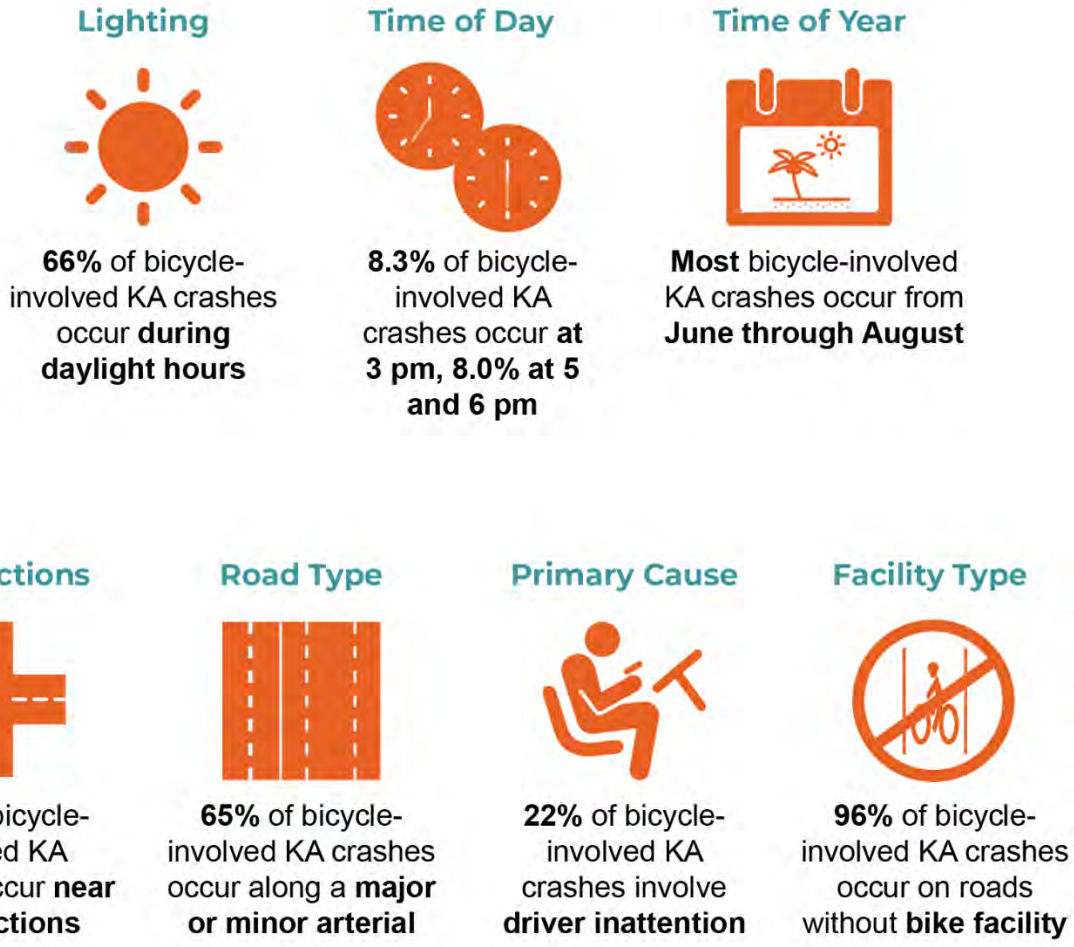
Rates of bicycling also vary between the genders. Men are even more likely to be a victim in a bicyclist-involved KA crash than in a pedestrian-involved KA crash. They make up 82% of bicyclist-involved KA crash victims in New Mexico. While in pedestrian-involved crashes, they make up 72% of the victims.

Age

Until the age of 65, when rates of bicycling would be expected to decline, the older you are in New Mexico, the more likely you are to be the victim in a bicyclist-involved KA crash. Those aged 0 to 14 are 4% of victims. Those aged 50 to 64 are 27% of victims. Those 65+ make up 14.8% of KA crash victims.

2.4.2 Common Bicyclist-Involved KA Crash Factors

Figure 2-11
Bicyclist-Involved Crash Factors (2013-2023)



Temporal Factors

Lighting and Time of Day

Most (66%) bicyclist-involved KA crashes occurred during daylight. Bicyclist-involved KA crashes are more evenly distributed throughout the day compared to pedestrian-involved KA crashes. Bicyclist-involved KA crashes appear to follow the commuter 9-to-5 workweek patterns more than pedestrian-involved KA crashes. Bicyclist-involved KA crashes occur most often at 7 a.m. (6.4%), 3 p.m. (8.3%), 5 p.m. (8.0%), and 6 p.m. (8.0%). The most common days of the week for bicycle-involved KA crashes to occur are Tuesday (19.6%), and Thursday (15.3%).

Bicyclist-involved KA crashes are concentrated in the warm months. The months that see the most bicyclist-involved KA crashes are June through August—the least are December through February.

Roadway Factors

Intersections

As mentioned in Section 2.3.2, the reliability of the intersection related characteristic is of concern. Given the data on-hand, 75% of bicyclist-involved KA crashes occurred near intersections. The intersection of a major arterial and a local road is the intersection type with the highest portion of KA crashes, at 27.7% despite these types of intersections only representing 3.6% of all intersections in the state. The second highest is the intersection of a minor arterial and a local road, with 17.8% of crashes. These types of intersections make up 5% of the intersections in the state.

Along the Roadway (non-intersection crashes)

Sixty-five percent of bicyclist-involved KA crashes at intersections occur on a major or minor arterial. Arterials are only 8% of the center line miles in New Mexico. Roads with speed limits of 40 or 45 MPH represent a disproportionately high percentage of bicyclist-involved KA crashes compared to the share of the state's roadways that have these speed limits. While bike volumes tend to be higher on lower-speed roads, some bicyclists may have little choice but to travel on higher-speed roads to reach their destinations.

Behavioral Factors

Alcohol

Alcohol was not involved in 89.3% of KA crashes. In 4.0% of KA crashes, the driver had imbibed alcohol. In 6.7% of KA crashes, the bicyclist had imbibed alcohol

Drugs

The consumption of drugs was not involved in 92.7% of KA crashes. In 2.8% of crashes, the driver was impaired by drugs. In 4.9% of KA crashes, the bicyclist was impaired by drugs. In 0.3% of crashes, both the driver and bicyclist were impaired by drugs.

Contributing Factor – Top Factor in Crash

The "top factor in crash" field was used on the UCR from 2013-2019. In 2020, the field was discontinued and replaced with the "First Harmful Event" field. As such, aggregating data from 2013-23, the "Top Factor in Crash" field was "not available" or blank on 59% of crash report forms. Of the remaining crashes with a top factor listed, the number one factor in a bicyclist-involved KA crash was "driver inattention," representing 22% of crashes. In 19% of KA crashes (with a top factor listed) alcohol or drugs was determined to be the top contributing factor. In 16%, "failed to yield right-of-way" was the top contributing factor.

Bicycle Facility

The crash report includes a section for pedestrian/bicyclist action to indicate whether a bicyclist was in a bicycle lane, travel lane, at an intersection with a marked/unmarked crosswalk, on the shoulder/roadside, and many other options at the time of the crash. Based on the available data, it is estimated that in 96.3% of bicyclist-involved crashes, the bicyclist was riding on a roadway without a bicycle facility present.

Table 2-4

Crash Analysis (2013-2023)

Crash Analysis	Number of Bicyclist KA Crashes	% of KA Crashes (with Analysis Field Containing Data)
Vehicle Struck Pedalcyclist at an Angle	119	49.4%
Pedalcyclist Struck Vehicle	47	19.5%
Vehicle Struck Pedalcyclist from Behind	50	20.7%
Vehicle Struck Pedalcyclist Head On	14	5.8%
Pedalcyclist Collision - Unknown/All Other	11	4.6%
Total	**241**	**100.0%**

3 High Risk Areas

This section identifies high risk geographic areas, which were analyzed through the distribution of crashes by county and through the development of the HIN. We have assigned a Crash Severity Index score to corridor segments and intersections along the HIN to further identify the areas of highest risk to VRUs. The Crash Severity Index score used the weights shown in Table 3-1 to score each location. These scores are provided in Section 5.1.3 Prioritized Infrastructure Recommendations.

Table 3-1
Crash Severity Index Weights

KABCO rating	Definition	Crash Severity Score Weights
K	Killed	20
A	Incapacitated: Carried from scene	5
B	Visible injury	1
C	Complaint of injury, but not visible	1
O	No apparent injury	0

3.1 High Injury Network

HINs illustrate the segments and intersections of roads where most serious and fatal crashes occur on a roadway network. The results often show that improvements to a small number of roadways have the potential to address many life-altering crashes and can help decision makers prioritize improvements. This approach moves beyond typical crash history and allows for a better understanding of the types of roadways in New Mexico where VRUs are most at risk. Of the vulnerable road user crashes on all public roadways in New Mexico, 83.1% of all injury-causing VRU-involved crashes and 90.4% of fatal vulnerable road user crashes occurred on roads classified as major collectors or higher, or at intersections with these roads, despite accounting for only 20% of centerline miles in the state.

The other 80% of centerline miles in the state that accounted for 16.2% of all injury-causing vulnerable road user-involved crashes and 9.6% of fatal vulnerable road user crashes were included in the initial analysis steps to identify high risk areas. However, since the subset that accounts for 20% of centerline miles captures such a significant amount of the vulnerable road user-related crashes, the next step of the vulnerable road user HIN analysis focused on roads in the state classified as major collectors or higher. Therefore, local roads and minor collectors were not considered for inclusion on the vulnerable road user HIN, even though the vulnerable road user-related crashes that occurred on these roads are included in the historical analysis that is included earlier in this report.

The Vulnerable Road User Safety Assessment HIN makes up 3.7% of all of New Mexico's road centerline miles and 75% of the state's VRU-involved Killed and Severely Injured (KA) crashes.

For the vulnerable road user HIN analysis, the focus was on roads where crashes are most concentrated to identify corridor segments with the most potential for vulnerable road user safety improvements. To identify these corridors, a geographic analysis was conducted on all vulnerable road user -involved crashes rated a K, A, B, or C on the KABCO scale. The KABCO scale, shown in Table 3-1, categorizes a crash by the worst injury sustained by any individual involved in the crash. Because the VRUSA is

designed to prevent injury crashes, property-damage only crashes were not included in the vulnerable road user HIN analysis.

The crash data analyses include data from as far back as 2013, which predates many safety improvements throughout the state, most notably, for example, on Central Avenue in Albuquerque. Therefore, the HIN highlights some segments that may not currently be responsible for the most vulnerable road user injuries. Where the HIN highlights areas that are known to have been improved, examining more recent data post-improvement may help to determine if interventions are helping to improve safety outcomes.

Maps of the HIN at a statewide and Albuquerque area level are included below in Figures 3-1 and 3-2. A zoomable and navigable map is also available online for easier viewing at NMDOT: Planning Division GIS Hub, scrolling down to the Interactive Mapping Applications section, then choosing the “NM Vulnerable Road User” tool from the available list of resources.

Figure 3-1
High Injury Network – Statewide

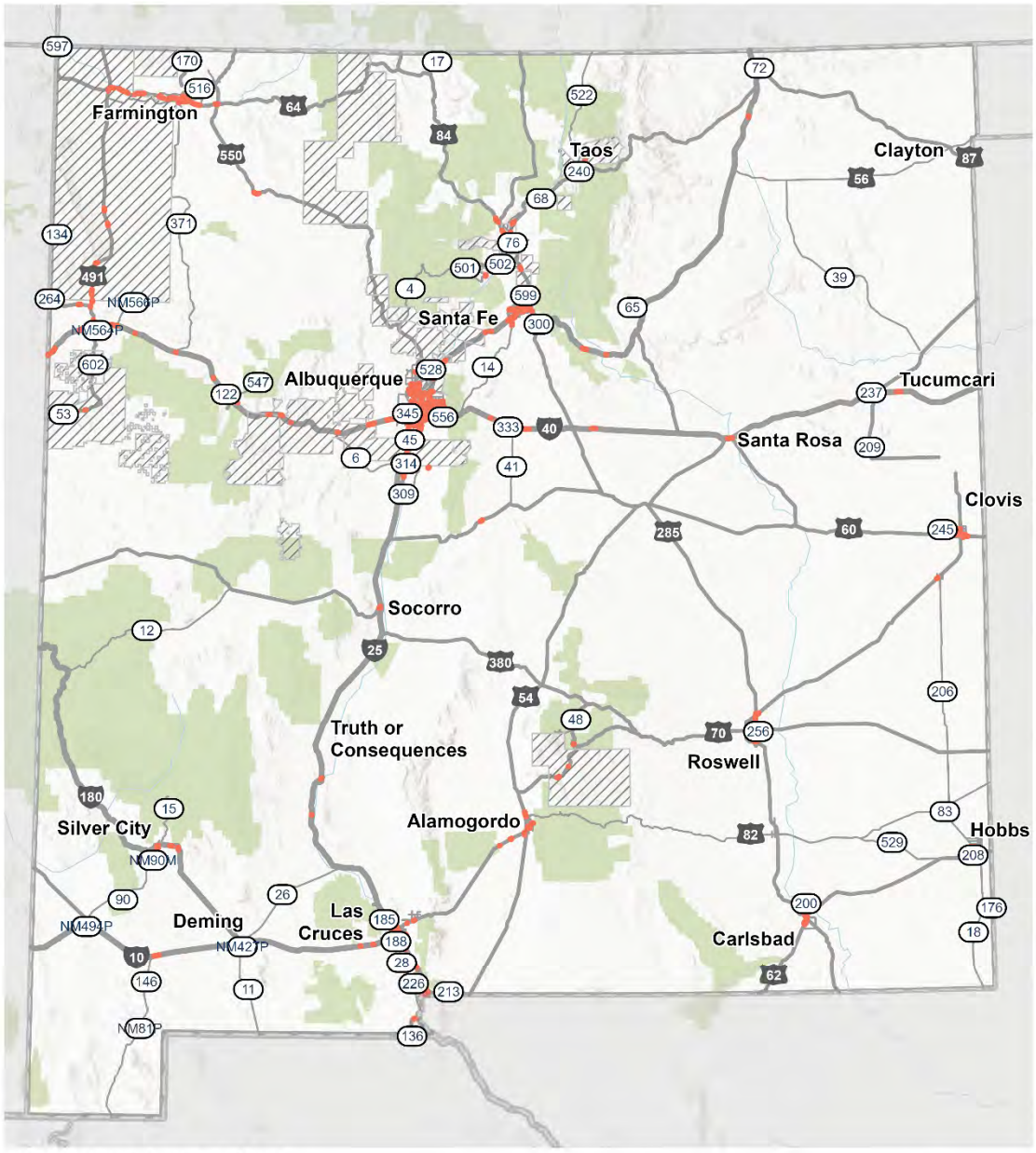
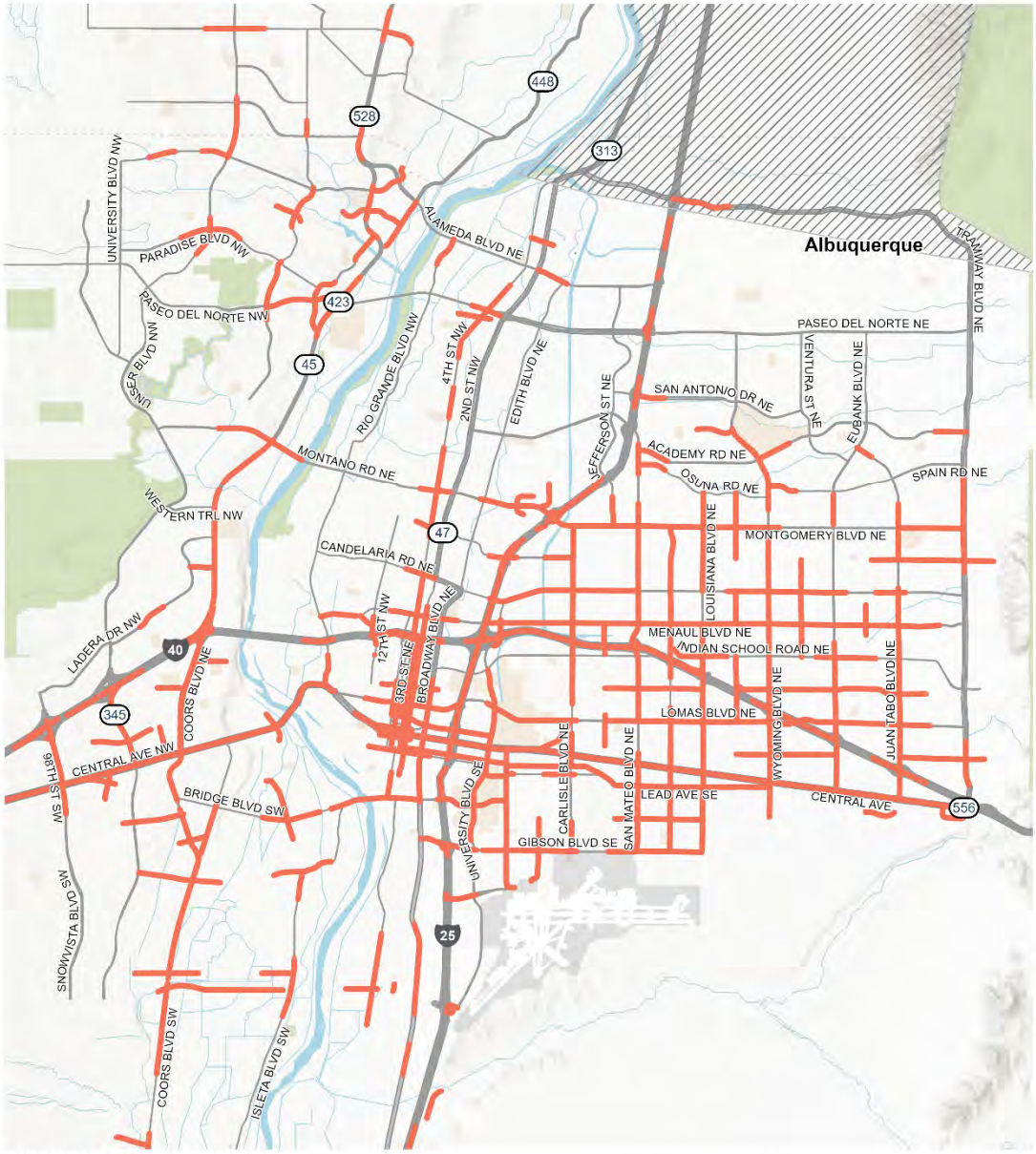


Figure 3-2

High Injury Network – Albuquerque Metro Area



HIGH INJURY NETWORK
ALBUQUERQUE METRO
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

Legend

- Interstate
- US/State Highway
- Other Roads
- High Injury Network
- Tribal Lands
- US Forest Service Lands & Federal Wilderness Areas

alta

NMDOT

3.2 Crash Counts by County

Table 3-2 shows the geographic distribution of KA and KABC crashes by county from 2013 to 2023. The top three results in each column have been highlighted in light orange to more easily demonstrate high risk areas of the state, based on different methods of analysis.

The "over or under representation" columns show the relationship between a county's share of the state's crashes and its share of the state population. Numbers above 1 mean the county contains a higher share of the state's crashes than the county's share of the state's population. Numbers below 1 indicate that the county has a smaller share of the state's crashes than it has population. Take, for example, Chaves County, where 3.1% of the state's population resides and 2.1% of the KA crashes occurred. By dividing 2.1% by 3.1%, we arrive at a representation of 0.7 – indicating there is a smaller percentage of KA crashes occurring in the county compared to its share of the state's residents.

The table has been sorted by the "Percentage of KA Crashes" column.

Table 3-2
Crash Counts by County (2013–2023)

County	KA Crashes	% of KA Crashes	KABC Crashes	% of KABC Crashes	% of State Population	Over or Under Representation for KA Crashes	Over or Under Representation for KABC Crashes	Average Population (2012 2022)
Bernalillo	1,073	48.5%	4,622	52.1%	32.2%	1.5	1.6	676,316
San Juan	174	7.9%	443	5.0%	6.8%	1.2	0.7	143,313
McKinley	159	7.2%	326	3.7%	3.4%	2.1	1.1	72,174
Doña Ana	152	6.9%	781	8.8%	10.3%	0.7	0.9	217,096
Santa Fe	127	5.7%	692	7.8%	7.2%	0.8	1.1	150,413
Lea	50	2.3%	193	2.2%	3.4%	0.7	0.6	70,610
Chaves	46	2.1%	219	2.5%	3.1%	0.7	0.8	65,181
Sandoval	41	1.9%	225	2.5%	1.3%	1.4	1.9	27,849
Valencia	40	1.8%	147	1.7%	3.6%	0.5	0.5	76,454
Eddy	34	1.5%	187	2.1%	2.8%	0.6	0.8	58,096
Otero	31	1.4%	135	1.5%	3.2%	0.4	0.5	66,706

County	KA Crashes	% of KA Crashes	KABC Crashes	% of KABC Crashes	% of State Population	Over or Under Representation for KA Crashes	Over or Under Representation for KABC Crashes	Average Population (2012 2022)
Taos	27	1.2%	82	0.9%	1.6%	0.8	0.6	33,304
Rio Arriba	26	1.2%	54	0.6%	1.9%	0.6	0.3	39,669
Grant	24	1.1%	80	0.9%	1.3%	0.8	0.7	28,124
Curry	23	1.0%	105	1.2%	2.4%	0.4	0.5	49,565
Torrance	21	0.9%	35	0.4%	0.7%	1.3	0.5	15,552
Luna	17	0.8%	75	0.8%	1.2%	0.7	0.7	24,640
Cibola	17	0.8%	31	0.3%	1.3%	0.6	0.3	27,067
Sierra	12	0.5%	29	0.3%	0.5%	1.0	0.6	11,300
Roosevelt	12	0.5%	34	0.4%	0.9%	0.6	0.4	19,230
Socorro	10	0.5%	39	0.4%	0.8%	0.6	0.5	16,864
San Miguel	10	0.5%	53	0.6%	6.0%	0.1	0.1	125,776
Colfax	9	0.4%	26	0.3%	0.6%	0.7	0.5	12,438
Guadalupe	7	0.3%	12	0.1%	0.2%	1.5	0.6	4,410
Hidalgo	6	0.3%	9	0.1%	0.2%	1.3	0.5	4,336
Lincoln	5	0.2%	25	0.3%	0.9%	0.2	0.3	19,838
Los Alamos	5	0.2%	38	0.4%	0.9%	0.3	0.5	18,641
Quay	2	0.1%	9	0.1%	0.4%	0.2	0.3	8,496
Union	1	0.0%	4	0.0%	0.2%	0.2	0.2	4,164
Harding	1	0.0%	1	0.0%	0.0%	1.4	0.4	670
Catron	1	0.0%	1	0.0%	0.2%	0.3	0.1	3,596
Mora	1	0.0%	1	0.0%	0.2%	0.2	0.1	4,476
De Baca	0	0.0%	2	0.0%	0.1%	0.0	0.3	1,804
Unknown	47	2.1%	153	1.7%	0.0%	-	-	-
TOTAL	**2,211**		**8868**					**2,098,167**

4 Stakeholder Input

For a complete synopsis of stakeholder engagement, refer to Appendix D.

4.1 Virtual Stakeholder Meetings

NMDOT and the consultant team conducted three stakeholder meetings in the summer of 2023. The meetings focused on areas of the state that contained the highest percentage of the state's KA crashes from 2012 to 2022. The three stakeholder meeting focus areas were the Albuquerque Metro Area, McKinley and San Juan Counties, and Doña Ana County, which also represent a good geographical spread throughout the state.

The **Albuquerque Metro Area**, which makes up a majority of the population in Bernalillo County, had the highest percentage of the state's VRU-involved KA crashes. Most of those KA crashes fall within the Albuquerque Metro Area. Albuquerque is the most densely populated area of the state, which causes it to have unique safety issues from the rest of the state.

McKinley and San Juan Counties, two bordering counties in the northwestern part of the state, had the second and third highest percentages of the states VRU-Involved KA crashes. The counties contain two mid-sized cities (Gallup and Farmington), Tribal Lands, and encompass rural highways identified in the HIN. Also, these counties are in the Northwest corner of the state, providing input and perspective from this region.

Doña Ana County in southern New Mexico had the fourth highest percentage of VRU-Involved KA crashes. The county contains Las Cruces as well as many small towns, covering a diversity of stakeholders and safety issues.

All meetings were held virtual and lasted an hour and a half. During each meeting an introductory presentation was first given to frame the discussion. Attendees also participated in a Mentimeter poll to gather feedback. A guided discussion using a virtual whiteboard to record thoughts, experiences, and feedback

Note: the VRUSA update in 2025/2026 did not include additional stakeholder input. The 2026 SHSP update includes extensive stakeholder engagement and vulnerable road users are an emphasis area resulting in VRU focused stakeholder input. Through the stakeholder engagement, multiple Interagency Working Group meetings were hosted where the focus was on vulnerable road users. In these meetings, Interagency Working Group members were tasked with prioritizing strategies and countermeasures that aimed to address infrastructure and behavioral issues related to vulnerable road users. Their input was taken into account when considering which implementation improvements were to appear in the 2026 NMDOT SHSP.

4.1.1 Meeting Discussion Themes

Stakeholders were asked guiding questions to focus discussion on topics especially important to the VRUSA. Participant responses were documented on a digital "Jamboard." Jamboard discussion questions and the resulting response themes, are shown in Tables 4-1 through 4-3.

Meetings also involved asking participants questions through the live survey application "Mentimeter." Mentimeter questions focused on identifying priority equity indicators and locations in need of safety improvements. Mentimeter questions and participant responses can be viewed in Appendix D.

Question: What are your top priorities to improve safety for vulnerable road users?

Table 4-1
"Top Priorities" Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	TOTAL
Pedestrian Infrastructure Improvements	9	9	7	**25**
Bike infrastructure improvements	5	2	4	**11**
Education	3	2	5	**10**
Enforcement	0	2	7	**9**
Speed reduction	2	2	3	**7**
Separation/barriers between vehicles and VRUs	1	4	1	**6**
Planning	0	0	5	**5**
Universal design/Americans with Disabilities Act (ADA)	2	2	1	**5**
Road diets	2	3	0	**5**
Road design	1	2	1	**4**
Signage	1	2	0	**3**
Maintenance	0	1	2	**3**
Shade/weather protection	3	0	0	**3**
Data	1	0	1	**2**
Policy	0	0	2	**2**
Streetlights	1	0	1	**2**

Participants indicated that their top priority for increasing vulnerable road user safety is improved pedestrian infrastructure. Conversations focused on the need to integrate and prioritize VRU-centered design and Universal Design standards in all transportation projects. Participants identified multiple goals associated with pedestrian infrastructure improvements, such as increased separation between pedestrians and vehicles, more frequent crossing opportunities, and improved intersection signalization.

Many comment themes are not mutually exclusive so they may consider multiple areas for concern. One example of this would be “road design”, which could include improvements for both pedestrian and bicyclist facilities. This thought process applies for Tables 4-1, 4-2, and 4-3.

Question: What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

Table 4-2
“Main Barriers” Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	TOTAL
NMDOT policies/roadway design	4	2	1	**7**
Car dependency/car centrism	2	0	5	**7**
Ineffective leadership/collaboration	1	4	0	**5**
Lack of public interest/public attitude	0	2	2	**4**
Road design	1	1	2	**4**
Data tracking	1	0	2	**3**
Staffing/capacity	1	2	0	**3**
Funding	1	1	1	**3**
Priorities	0	2	0	**2**
Education	1	0	1	**2**
Infrastructure	1	0	1	**2**

Participants indicated that NMDOT policy and roadway design is the top barrier to implementing strategies, policies, and projects furthering vulnerable road user safety. There were discussions in each group regarding the inflexibility of NMDOT policy for implementing pedestrian safety improvements along NMDOT roadways. Concerns included the prioritization of level of service over safety, resistance to change, and fear of lawsuits. The next most identified barrier was car-dependency and car-centrism. Participants discussed how this influences public attitudes, driver behavior, policy, and infrastructure. Ineffective leadership and coordination at all levels of government were also discussed as barriers to effective project prioritization and implementation.

Question: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?

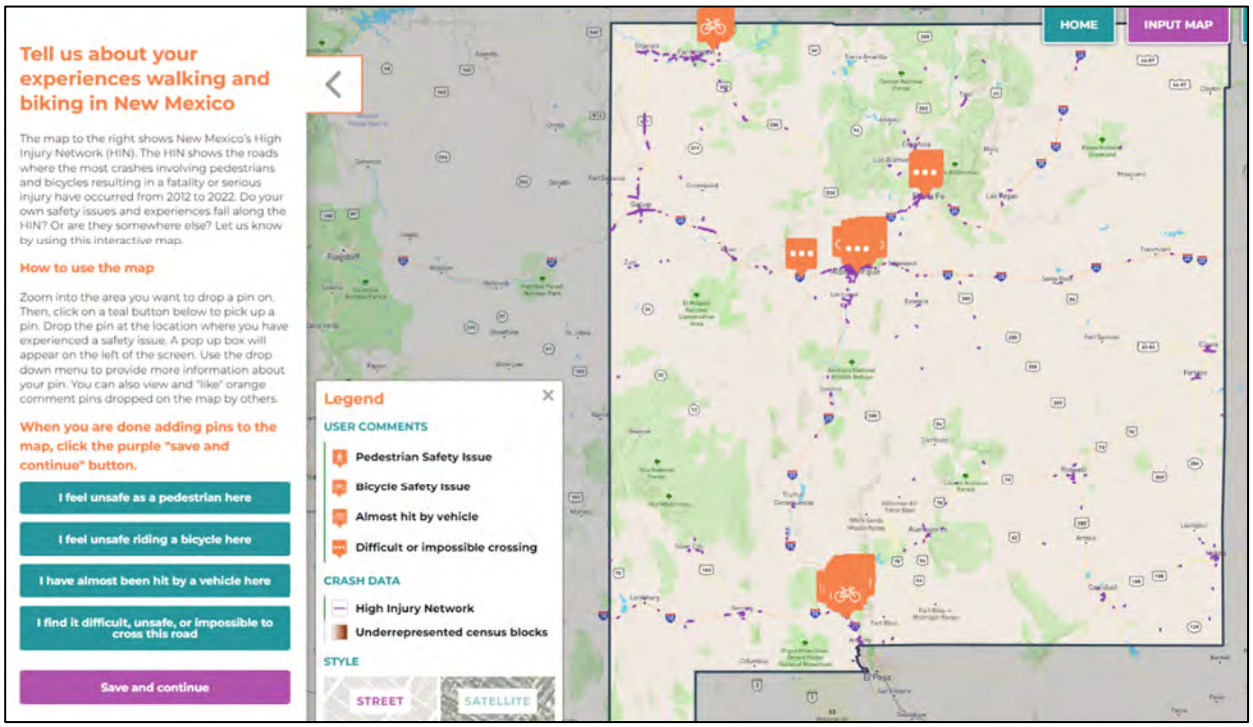
Table 4-3
"Perceived Contributing Factors" Response Themes

Comment Themes	ABQ	NW Corner	Doña Ana	
Driver inattention/distracted driving	3	1	6	
Road design	3	3	2	
VRU infrastructure	4	0	3	
Car centrism/disregard for pedestrian safety	0	0	7	
Speed	2	2	2	
Large vehicles	2	1	2	
Time of day	1	2	2	
Impairment/intoxication	5	0	0	
Equity	3	0	0	
Pedestrian behavior	2	0	0	
Weather	0	0	2	
Planning	0	0	1	
Lack of knowledge about road rules	1	0	0	

The leading response to the above question in Table 4-3 was driver inattention related to cell phone use or other distractions. The next most frequently discussed contributing factors were road design and the quality of vulnerable road user infrastructure. Participants noted that road design currently prioritizes vehicle travel, with wide, high-speed corridors. In all parts of the state, participants described long stretches of road without pedestrian facilities such as crosswalks, pedestrian refuges, or other safety countermeasures, the lack of which contribute to unprotected midblock crossings. Additionally, many participants expressed that pedestrian infrastructure is not equitably distributed throughout their communities, and that there is a relationship between lower income neighborhoods and inadequate infrastructure. Excessive vehicle speed and car-centric attitudes and designs reflective of a disregard for pedestrian safety were the other perceived top contributing factors discussed in the meetings. The increased prevalence of large vehicles was also mentioned as a major contributing factor.

4.2 Web Map and Survey

Figure 4-1
Interactive Web Map and Survey Landing Page



An interactive web map (Figure 4-1) allowed respondents to add location pins and comments that address safety concerns as part of the NMDOT VRUSA. The web map went live on August 1, 2023 and was hosted at https://newmexicodotshsp.com/. On September 14, 2023, all posted comments and survey responses were collected for inclusion in this VRUSA and the survey was closed, along with comments no longer being collected.

The locations of dropped pins correspond to the locations of stakeholder meetings, with a high number of responses from Bernalillo and Doña Ana Counties. We publicized the web map during stakeholder meetings to solicit feedback.

A total of 24 participants contributed to the web map, dropping 115 pins.

The most-commonly dropped pins on the web map are as follows:

- Unsafe driver behavior and/or speeding occurs here: 24% of pins and likes
  - This was described as both a pedestrian and a bicyclist safety issue.
- There isn't a bicycle facility (e.g., bike lane or shared use path) on this road: 18%
- "Other" bicycle safety issue: 14.4%
- The existing bicycle facility doesn't feel safe to use: 11.5%

5 Recommended Countermeasures and Strategies

This section contains two categories of recommendations: Prioritized Infrastructure Recommendations, and Program, Policy, and Procedure Recommendations. The Prioritized Infrastructure Recommendations have been assigned a Typology to describe location contexts and provide appropriate safety countermeasure recommendations. To provide sufficient context, the Typology categorization structure appears before the Prioritized Infrastructure Recommendations in this Recommendations section. The infrastructure recommendations and their corresponding typologies can be viewed in Figures 5-4 and 5-5, and in Tables 5-1 through 5-8.

5.1 Typologies and Recommended Countermeasure Strategies

Due to the large number of corridor segments and intersections identified and prioritized along the HIN, a typology structure was used to recommend relevant safety countermeasures and project opportunities.

Typologies categorize the roadways and intersections based on various characteristics and design features. They help planners, engineers, and transportation professionals understand the purpose, function, and design requirements of different types of roads. Roadway typology takes into account factors such as the surrounding development context, road capacity, speed limits, the volume and types of traffic they are intended to accommodate, and their physical attributes.

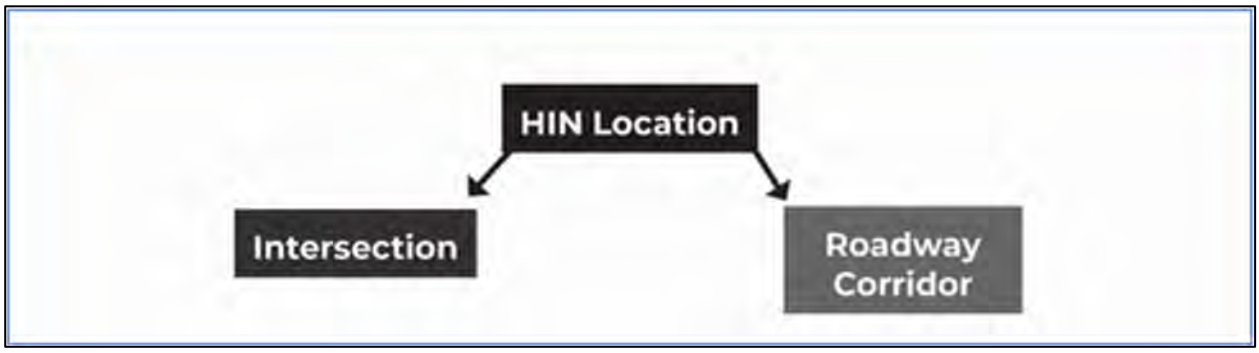
Typologies for priority locations were created and assigned using the decision flow chart that appears in Figures 5-1 through 5-3. The flowchart reflects the wide range of intersection and corridor contexts that exist across New Mexico.

For each typology, this section provides an initial list of safety countermeasures that reduce crashes caused by the safety issues identified at these types of locations in the historical crash analysis. A safety countermeasure refers to a specific action or physical improvement implemented to reduce the risk of crashes, injuries, and fatalities on roadways. These countermeasures are designed to enhance the safety of transportation systems for all road users, including motorists, pedestrians, cyclists, and public transit passengers. However, some countermeasures may target a specific crash type, but have residual, positive impacts on other crash types of modes of safety. One example of this is shown in Table 5-5 where a widened shoulder is presented. Widening the should would have a positive impact on reducing run off road crashes, but it also acts as an unofficial area for pedestrian to walk if there were no sidewalk present. Instead of pedestrians walking in the travel lane or on the edgeline, the addition paved shoulder width helps provide separation of vehicles and active transportation users. Safety countermeasures are a crucial component of traffic safety management and aim to address known hazards and improve overall safety performance.

By referencing the typologies and corresponding countermeasures assigned to the Priority Project Locations, planners and engineers can develop a short list of potential appropriate safety interventions for

the identified priority locations. Agency staff should refer to their organization's design policies and directives on the implementation of specific countermeasures.

Figure 5-1
Typology Decision Matrix

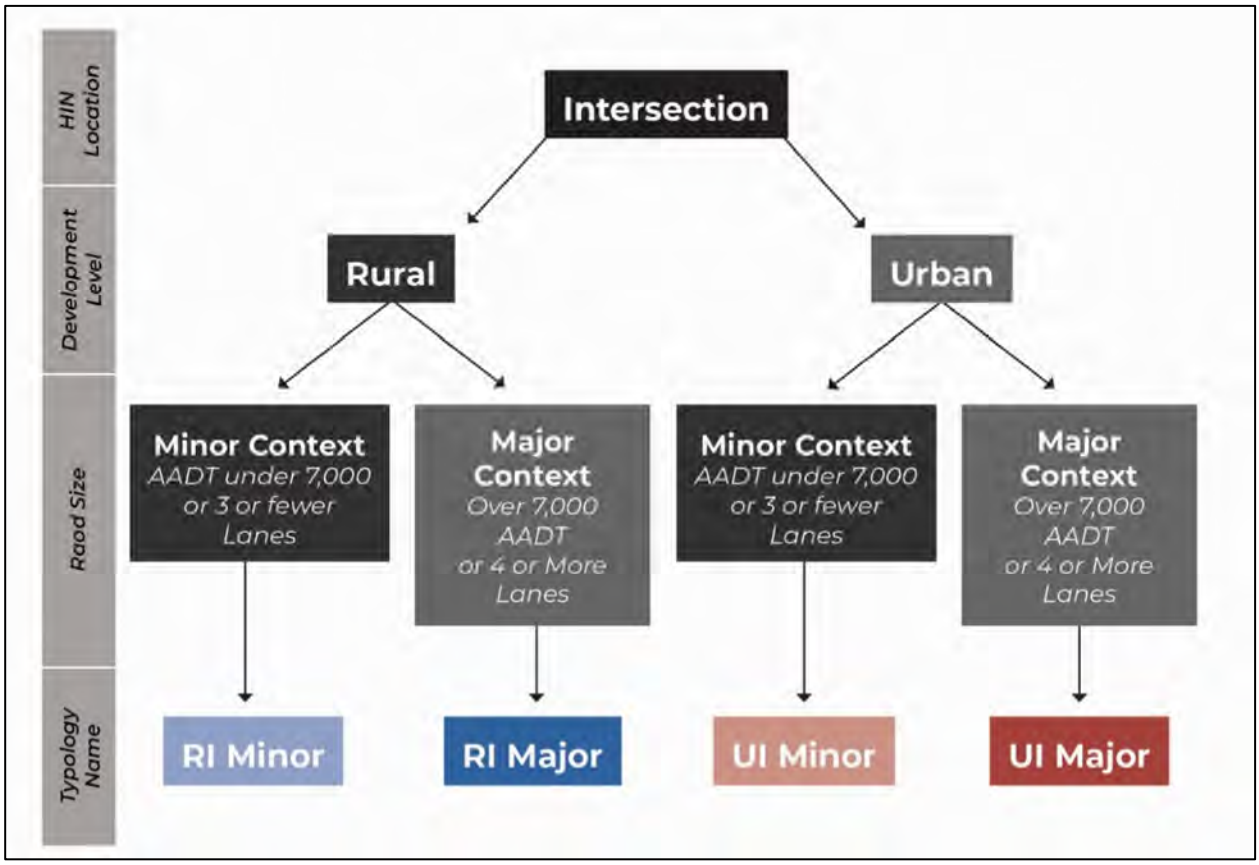


5.1.1 Intersection Typologies and Countermeasure Strategies

Intersection Typologies

We have developed intersection typologies (Figure 5-2) to categorize the various intersection contexts that appear in New Mexico. The typologies sort the contexts into groups using the key variables and decision-making factors that an engineer would use to determine the suitability of countermeasures for a given location. The provided countermeasures that are recommended for application within each typology have been selected using engineering judgment and best practices. Many of the countermeasures fall under the FHWA's list of Proven Safety Countermeasures or are in the FHWA's Guide to for Improving Pedestrian Safety at Uncontrolled Crossings.

Figure 5-2
Intersection Typology Decision Matrix



Intersection Countermeasure Strategies

In the intersection countermeasures below (Tables 5-1 through 5-4), the countermeasure is listed in the left column in bold text. The second column contains the Crash Modification Factor (CMF) that was obtained from https://cmfclearinghouse.fhwa.dot.gov/. A CMF is used to indicate the expected reduction in crashes once a countermeasure or improvement has been implemented at a location. For example, if an intersection experiences 5 crashes per year over a 5-year sample size and a safety improvement is implemented which carries a CMF of 60%, the expected number of crashes in future years is expected to average to 3 crashes per year. Take note of the asterisks and other addendum symbols that denote additional decision-making criteria for certain listed countermeasures. Some countermeasures, for example, are only suitable on roadways with a posted speed limit below 35 MPH.

Table 5-1
Countermeasures for RI Minor Typology

Typology: RI Minor			
Rural intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	CMF	Why It Works	Why We Chose It
Convert intersection to all-way stop control	Reduction of 77%, all fatal and injury crashes (CMF #3128)	Reduces speed approaching the intersection, lowering impact speed of a crash and thus severity. Proven to be effective on high-speed roads as well as on low-speed roads.	Pedestrian safety at rural intersections is not as robustly studied as at urban intersections. However, reducing the speed of vehicles approaching the intersection will make a crossing safer for all users.
Convert intersection to roundabout (single lane)	Reduction of 79%, fatal and injury crashes in rural areas (CMF #10435)	Low entry speed. Fewer conflict points. Safer pedestrian crossing.	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes.
Add traffic signal if warranted	Reduction of 44%, all crashes in rural area (CMF #325)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
High visibility crosswalks	Reduction of 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
Install advance yield signage and pavement markings in advance of crosswalk	Reduction of 25%, pedestrian crashes (CMF #9017)	Makes crosswalks more conspicuous and puts distance between drivers and crosswalk, increasing safety.	Proven safety countermeasure.
Install Rectangular Rapid Flashing Beacon (RRFB) across uncontrolled leg*	Reduction of 69%, pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure.
Intersection lighting	Reduction of 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians and bicyclists more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.

Countermeasures with a should only be applied when the speed limits are 35 MPH or lower.*

Table 5-2
Countermeasures for RI Major Typology

Typology: RI Major			
Rural intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Add traffic signal if warranted	Reduction of 44%, all crashes in rural area (CMF #325)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
Convert intersection to roundabout (single lane)	Reduction of 79%, fatal and injury crashes in rural areas (CMF #10435)	Low entry speed. Fewer conflict points. Safer pedestrian crossing (can be enhanced with an RRFB).	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes.
Convert intersection to roundabout (multi-lane)	Reduction of 71%, fatal and injury crashes (CMF #4927)	Low entry speed. Fewer conflict points. Provides pedestrian and bike crossing (can be enhanced with a PHB signal).	Proven safety countermeasure. Although roundabouts have been primarily studied for vehicular crashes, the speed reduction is safer for users of all modes. In addition, this treatment can be used as a “gateway” treatment near a town.
Install Pedestrian Hybrid Beacon (PHB) at uncontrolled crossing**	Reduction of 45%, pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
Undercrossing or overcrossing	Reduction of up to 90%, fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume rural highways or across freeways.

Typology: RI Major			
Rural intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Intersection lighting	Reduction of 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.

*Countermeasures with a** should only be applied when the speed limits are 50 MPH or lower.*

Table 5-3
Countermeasures for UI Minor Typology

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Intersection bike crossing markings	No CMF	Delineates path of bikes through an intersection.	Provides continuity of bike facility through an intersection.
Raised crosswalk*	Reduction of 46%, pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country for many years.
Intersection daylighting (including curb extensions) on roads with on-street parking	Exact CMF for improving intersection sight distance is a formula and may vary per intersection.	Reduces crossing distance and increases visibility of pedestrians. Removal of obstructions, such as parked cars, from the immediate vicinity of the intersection increases sight distance and safety for users of all modes.	Case studies from numerous cities, such as Hoboken, NJ, have proven that intersection daylighting is an effective treatment. Increasing sight distance at intersections improves safety for all modes.

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Protected intersections	CMF is not yet determined; NCHRP 15-63 indicates mixed results.	Physical separation of cyclists and pedestrians on approach to intersection. Increases visibility of pedestrians and cyclists by providing a setback from motor vehicles, putting them in line of sight of drivers. Slows down motor vehicles and reduces conflicts.	A bike network can fail if intersections are not adequately safe or comfortable. Protected intersections are key to having a safe, protected bike network.
Intersection lighting	Reduction of 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.
Median refuge islands	Reduction of 32%, pedestrian crashes (CMF #8799)	Provides safe crossing for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety, effective on both signalized and unsignalized crossings.
RRFB	Reduction of 69%, pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
Convert two-way stop intersection to mini-roundabout*	Reduction of 61%, fatal and injury crashes (CMF #11241)	Slows drivers entering intersection on major street. Reduces severity of crashes due to lower speeds	Effective to reduce crashes at low volume intersections with heavy left turn movements.
Convert two-way stop intersection to all-way stop control.	Reduction of 42%, all fatal and injury crashes (CMF #10520)	Reduces speed approaching the intersection, lowering impact speed of a crash and thus severity. This countermeasure is proven to be effective on high-speed roads as well as on low-speed roads.	Reducing speed of vehicles approaching the intersection will make a crossing safer for all users. It is a low-cost, high effectiveness treatment for low volume urban intersections.

Typology: UI Minor			
Urban intersection with the major street having AADT under 7,000 or 3 or fewer lanes.			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Add traffic signal if warranted	Reduction of 14%, all fatal and injury crashes (CMF #316)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
High visibility crosswalks	Reduction of 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
Leading Pedestrian Interval (LPI)* **	Reduction of 19%, pedestrian crashes (CMF #9903)	By having pedestrians begin crossing before cars get a green light, pedestrians are more visible to cars.	Proven safety countermeasure. Operational countermeasure that can be implemented quickly and improve safety.
Increase signal phase length to give more pedestrian crossing time* **	Reduction of 51%, pedestrian crashes (CMF #5252)	Extending crossing time makes crossing more comfortable for older, younger, and disabled pedestrians.	Operational countermeasure that can be implemented quickly.
Exclusive bike or pedestrian signal phase* **	Reduction of 35%, pedestrian crashes (CMF #5244)	Provides temporal separation from motor vehicle traffic, eliminating conflicts with vehicles.	Effective at signalized intersections with significant pedestrian demand.

Countermeasures with a should only be applied when the speed limits are 35 MPH or lower.*

Table 5-4

Countermeasures for UI Major Typology

Typology: UI Major			
Urban intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
High visibility crosswalks	Reduction of 40%, pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.

Typology: UI Major			
Urban intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Intersection daylighting (including curb extensions) on roads with on-street parking	Exact CMF for improving intersection sight distance is a formula and may vary per intersection.	Reduces crossing distance and increases visibility of pedestrians. Removal of obstructions, such as parked cars, from the immediate vicinity of the intersection increases sight distance and safety for users of all modes.	Case studies from numerous cities, such as Hoboken, NJ, have proven that intersection daylighting is an effective treatment. Increasing sight distance at intersections improves safety for all modes.
Median refuge islands	Reduction of 32%, pedestrian crashes (CMF #8799)	Provides safe crossing for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety, effective on both signalized and unsignalized crossings.
Install PHB	Reduction of 45%, pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
LPI* **	Reduction of 19%, pedestrian crashes (CMF #9903)	By having pedestrians begin crossing before cars get a green light, pedestrians are more visible to cars.	Proven safety countermeasure. Operational countermeasure that can be implemented quickly and improve safety.
Increase signal phase length to give more pedestrian crossing time* **	Reduction of 51%, pedestrian crashes (CMF #5252)	Extending crossing time makes crossing more comfortable for older, younger, and disabled pedestrians.	Operational countermeasure that can be implemented quickly.
Protected intersection	CMF is not yet determined; NCHRP 15-63 indicates mixed results.	Physical separation of cyclists and pedestrians on approach to intersection. Increases visibility of pedestrians and cyclists by providing a setback from motor vehicles, putting them in line of sight of drivers. Slows down motor vehicles and reduces conflicts.	A bike network can fail if intersections are not adequately safe or comfortable. Protected intersections are key to having a safe, protected bike network.

Typology: UI Major			
Urban intersection with the major street having AADT of 7,000 or higher or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Exclusive bike or pedestrian signal phase* **	Reduction of 35%, pedestrian crashes (CMF #5244)	Provides temporal separation from motor vehicle traffic, eliminating conflicts with vehicles.	Effective at signalized intersections with significant pedestrian demand.
Intersection bike crossing markings	No CMF	Delineates path of bikes through an intersection	Provides continuity of bike facility through an intersection.
Intersection lighting	Reduction of 42%, pedestrian crashes at night (CMF #436)	Makes pedestrians more conspicuous, especially at night.	Proven safety countermeasure. Can be effective at isolated rural intersections, which are plentiful across NM.
Add traffic signal if warranted	Reduction of 14%, all fatal and injury crashes (CMF #316)	Signalizes intersection, making it safer for users of all modes to cross or turn left onto major street.	Standard countermeasure.
Convert signalized intersection to roundabout* **	Reduction of 71%, fatal and injury crashes (CMF #4195)	Reduces speeds of drivers approaching intersections. Fewer conflict points. Safer pedestrian crossing.	Proven safety countermeasure that can be designed to safely accommodate bikes and pedestrians.

*Countermeasures with *** only apply to signalized intersections.*

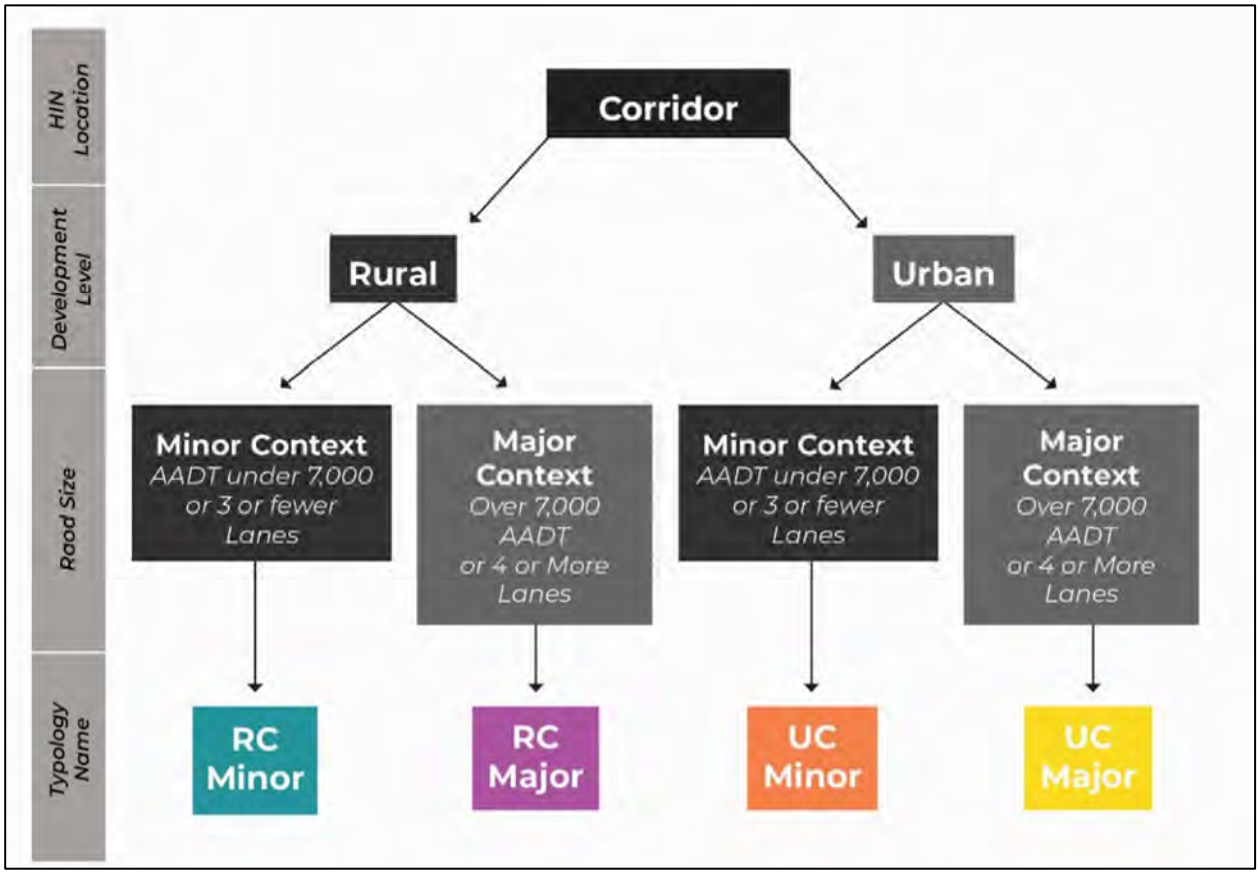
5.1.2 Corridor Typologies and Countermeasure Strategies

Corridor Typologies

Corridors have been divided into a similar structure of typologies as intersections (Figure 5-3). The primary driver is an urban or rural context, followed by the scale of the roadway size. This can be determined by either AADT or the number of lanes. This assessment assigned HIN segment typologies using the available AADT data, not number of lanes.

Figure 5-3

Corridor Typology Decision Matrix



Corridor Countermeasure Strategies

In the corridor countermeasure below (Tables 5-5 through 5-8), the countermeasure is listed in bold. Additional related countermeasures that relate to that countermeasure are listed immediately to the right in italics. The second column contains the CMF. Take note of the asterisks and other addendum symbols that denote additional decision-making criteria for certain listed countermeasures. Some countermeasures for example, are only suitable on roadways with a posted speed limit below 35 MPH.

Table 5-5

Countermeasures for RC Minor Typology

Typology: RC Minor				
Rural roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Wider edge lines (4 to 6 inch)		CMF 0.63, non-intersection fatal and injury crashes (CMF #4737)	Increases driver perception of edge of travel lane, thus reducing run-off-road crashes.	Proven safety countermeasure.
Widen shoulder (paved) from 0 feet to 4 feet		CMF = 0.86 for fixed object, head on, run off road, sideswipe crashes (CMF #6327)	Paved shoulder gives more room for recovery.	The paved shoulder provides drivers more recovery area, while also acting as an unofficial walking area, reducing the likelihood of pedestrians walking in the travel lane or on the edgeline.
Longitudinal rumble strips		CMF = 0.85 for run-off-road crashes (CMF #10406)	Alerts drivers of lane departure, causing correction. Reduces run-off-road crashes.	Proven safety countermeasure.
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.

Typology: RC Minor				
Rural roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	RRFB	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.

Table 5-6
Countermeasures for RC Major Typology

Typology: RC Major			
Rural roadway corridor with either an AADT of 7,000 or greater or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Wider edge lines (4 to 6 inch)	CMF = 0.63 for non-intersection fatal and injury crashes (CMF #4737)	Increases driver perception of edge of travel lane, thus reducing run-off-road crashes.	Proven safety countermeasure.
Widen shoulder (paved) from 0 feet to 8 feet	CMF = 0.92 for fixed object, head on, run off road, sideswipe crashes (CMF #6371)	Paved shoulder gives more room for vehicles to recover.	Widening a shoulder, while not a pedestrian facility, has a tangential benefit of increasing comfort for cyclists or pedestrians who choose to use the shoulder.
Shoulder rumble strips	CMF = 0.65 for run-off-road crashes (CMF #6651)	Alerts drivers of lane departure, causing correction. Reduces run-off-road crashes.	Proven safety countermeasure.

Typology: RC Major				
Rural roadway corridor with either an AADT of 7,000 or greater or 4 or more lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	*RRFB^*	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
	Undercrossing or overcrossing	CMF up to 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.

Countermeasures with a ^ should not be considered on multilane roads with AADT greater than 15,000 and speed limits 40 MPH or higher.

Table 5-7

Countermeasures for UC Minor Typology

Typology: UC Minor				
Urban roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	High visibility crosswalks	CMF = 0.60 for pedestrian crashes (CMF #4123)	Enhances crosswalk visibility, increasing yielding.	Proven safety countermeasure.
	Install marked crosswalk with median refuge island	CMF = 0.54 for pedestrian crashes (CMF #175)	Provides a safe location to cross midblock for pedestrians.	Proven safety countermeasure.
	*Raised crosswalk**	CMF = 0.54 for pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country with proven results.
	RRFB	CMF = 0.31 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.

Typology: UC Minor				
Urban roadway corridor with an AADT under 7,000 or 3 or fewer lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
	Undercrossing or overcrossing	CMF as low as 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.
Road diet		CMF ranges between 0.53 and 0.82 (CMF #5554 & 2841)	Reallocates cross section of roadway from cars to add facilities for bikes and pedestrians. Shown to reduce speeds.	Proven safety countermeasure and a standard treatment for roads with 4+ lanes to enhance safety for users of all modes.
Add sidepath or sidewalk		Sidepath - CMF = 0.75 for bicycle crashes (CMF #9250) Sidewalk - CMF = 0.60 for pedestrian crashes (CMF #11246)	Provides safe space to walk or bike, separated from traffic or shoulders.	Proven safety countermeasure.
Add bike lanes		CMF as low as 0.51 for all crashes on 4 lane undivided roads CMF as low as 0.70 on 2-lane collectors (from FHWA)	Provides safe space to bike separated from traffic, either by widening or reallocating the cross section.	Proven safety countermeasure.
Enhance existing bike lane		CMF between 0.47 and 0.82 18% and 53% (CMF #11293 – 11303) Varies based on type of upgrade	Provides even safer bike lane. The more separation from traffic, the more safety provided.	A more separated bike network is key to reducing bike crashes, as well as providing a network comfortable to users of all ages and abilities. Potential for additional safety benefit for all modes.

*Countermeasures with a * should only be considered when the speed limits are 35 MPH or lower.*

Table 5-8
Countermeasures for UC Major Typology

Typology: UC Major				
Urban roadway corridor with an AADT of 7,000 or greater or 4 or more lanes				
Countermeasure		**CMF**	**Why It Works**	**Why We Chose It**
Provide or enhance midblock crossings	*Median refuge islands*	CMF = 0.68 for pedestrian crashes (CMF #8799)	Provides safe midblock crossings for pedestrians by allowing them to focus on traffic in one direction at a time.	Proven safety countermeasure to enhance pedestrian safety at midblock crossings.
	Install marked crosswalk with median refuge island	CMF = 0.54 for pedestrian crashes (CMF #175)	Provides a safe location to cross midblock for pedestrians.	Proven safety countermeasure.
	Raised crosswalk[*]	CMF = 0.54 for pedestrian crashes (CMF #136)	Vertical deflection is an effective speed reduction technique. It also puts pedestrians into drivers' view by elevating them. Subtly communicates pedestrian priority by having road elevate to the height of sidewalk, instead of other way around.	Effective traffic calming measure, as well as increasing pedestrian comfort and safety. Improves yielding and has been used by jurisdictions all over the country for many years.
	RRFB[^]	CMF = 0.71 for pedestrian crashes (CMF #11158)	Makes crosswalks more conspicuous to drivers, increasing yielding.	RRFBs are a proven safety countermeasure to enhance visibility of a crosswalk.
	Install PHB	CMF = 0.55 for pedestrian crashes (CMF #10607)	Signalizes the pedestrian crossing and provides enhances visibility. Provides safe crossing for people with vision impairments.	Proven safety countermeasure that works along busy roads and can work along rural divided facilities, especially near edges of towns.
	Undercrossing or overcrossing	CMF as low as 0.10 for fatal and injury pedestrian crashes (FHWA SA-014)	Fully separated pedestrian/bike movements put pedestrians out of conflict point with cars, particularly across busy roads or freeways.	Can be used as a treatment across high-speed, high-volume roads or across freeways.

Typology: UC Major			
Urban roadway corridor with an AADT of 7,000 or greater or 4 or more lanes			
Countermeasure	**CMF**	**Why It Works**	**Why We Chose It**
Road diet#	CMF ranges between 0.53 and 0.82 (CMF #5554 & 2841)	Reallocates cross section of roadway from cars to add facilities for bikes and pedestrians. Shown to reduce speeds.	Proven safety countermeasure and a standard treatment for roads with 4+ lanes to enhance safety for users of all modes.
Corridor access management	CMF ranges between 0.69 and 0.75 (CMF #179 & 178)	Reduces density of driveway curb-cuts. Fewer access points mean less exposure to traffic for pedestrians and cyclists.	Proven safety countermeasure and increases safety along arterials for users of all modes.
Add buffered or separated bike lanes	CMF as low as 0.51 for all crashes on 4 lane undivided roads Reduction of up to 30%, 2-lane collectors (from FHWA)	Provides safe space to bike separated from traffic, either by widening or reallocating the cross section.	Proven safety countermeasure.
Enhance existing bike lane	CMF ranges between 0.47 and 0.82 (CMF #11293 – 11303) Varies based on type of upgrade	Provides even safer bike lane. The more separation from traffic, the more safety provided.	A more separated bike network is key to reducing bike crashes, as well as providing a network comfortable to users of all ages and abilities. Potential for additional safety benefit for all modes.

*Countermeasures with a * should only be considered when the speed limits are 35 MPH or lower.*
Countermeasures with a ^ should not be considered on multilane roads with AADT greater than 15,000 and speed limits 40 MPH or higher.
Countermeasures with a # might require further study for AADT volume above 10,000.

5.2 Prioritized Project Locations

5.2.1 Project Location Prioritization Analysis

A prioritization analysis identified priority corridor segments and intersections for improving vulnerable road user safety. To determine the corridors and intersections that should be prioritized for investment, we created a VRU Prioritization Score that combines the Crash Severity Index Score and the Equity Analysis Score, shown in Table 5-9. The Crash Severity Index Score accounts for 75%, and the Equity Analysis Score accounts for 25% of the final VRU Prioritization Score. A detailed prioritization methodology memo can be found in Appendix A.

All corridor segments and intersections that fall on the statewide HIN have been scored. This comprised 991 road segments and 3,385 intersections. The top 10% of corridor segments and the top 10% of intersections are considered “priority locations” and can be reviewed in tables in Appendix A. Tables 5-9 through 5-21 list the top five corridors and intersections in each NMDOT district. For intersections, the jurisdiction/ownership of the intersection is listed for the highest agency. For example, the intersection of a state route and local route would be listed as a state jurisdiction route in the upcoming Section 5 tables.

Maps of the priority locations can also be reviewed in Figures 5-4 and 5-5. On a statewide scale, it is difficult to view these locations in printed map format. We recommend reviewing priority locations in more detail at the NMDOT: Planning Division GIS Hub, scrolling down to the Interactive Mapping Applications, then choosing the “NM Vulnerable Road User” tool from the available list of resources. This will bring the user to a zoomable and navigable map, as well as in-depth contextual information about each priority location.

Historical and potential projects from the NMDOT’s eSTIP and the Mid-Region MPO’s MTP that overlap with identified priority locations are identified in the online map at the link above.

Table 5-9
Prioritization Criteria Summary

Criteria	Measures	Data Source	Weight
Safety	The typical intensity of severe, bicycle, and pedestrian crash patterns	New Mexico UCR	75%
Equity	Equity index leveraging a combination of demographic and public health data to identify socially vulnerable populations with high investment need.	Alta Equity Analysis tool	25%

Figure 5-4

Top Prioritized Intersections and Corridors by Typology – Statewide

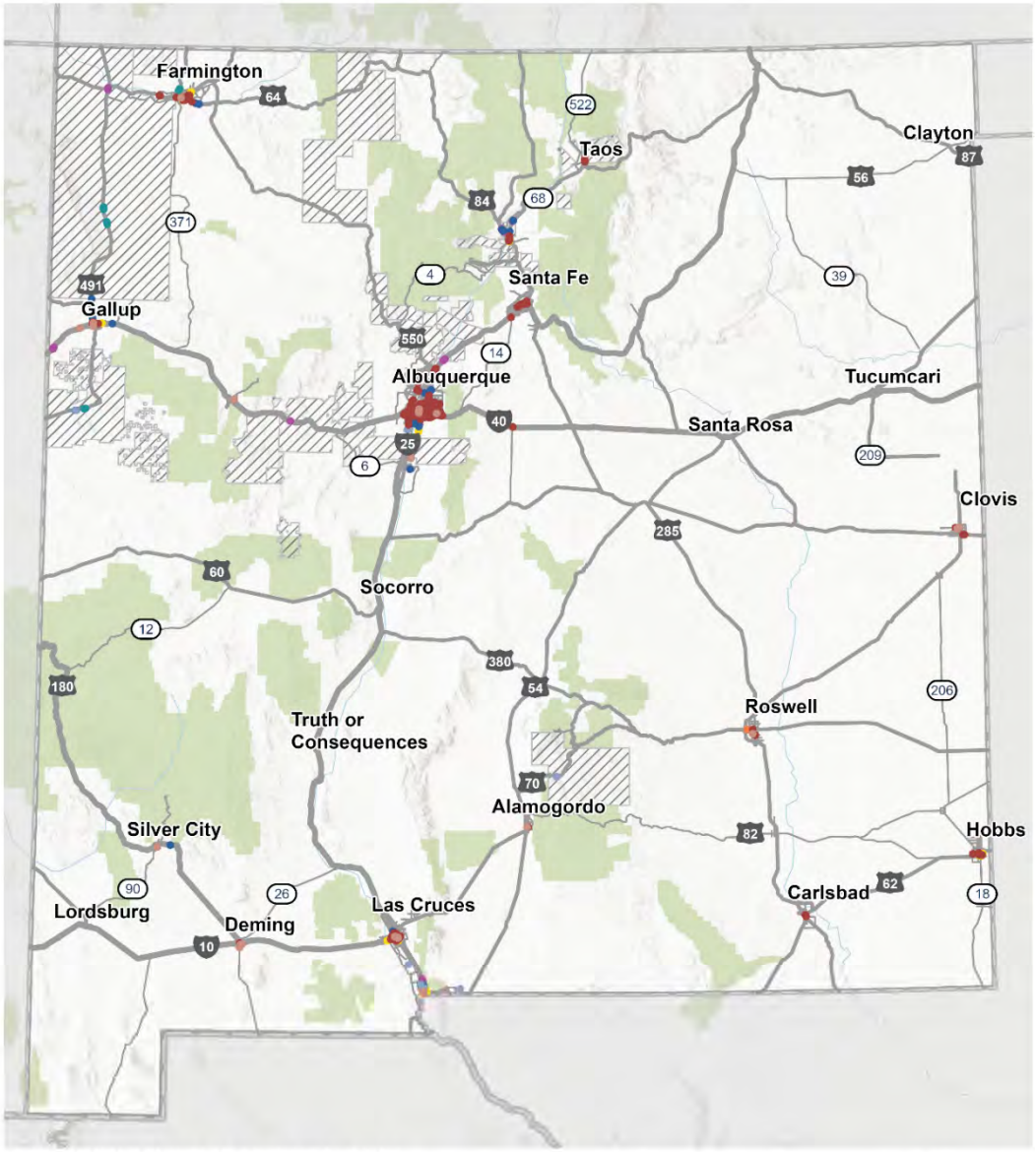
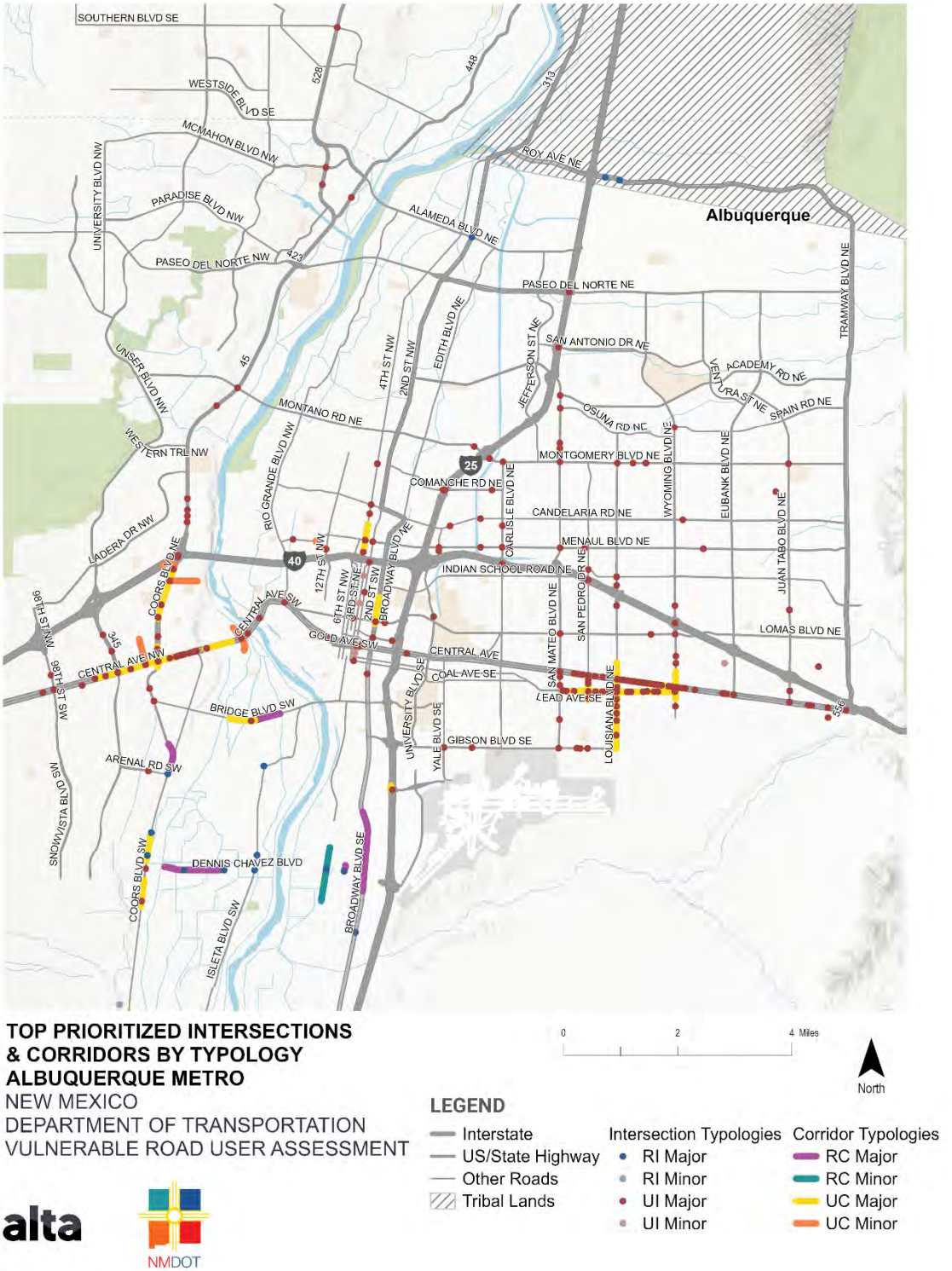


Figure 5-5

Top Prioritized Intersections and Corridors by Typology – Albuquerque Metro Area



TOP PRIORITIZED INTERSECTIONS & CORRIDORS BY TYPOLOGY ALBUQUERQUE METRO
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
VULNERABLE ROAD USER ASSESSMENT

0 2 4 Miles

North

LEGEND

- Interstate
- US/State Highway
- Other Roads
- Tribal Lands

Intersection Typologies
- RI Major
- RI Minor
- UI Major
- UI Minor

Corridor Typologies
- RC Major
- RC Minor
- UC Major
- UC Minor

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NMDOT

Table 5-10
District 1 Top Priority Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Percentile Score	Crash Severity Index	Typology
E Lohman Ave	S Solano Dr	City of Las Cruces	Doña Ana	0.986	0.975	44	UI Major
El Paseo Rd	Foster Rd	City of Las Cruces	Doña Ana	0.976	0.998	27	UI Major
E Amador Ave	S Espina St	City of Las Cruces	Doña Ana	0.933	0.885	22	UI Minor
N 4th St	Putter Cir	City of Anthony	Doña Ana	0.929	0.997	20	UI Minor
Avenida de Mesilla	W Barker Rd	City of Las Cruces/NM DOT	Doña Ana	0.929	0.895	21	UI Major

Table 5-11
District 1 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
El Paseo Rd	Montana Ave	Wyatt Dr	City of Las Cruces	0.992	0.987	100	UC Major
E Lohman Ave	S Almendra St	S Doña Ana St	City of Las Cruces	0.982	0.953	95	UC Major
Anthony Dr	Lipps Rd	E Joy Dr	Doña Ana County	0.980	0.977	53	RC Minor
E Idaho Ave	S Main St	El Paseo Rd	City of Las Cruces	0.977	0.987	41	UC Major
E Lohman Ave	S Doña Ana St	S Walnut St	City of Las Cruces	0.975	0.953	57	UC Major

Table 5-12
District 2 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
N Marland Blvd	E Snyder St	City of Hobbs/NM DOT	Lea	0.958	0.986	22	UI Major
W Sanger St	N Turner St	City of Hobbs	Lea	0.946	0.921	23	UI Major
Mabry Dr	S Norris St	City of Clovis/NMD OT	Curry	0.940	0.866	26	UI Major
N Turner St	W Park St	City of Hobbs	Lea	0.930	0.998	20	UI Major
E Fiesta Dr	S Canal St	City of Carlsbad/N MDOT	Eddy	0.913	0.779	24	UI Major

Table 5-13
District 2 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
N Marland Blvd	E Broadway St	E Clinton St	City of Hobbs	0.975	0.988	38	UC Major
N Turner St	W Broadway St	Sanger St	City of Hobbs	0.968	0.909	70	UC Major
E Sanger St	N Shipp St	N Morris St	City of Hobbs	0.960	0.924	39	UC Minor
W 2nd St	S Eisenhower Rd	Canoncito Dr	NMDOT	0.960	0.952	30	UC Minor
N Marland Blvd	E Dunnam St	E Sanger St	NMDOT	0.953	0.928	29	UC Major

Table 5-14
District 3 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
Central Ave	Coors Blvd	City of Albuquerque/ NMDOT	Bernalillo	0.989	0.956	108	UI Major
Central Ave	Wyoming Blvd	City of Albuquerque	Bernalillo	0.988	0.954	83	UI Major
Central Ave	Dallas St	City of Albuquerque	Bernalillo	0.987	0.954	76	UI Major
Central Ave	General Marshall St	City of Albuquerque	Bernalillo	0.983	0.973	41	UI Major
Central Ave	Charleston St	City of Albuquerque	Bernalillo	0.980	0.954	43	UI Major

Table 5-15
District 3 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
Central Ave	Texas St	General Arnold St	City of Albuquerque	0.990	0.961	395	UC Major
Central Ave	Airport Dr	60th St	City of Albuquerque	0.986	0.948	240	UC Major
Wyoming Blvd	Virginia Ct	Domingo Rd	City of Albuquerque	0.985	0.949	148	UC Major
Louisiana Blvd	Kathryn Ave	Zuni Rd	City of Albuquerque	0.984	0.943	161	UC Major
Airport Dr	Central Ave	Bluewater Rd	City of Albuquerque	0.984	0.986	59	UC Minor

Table 5-16
District 4 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
I-25 Exit Ramp	NM 3	NMDOT	San Miguel	0.200	0.799	0	RI Minor
Historic Rt 66	Cedarville Rd	NMDOT/ Private	Guadalupe	0.143	0.573	0	UI Minor
Historic Rt 66	Chuck and Dale Ln	NMDOT/ Private	Guadalupe	0.143	0.573	0	UI Minor
I-40 EB Exit Ramp	Historic Rd 66	NMDOT	Guadalupe	0.092	0.367	0	UI Minor
Historic Rt 66	Will Rogers Dr	NMDOT	Guadalupe	0.092	0.367	0	UI Minor

District 4 did not have any intersections along the HIN that contained crashes. As such, a Crash Severity Index Score could not be calculated. A sixth intersection tied for last place in this table: the I-40 westbound exit ramp at Historic Route 66.

Table 5-17
District 4 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
I-25 EB On Ramp	NM 3	I-25	NMDOT	0.949	0.815	100	RC Minor
I-40	Milepost 341	Milepost 342	NMDOT	0.901	0.756	20	RC Major
I-25	Milepost 433	Milepost 434	NMDOT	0.892	0.644	43	RC Minor
I-25	Milepost 314	Milepost 316	NMDOT	0.882	0.677	21	RC Major
Historic Rt 66	I-40	Chuck and Dale Ln	NMDOT	0.848	0.547	19	UC Minor

Table 5-18
District 5 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
US 285/84	Private Drive 1525	NMDOT/Private	Rio Arriba	0.935	0.917	21	RI Major
W Main St	Deer Trail	NMDOT/City of Farmington	San Juan	0.921	0.860	21	UI Major
Riverside Dr	Solano Ln	NMDOT/Private	Rio Arriba	0.919	0.956	20	UI Major
Cerrillos Rd	Vegas Verdes Dr	NMDOT/City of Santa Fe	Santa Fe	0.914	0.675	51	UI Major
US 64	Road 5568	NMDOT/San Juan County	San Juan	0.908	0.918	20	RI Major

Table 5-19
District 5 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
US 491	Road 9723	Road 8953	NMDOT	0.978	0.986	42	RC Minor
US 84/285	Private Dr 1522	Private Dr 1534	NMDOT	0.977	0.947	66	RC Major
US 491	Tachiinii Blvd	1st St	NMDOT	0.976	0.969	47	RC Major
US 491	Milepost 41	Milepost 42	NMDOT	0.973	0.969	42	RC Minor
US 84/285	Private Rd 1135	Private Dr 1522	NMDOT	0.973	0.947	57	RC Major

Table 5-20
District 6 Top Prioritized Intersections

Road 1	Road 2	Ownership	County	Prioritization Score	Equity Score	Crash Severity Index	Typology
9th St	Lincoln Ave	NMDOT/City of Gallup	McKinley	0.953	0.966	22	UI Minor
NM 53	Iule St	NMDOT/Bureau of Indian Affairs	McKinley	0.928	0.990	20	RI Minor
Maloney Ave	5th St	NMDOT/City of Gallup	McKinley	0.922	0.966	20	UI Major
Santa Fe Ave	Hall St	NMDOT/City of Grants	Cibola	0.920	0.799	25	UI Minor
Montoya Blvd	Maloney Ave	NMDOT/City of Gallup	McKinley	0.895	0.860	20	UI Major

Table 5-21
District 6 Top Prioritized Corridors

Road Name	From	To	Ownership	Prioritization Score	Equity Score	Crash Severity Index	Typology
Maloney Ave	7th St	1st St	NMDOT	0.976	0.930	87	UC Major
North 9th St	Wilson Ave	Jefferson Ave	NMDOT	0.975	0.971	44	UC Minor
NM 53	Leo Dr	Sandy Hill St	NMDOT	0.971	0.989	31	RC Minor
I-40	Milepost 3	Milepost 4	NMDOT	0.969	0.953	42	RC Major
I-40	Milepost 24	Milepost 25	NMDOT	0.963	0.873	100	UC Major

5.3 NMDOT Policy, Process, and Program Strategies

The recommendations listed in Tables 5-22 through 5-28 are advisory in nature. Recommendations are based on the historical crash trends analysis, stakeholder input, and a review of past plans. We have categorized recommendations into subject area groupings, tagged by their alignment with elements of the Safe Systems Approach, as well as by their appearance in past plans. A recommendation did not have to contain the precise wording here to be noted as appearing in a given plan. Recommendations were indicated (with a teal box) as appearing in a plan if the plan contained a recommendation with similar language or one that targeted the same objective. For more information about related NMDOT plans, reference Appendix E, for a document and plan review summary.

Table 5-22

Recommendations – Data Collection and Management

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Data Collection and Management										
Update the UCR form to ensure consistency with National Highway Traffic Safety Administration guidance and usability for law enforcement officers to accurately capture information on VRU-involved crashes.					■	■				■
Develop a methodology for determining current and future pedestrian volumes, as well as latent demand.			■			■				
Create a pedestrian and bicycle count collection strategy and program.			■							
Continue pedestrian and bicycle counter lending program for use by other jurisdictions.			■							
Annually distribute survey seeking feedback on UCR form and integrate feedback into next comprehensive UCR update.	■					■				■

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Data Collection and Management										
Include pedestrian-involved crash data and equity in project prioritization.										
Explore utility of “top contributing factor” process and definition.										
Integrate the statewide bicycle network with local and regional networks to improve bicycle travel across communities, regardless of jurisdictions or infrastructure ownership and ensure network continuity.										
Create a data dashboard with historical crash data. Crash data should be selectable, downloadable, and updated annually for use by NMDOT engineers and public. Crash data should be complete and contain all relevant roadway, context, and analysis factors necessary to inform infrastructure design.										
Create a statewide sidewalk and crosswalk GIS layer to identify sidewalk gaps and assist in crash analysis.										
Create a statewide bicycle facility GIS layer to identify network gaps and assist in crash analysis.										
Establish a program to continually gain feedback from all user groups on their experience with the transportation system, especially seeking input from disadvantaged or vulnerable communities, commuters, and transit passengers.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Data Collection and Management										
Publish a brief, public-facing VRU-involved crash report that compiles each previous year's crash statistics and report on progress.										

Table 5-23

Recommendations – Communication and Education

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Communications and Education										
Continue to develop and lead statewide distracted-driver education campaigns and conduct periodic program evaluation to measure effectiveness.										
Continue to support public information campaigns to reduce alcohol- and drug-impaired driving and conduct periodic program evaluation to measure effectiveness of NMDOT initiatives.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Communications and Education										
Expand driver education curriculum with renewed focus on bicyclist and pedestrian vulnerability and safety; support the New Mexico Motor Vehicle Division in integrating related questions into the New Mexico drivers' test.										
Secure funding for and continue delivering an anti-speeding media campaign.										
Develop a public education campaign on the rules and habits to safely ride a bicycle on the road and in traffic.										
Create and deliver a public information campaign on how to safely drive around bicyclists and safe passing behavior.										
Create a targeted information campaign in bars and liquor stores to promote safe ride home and transit services.										
Utilize signage along rural highways to remind drivers to keep an eye out for pedestrians walking along the roadway.										
Work with local communities, schools, universities, and media to continuing implementing the Look For Me pedestrian safety education campaign for communities at higher risk of pedestrian injuries and fatalities, with particular emphasis in identified high risk counties										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Communications and Education										
Develop a media toolkit for Public Information Officers and media outlets to use to provide proactive pedestrian safety messages and tips.										

Table 5-24

Recommendations – Infrastructure (NMDOT-Owned Roadways)

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Infrastructure on NMDOT-Owned Roadways										
Install and track implementation of ADA-compliant curb ramps as part of maintenance projects, in accordance with federal guidance										
Continue to implement (and update as needed) the NMDOT *ADA Transition Plan for Public Rights-of-Way*.										
Improve project scoping, review, and approval to better account for pedestrian access and safety.										

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Infrastructure on NMDOT-Owned Roadways										
Ensure future updates to existing NMDOT manuals align with national best practices in planning and design, as captured in the 2020 *NMDOT Design Manual*.	■					■				
Install 10 or more PHB signals on state roads.	■		■			■				
Install LPIs at 10 or more intersections.	■		■			■				
Develop a countermeasure quick-build guide for use by NMDOT staff and outside agencies.	■					■				
Incorporate roundabouts, gateways, and other traffic calming measures that slow traffic, through design, on approaches into rural towns.	■	■								
For segments of the HIN that contain transit routes, review pedestrian facilities for ADA compliance and accessibility.			■							■
Utilize quick-build projects to rapidly improve vulnerable road user safety until more permanent materials and installations can be funded.	■		■							
Advance a system of safe, high-quality, and comfortable bicycle facilities.	■		■					■		
Integrate Complete Streets approaches into the development process of new construction and reconstruction projects.	■		■				■			
Implement active speed warning signs, including dynamic message boards at rural-to-urban transitions.		■								■

Recommendations	Alignment with Safe System Approach					Alignment with Previous Plans				
	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Infrastructure on NMDOT-Owned Roadways										
Increase the minimum crossing time per traffic lane at intersections on NMDOT roads in NMDOT design guidance.										
Include safe interaction and connectivity of transit, pedestrian, and bicycle modes in the planning, design, and construction of transportation facilities.										
Create recommended street light activation times for each month of the year to ensure streetlights turn on sufficiently in advance of sunset. Review light sensor sensitivity levels to ensure they comply with scheduled activation times.										
Evaluate illumination standards for NMDOT roadways for shadows, minimum coverage, and lumen levels to ensure areas of high risk for vulnerable road users are adequately lit.										
Reduce fatalities and serious injuries of bicyclists on NM highways through implementation of crash reduction measures (e.g., installing dedicated bicycling facilities, providing wide shoulders on bicycling routes, and improving intersection crossing conditions for bicyclists).										
Conduct a permeability study on interstate sections of the HIN to assess opportunities for additional vulnerable road user crossings or safety improvements.										

Table 5-25

Recommendations – Infrastructure (State- and Locally Owned Roadways)

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Infrastructure, on Both State- and Locally Owned Roadways										
Develop strategies to integrate targeted vulnerable road user safety improvements into all eSTIP, TIP, and state-funded projects when located on the statewide HIN.	■		■							
Conduct a permeability study on high AADT arterials along the HIN to assess crossing frequencies and potential improvements.	■									
Identify operations and roadway facility improvements for transit safety, such as location and types of stops, improved communications (such as use of geographic information systems), and signal pre-empt for transit to be consistent with the NM Statewide Public Transportation Plan.			■							■
Increase funding for, and target safety improvements at, transit stops. (For example for the installation of curb ramps to ensure ADA access to transit stops.)			■							■

Table 5-26

Recommendations – NMDOT Process, Programs, and Actions

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
NMDOT Process, Programs, and Actions										
Continue providing an internal continuing education requirement for NMDOT staff (particularly design and planning staff) to watch vulnerable road user safety trainings annually.	■					■				
Adopt a Complete Streets policy and formally integrate Complete Streets into NMDOT Practices, Policies, and Plans (SHSP, statewide transportation plan).	■		■			■	■			■
Revisit speed limit setting policies and speed limit design tables.		■				■				
Adopt a statewide Toward Zero Deaths vision.	■		■			■				
Update the 2018 NM Bike Plan to increase the recommended bicycle facility protection and comfort level guidance in relation to various roadway configurations to increase bicyclist safety to match current best practices.	■		■							
Create a statewide vehicle inspection program to ensure vehicles are safe to operate and do not contain faults that would impede the safety of VRUs. (For example, are all windows unblocked by cracks or other obstructions? Is a safe bumper present? Is the vehicle “lifted” above the legal limit?)				■						
Increase vehicle registration costs for larger and heavier vehicles.				■						

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
NMDOT Process, Programs, and Actions										
Host annual focus group meetings with disability advocates to understand mobility and safety issues.			■							
Increase organizational capacity for safety management and HSIP execution.	■	■					■			
Implement recommendations from the NM Bike Plan for reconstruction and rehabilitation projects to increase safety for local and tourist cyclists and reduce VMT.			■				■			
Implement recommendations from the NMDOT *Pedestrian Safety Action Plan*.			■				■			
Develop an NMDOT Climate Change Plan to develop adaptation and resiliency strategies. Include heat mitigation solutions for VRUs.			■				■			
Implement recommendations of forthcoming 2024 Complete Streets Strategic Plan and support next phases of implementation.	■		■							

Table 5-27

Recommendations – Partnerships

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	Safe Roads	Safe Speeds	Safe Road Users	Safe Vehicles	Post-Crash Care	Pedestrian Safety Action Plan	Statewide Transportation Plan	NM Bike Plan	Highway Safety Plan	Strategic Highway Safety Plan
Partnerships										
Continue conducting annual trainings on the UCR with local and state law enforcement officers.					■	■			■	■
Develop or support Pedestrian Safety Technical Assistance Program for tribal nations and local governmental agencies.	■					■	■			
Support New Mexico legislative actions that improve pedestrian safety.			■			■				
Create and provide an annual in-depth technical vulnerable road user safety training program on the planning and design of infrastructure, open to engineers and planners at MPOs, counties, municipalities, and local agencies. Include content on NACTO, FHWA proven safety countermeasures, and other rapidly evolving national best practices. Encourage participants to look for resources beyond the MUTCD and remain up to date and adaptable.	■									
Support federal regulatory actions that improve pedestrian safety.			■			■				
Support the adoption of a state five-foot passing law around bicyclists.			■							
Increase coordination and engagement with Tribal Nations as part of infrastructure project selection and design.	■						■			■

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Partnerships										
Partner with state and local law enforcement agencies to target enforcement along the 2025 vulnerable road user statewide HIN and identified high risk areas.		■							■	■
Explore partnerships with American Planning Association, Institute of Transportation Engineers, other professional organizations, advocacy organizations, and local engineers and planners to lead vulnerable road user safety presentations to county and local government officials to educate them about traffic safety issues and concepts.			■							
Host a vulnerable road user safety meeting between the NMDOT Tribal Liaison and Tribal Nations and representatives to identify solutions to increase coordination between the NMDOT and Tribal Nations.							■			■
Promote and support the expansion of vanpooling services to close transit service gaps, improve mobility, and reduce VMT.			■				■			
Provide law enforcement agencies with technical assistance via law enforcement liaisons and the Traffic Safety Resource Prosecutors, and providing other resources to help law enforcement agencies identify, prioritize, and address traffic safety problem areas.									■	■

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Partnerships										
Encourage the National Highway Traffic Safety Administration to regulate the design of vehicles to improve vulnerable road user outcomes in the event of a crash. For example, lowering the height and angle of the hood, reducing vehicle weight, and reducing blind spots.										

Table 5-28

Recommendations – Funding and Grants

	Alignment with Safe System Approach					Alignment with Previous Plans				
Recommendations	**Safe Roads**	**Safe Speeds**	**Safe Road Users**	**Safe Vehicles**	**Post-Crash Care**	**Pedestrian Safety Action Plan**	**Statewide Transportation Plan**	**NM Bike Plan**	**Highway Safety Plan**	**Strategic Highway Safety Plan**
Funding and Grants										
Develop projects and programs to utilize dedicated HSIP funding for pedestrian improvements.	■		■			■				■
Tie grant funding to addressing critical safety issues identified in the VRUSA, such as pedestrian safety in proximity to transit, and long distances between safe crossings.	■		■							
Increase funding for transit operations to increase transit frequency.			■							
Create a funding program administered through the HSIP to provide funding to jurisdictions and agencies to implement quick-build projects focused on vulnerable road user safety.	■									
Allocate funding to provide technical and administration support to under-resourced communities in project implementation.	■									
Add the 2025 statewide HIN and identified high risk areas as a locational scoring criterion on relevant NMDOT grant applications.	■									

Appendix A
Methods Technical Memo

1 Introduction

This memo summarizes Alta's technical analyses for the New Mexico Vulnerable Road Users (VRU) Analysis of bicycle and pedestrian-involved crashes in the state. Alta completed the following four technical analyses:

- Crash Trends Analysis
- Equity Analysis
- High Injury Network
- Crash Profiles

These four technical assessments served as the foundation for the subsequent Prioritization Analysis. Detailed methodology on each analysis and information on data used is provided below.

1.1 Crash Data Preparation

Alta was provided an export of all crashes from the NM Uniform Crash Report, which included 470,600 crashes recorded from 2013-2023. This dataset played a pivotal role in Alta's analytical processes, particularly in the development of crash profiles, crash trend analyses, and prioritization assessments. The data was utilized across three distinct levels:

- Crash level
- Vehicle/unit level
- Person level

In some cases, data was further filtered by injury severity. There were 9,745 crashes involving a bike or pedestrian that resulted in an injury. Alta prepared the analysis dataset with the following steps:

1. **Filter by mode:** Remove any crashes that did not involve a pedestrian or bicycle.
2. **Join crash data:** Using R Studio, join important person- and vehicle-level variables, such as driver or VRU alcohol involvement or vehicle turning movement, to crash data using the CID field. Where more than one person or vehicle is associated with one crash, join the data point that was most likely to contribute to a crash. For example, if more than one driver is involved in a crash and only one had alcohol impairment, indicate driver alcohol impairment for that crash.
3. **Join roadway data**: Spatially join contextual data, such as roadway class, speed limit, and AADT, to each crash point using roadway data in GIS.

Crashes on all public roadways in the state were included for analysis unless otherwise stated.



1.2 Roadway Data

Alta also relied heavily on roadway data provided by the New Mexico DOT. This data included attributes such as speed limit, AADT, and number of lanes. NMDOT also provided polygon datasets of various local jurisdictions and point data of highway mileposts. Alta supplemented data with other datasets as well in order to ensure the dataset's comprehensiveness and accuracy. This data was obtained from public data sources like Open Street Map and the Smart Location Database, local governments, and Replica, a private data vendor.

1.3 Unit of Analysis

The crash trends and prioritization analyses required summarizing data at the roadway level. Alta created two separate datasets for roadway-level analysis: one of road segments, usually 1 mile long, and one of intersections, which are the areas within 100 feet of the centerline intersection. Road segments may pass through intersections and as a result, some crashes that occurred at intersections were attributed to both the intersection and the road segment on which they occurred. This approach acknowledges that intersections may have unique safety improvement needs, but segments with many crashes, whether at intersections or not, need to be highlighted. It also ensures that when a crash occurs at an intersection of two streets, the attributes of both streets are accounted for in the analysis rather than only one street. The intersection analysis allowed Alta to examine the attributes of AADT, speed limit, number of lanes, and functional class for both roadways involved in an intersection crash rather than just one.

2 Crash Trends Analysis

2.1 Purpose

The crash trends analysis highlights key trends among the vehicles, people, and actions involved in crashes on a statewide level. It summarizes key statistics and identifies relationships between key variables.

2.2 Methodology

This analysis relied on the crash-level dataset explained in the Introduction. Analysis steps included the following:

1. **Filter for severity:** Apply filter to display crashes that resulted in a person being killed or seriously injured based on the KABCO field values of K and A. While the focus of the Vulnerable Road User Assessment is on fatalities and serious injuries, a summary of all VRU crashes was also included for context.
2. **Filter by mode:** Apply separate filters for pedestrian-involved and bicyclist-involved crashes. Pedestrian and bicyclist crashes were analyzed separately to identify trends unique to each mode.
3. **Tabulation in Excel**: Tabulate results in Excel for different combinations of variables.

In total, there were 1,886 pedestrian KA crashes and 327 bicyclist KA crashes between 2013 and 2023. Data from person-level and vehicle-level tables were also joined to crash-level data where possible to facilitate analysis. Variables used in analysis included:

- **Demographics**
  - Age of VRU
  - Gender of VRU
  - Race/Ethnicity of VRU
  - Local or Out-of-State Driver
- **Date/Time**
  - Month of Year
  - Day of Week
  - Time of Day

  - Lighting Conditions
- **Crash Characteristics**
  - Primary Crash Factor
  - Alcohol Involvement (both driver and VRU)
  - Drug Involvement (both driver and VRU)
  - Hit-and-Run
  - Vehicle Turning Movements
  - Using Bicycle Infrastructure (Bicyclist Crashes Only)
  - Crash Location within the right of way
- **Location**
  - Intersection or Non-Intersection
  - Near Transit
  - Near Signal
  - Urban or Rural
  - Tribal Jurisdiction
  - Population Density of Crash Area
- **Roadway Characteristics**
  - Functional Classification
  - Number of Lanes
  - Speed Limit
  - AADT
  - Lane width

Variables that lacked sufficient information to support the analysis were excluded, such as where 80% of cells were blank. Some data which may be correlated with crash rates was not available, such as the presence of sidewalks or crosswalks at crash locations. The analysis also considered vehicle type information but found it to be inconclusive due to the categorization groupings of vehicles.

In assessing VRU crashes as a whole, as well as rates by mode, two key metrics were also calculated over time:



- The change in crash rate per 100,000 population of both KA and KABCO crashes over time. This provides a standardizes measure of VRU crash frequency relative to state population size.
- The share of KA crashes out of all KABCO crashes. This provides a measure of severe crash outcomes over time.

3 Crash Profiles

3.1 Purpose

Crash profiles identify groups of crashes with similar characteristics with the goal of identifying a few trends that together account for the majority of injury crashes. The crash profile identification and analysis were informed by TCRP Report 955, “Guide for Quantitative Approaches to Systemic Safety Analysis.” The crash profiles presented in this memo highlight key statistics based on an analysis of crash data and related environmental factors. The process builds on the preceding crash trends analysis and High Injury Network analysis.

It is important to note that crash profiles are not intended to account for all crashes, nor are they mutually exclusive. Some crashes could belong to multiple crash profiles; for example, a crash could belong in both profile 2, “pedestrian crashes, in the dark, on state roads” and profile 3, “pedestrian crashes, at unsignalized intersections, in high density areas.” Alta has made an effort to create profiles that explore the relationship of different variables to crash numbers, so some overlap is expected.

3.2 Data Preparation

The crash profiles were developed based on all injury crashes in the region involving bicyclists and pedestrians using crash data from 2013 – 2023 and prepared as described above. Alta developed separate profiles for KA crashes and minor injury (B and C on the KABCO scale) crashes.

3.3 Methodology

Alta analyzed crash data and developed thirteen crash profiles for serious and fatal crashes, and six crash profiles for minor injury crashes. Six serious profiles and three minor injury profiles have been identified as priority profiles because they account for the most crashes and are most aligned with factors that can be addressed through countermeasures.

After compiling the analysis dataset, Alta performed an exploratory crash pattern analysis of the factors using a hierarchical clustering algorithm in R Studio. This process identified 6-8 groups of crashes for each injury category that have shared characteristics with the goal of finding groups that were as dissimilar to each other as possible. Using the clusters as a guide, Alta used both quantitative and qualitative evaluation and cross-tabulations of varying crash characteristics to make a final selection of profiles. Alta paid special attention to ensuring that selected profiles point to actionable crash trends that either comprised substantial subsets of collisions or connected to specific countermeasures to address them.

Each crash profile was defined by one or more mode crash factors and/or contextual factors. Crash factors included data from the NM Uniform Crash report as well as data on signals and intersections derived from GIS analysis. The variables that defined the final selected crash profiles were:

- **Modes Involved in Crash**
  - Pedestrian
  - Bicycle
- **Crash Factors**
  - Collision Type
  - Driver failure to yield
  - Driver maneuver: Turning right, left, or going straight
  - Hit and run
  - Darkness/daylight
  - Roadway lighting
  - Alcohol involvement – both driver and VRU
  - Intersection or mid-block crash
  - Presence of traffic signal
- **Contextual Factors**
  - Road Functional Classification
  - Proximity to an interstate
  - AADT
  - Number of Lanes
  - Speed Limit
  - State/non-state road
  - Proximity to a bike facility
  - Population density of census tract
    - High
    - Medium

    - Low
- Location on tribal land
- Proximity to transit

In some cases, Alta considered other variables when developing clusters, but this data did not exhibit enough variability to be a useful way to define clusters. For example, most crashes happened when the weather was clear; there were not enough bad-weather crashes to comprise a meaningful profile or identify a trend.

The variables that were not used in crash profiles included:

- Weather
- Road surface condition
- Free-flow speed of roadway compared to speed limit
- Roadway grade or hillcrest

The resulting profiles will be paired with general safety countermeasures most appropriate for the crash and location context. These countermeasure recommendations will not be site-specific.

4 Equity Analysis

4.1 Purpose

The purpose of the equity analysis is to identify areas of underserved communities across the state of New Mexico. This data can help to prioritized safety improvements in areas where they will benefit people who have been harmed by transportation infrastructure, pollution, and unequal resource distribution in the past. The equity analysis was combined with crash severity data and the High Injury Network (HIN) to identify corridors with both high safety needs and high populations of underserved communities and generate the final VRU Prioritization Score.

4.2 Variable Selection

The initial data was gathered using an in-house tool developed by Alta, known as Site Explorer, which aggregate various socio-economic, health and environmental data at the census block group level. Alta also added variables for flood risk and location on a tribal land and weighted every variable to reflect the importance of the variable to identifying underserved communities. Table 1 shows every variable used in this analysis and its weighting.

Table 1. Selected variables and weights

Variable	Weight	Source	Definition
Low-Income Households	20%	American Community Survey (ACS) 2022	Percent of households with an income below 200% of the Federal Poverty Level
Youth and Senior	15%	ACS 2022	Percentage of population under age 18 or over age 65. Many of these populations cannot drive. They may also be more vulnerable when crossing the street or walking.
No Vehicle Access	10%	ACS 2022	Percentage of households with no vehicles at home.
Race and Ethnicity	10%	ACS 2022	Percentage of the population that is either a person of color and/or Hispanic. This includes any person who is not a non-Hispanic white.
Educational Attainment	10%	ACS 2022	Percentage of population with no high school diploma or equivalent or no education past high school.
Flood Risk	5%	FEMA National Risk Index, 2019	Annualized risk of river flooding
Air Quality	10%	EJScreen	Levels of PM 2.5 air pollution
Economic Opportunity	10%	Opportunity Atlas	Percent of children growing up in a block group who end up living in a low-poverty neighborhood as adults.
Coronary Heart Disease	5%	CDC PLACES, 2021	Prevalence of coronary heart disease among adults 18 years and over
Limited English Proficiency	5%	ACS 2022	The percentage of people who speak English less than “very well.”
Tribal land	*	NMDOT	If block group is located on tribal land, the entire score was inflated 20%. This was applied after the weights had been applied to other variables.

4.2.1 Variables Excluded

People with disabilities: ACS data about disabilities is highly unreliable, with margins of error often exceeding the estimated values.

4.3 Variable Comparison to Federal Datasets

Alta's equity dataset is derived from many of the same variables that comprise federal datasets such as EJScreen, USDOT Transportation Disadvantaged Census Block groups, and the CDC Social Vulnerability Index. Like Site Explorer, these tools are composites of data from the Census as well as other sources. Figure 1 compares Alta's selected variables with those provided in other tools. Site Explorer contains variables related to health, environment, housing, transportation, resilience, and socioeconomics.

Figure 1: Variable Comparison

		Alta Equity Tool	EJ Screen: Environmental Justice Screening and Mapping Tool	Socioeconomics and Equity Analysis	Transportation Disadvantaged Census Tracts	Climate and Economic Justice Screening Tool	Social Vulnerability Index
Creator		Alta Planning + Design	EPA	FHWA	USDOT	CEQ	CDC
Geography		Census Block Group	Census Block Group	County	Census Tract	Census Tract	Census Tract
Socioeconomic	Low-Income Households	X	X	X	X	X	X
	People of Color	X	X	X		X	X
	Youth	X	X				X
	Seniors	X	X	X	X		X
	Economic Opportunity	X					
	English Proficiency	X	X	X	X	X	X
	Unemployment		X	X	X	X	X
	People with Disabilities			X	X		X
	Tribal Land	X					
	Educational Attainment	X	X	X	X	X	X
Housing	Housing Cost Burden				X	X	X
	Units per Square Mile		X				
	Crowding						X
Transportation	No Vehicle Access	X		X	X		X
	Commute Time		X	X			
	Transit Trips		X				
Environmental	Air Quality	X	X	X	X	X	
	Lead Exposure		X			X	
	Superfund Site Proximity		X			X	
	Traffic Proximity				X	X	
	Hazardous Waste Proximity		X			X	
	Wastewater Discharge		X			X	
Resilience	Lack of Tree Canopy				X		
	Green Space					X	
	Food Deserts			X			
	Flood Risk	X				X	
	Wildfire Risk					X	
Health	Coronary Heart Disease	X				X	
	Diabetes					X	
	Asthma					X	
	Cancer				X		

4.4 Methodology

Alta's Site Explorer weights and sums selected variables to generate a composite equity index. Generating the composite index is a multi-step process, some of which is automated by the tool:

- Acquire raw values for each census block group for each of the categories using the sources shown. Values are ordered so that higher values indicate higher equity priority or higher need.
- Within each category, percentile-rank values on a statewide level to put them on a standard scale.

- Multiply each census block group's percentile-ranked score is by the chosen weight for that category to generate a weighted score. For example, if income is weighted 20% of the overall score, then a block group that was in the 80th percentile for low-income population would get a weighted income score of (.80 * .250) = 0.16.
- Sum weighted scores for each variable to generate an equity composite index of between 0 and 1 for each block group.

In order to take into account the tribal lands of the 23 federally recognized indigenous tribes in the state, another calculation was applied to the equity composite index. Any block groups located on tribal lands (completely or partially) had 20% added to their scores. Other block groups did not. The result was the final equity score.

5 High Injury Network

5.1 Purpose

High injury networks (HIN) illustrate that often a small number of improvable roadways can address the majority of life-altering crashes. This approach moves beyond typical crash history and allows for a better understanding of the types of roadways in New Mexico where vulnerable road users (VRUs) are most at risk.

This section explains Alta's approach to analyzing crash data and developing the HIN for VRUs only.

5.2 Vehicle Mode

This HIN exclusively considered crashes involving VRUs. VRUs include pedestrians and cyclists and exclude motorcyclists. Road workers who are struck while working on the roadway would be considered pedestrians as well.

5.3 Geographic Area

Alta conducted one statewide HIN for VRU crashes. Alta began by examining VRU crashes on all public roadways in the state and found that 83.1% of all injury-causing VRU-involved crashes and 90.4% of fatal VRU crashes occurred on roads classified as Major Collectors or higher, or at intersections with those roads. These roads accounted for only 20% of centerline miles in the state. For the VRU HIN analysis, Alta decided to focus on these roads where crashes are most concentrated in order to identify a connected network with the most potential for VRU safety improvements while considering the practical constraints of analyzing a large statewide road network. Other tasks in the VRU analysis, such as Crash Profiles and Crash Trends Analysis, analyzed crashes on all public roadways in the state.

5.4 Injury Crashes

The decision of which crashes to include in a VRU HIN analysis is an important one.

In this case, 2,213 serious and fatal crashes involving VRUs occurred on the roadways under study during the 11 years of crash data. This represented 0.4% of the more than 470,600 crashes of all modes in the state during this time and was a low enough sample size that it could limit the ability to identify areas of high crash severity on a statewide level. On the other hand, the VRU analysis must prioritize the most serious crashes.

To address this challenge, Alta decided to incorporate moderate and minor-injury crashes to increase the sample size but utilized a method that prioritized serious and fatal crashes using weighting. This included all crashes rated a K, A, B, or C on the KABCO scale. The KABCO scale, shown in Table 2, is used to



indicate the worst injury sustained by any individual involved in the crash. Because the VRU Analysis is designed to prevent injury crashes, property-damage only crashes were not included in the VRU HIN analysis.

Table 2: KABCO scale for New Mexico (FHWA, n.d.)

KABCO Rating	Definition	Weight Used in Analysis
K	Killed	20
A	Incapacitated: Carried from scene	5
B	Visible injury	1
C	Complaint of injury, but not visible	1
O	No apparent injury	0

Under this approach, 9,745 crashes were ultimately used in the analysis. Each crash was assigned a weight based on its severity, as shown in Table 2. This effectively prioritizes areas where more serious crashes are occurring in order to identify areas where the most serious injuries can be reduced. These weights are based on the ratio of the average cost to society from fatal and serious crashes.[1] More details about how these weights are used in the analysis are given in the Methodology section.

5.5 Inputs

VRU HIN development required two data sets:

Crash Layer: 11-year crash data (2013 – 2023) of all crashes in New Mexico, prepared by Jacobs.

- Filter data to include only crashes involving bicyclists or pedestrians.
- Filter data to include only crashes resulting injuries (K, A, B, and C on the KABCO scale).
- Typical HINs may use a shorter time span. However, focusing on VRUs only greatly reduces the number of eligible crashes, so using a longer time span ensures we have enough crashes for robust analysis.

Prepared Roadway Network: Street centerline file, provided by NMDOT.

- For a statewide HIN, filter the roadway network to roads with a functional classification of major collector or higher.

[1] There are many calculations of average cost of severe and fatal crashes. The ratio shown here is based off of the FHWA's *Crash Costs for Safety Analysis* (2018), Tables 14 and 19. In Table 14, the ratio of fatal costs to the average of severe, critical, and serious costs was 3.1. In Table 19, the ratio of the mean cost of K (killed) and A (serious) crashes was 5.5. The ratio of 4 was chosen as a median of these. Source: https://safety.fhwa.dot.gov/hsip/docs/fhwasa17071.pdf.

5.6 Methodology

Alta's methodology is explained here and summarized in Figure 1.

1. **Prepare Street Network:**

   Prepare the street network used in GIS analysis in a way that allows for accurate comparisons between corridors. To determine which corridors experience the most crashes, streets must be divided into equal-sized segments to allow for apples-to-apples comparison. However, a common problem in HIN development is that where these breaks happen to fall can impact the results, causing certain segments to arbitrarily stand out. Alta outlines an approach that effectively smooths out this effect to mitigate this bias.

   a. Consolidate dual-carriageway roads so each road is represented by one line.

   b. Use the "unsplit lines" tool to merge road segments based on road name and functional classification. This eliminates any arbitrary splits in the centerline shapefile.

   c. Divide centerlines into segments of approximately one-mile segments, to show the crash numbers normalized by roadway length. Crashes were not normalized by traffic volumes. This allows the VRU HIN to identify areas that, when improved, will reduce the greatest number of injuries and fatalities.

   d. Use a "rolling window approach" to mitigate the influence of arbitrary segmentation in the roadway network. Create line extensions on the centerline network that extend each 1-mile road segment 1/4 mile in each direction for the analysis (for a total segment length of 1-1/2 mile). Extend segments in a straight line based on the average heading determined from the last 20% of the segment and join crashes within 50 feet of each extended segment to that segment. While this may not capture all crashes on neighboring segments on very curvy roads, the 50-foot search radius around the line extension will capture most of them. Curved-line extensions along the roadway are not feasible.

2. **Prepare Crash Data:**

   a. Weight each crash based on the KABCO rating shown in Table 2.

   b. Snap all crashes within 250 feet of the roadway network to the prepared street network. This distance generally accounts for collisions on dual carriage roadways that occur far from the now-consolidated centerline (such as wide highways) but is not long enough to capture collisions that occurred in parking lots or adjacent roadways.

3. **Apply Rolling Window Analysis:**

   a. Calculate rolling window statistics on each extended road segment by summing the crash weights on each segment and dividing by the segment length to obtain the rolling crash severity index per

mile of road segment. This process reduces the impact that dead-end streets, network segmentation artifacts, or anomalous crashes have on the final VRU HIN.

b. Spatially join the crash layer to the rolling window road network to associate crashes within 50 feet of the rolling network.

c. Calculate the summed rolling crash weight for each rolling road segment based on the weight of each crash on the segment. This sums the weight of crashes on each rolling segment to reflect total crash severity on each segment. For example, a segment with three fatal crashes (worth 20 points each) and five serious crashes (worth 5 points each) would receive a rolling crash weight of 85.

d. Join the rolling crash weight from the rolling window layer back to the original centerline network to show rolling crash weight per road mile on each segment, resulting in a crash severity index for each road segment. This normalizes the crash weight for the road length. However, for the purpose of calculating crash weight per road mile, count any rolled segments of less than 0.2 miles as 0.2 miles for the analysis, to avoid overrepresenting crashes on small road segments (dividing by very small numbers yields very large numbers).

4. Accumulate Crashes:

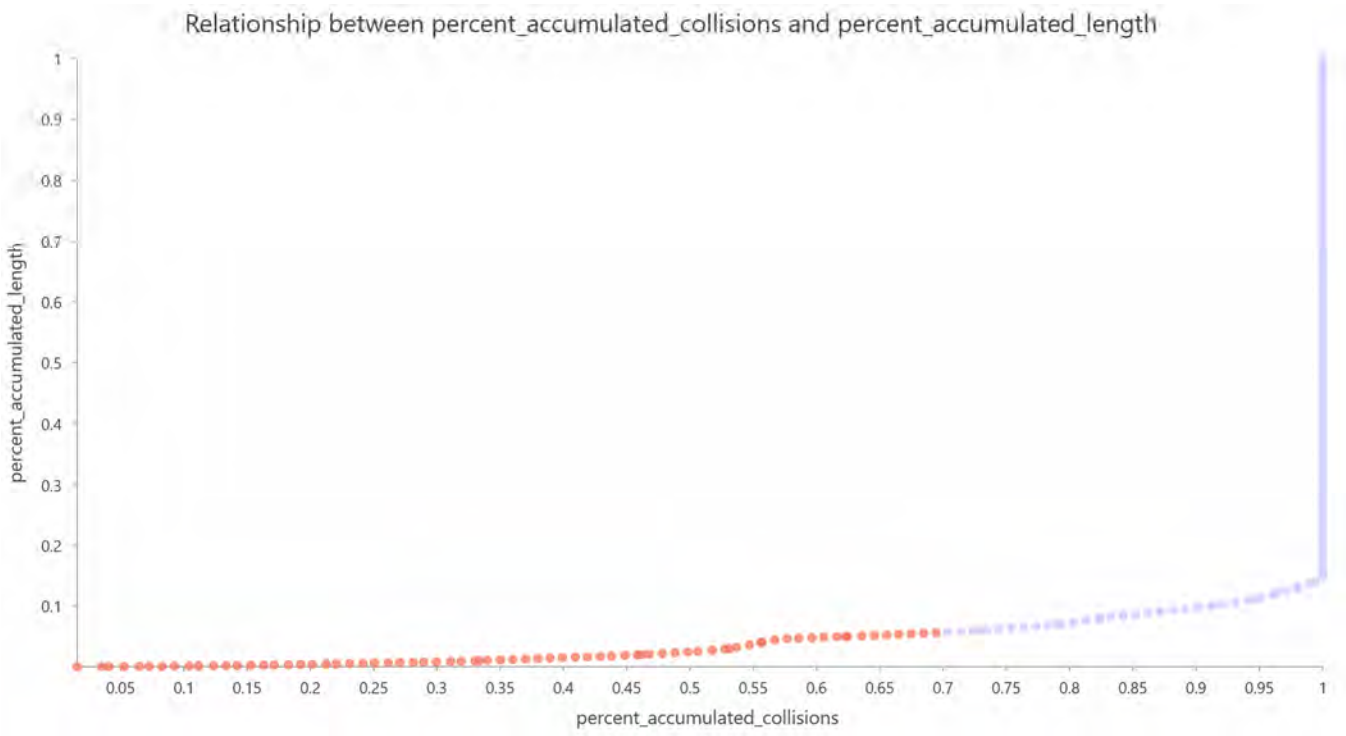
a. Beginning with segments with the highest crash severity index, use Alta's custom-built HIN Generation tool to progressively add segments to the HIN. This tool calculates the length in miles for each segment as it is added and keeps track of the cumulative miles in the HIN and the number of crashes occurring on those segments. It stops when the designated threshold of collisions has accumulated. The tool also generates a table that shows the number of crashes and the number of roadway miles accounted for with each HIN segment.

b. The graph below was used to help determine the HIN threshold, or the percent of collisions that the VRU HIN should include, by comparing accumulated collisions with accumulated roadway centerline miles. The slight steepening of the graph around x = 0.55 shows that after accumulating 55% of collisions, the VRU HIN must accumulate more roadway length in order to find more collisions to include as collisions become sparser. This means there are diminishing returns if the goal is to find a small number of roadways that account for the most crashes. However, manual cleaning may add or subtract road segments from the VRU HIN.

5. Final Refinement:

a. Examine the map of qualifying VRU HIN segments and perform manual cleaning output from the tool. This step eliminates segments that the tool may have selected where no crashes have occurred, such as on roads perpendicular to a high-crash corridor. It also fills small gaps in otherwise contiguous networks.

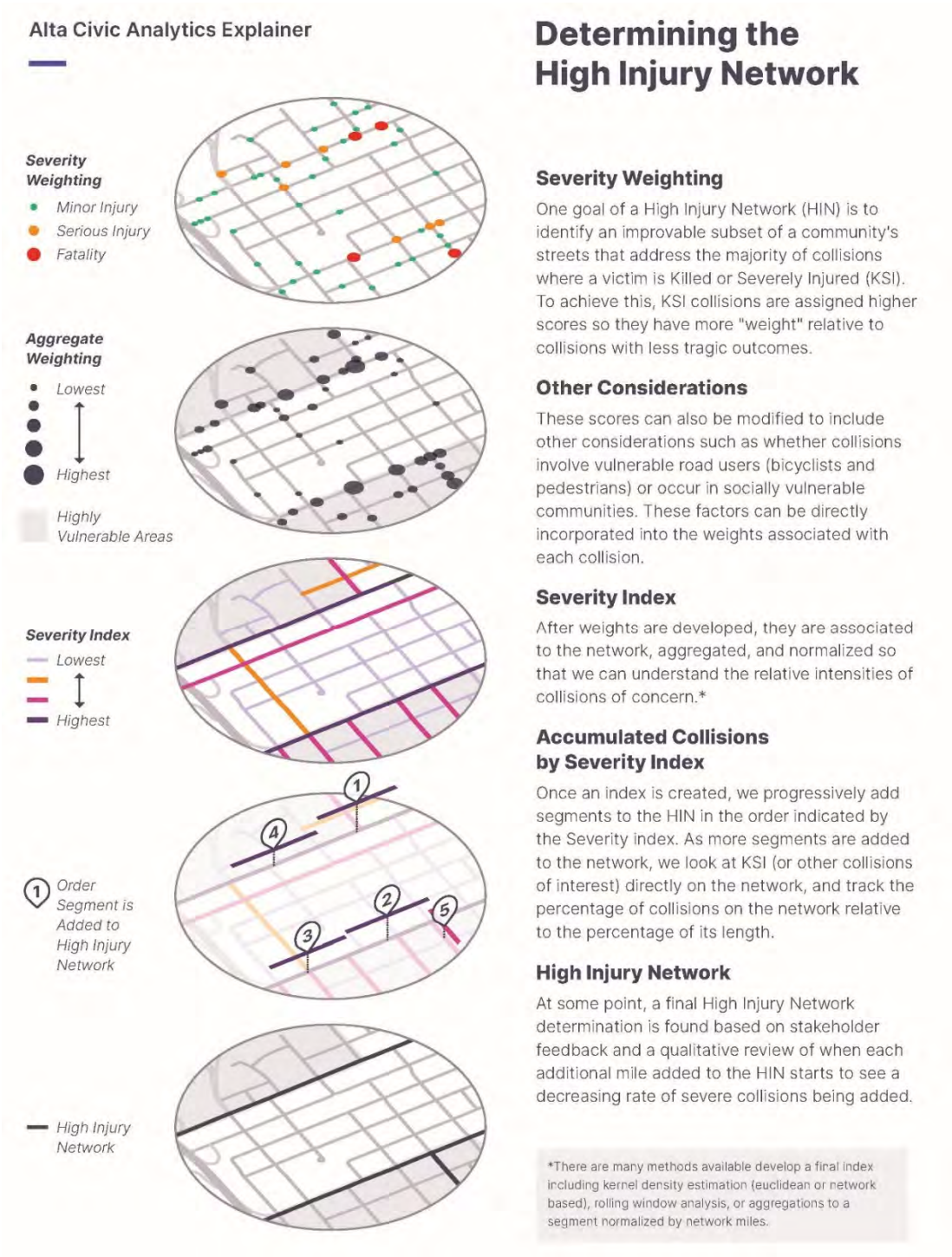
Figure 2: Crash Accumulation and Accumulated Length



5.7 Limitations

The VRU HIN includes crash data beginning in 2013, which predates many safety improvements throughout the state, most notably on Central Avenue in Albuquerque. Therefore, the HIN highlights some segments that may not currently be responsible for the most VRU injuries. Where the HIN highlights areas that are known to have been improved, examining more recent data post-improvements will help to determine if improvements are helping to drive crash rates down.

Figure 3: Alta's HIN Development Process



6 Prioritization Analysis

6.1 Purpose

The goal of the prioritization spatial analysis is to inform the prioritization of safety improvement project locations for the New Mexico Vulnerable Road Users Analysis. The analysis methodology is informed by the High Injury Network and crash profiles (Tasks 8.2 and 8.3, respectively). This technical approach outlines key aspects of the analysis methodology to suggest priority locations for improving vulnerable road user safety. The final deliverable is a list of the corridors and segments that should be given highest priority for improvements to bicycle and pedestrian infrastructure in order to reduce risk to vulnerable road users.

6.2 Summary

To determine the roadways that should be prioritized for investment, Alta calculated a VRU prioritization score based on the Crash Severity Index and the Equity Analysis. Scores for safety and equity were combined using a weighted average to obtain a weighted score for every segment in the study area, in this case the High Injury Network. Because the crash severity index was originally on a scale of 0 – 742 and the equity index was on a scale of 12 - 85, the safety and equity scores for each segment were first percentile-ranked so that they were uniformly distributed on a 100-point scale. Each segment's safety and equity scores were then weighted and summed to generate a final VRU Prioritization score. Weights are listed in Table 3.

Table 3 Prioritization Criteria Summary

Criteria	Measures	Data Source	Weight
Safety	The typical intensity of severe, bicycle and pedestrian crash patterns	NM Uniform Crash Report	75%
Equity	Equity index leveraging a combination of demographic and public health data to identify socially vulnerable populations with high investment need.	Alta Equity Analysis tool, or another if preferred	25%

6.3 Methodology

Alta created a comprehensive prioritization dataset to gather all key roadway-level attributes in one place. Alta considered all segments on the High Injury Network or intersections that intersect with the High Injury Network as its study area for this dataset. This comprised 991 road segments and 3,385 intersections.

Alta created most attributes of this table by using spatial join tools in ArcGIS Pro with data provided by NMDOT and partners along with data derived for other tasks in the VRU analysis. Alta spatially joined data to roadway segments and intersections. This data included:

- Roadway features
- Local jurisdictions and planning organizations
- Roadway projects underway along the corridor
- Crash profiles represented on that corridor
- Location along the roadway. For segments along roadways with mileposts, the nearest milepost on each side of the segment were reported. Since most 1-mile segments would intersect a milepost, the reported mileposts were one mile before and one mile after this milepost.
- Crash severity index
- Equity index
- Final VRU prioritization score

Using the attributes featured in this dataset, NMDOT staff can apply filters by geography and obtain ranked lists of segments and intersections ripe for safety investment. This data is available in both GIS shapefile and Excel format. For a complete list of attributes in this dataset, please see the data dictionary.

References

Federal Highway Administration (FHWA), n.d. “KABCO Injury Classification Scale and Definitions.” *FHWA.* Available at: https://safety.fhwa.dot.gov/hsip/spm/conversion_tbl/pdfs/kabco_ctable_by_state.pdf.

Appendix B
Safety Assessment Maps

1 Introduction

1.1 Digital Maps Available

For a more optimal viewing experience, zoomable and navigable maps are available online at the NMDOT: Planning Division GIS Hub, scrolling down to the Interactive Mapping Applications section, then choosing the “NM Vulnerable Road User” tool from the available list of resources. If digital review is infeasible due to technological limitations, contact the NMDOT planning division at 505- 795-1401 or dot.nm.gov/contact-us/ for assistance. Staff at your local MPO or RTPO are also available to provide assistance.

Appendix C
Historical Crash Trends Analysis

1 Introduction

This memo provides an analysis of historical Vulnerable Road User (VRU) Crashes in New Mexico. For the purpose of this memo, Vulnerable Road User will be defined as pedestrians and bicyclists. The crash trends analysis was conducted on crash data from years 2013 to 2023. In those years, a total of 9,745 crashes occurred that involved pedestrians or bicyclists. Tables and raw data that support this analysis have been sent within an Excel spreadsheet for a complete look at the available data. The conclusions deemed most salient have been included in the analysis.

The following information was not available to analyze:

- Presence of sidewalks on roadway
- Presence of crosswalk at intersection

A separate equity analysis is being conducted to analyze the demographic and underrepresented population characteristics of high crash locations within the state. As well, crash profiles are being developed to determine correlation patterns between a number of the crash variables described below.

Within this memo, the KABCO categorization system is used to label crash severity. Crashes are categorized within the system by designating each crash by the most severe injury or fatality that occurred to anyone involved in the crash.

- K- Killed
- A – Serious Injury
- B – Suspected Minor Injury
- C – Complaint of Injury
- O – No Apparent Injury

Special consideration is given to analyzing crashes that resulted in a fatality or serious injury. These will be referred to as KA crashes for the duration of the memo.

2 VRU Crash Rates Over Time

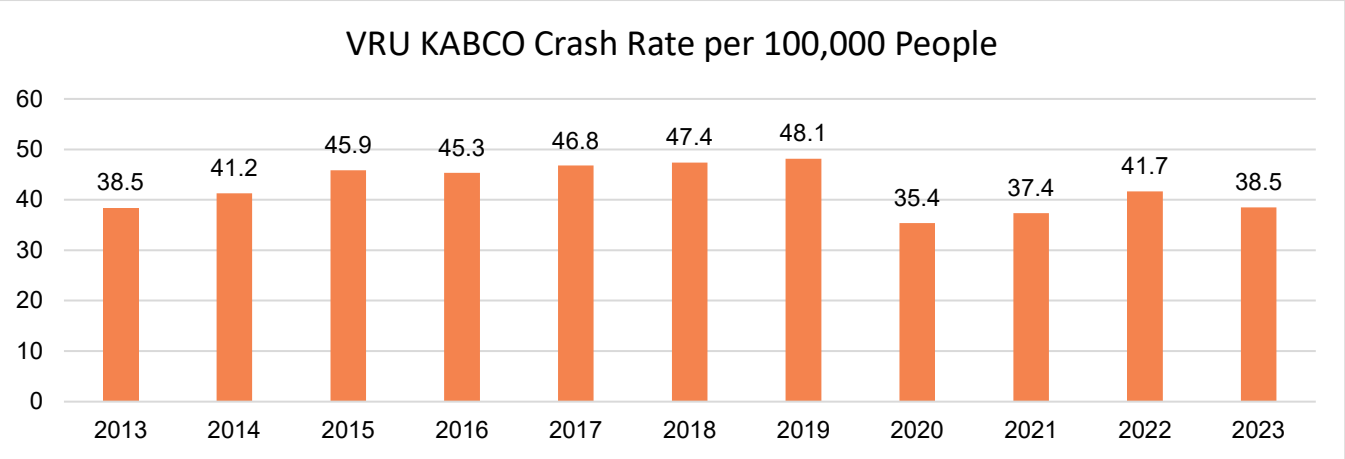
Between 2013 and 2023, a total of 9,745 crashes occurred that involved pedestrians or bicyclists. Of the VRU crashes, 6,291 (or 65%) involved pedestrians and 3,454 (35%) involved bicyclists. Some crashes involved both bicyclists and pedestrians, making the number of total VRU crashes fewer than the sum of each mode.

The VRU-involved crashes represent 2.1% of all roadway crashes (470,600) that occurred in New Mexico during these years.

A portion of crashes involved multiple pedestrians/bicyclists/victims. As such, the grand totals for the demographic data tables in the mode specific analysis below exceeds that of the grand total number of crashes for the time period.

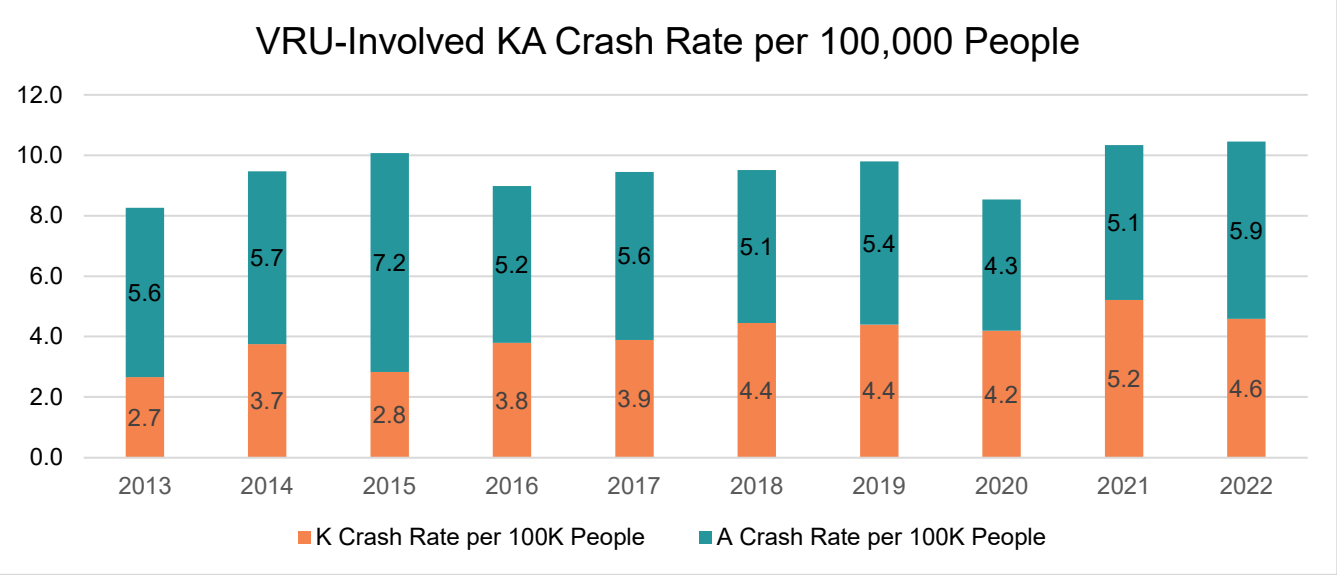
The crash rate for all VRU-involved crashes averaged 42.4 crashes per 100,000 people per year from 2013-2023.

Figure 1: VRU KABCO Crash Rate by Year



There were a total of 2,211 VRU-Involved KA crashes between 2013 and 2023 – 937 fatalities and 1,274 serious injuries. 1,886 of the VRU-involved KA crashes involved pedestrians, and 327 involved a bicyclist. Two crashes involved both a pedestrian and a bicyclist. The VRU-involved KA crash rate averaged 9.6 per 100,000 population per year from 2013 to 2023.

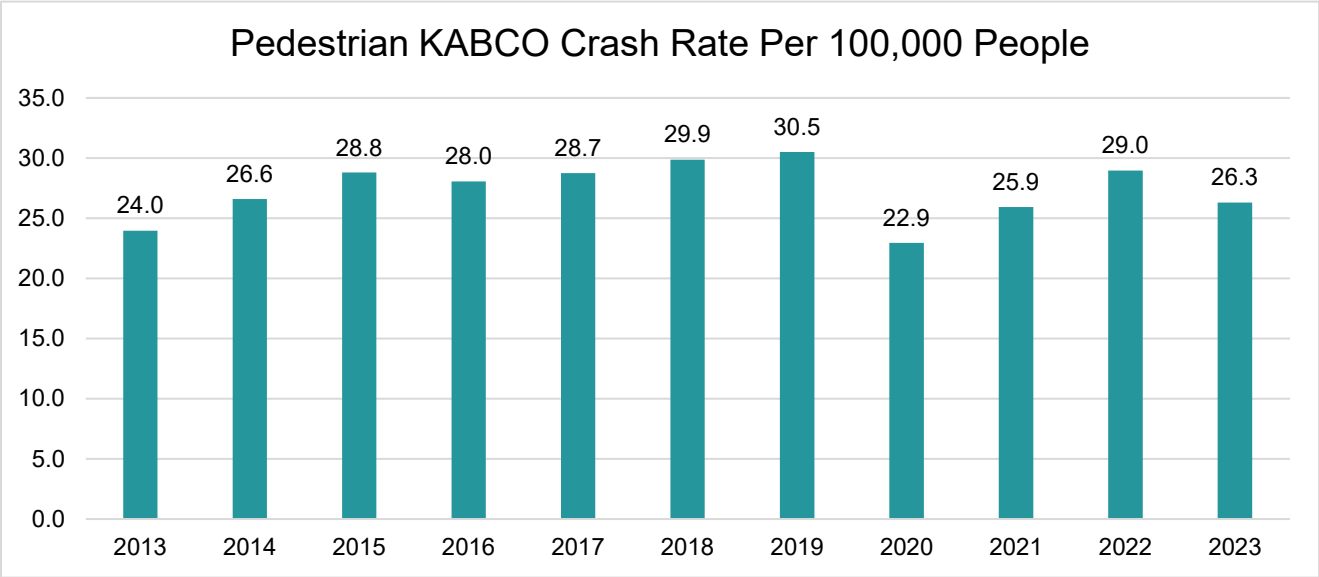
Figure 2: VRU-Involved KA Crash Rate by Year



Overall, from 2013 to 2023, KA crashes made up 23% of all VRU-involved crashes in New Mexico. While the rate of all KABCO VRU-Involved crashes has declined since 2019, the rate of KA crashes increased after a dip in 2020 to roughly tie the all-time high.

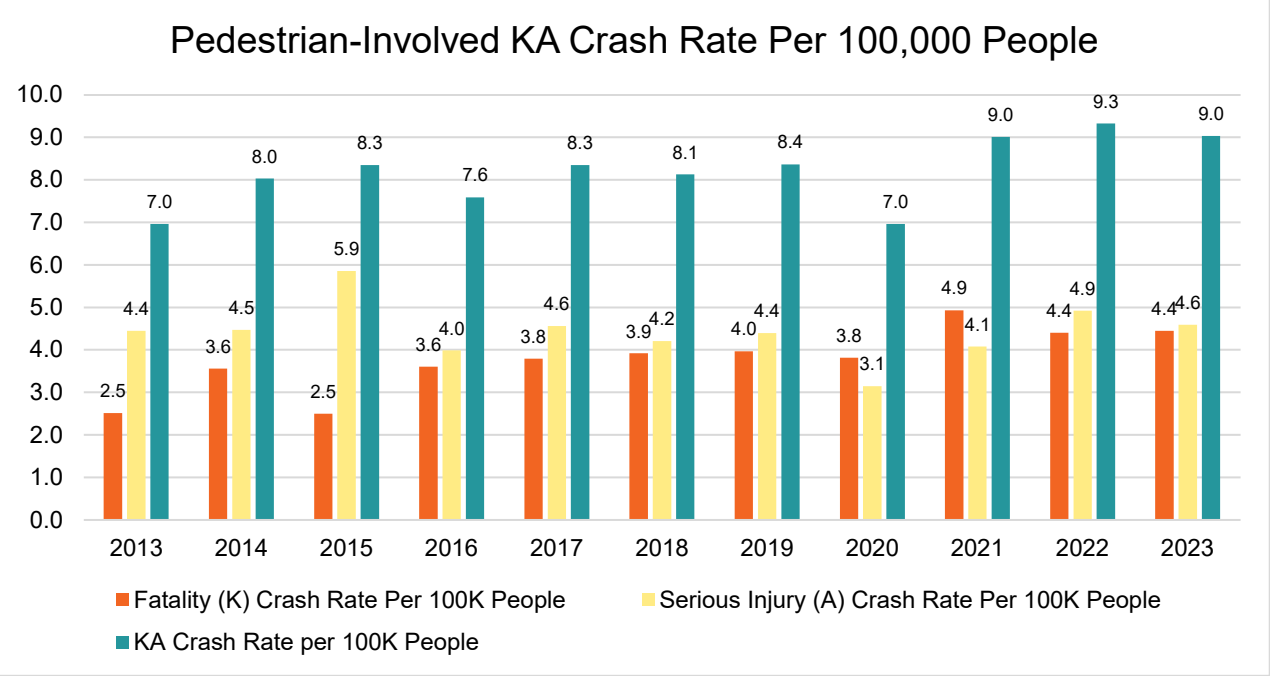
3 Pedestrian

Figure 3: Pedestrian KABCO Crash Rate by Year



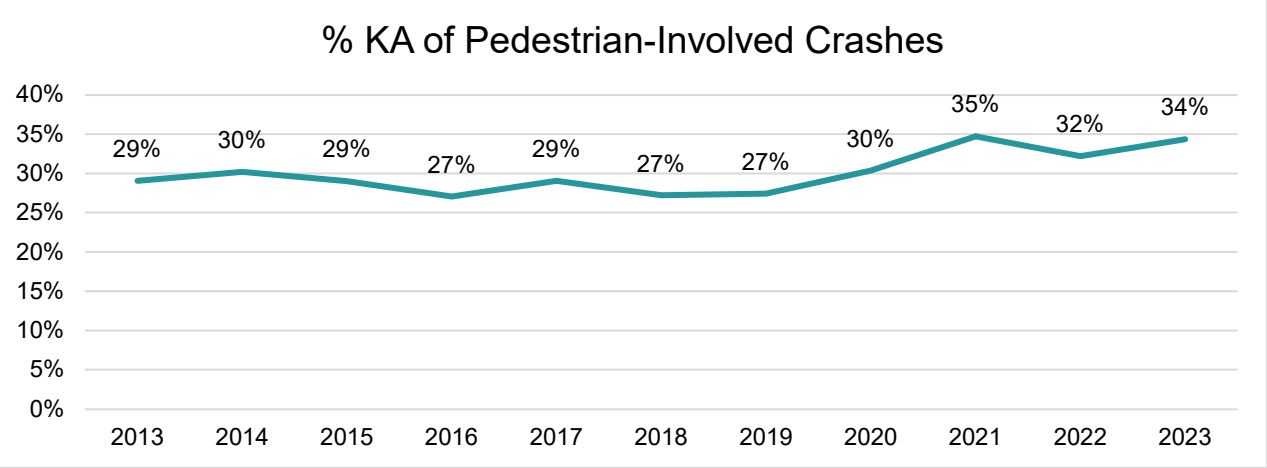
The rate of pedestrian-involved crashes per 100k population steadily increased between 2013 and 2019 and dropped in 2020. It then increased but decreased in 2023.

Figure 4: Pedestrian-Involved KA Crash Rate by Year



The rates of Pedestrian-involved KA crashes has steadily increased over time - with the exception of 2020 when New Mexico experienced reduced mobility due to the Covid pandemic. This infers that pedestrian-involved crashes in New Mexico are becoming more severe over time. Where KA crashes accounted for 29% of all pedestrian-involved crashes in 2013, they now make up 34% of all pedestrian-involved crashes in 2023.

Figure 5: KA of Pedestrian-Involved Crashes by Year



3.1 Crash Locations

3.1.1 Urban or Rural Context

26.9% of Pedestrian-Involved KA crashes occurred in a rural context as defined by the NMDOT. The NMDOT defines “rural” as any area outside of an incorporated municipality.

3.1.2 Population Density

Looking at residential population density, the most KA crashes occurred in a low population density context, followed by high density. The fewest occurred in a medium population density setting.

Table 1: Population Density of Pedestrian-Involved KA Crashes

	KA Crashes	% of KA Crashes	% of Total Land Area in NM
High Density	606	32.1%	99.8%
Medium Density	349	18.5%	0.1%
Low Density	893	47.3%	0.1%
Unknown	38	2.0%	
Total	**1886**	**100.0%**	**100.0%**

We have defined the population density brackets as:

- High = Greater than 6 people per acre
- Medium = Between 3 and 6 people per acre
- Low = Less than 3 people per acre

3.1.3 Tribal Jurisdiction

About 5.9% of KA collisions occurred on tribal land. The percentage of KA crashes occurring on tribal land is less than would be expected in relation to the percentage of center line miles and population that reside within tribal land. It should be pointed out that many people who are not Native American also live on tribal land. Please review the Race/Ethnicity tables of VRU crash victims for further context.

Table 2: Tribal Jurisdiction of Pedestrian-Involved KA Crashes

	KA Crashes	% of KA Crashes	% of NM Centerline Miles on Tribal Land	% of NM Population Living on Tribal land
Not on Tribal Land	1775	94.1%	91%	90%
On Tribal Land	111	5.9%	9%	10%
Total	**1886**	**100%**	**100%**	**100%**

3.1.4 Near Transit

The percentage of pedestrian-involved KA crashes that occurred near transit is highly over-represented. “Near transit” is defined as within 100 meters of a bus or rail stop. About 15.8% of pedestrian-involved KA crashes occurred near transit, and 58% of those were on Central Avenue in Albuquerque, along what is now the Albuquerque Rapid Transit corridor. In comparison, less than 1% of New Mexico’s road network lies within 100 meters of a known transit stop. Due to possibly incomplete bus stop data, the actual number of crashes near transit and share of roadways near transit may be higher.

Table 3: Transit Proximity of Pedestrian-Involved KA Crashes

Near Transit	KA Crashes	% of KA Crashes	% of Centerline Miles within 100m of Transit	% of NM Lane Miles within 100m of Transit
No	1588	84.2%	99.0%	99.0%
Yes	298	15.8%	1.0%	1.0%
Total	**1886**	**100.0%**	**100.0%**	**100.0%**

3.2 Roadway Characteristics

3.2.1 Intersection vs. Non-Intersection

Of 1,886 pedestrian-involved KA crashes, 1,190 (63.1%) occurred at intersections. 36.9% occurred on roadways not at intersections. To determine this factor, a buffer analysis was conducted in ArcGIS to determine the proximity of a crash to an intersection. Crashes were determined to have occurred at an intersection if they were within 100 feet of the intersection of two roadway line segments. Also included in the balance are crashes that occurred off designated roadways, such as in parking lots or alleys.

3.2.2 Intersection Crashes

3.2.2.1 Near a Signalized Intersection

About 29% of all pedestrian-involved KA crashes occurred near a signalized intersection. 44% of pedestrian-involved KA crashes at intersections were near a signalized intersection. The remaining 56% of intersection crashes were therefore at unsignalized intersections. “Near” is defined as within 100 feet of a traffic signal, which was the typical length of the approach lanes at a signal.

3.2.2.2 Intersection Lighting

The level of lighting at the intersection did not correlate with crash rates at the intersection. Of KA crashes at an intersection, unlighted intersections at night represented 23%, lighted intersections at night represented 39% of crashes, and 34% occurred in daylight.

3.2.2.3 Roadway Classifications of KA Crashes at Intersections

40.2% of pedestrian-involved KA crashes at intersections occurred where a major arterial intersects with a local roadway, as shown in Table 4. However, only 3.6% of all intersections in New Mexico are the junction of a major arterial and a local road, as shown in Table 5. Meanwhile, only 7.8% were at intersections between two local roads, while this intersection class type makes up 78% of all intersections in the state.

Table 4: Pedestrian KA Crashes at Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	128 (10.8%)	80 (6.7%)	114 (9.6%)	24 (2.0%)	478 (40.2%)
Minor Arterial		21 (1.8%)	30 (2.5%)	1 (0.1%)	124 (10.4%)
Major Collector			9 (0.8%)	4 (0.4%)	73 (6.1%)
Minor Collector				--	8 (0.7%)
Local					93 (7.8%)
Total*	**824 (69.4%)**	**256 (21.5%)**	**231 (19.4%)**	**38 (3.2%)**	**776 (65.3%)**

*(% of crashes that involve at least one street of this classification)

Table 5: All Roadway Intersections in New Mexico by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	0.27%	0.20%	0.33%	0.12%	3.61%
Minor Arterial		0.20%	0.31%	0.11%	5.20%
Major Collector			0.34%	0.16%	7.31%
Minor Collector				0.23%	3.10%
Local					78.28%

3.2.2.4 Speed Limit of Crashes at Intersections

Most pedestrian-involved KA crashes involve at least one road with a speed limit between 30 and 45 mph, see Table 6.

Table 6: Speed limit of Pedestrian KA Crashes at Intersections

Speed Limit of Roadways at Intersection	<20	20-25	30-35	40-45	50+
<20	1 (0.1%)	4 (0.3%)	47 (3.9%)	56 (4.7%)	11 (0.9%)
20-25		19 (1.6%)	113 (9.5%)	61 (5.1%)	3 (0.3%)
30-35			350 (29.4%)	260 (21.8%)	42 (3.5%)
40-45				174 (14.6%)	32 (2.7%)
50+					17 (1.4%)
Total*	**119 (10.0%)**	**200 (16.8%)**	**812 (68.2%)**	**583 (49.0%)**	**105 (8.8%)**

*(% of crashes that involve at least one street of this speed limit)

3.2.2.5 AADT of Crashes at Intersections

Intersection crashes were most likely to occur between low-volume roads (under 2,000 annual average daily traffic [AADT]) and higher volume roads (Over 10,000 AADT), as shown in Table 7.

Table 7: AADT of Pedestrian KA Crashes at Intersections

AADT of Roadways at Intersection	< 2,000	2,000 – 5,000	5,001 – 10,000	10,001 – 20,000	20,001 – 50,000	>50,000
< 2,000	117 (9.8%)	73 (6.1%)	107 (9.0%)	232 (19.5%)	293 (24.6%)	25 (2.1%)
2,000 – 5,000		4 (0.3%)	23 (1.9%)	35 (2.9%)	40 (3.4%)	7 (0.6%)
5,000 - 10,000			7 (0.6%)	23 (1.9%)	42 (3.5%)	4 (0.3%)
10,000 - 20,000				16 (1.3%)	96 (8.1%)	5 (0.4%)
20,000 - 50,000					31 (2.6%)	9 (0.8%)
>50,000						1 (0.1%)
Total*	**847 (71.2%)**	**182 (15.3%)**	**206 (17.3%)**	**407 (34.2%)**	**511 (42.9%)**	**51 (4.3%)**

*(% of crashes that involve at least one street of this AADT)

3.2.2.6 Number of Lanes of Crashes at Intersections

84.5% of pedestrian-involved KA crashes at intersections involve a two-lane road, as shown in Table 8.

Table 8: Lane Count of Intersections – Pedestrian KA Crashes

Lane Count of Roadways at Intersections	1	2	3	4	5	6	8+
1	2 (0.2%)	2 (0.2%)	1 (0.1%)	9 (0.8%)	1 (0.1%)	10 (0.8%)	2 (0.2%)
2		311 (26.1%)	5 (0.4%)	345 (29.0%)	17 (1.4%)	315 (26.5%)	10 (0.8%)
3			1 (0.1%)	2 (0.2%)	--	--	--
4				43 (3.6%)	--	38 (3.2%)	9 (0.8%)
5					1 (0.1%)	16 (1.3%)	4 (0.3%)
6						46 (3.9%)	--
Total*	**27 (2.3%)**	**1,005 (84.5%)**	**9 (0.8%)**	**446 (37.5%)**	**39 (3.3%)**	**425 (35.7%)**	**25 (2.1%)**

*(% of crashes that involve at least one street with this number of lanes)

3.2.3 Non-Intersection Crashes

696 pedestrian KA crashes occurred outside of intersections.

3.2.3.1 Roadway Classification of KA Crashes Not at Intersections

Non-intersection pedestrian-involved KA crashes disproportionately occurred on interstates and major arterials, which together account for almost two-thirds of these non-intersection crashes, as shown in Table 9.

Table 9: Non-Intersection Pedestrian-Involved KA Crashes by Roadway Class

Road Classification	KA Crashes	% of KA Crashes	% of NM Centerline Miles	% of NM Lane Miles
Interstate/Freeway	165	23.7%	2%	3%
Major Arterial	272	39.1%	4%	6%
Minor Arterial	75	10.8%	4%	4%
Major Collector	49	7.0%	7%	7%
Minor Collector	16	2.3%	5%	5%
Local	74	10.6%	78%	75%
Unknown	45	6.5%	2%	0%
Total	**696**	**100%**	**100%**	**100%**

3.2.3.2 Speed Limit of Crashes Not at Intersections

Table 10: Pedestrian KA Crashes Not at Intersections by Roadway Speed Limit

Posted Speed Limit (MPH)	KA Crashes	% of KA Crashes	% of NM Centerline Miles	% of NM Lane Miles
Under 20	5	0.7%	1.6%	1.6%
20 - 25	17	2.4%	1.5%	1.5%
30 - 35	157	22.6%	72.7%	70.2%
40 - 45	166	23.9%	9.5%	9.8%
50+	290	41.7%	12.8%	15.2%
Unknown	61	8.8%	1.9%	1.8%
Total	**696**	**100%**	**100%**	**100%**

Source: NMDOT Roadways layer and Replica Free Flow Speeds module, 2022. Local roads without speed data were presumed to have a speed limit of 30 MPH.

Pedestrian-involved KA crashes that occur along the roadway (not at an intersection) are most likely to occur on roadways with speed limits of 50+ mph, as shown in Table 10.

Looking only at KA crashes on roads with known speed limits, roads with speed limits above 40 mph represent a disproportionately high percent of KA crashes compared to the share of the state's roadways that have these speed limits. Roads with speed limits between 20 and 25 mph are also slightly overrepresented, but this likely reflects the roads that have higher volumes of pedestrians.

3.2.3.3 AADT of Crashes Not at Intersections

Roads with 0-2,000 AADT represent 86.9% of New Mexico's center line miles across the state, as shown in Table 11. Despite their ubiquity, only 19.4% of pedestrian-involved KA crashes occurred on these low AADT roads. Above 2,000 AADT, a clear relationship emerges, the higher the AADT range, the more disproportionate the share of KA crashes is.

Table 11: Roadway AADT of Pedestrian-Involved KA Crash Locations

Roadway AADT	KA Crashes	% of KA Crashes	% of Centerline Miles	% of Lane Miles in NM
0-2,000	135	19.4%	87%	61%
2,000-5,000	89	12.8%	4%	15%
5,000-10,000	85	12.2%	2%	9%
10,000-20,000	156	22.4%	2%	8%
>20,000	173	24.9%	1%	4%
Unknown	58	8.3%	5%	2%
Total	**696**	**100.0%**	**100%**	**100%**

3.2.3.4 Number of Lanes of Crashes Not at Intersections

Crashes along the roadway most frequently occur on two-lane roads, as shown in Table 12. Followed by four-lane roads. This, despite higher AADT correlating with a more disproportionate number of KA crashes. These lower-lane-count roads, are likely to still carry a high number of vehicles per day.

Table 12: Number of Lanes on Roadway for Pedestrian KA Non-Intersection Crashes

Number of Lanes	KA Crashes	% of KA Crashes
1	29	4.2%
2	227	32.6%
3	3	0.4%
4	310	44.5%
5	5	0.7%
6	62	8.9%
7	1	0.1%
8	12	1.7%
10	4	0.6%
12	1	0.1%
Unknown	42	6.0%
Total	**696**	**100%**

3.3 Temporal Frequency and Context

3.3.1 Lighting Conditions

65.8% of pedestrian-involved KA crashes occurred at night, as shown in Table 13. Roughly half of those occurred with street lighting present, half without. 29.5% of crashes occurred in lighting described as “daylight.”

Table 13: Lighting Conditions of Pedestrian-Involved KA Crashes

Lighting Conditions	KA Crashes	% of KA Crashes
Dark-Lighted	600	31.8%
Dark-Not Lighted	630	33.4%
Dark-Unknown Lighting	11	0.6%
Dawn	22	1.2%
Daylight	557	29.5%
Dusk	49	2.6%
Other	3	0.2%
Unknown or Not Reported	14	0.7%
Total	**1,886**	**100.0%**

3.3.2 Hour and Day of the Week

KA crashes are most likely to occur between 5 and 9:59 pm on all days of the week. Within that hour range, Friday and Saturday evenings (again, from 5 to 9:59pm) are the most likely portion of the week for KA crashes. If divided evenly, one would expect 14.3% of crashes to occur on any given day. 16.9% of crashes occurred on a Friday. 16.2% of crashes occurred on a Saturday. All other days of the week saw between 11.9% and 14.3% of crashes.

3.3.3 Hour and Month

When analyzing time of day by month, the period from 5 to 9:59pm remains the most common for pedestrian-involved KA crashes. About 48% of KA crashes occur in during this time window. However, an additional pattern emerges where the hour most likely for crashes to occur follows the change in sunset time across the year. In January, crashes are most likely at 6pm. In June, crashes are most likely at 9pm. In December, crashes are most likely at 5pm. The most common time and month for crashes is 7pm in October. Sunset appears to be a large factor in pedestrian-involved KA crashes. This may be due to street lights turning on later in the twilight hours, making pedestrians less visible, or it may be due to a low hanging sun shining in the eyes of drivers. When analyzing crashes during the 5 to 9:59pm timeframe, crashes are slightly more likely to occur when the vehicle is traveling west (20.2%), compared to when the vehicle is travelling east (17.4%).

Table 14: Pedestrian-Involved KA Crashes by Hour and Month

	January	February	March	April	May	June	July	August	September	October	November	December	
12 a.m.	5	3	5	4	1	8	8	6	7	7	4	4	**62**
1 a.m.	8	4	2	1	2	8	6	6	3	4	3	4	**51**
2 a.m.	5	6	3	3	4	1	4	3	3	6	1	1	**40**
3 a.m.	0	4	1	2	1	2	5	4	4	3	0	1	**27**
4 a.m.	5	3	1	1	3	4	3	2	4	0	1	1	**28**
5 a.m.	2	5	0	1	5	3	2	7	3	5	2	3	**38**
6 a.m.	3	3	4	2	1	3	0	4	6	7	5	9	**47**
7 a.m.	5	2	5	3	6	0	5	4	4	8	4	4	**50**
8 a.m.	7	2	2	2	2	2	2	0	5	1	1	1	**27**
9 a.m.	7	1	2	2	3	0	3	3	2	1	4	4	**32**
10 a.m.	1	2	2	3	1	0	4	5	1	5	5	3	**32**
11 a.m.	2	6	0	2	4	2	4	4	1	7	4	2	**38**
12 p.m.	2	0	6	6	1	4	4	8	3	4	2	4	**44**
1 p.m.	1	3	6	10	2	2	2	5	8	3	3	4	**49**
2 p.m.	1	4	5	2	2	4	1	5	1	10	2	3	**40**
3 p.m.	4	10	4	5	5	4	2	6	8	3	4	11	**66**
4 p.m.	7	10	4	3	6	5	4	3	7	7	3	9	**68**
5 p.m.	16	14	3	5	3	3	8	7	4	3	21	35	**122**
6 p.m.	28	26	9	3	5	4	7	6	7	10	33	27	**165**
7 p.m.	20	13	20	8	5	7	8	9	25	43	16	20	**194**
8 p.m.	17	13	20	27	22	13	9	18	16	25	19	15	**214**
9 p.m.	12	5	21	15	24	33	21	19	11	12	20	12	**205**
10 p.m.	12	6	11	11	15	14	14	9	18	9	9	7	**135**
11 p.m.	3	11	8	6	15	14	19	8	3	7	13	5	**112**
	173	**156**	**144**	**127**	**138**	**140**	**145**	**151**	**154**	**190**	**179**	**189**	**1886**
	9.2%	**8.3%**	**7.6%**	**6.7%**	**7.3%**	**7.4%**	**7.7%**	**8.0%**	**8.2%**	**10.1%**	**9.5%**	**10.0%**	

3.3.4 Day of the Week and Month

The most dangerous months for pedestrians are October, December, and November, as shown in Table 14. Within these months, Fridays are the most dangerous day of the week. The darkness and holidays that occur in these months likely contribute to the higher number of KA crashes. Fridays in October are the most dangerous day of the week of any month.

3.4 Behavioral Factors

3.4.1 Alcohol Involvement

Alcohol was not involved in 65.7% of pedestrian-involved KA crashes. In 2.7% of KA crashes, the driver has imbibed alcohol. In 31.7% of KA crashes the pedestrian had imbibed alcohol. In 0% of the crashes, both the driver and pedestrian had imbibed alcohol. It is unclear how officers are determining and reporting pedestrian alcohol involvement- whether this is on-scene or determined later through testing at the hospital.

3.4.2 Drug Involvement

Drugs were not involved in 84.8% of pedestrian-involved KA crashes. In 1.2% of KA crashes the driver had consumed drugs, in 14.2% the pedestrian, and in 0.2% of KA crashes both the driver and pedestrian had consumed drugs.

3.4.3 Primary Crash Factor

The primary crash factor was unavailable for 58.4% of pedestrian-involved KA crashes. In 44.0% of KA crashes, alcohol or drugs was determined to be the primary crash factor. In 30.4% of crashes, pedestrian error was the primary factor. However, the NMDOT Pedestrian Safety Action Plan specifies that this metric is suspected to be erroneous in relation to officer reporting of circumstances and is a broad category that could represent many pedestrian behaviors. The third most likely primary crash factor was driver inattention, which was the primary crash factor in 9.4% of KA crashes.

3.4.4 Crash Analysis

Table 15. Crash Analysis of Pedestrian-Involved KA Crashes

Crash Analysis	KA Crashes	% of KA Crashes (with analysis field containing data)
Pedestrian Collision - Vehicle Going Straight	1,066	78.9%
Pedestrian Collision - All Others and Not Known	95	7.0%
Pedestrian Collision - Vehicle Turning Left	92	6.8%
Pedestrian Collision - Vehicle Turning Right	66	4.9%
Pedestrian Collision - Vehicle Backing	32	2.4%
Total	**1,351**	**100.0%**

The top 5 most reported crash analysis descriptions are listed in the table above. The crash analysis was left blank in 535 of 1,886 crash reporting forms. Percents shown in the table are displayed as a fraction of the 1,351 crashes with a filled in crash analysis field. The most common crash description in pedestrian-involved KA crashes is that the vehicle was travelling forward and straight at the time of the crash.

3.4.5 Turning Movements

In the majority of pedestrian-involved KA crashes, the direction of travel is described as “straight,” representing 78.9% of KA crashes. KA crashes are slightly more likely for left turns (6.8%) than for right turns (4.9%).

3.4.6 Hit and Run Occurrence

Hit and runs occur in 23.5% of pedestrian-involved crashes, as shown in Table 16.

Table 16: Hit and Run Pedestrian-Involved KA Crashes

Hit and Run	KA Crashes	% of KA Crashes
No	1,443	76.5%
Yes	443	23.5%
Total	**1,886**	**100%**

3.5 Demographics of Pedestrian Crash Victims

3.5.1 Age of Victim

In Table 17, the age of victims in pedestrian-involved KABCO crashes can be seen. People ages 35-49 are the most likely to be involved in a pedestrian-involved crash. However, those ages 25-34 are the most disproportionately likely, in relation to their share of the overall population.

Table 17: Age of Victims in Pedestrian-Involved KABCO Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Suspected Minor Injury (B)	Complaint of Injury (C)	No Apparent Injury (O)	Total	% of Pedestrian Crash Victims	% of 2023 Population
0-14	8	31	157	95	27	318	4.5%	17.2%
15-24	104	160	418	353	89	1,124	16.0%	13.2%
25-34	199	214	432	390	103	1,338	19.1%	13.1%
35-49	251	280	542	433	89	1,595	22.8%	18.7%
50-64	251	230	468	414	73	1,436	20.5%	17.9%
65+	128	185	395	277	212	1,197	17.1%	19.9%
Total	941	1,100	2,412	1,962	593	7,008	100.0%	
% of Total	**13%**	**16%**	**34%**	**28%**	**8%**	**100%**		

However, if involved in a crash, the older someone is, the more severe the outcome, as shown in Table 18. The cells in each column have been color coded from highest to lowest percent to show which age range is the most represented within that crash severity. Pedestrians between 50 and 64 were killed in 17% of crashes they are involved in. For those 0-14, they were killed in 3% of crashes they are involved in.

Table 18: Likelihood of Severity Outcome for Each Age Range - Pedestrian-Involved KA Crashes

Age	Killed (K)	% of Age Range Crashes (K)	Suspected Serious Injury (A)	% of Age Range Crashes (A)	Suspected Minor Injury or Complaint of Injury (B or C)	% of Age Range Crashes (B or C)	No Apparent Injury (O)	% of Age Range Crashes (O)	Total
0-14	8	3%	31	10%	252	79%	27	8%	318
15-24	104	9%	160	14%	771	69%	89	8%	1124
25-34	199	15%	214	16%	822	61%	103	8%	1338
35-49	251	16%	280	18%	975	61%	89	6%	1595
50-64	251	17%	230	16%	882	61%	73	5%	1436
65+	128	11%	185	15%	672	56%	212	18%	1197
Total	**941**		**1,100**		**4,374**		**593**		

When looking at just victims of KA crashes, those 35 to 49 are the most disproportionately represented in relation to their share of the population, as shown in Table 19. The second most disproportionately represented is the 25-34 year-old age range.

Table 19: Age of Victim in Pedestrian-Involved KA Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Total	% of Pedestrian KA Crash Victims	% of 2023 Population
0-14	8	31	39	1.9%	17.2%
15-24	104	160	264	12.9%	13.2%
25-34	199	214	413	20.2%	13.1%
35-49	251	280	531	26.0%	18.7%
50-64	251	230	481	23.6%	17.9%
65+	128	185	313	15.3%	19.9%
Total	**941**	**1,100**	**2,041**	**100.0%**	

3.5.2 Race/Ethnicity of Victim

Those identifying as Native American/American Indian are by far the most overrepresented in KA crashes in proportion to their share of the overall population. Despite being Native American/American Indian being 8.3% of the New Mexico population, they are 22.8% of VRU KA crash victims. The "other" category is also over represented.

Table 20: Race/Ethnicity of Victim in Pedestrian-Involved KA Crashes

Race/Ethnicity	KA Crashes	% of KA Crash Victims	2023 Population
American Indian	465	22.8%	8.3%
Asian	7	0.3%	1.7%
Black	68	3.3%	1.7%
White (Not Hispanic)	500	24.5%	35.9%
Hispanic	511	25.0%	48.6%
Other	490	24.0%	3.8%
Total	**2,041**		

3.5.3 Gender

Men are much more likely to be victims in pedestrian-involved KA crashes than women, as shown in Table 21.

Table 21: Gender of Victim in Pedestrian-Involved KA Crashes

	Killed (K)	Serious Injury (A)	Total	% of Pedestrian-Involved KA Crash Victims
Female	228	335	563	27.6%
Male	713	753	1466	71.8%
Unknown	0	12	12	0.6%
Total	**941**	**1,100**	**2,041**	**100.0%**

3.6 Driver Residency

Table 22 below depicts driver residency of both parties involved in a crash. The data shows that approximately 63% of crashes involved two local drivers and approximately 35% of crashes involved a local and out of state drivers. It's important to note that there is ambiguity on how driver residency was determined. Example being whether reporting data included driver license or vehicle license plate.

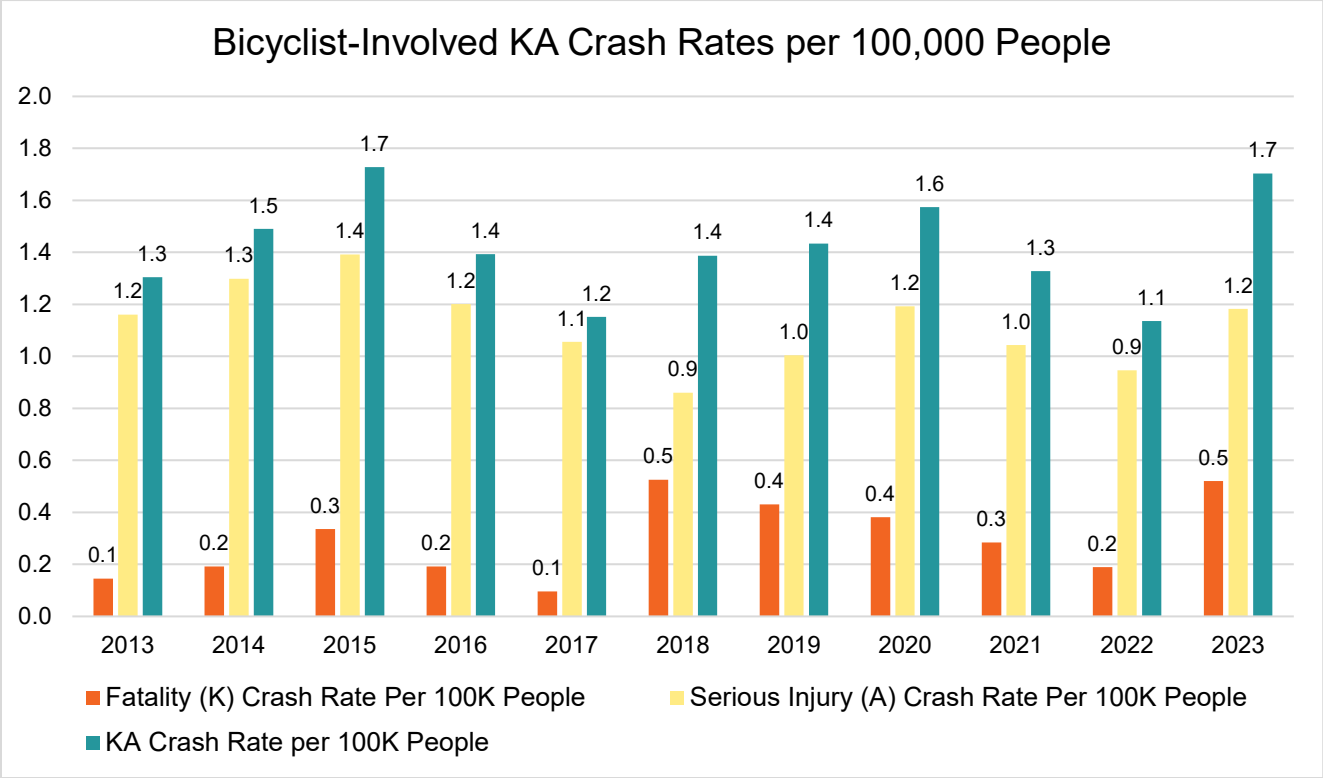
Table 22: Residency of Driver in Pedestrian-Involved KA Crashes.

State Residency of Vehicle Drivers	KA Crashes	% of KA Crashes
Both Local and Out of State	652	34.6%
Local Drivers	1,184	62.8%
Not Available	50	2.7%
Grand Total	**1,886**	**100.0%**

4 Bicyclist

The rate of bicyclist-involved crashes per 100K population has fluctuated over the analysis period. There were notable peaks in 2015 and 2020. Crash rates decreased in 2021 and 2022 but rose to 1.7 in 2023, as shown in Figure 6.

Figure 6: Bicyclist-Involved KA Crash Rate



4.1 Crash Locations

4.1.1 Urban or Rural Context

22.6% of bicyclist-Involved KA crashes occurred in a rural context as defined by the University of New Mexico during geocoding, using FHWA definitions, per the UNM Crash-Level Data Dictionary.

4.1.2 Population Density

Looking at residential population density, KA crashes were most likely to occur in a low population density context, followed by high density. They were least likely to occur in a medium population density setting, as shown in Table 23.

Table 23: Population Density of Bicyclist-Involved KA Crashes

	KA Crashes	% of KA Crashes	% of Total Land Area in the State
Low Density	124	37.9%	0.1%
Medium Density	82	25.1%	0.1%
High Density	112	34.3%	99.8%
Unknown	9	2.8%	
Total	**327**	**100%**	**100%**

We have defined the population density brackets as:

- High = Greater than 6 people per acre
- Medium = Between 3 and 6 people per acre
- Low = Less than 3 people per acre

4.1.3 Tribal Jurisdiction

Only 1.8% of KA collisions occurred on tribal land. The percentage of KA crashes occurring on tribal land is less than would be expected in relation to the percentage of center line miles and population that reside within tribal land. It should be pointed out that many people who are not Native American also live on tribal land. Please review the Race/Ethnicity tables of VRU crash victims for further context.

Table 24: Tribal Jurisdiction of Bicyclist-Involved KA Crashes

	KA Crashes	% of KA Crashes	% of NM Centerline Miles on Tribal Land	% of NM Population Living on Tribal land
On Tribal Land	6	1.8%	9%	10%
Not on Tribal Land	321	98.2%	91%	90%
Total	**327**	**100%**	**100%**	**100%**

4.1.4 Near Transit

The percentage of pedestrian-involved KA crashes that occurred near transit is highly over represented, as shown in Table 25. “Near transit” is defined as within 100 meters of a bus or rail stop. 12.5% of KA crashes occurred near transit. While less than 1% of New Mexico’s road network lies within 100 meters of a transit stop.

Table 25: Proximity to Transit: Bicyclist-Involved KA Crashes

Near Transit	KA Crashes	% of KA Crashes	% of Centerline Miles within 100m of Transit	% of NM Lane Miles within 100m of Transit
Yes	41	12.5%	1%	1%
No	286	87.5%	99%	99%
Total	**327**	**100%**	**100%**	**100%**

4.2 Roadway Characteristics

4.2.1 Intersection Vs. Non-Intersection

Of 327 bicycle-involved KA crashes, 75% occurred at intersections. To determine this factor, a buffer analysis was conducted in ArcGIS to determine the proximity of a crash to an intersection. Crashes were determined to have occurred at an intersection if they were within 100 feet of the intersection of two roadway line segments.

4.2.2 Intersection Crashes

4.2.2.1 Intersection Lighting

The majority of crashes at intersections occurred in daylight (66.4%).

4.2.2.2 Near Signalized Intersection

28.4% of all bicyclist-involved KA crashes occurred near a traffic signal. Of crashes at intersections, 36.9% of were near a signal. “Near” is defined as within 100 feet of a traffic signal, which was the typical length of the approach lanes at a signal. The remaining 63.1% of intersection crashes occurred at unsignalized intersections.

4.2.2.3 Roadway Classifications of KA Crashes at Intersections

27.7% of bicycle-involved KA crashes at intersections occurred at intersections between major arterials and local roads, as shown in Table 26. This follows the same pattern as pedestrian-involved KA crashes, where the intersection of smaller and larger roads is the intersection type with the highest risk. It is possible that in many cases the larger road contains no traffic signal to provide the bicyclist with a safe opportunity to cross and continue their journey on the more minor road.

Table 26: Bicycle-Involved KA Crashes at Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	17 (7.0%)	12 (5.0%)	19 (7.9%)	6 (2.5%)	67 (27.7%)
Minor Arterial		9 (3.7%)	6 (2.5%)	--	43 (17.8%)
Major Collector			1 (0.4%)	--	26 (10.7%)
Minor Collector				--	3 (1.2%)
Local					33 (13.6%)
Total*	**121 (50.0%)**	**70 (28.9%)**	**52 (21.5%)**	**9 (3.7%)**	**172 (71.1%)**

*(% of crashes that involve at least one street with this classification)

In contrast, 78% of intersections in the state are between two local roads, as shown in Table 27.

Table 27: All Roadway Intersections by Road Class

Class of Roadways at Intersection	Major Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Major Arterial	0.27%	0.20%	0.33%	0.12%	3.61%
Minor Arterial		0.20%	0.31%	0.11%	5.20%
Major Collector			0.34%	0.16%	7.31%
Minor Collector				0.23%	3.10%
Local					78.3%

4.2.2.4 Speed Limit of Crashes at Intersections

Table 281: Bicycle-Involved KA Crashes at Intersections by Speed Limit

Speed Limit of Roadways at Intersection	<20	20-25	30-35	40-45	50+
<20	--	--	16 (6.6%)	7 (2.9%)	1 (0.4%)
20-25		2 (0.8%)	36 (14.8%)	11 (4.5%)	1 (0.4%)
30-35			90 (36.9%)	51 (20.9%)	4 (1.6%)
40-45				19 (7.8%)	2 (0.8%)
50+					4 (1.6%)
Total*	**24 (9.8%)**	**50 (20.5%)**	**197 (80.7%)**	**90 (36.9%)**	**12 (4.9%)**

*(% of crashes that involve at least one street with this speed limit)

4.2.2.5 AADT of Crashes at Intersections

Table 29: Bicycle-Involved KA Crashes at Intersections by AADT

AADT of Roadways at Intersection	< 2,000	2,000 – 5,000	5,000 – 10,000	10,000 – 20,000	20,000 – 50,000	> 50,000
< 2,000	47 (19.3%)	21 (8.6%)	23 (9.4%)	46 (18.9%)	49 (20.1%)	--
2,000 – 5,000		--	3 (1.2%)	2 (0.8%)	8 (3.3%)	--
5,000 - 10,000			2 (0.8%)	12 (4.9%)	5 (2.0%)	--
10,000 - 20,000				5 (2.0%)	19 (7.8%)	--
20,000 - 50,000					2 (0.8%)	--
> 50,000						--
Total*	**186 (76.2%)**	**34 (13.9%)**	**45 (18.4%)**	**84 (34.4%)**	**83 (34.0%)**	**--**

*(% of crashes that involve at least one street with this AADT)

The intersection of low AADT roadways (below 2,000 AADT) and high AADT roadways (above 10,000 AADT) is the intersection type with the highest risk, as shown in Table 29. This correlates with the findings from the roadway classification table. Fully 76.2% of bicyclist-involved KA crashes occur at an intersection with a roadway with an AADT below 2,000.

4.2.2.6 Number of Lanes of Crashes at Intersections

Table 30: Bicyclist-Involved KA Crashes at Intersections by Number of Lanes

Lane Count of Roadways at Intersection	2	3	4	5	6	8
2	100 (41.0%)	1 (0.4%)	82 (33.6%)	6 (2.5%)	28 (11.5%)	
3			1 (0.4%)			
4			7 (2.9%)		11 (4.5%)	
6					7 (2.9%)	1 (0.4%)
Total*	**217 (88.9%)**	**2 (0.8%)**	**101 (41.4%)**	**6 (2.5%)**	**47 (19.3%)**	**1 (0.4%)**

*(% of crashes that involve at least one street with this number of lanes)

4.2.3 Non-Intersection Crashes

63 bicycle KA crashes occurred on roadways that were not intersections.

4.2.3.1 Roadway Classification of KA Crashes Not at Intersections

Non-intersection crashes disproportionately occurred on major and minor arterials, which together account for 65.1% of bicyclist KA crashes. One KA crash occurred on interstates, as shown in Table 31.

Table 31: Non-Intersection Bicycle-Involved KA Crashes by Roadway Class

Road Classification	KA Crashes	% of KA Crashes	% of NM Centerline Miles	% of NM Lane Miles
Interstate/Freeway	1	1.2%	2%	3%
Major Arterial	36	43.4%	4%	6%
Minor Arterial	18	21.7%	4%	4%
Major Collector	10	12.0%	7%	7%
Minor Collector	3	3.6%	5%	5%
Local	6	7.2%	78%	75%
Unknown	9	10.8%	2%	0%
Total	**83**	**100%**	**100%**	**100%**

4.2.3.2 Speed Limit of Crashes Not at Intersections

Table 32: Non-Intersection Bicyclist-Involved KA Crashes – Speed Limit

Posted Speed Limit (MPH)	KA Crashes	% of KA Crashes	% of NM Centerline Miles	% of NM Lane Miles
<20	4	4.8%	1.6%	1.6%
20 - 25	23	27.7%	1.5%	1.5%
30 - 35	19	22.9%	72.7%	70.2%
40 - 45	28	33.7%	9.5%	9.8%
50+	9	10.8%	12.8%	15.2%
Unknown	0	0.0%	1.9%	1.8%
Total	**83**	**100%**	**100%**	**100%**

Source: Replica Free Flow Speeds module, 2022.

As shown in Table 32, Bicyclist-involved KA crashes are most likely to occur on roadways with speed limits of 40-45 mph, but the share of crashes on these roads is much higher compared to their proportion of centerline miles in the state.

Roads with speed limits of 40 or 45 mph represent a disproportionately high percent of KA crashes compared to the share of the state's roadways that have these speed limits. While bike volumes tend to be higher on lower-speed roads, some cyclists may have little choice but to travel on higher-speed roads to reach their destinations.

4.2.3.3 AADT of Crashes Not at Intersections

Roads with 0-2,000 AADT represent 86.9% of New Mexico's center line miles across the state, as shown in Table 33. Despite their ubiquity, only 19.3% of KA crashes occurred on these low AADT roads. Roads with an AADT of 10,001- 20,000 have the most disproportionate share of bicyclist-involved KA crashes. Many more KA crashes (20.5%) occur on these roads than their share of center line miles (2%) would predict.

Table 33: AADT of Roadways of Bicyclist-Involved KA Crashes

Roadway AADT	KA Crashes	% of KA Crashes	% of Centerline Miles	% of Lane Miles in NM
0-2,000	16	19.3%	87%	61%
2,000-5,000	15	18.1%	4%	15%
5,000-10,000	18	21.7%	2%	9%
10,000-20,000	17	20.5%	2%	8%
>20,000	8	9.6%	1%	4%
Unknown	9	10.8%	5%	2%
Total	**83**	**100.0%**	**100%**	**100%**

Most bicycle-involved KA crashes that occurred outside of intersections were on roads with two lanes, as shown in Table 34.

Table 34: Number of Lanes for Bicycle-Involved KA Crashes Not at Intersections

Number of Lanes	KA Crashes	% of KA Crashes
2	38	45.8%
3	0	0.0%
4	30	36.1%
5	0	0.0%
6	5	6.0%
8	1	1.2%
Unknown	9	10.8%
Total	**83**	**100%**

4.3 Temporal Frequency and Context

4.3.1 Lighting Conditions

66.4% of bicyclist-involved KA crashes occurred in daylight. Of nighttime crashes, 60.2% occurred where street lighting was present.

Table 34: Lighting Conditions of Bicyclist-Involved KA Crashes

Lighting Conditions	KA Crashes	% of KA Crashes
Dark-Lighted	53	16.2%
Dark-Not Lighted	35	10.7%
Dawn	8	2.4%
Daylight	217	66.4%
Dusk	12	3.7%
Other	0	0.0%
Unknown or Not Reported	2	0.6%
Total	**327**	**100%**

4.3.2 Hour and Day of the Week

Bicyclist-involved KA crashes are more evenly distributed throughout the day and time than pedestrian-involved KA crashes. KA crashes appear to follow more commuter 9-5 workweek patterns than pedestrian-involved KA crashes. Bicyclist-involved KA crashes occur the most at 3pm (8.3%), 5pm (8.0%), 6pm (8.0%) and 7pm (7.0%). The most common days of the week to ride are Tuesday (19.6%) and Thursday (15.3%). If divided evenly, one would expect 14.29% of crashes to occur on any given day, and 4.17% of crashes to occur at any given hour of the day. The most common time and day of the week for crashes was Tuesday at 5pm (8 crashes) and 3pm (7 crashes).

4.3.3 Hour and Month

Bicyclist-involved KA crashes do not display the same distinct crash pattern related to sunset as do pedestrian-involved KA crashes. There were more crashes in the months of June through September. These crashes were spread out throughout the day. The months with the fewest KA crashes are December through February. The month and time with the highest number of KA crashes is 7am in August, with seven crashes.

4.3.4 Day of the Week and Month

During the summer months (May-September), bicycling-involved KA crashes are concentrated on Monday through Friday. This indicates that many people bike to work in New Mexico by choice when the weather is more pleasant.

4.4 Behavioral Factors

4.4.1 Alcohol Involvement

Alcohol was not involved in 89.3% of bicyclist-involved KA crashes. In 4.0% of KA crashes, the driver had imbibed alcohol. In 6.7% of KA crashes the bicyclist had imbibed alcohol. In 0% of crashes, both the driver and pedestrian had imbibed alcohol.

4.4.2 Drug Involvement

Drugs were not involved in 92.7% of pedestrian-involved KA crashes. In 2.8% of KA crashes the driver had consumed drugs, and in 4.9% the bicyclist had. In 0.3% crashes, drug use was suspected for both the driver and bicyclist.

4.4.3 Primary Crash Factor

The primary crash factor was unavailable or "None" for 59% of bicyclist-involved KA crashes. The number on primary factor in a bicyclist-involved KA crash was "Driver Inattention," representing 22.2% of crashes where a primary crash factor was provided. In 19.3% of (known primary factor) KA crashes, alcohol or drugs was determined to be the primary crash factor. In 16.3% of (known primary factor) KA crashes "Failed to Yield Right of Way" was the primary factor.

4.4.4 Crash Analysis

The top 5 most reported crash analysis descriptions are listed in Table 36. The crash analysis was left blank, or had an invalid or unrelated code, in 86 of 327 crash reporting forms. Percents shown in the table are displayed as a fraction of the 241 crashes with a filled in crash analysis field. The most common crash description in bicyclist-involved KA crashes is that the vehicle struck the bicyclist at an angle.

Table 36: Crash Analysis of Bicyclist KA Crashes

Crash Analysis	Number of KA Crashes	% of KA Crashes (with analysis field containing data)
Vehicle Struck Pedalcyclist at an Angle	119	49.4%
Pedalcyclist Struck Vehicle	47	19.5%
Vehicle Struck Pedalcyclist from Behind	50	20.7%
Vehicle Struck Pedalcyclist Head On	14	5.8%
Pedalcyclist Collision - Unknown/All Other	11	4.6%
Total	**241**	**100.0%**

4.4.5 Turning Movements

For bicyclist-involved KA crashes, 94.2% of KA crashes involved a vehicle traveling straight. KA crashes are slightly more likely for right turns (17.7%) than for left turns (15.9%).

4.4.6 Hit and Run Occurrence

Hit and runs occur in 20.5% of bicyclist-involved KA crashes.

Table 37: Hit and Runs in Bicyclist-Involved KA Crashes

Hit-and-Run	KA Crashes	% of KA Crashes
Yes	67	20.5%
No	260	79.5%
Total	**327**	**100%**

4.4.7 Riding in a Bicycle Facility

In 96.3% of KA crashes the bicyclist was not riding in a bicycle facility. As bicycle facilities are not present on most roads, this proportion is expected.

4.5 Demographics of VRUs

4.5.1 Age of Victim

In Table 38, the most likely outcome of a crash can be seen for people of the different age ranges. People ages 50-64 are the most likely to be involved in a pedestrian-involved crash. Those ages 25-34 are the most disproportionately likely, in relation to their share of the overall population.

Table 38: Age of Victim in Bicyclist-Involved KABCO Crashes

Age	Killed (K)	Suspected Serious Injury (A)	Suspected Minor Injury (B)	Complaint of Injury (C)	No Apparent Injury (O)	Total	% of Bicyclist Crash Victims	% of 2023 Population
0-14	2	12	149	73	32	268	6.8%	17.2%
15-24	4	43	336	232	104	719	18.3%	13.2%
25-34	14	45	352	236	88	735	18.7%	13.1%
35-49	18	74	353	270	89	804	20.5%	18.7%
50-64	22	77	366	269	85	819	20.9%	17.9%
65+	16	38	185	134	204	577	14.7%	19.9%
Total	76	289	1,741	1,214	602	3,922	100.0%	
% of Total	**2%**	**7%**	**44%**	**31%**	**15%**	**100%**		

If involved in a crash, the older someone is, the more severe the outcome, as shown in Table 39. The cells in each column have been colored from red (most likely) or green (least likely). Those 65 and above are killed in about 2.8% of crashes in which they are involved. For those under 24, they are killed in less than 1% of crashes in which they are involved.

Table 39: Age Representation for Bicyclist-Involved Crash Severity Outcomes

Age	Killed (K)	% of Age Range Crashes (K)	Suspected Serious Injury (A)	% of Age Range Crashes (A)	Suspected Minor Injury or Complaint of Injury (B or C)	% of Age Range Crashes (B or C)	No Apparent Injury (O)	% of Age Range Crashes (O)	Total
0-14	2	0.7%	12	4.5%	222	82.8%	32	11.9%	268
15-24	4	0.6%	43	6.0%	568	79.0%	104	14.5%	719
25-34	14	1.9%	45	6.1%	588	80.0%	88	12.0%	735
35-49	18	2.2%	74	9.2%	623	77.5%	89	11.1%	804
50-64	22	2.7%	77	9.4%	635	77.5%	85	10.4%	819
65+	16	2.8%	38	6.6%	319	55.3%	204	35.4%	577
Total	**76**		**289**		**2,955**		**602**		**3,922**

When looking at just victims of KA crashes, as shown in Table 40, those 50-64 are the most disproportionately represented in relation to their share of the population. The second most disproportionately represented is the 35- to 49-year-old age range.

Table 40: Age of Victim in Bicyclist-Involved KA Crashes

Age	Killed (K)	Suspected Serious Injury (A)	KA Crashes	% of KA Crash Victims	% of 2023 Population
0-14	2	12	14	3.8%	17.2%
15-24	4	43	47	12.9%	13.2%
25-34	14	45	59	16.2%	13.1%
35-49	18	74	92	25.2%	18.7%
50-64	22	77	99	27.1%	17.9%
65+	16	38	54	14.8%	19.9%
Total	**76**	**289**	**365**	**100.0%**	

4.5.2 Race/Ethnicity of Victim

Those identifying as White are by far the most overrepresented in KA crashes in proportion to their share of the overall population, as shown in Table 41. Despite being 35.9 % of the New Mexico population, they are 44.1% of bicyclist KA crash victims. The “other” category is also overrepresented. It is unclear, which demographic group(s) this would most likely refer to in New Mexico.

Table 41: Race/Ethnicity of Victim in Bicyclist KA Crashes

Race/Ethnicity	KA Crashes	% of KA Crash Victims	2023 Population
American Indian	30	8.2%	8.3%
Asian	4	1.1%	1.7%
Black	10	2.7%	1.7%
White (not Hispanic)	161	44.1%	35.9%
Hispanic	97	26.6%	48.6%
Other	63	17.3%	3.8%
Total	**365**		

4.5.3 Gender

Men are almost five times more likely to be victims in bicyclist-involved KA crashes than women, as shown in Table 42

Table 42: Gender of Victims in Bicyclist-Involved KA Crashes

Gender	Killed (K)	Serious Injury (A)	Total	% of Bicyclist-Involved KA Crash Victims
Female	6	57	63	17.3%
Male	70	230	300	82.2%
Unknown		2	2	0.5%
Total	**76**	**289**	**365**	**100.0%**

NMDOT VRU Safety Assessment Appendix D: Stakeholder Input Summary

New Mexico Department of Transportation

NMDOT Vulnerable Road User Safety Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

1 Activities

1.1 Stakeholder Meetings

Three stakeholder meetings were conducted in the summer of 2023. The stakeholder meetings included participants from areas with the highest percentage of the state's KA crashes from 2012 to 2022. The first stakeholder meeting was Bernalillo County, the area with the highest percentage of KA crashes statewide. However, given the reality that the population of the greater Albuquerque metro area extends across multiple counties, stakeholders included representatives and interests from the broader metro region and were not limited to Bernalillo County itself.

For the second two meetings, county boundaries were used to determine the area of data analysis for the meeting, and the stakeholders who should participate. By using county boundaries, communities in a range of sizes and densities were included, as well as representatives from tribal nations and regional organizations.

Meetings were virtual, lasted an hour and a half, and consisted of:

- An introductory presentation to frame discussion
- Mentimeter poll questions to gather feedback from participants
- A guided discussion using a virtual white board to record thoughts

Meeting 1:

Focus Area: Albuquerque Metro Area
August 9th, 2023
10-11:30am

Meeting 2:

Focus Area: McKinley and San Juan Counties
August 30th, 2023
12-1:30pm

Meeting 3:

Focus Area: Doña Ana County
September 11th, 2023
12-1:30pm

1.1.1 Meeting Themes

Stakeholder Discussion

During the NMDOT Vulnerable Road User Safety Assessment (VRUSA), three (3) virtual meetings were conducted with stakeholder groups in different geographic regions around the state: Albuquerque area,

Northwest (McKinley and San Juan Counties), and Doña Ana County. The primary objective of these meetings was to share an overview on the VRUSA process and provide opportunities for meaningful dialogue that could inform decision making and the final products of the planning process.

After presenting the data analysis used to identify areas of high risk to vulnerable road users, the conversation was opened to participants. The project team facilitated group discussions to gather input on a series of topics. Questions were organized into three (3) categories: Strategies, Policies, & Projects; Comparing Data; and Involvement in Transportation Planning. Google Jamboard was used to capture stakeholder comments.

Group Discussion Questions

Strategies, Policies & Projects

- What are your top priorities to improve safety for vulnerable road users?
- What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

Comparing Data

- How does the High Injury Network (HIN) data we shared compared to data you've seen? Does it reflect what you've seen?
- What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries (speed of traffic, time of day, etc.)?

Involvement in Transportation Planning

- Do you feel that your group is adequately represented in statewide transportation planning?

What we heard around New Mexico

This section provides a virtual meeting discussion overview. Reflective of prevalent challenges and consistent priorities for state-wide transportation safety, there were commonalities between all three (3) stakeholder meeting discussions.

Top Priorities

Participants from all three (3) regions around the state indicated that their top priority for increasing vulnerable road user safety is improved pedestrian infrastructure. Conversations focused on the need to integrate and prioritize VRU-centered design and Universal Design standards in all transportation projects. Participants identified multiple goals associated with pedestrian infrastructure improvements, such as increased separation between pedestrians and vehicles, more frequent crossing opportunities, and improved intersection signalization. In order, the other priorities mentioned most often were bike infrastructure improvement, public education, enforcement, and speed reduction.

Main Barriers

Participants in all three (3) regions indicated that NMDOT policy and roadway design is the top barrier to implementing strategies, policies, and projects furthering vulnerable road user safety. There were discussions in each group regarding the inflexibility of DOT policy for implementing pedestrian safety improvements along DOT roadways. Concerns included the prioritization of level of service over safety, resistance to change, and fear of lawsuits. The next most identified barrier was car-dependency and car-

centrism. Participants discussed how this influences public attitudes, driver behavior, policy, and infrastructure. Ineffective leadership and coordination were also discussed as barriers to effective project prioritization and implementation.

Comparing the Data

Participants in all three (3) regions indicated that the data presented was consistent with what they had seen, while many others noted that they had never seen this analysis specifically for vulnerable road users. There was interest in seeing additional data related to various equity indicators.

Contributing Factors

When asked what people believed were the top contributing factors to vulnerable road user safety, the leading response was driver inattention related to cell phone use or other distractions. The next most frequently discussed contributing factors were road design and the quality of vulnerable road user infrastructure. Participants noted that road design currently prioritizes vehicle travel, with wide, high-speed corridors. In all parts of the state, participants described long stretches of road without pedestrian facilities such as crosswalks, pedestrian refuges, or other safety countermeasures, the lack of which contribute to unprotected mid-block crossings. Additionally, many participants expressed that pedestrian infrastructure is not equitably distributed throughout their communities, and that there is a relationship between lower income neighborhoods and inadequate infrastructure.

Excessive vehicle speed and car-centric attitudes and designs reflective of a disregard for pedestrian safety were the other top contributing factors discussed in the meetings. The increased prevalence of large vehicles was also mentioned as a major contributing factor.

Participation in Transportation Planning

Discussion about participation in transportation planning reflected the diversity of stakeholders present in the meetings. In each region, participants discussed that there hasn't been much genuine opportunity for the communities most harmfully impacted by transportation infrastructure to participate in planning. Participants discussed the need for better coordination and partnership with Tribal government and communities as well as greater efforts to align statewide plans with local plans. Multiple participants mentioned that this was the first time their group had been included in statewide transportation planning and that they appreciated the opportunity to be involved. Stakeholders representing pedestrian and cyclist advocacy groups, disabled communities, and Tribal communities expressed the desire to be involved in the Strategic Highway Safety Plan.

What we heard in each region

Stakeholders in the different virtual meetings shared priorities and concerns reflective of the unique nature of transportation safety issues in each region.

Top Priorities

Albuquerque Area – Central NM

In Albuquerque, the conversation about priorities focused heavily on improvements to pedestrian and bicycling infrastructure, particularly on busy corridors such as Central Ave and Coors Ave. In terms of infrastructure improvements, participants prioritized increased separation between pedestrians, cyclists, and motor vehicles to minimize the exposure of vulnerable road users. Specific improvements suggested included protected bike lanes, pedestrian refuges, and protected mid-block crossings with the use of High-Intensity Activated CrossWalk (HAWK) signals.

Multiple participants noted that major infrastructure improvements have taken place in Albuquerque, but that they would like to see improved connectivity between existing facilities. Participants expressed interest in education and outreach within the most impacted communities and recommended specific education initiatives around proven safety counter measures. Participants also expressed support for road diets and speed reduction, which was discussed at greater length during the conversation about contributing factors.

McKinley and San Juan Counties – Northwest NM

In McKinley and San Juan Counties, the conversation focused heavily on pedestrian infrastructure improvements particularly on routes such as U.S. 491 between Shiprock and Gallup, U.S. 64 between Shiprock and Farmington, and Old Route 66 in Gallup. Participants noted the need for increased separation between pedestrians/bicyclists and motor vehicles, particularly along high-speed rural routes. They also noted that lacking or insufficient pedestrian infrastructure such as crosswalks, pedestrian refuge zones, and crossing signals was leading to unsafe crossings. Multiple participants expressed interest in road diets within Main Street corridors.

Doña Ana County – Southern NM

In Doña Ana County, participants identified pedestrian infrastructure improvements as a top priority. The conversation focused heavily on the need for increased crossing opportunities and signalized crossing improvements. Participants noted the prevalence of long stretches between protected crossings that result in unsafe mid-block crossings. Concern was expressed over a lack of enforcement of speed laws and inaccurate reporting of traffic incidents. Additionally, multiple participants spoke to a need for more coordination between local planning efforts such as affordable housing planning and transportation infrastructure improvements.

Barriers

Albuquerque Area – Central NM

In Albuquerque, participants identified NMDOT policy and road design requirements as the top barrier to implementing strategies and projects to enhance vulnerable road user safety. Participants shared that they perceive resistance on the part of DOT engineers to reducing the speed or reducing level of service for vehicles on DOT roadways. Participants called upon the DOT to prioritize pedestrian safety over level of service and to consider community-identified and proven safety countermeasures. Other barriers discussed included car-centric design and how funding allocation is prioritized.

McKinley and San Juan Counties – Northwest NM

In the McKinley and San Juan Counties participants identified lack of leadership and ineffective partnerships as the greatest barrier to implementing strategies and projects to enhance vulnerable road user safety. Participants discussed a lack of leadership and coordination with Tribal governments and communities. There is also a perception that there is a lack of communication and coordination about priorities between the NMDOT Planning Bureau and the local District.

Participants discussed that NMDOT road design policies aren't flexible or responsive to the needs of communities. It can be challenging for communities to get approval of flow reduction on DOT highways that serve as Main Streets. This leads to an unsafe environment in the commercial core of communities and limits economic development opportunities.

Doña Ana County – Southern NM

In Doña Ana County, participants identified car dependency and car-centric design as interrelated barriers to implementing strategies and projects to enhance vulnerable road user safety. Participants discussed

that the prominence of car culture in their communities leads to disregard of vulnerable road users and victim blaming when accidents occur. Participants discussed a needed shift towards prioritizing vulnerable road users in roadway design.

Contributing Factors

Albuquerque Area – Central NM

In Albuquerque, the conversation about the factors that contribute to vulnerable road user fatalities and injuries centered on infrastructure inequity. Participants expressed concern that the quality and distribution of multi-modal infrastructure is inequitably distributed throughout the city leading to inequitable outcomes in different communities. Participants discussed how in communities such as the International District, there are long stretches of multi-lane roads without frequent protected crossing opportunities, increasing the vulnerability of pedestrians.

Participants discussed how roads are designed for speed and that wide roads create an inhospitable environment for pedestrians. Driver and pedestrian impairment were also noted as a contributing factor, particularly along Central Ave; notably, other participants expressed concern that the focus on impairment can lead people to ignore other contributing factors and deter them from pursuing infrastructure improvements.

Northwest Corner Region – Northwest NM

In Farmington, participants identified road design and distracted driving as the top contributing factors to vulnerable road user fatalities and injuries. Participants discussed the lack of separation between vulnerable road users and roads that promote excessive speeds as the main road design challenges in the region and discussed how the consequences of distracted driving are heightened due to road design and speed. Participants also expressed concern about pedestrian impairment and time of day as contributing factors.

Doña Ana County – Southern NM

In Doña Ana County, participants identified car-centrism and distracted driving as the top contributing factors related to vulnerable road user fatalities and serious injuries. Participants discussed how due to the design of road infrastructure, current facilities prioritize vehicle use exclusively, and thus drivers feel that only vehicles should be on roads. It was discussed that this car-centric attitude, paired with roadway design leads to disregard for pedestrian and cyclist safety.

Participation in Transportation Planning

Albuquerque Area – Central NM

In Albuquerque, participants expressed appreciation for the ability to participate in the VRU Safety Assessment process. Participants requested additional efforts to engage and plan with Tribal and other community groups that are most impacted by traffic fatalities and injuries. A participant from Presbyterian Healthcare Services and the Health Equity Council offered to support efforts to reach Hispanic and Native American communities in future outreach.

McKinley and San Juan Counties – Northwest NM

In McKinley and San Juan Counties, participants requested additional efforts to engage and plan with Tribal stakeholders. It was also discussed that the NMDOT seems to be missing a disability related liaison and that there should be more efforts to consider how the state is planning for Universal Design and ADA accessibility.

Doña Ana County – Southern NM

In Doña Ana County, multiple participants representing vulnerable road user stakeholder groups indicated that they had never been included in statewide planning processes in the past and appreciated inclusion in the VRU Safety Assessment. Cycling, vulnerable road users, and homeless advocacy groups expressed interest in further participation in the Strategic Highway Safety Plan. A City of Las Cruces official recommended that it would be beneficial for the DOT to include housing developers in the planning process to support alignment of planned developments and transportation infrastructure projects. Some participants expressed concern that planning processes can go well, but often don't translate to implementation.

1.1.2 Meeting 1 Notes: Albuquerque

Attendees

NMDOT

Rosa Kozub, NMDOT
Jason Coffey, NMDOT

Project Team

Tommy Myszka, Jacobs
Kim Kolody, Jacobs
Brandon Gonzalez, Alta
Krista Flynt, Alta
Kelly Dunn, Alta
Anthony Rios Gurrola, Alta
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio
Claire Jordy, Groundwork Studio

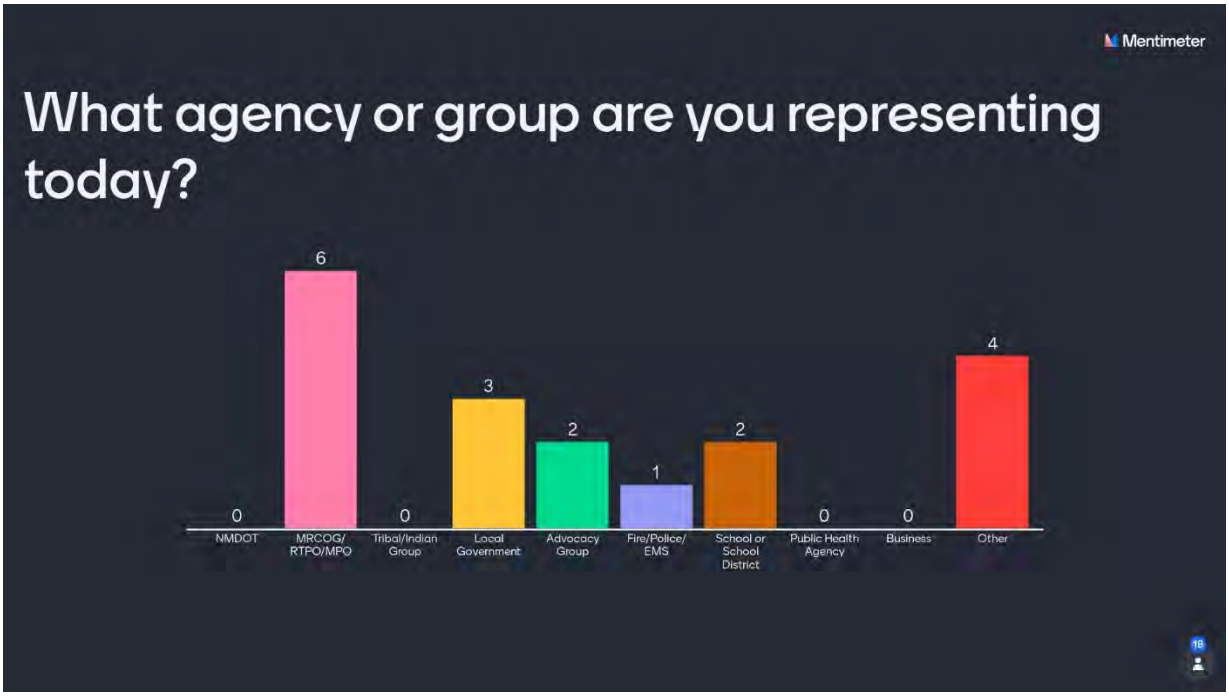
Stakeholders

Amira Rasheed, NMAG
Mark McConnell, Bernalillo County
Richard Meadows, Bernalillo County
Jennifer Lopez, Aubaquerque Public Schools
Forest Replogle, MRCOG
Clare Haley, BHI Inc.
Aaron Moore, MRRTPO
Peach Anderson-Tauzer, MRMPO
Tara Cok, MRMPO/MRCOG
Karen Waconda, Presbyterian Community Health
Kendra Montanari, MRCOG
Rebecca Bolen, CABQ Planning
Willy Simon, MRCOG
Katt Valencia Soria, UNM
Jeff Hertz, CABQ Planning
Christopher Ramirez, Together for Brothers
Tatiana Falcon-Rodriguez, Presbyterian Community Health
Cordell Bock, Albuquerque Public Schools
Hao Yin, NMDOT
Rebecca Montoya, The Arc NM
Amy Morse, Environmental defense Fund
Tiffany Stevens, First Choice Community Healthcare
John Hamiga
Mark Aasmundstad
Jennifer Lucero
Scott Hale

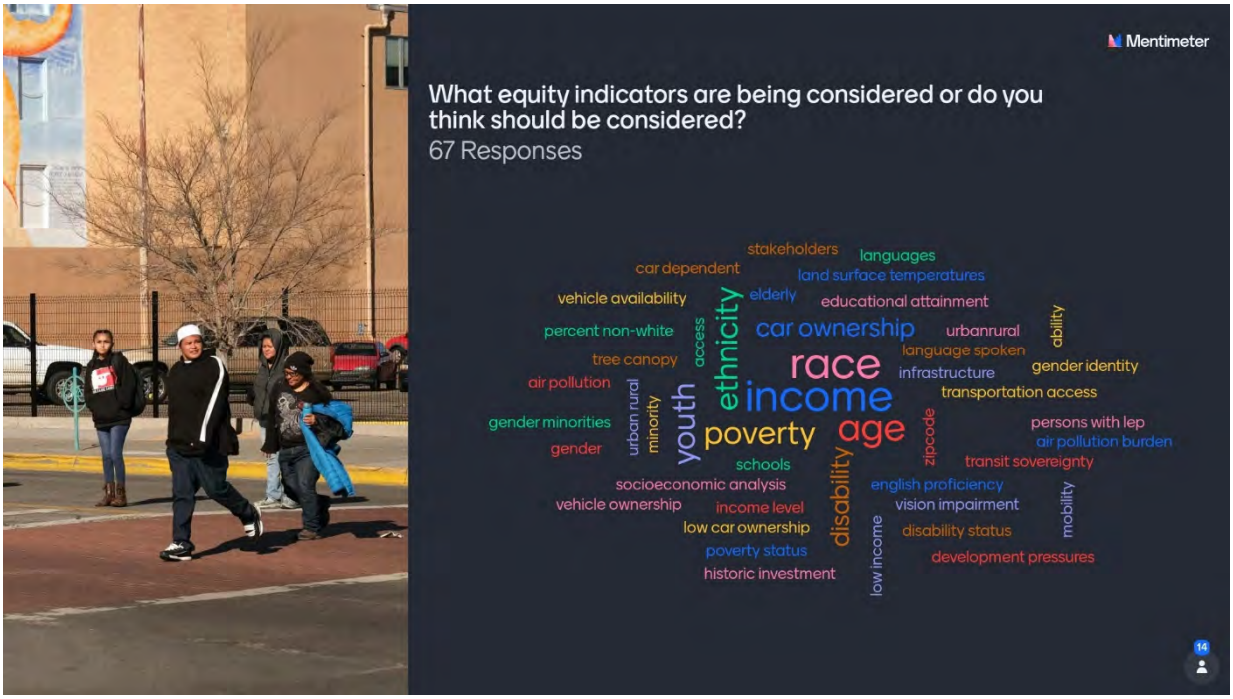
Discussion and Questions During Overview Presentation

- Question 1: How is qualitative data also being included in addition to numbers? If “vulnerable communities” are the focus, how are their stories and feedback being centered?
- Question 2: Isn’t that statewide number (15%) higher in some communities? Like Central Avenue?
- Question 3: Within that 15% do we know how many are people with a disability or using wheelchairs, walkers, or other devices?
- Question 4: Is the proximity to the intersection because that is where all the people are or because it is more dangerous than a mid-block crossing?
- Stakeholder: Concerned about high-speed corridors (50 mph)
- Stakeholder: What was the context for intersections? Signalized? Does this included all intersections including local streets?
- Stakeholder: How do we consider equity in infrastructure? How do we document sidewalk presence and sidewalk condition? He says he has noticed that this could be the reason why people cross. As a bus rider, he’s seen people dashing across the road to catch the bus. I also want to mention that in some parts of Central it’s so wide (six or more lanes) that it’s also a BIG factor.
- Stakeholder: Noting the disproportionate share of Native American people wonders if more KA collisions happen when people living in rural areas come into urban areas (e.g. Gathering of the Nations); she grew up on the reservation and until college, did not know bike laws existed. Could we supplement data with tribal enrollment data.
- Stakeholder: Wanted to reiterate inequity in infrastructure. Also asked about the
- Stakeholder: Pointed us to a professor at NMSU whose research focuses on bike/ped infrastructure in ABQ area.
- Stakeholder: Two major safety studies; shown that safety improvements are needed on E Central Ave.

Mentimeter Responses



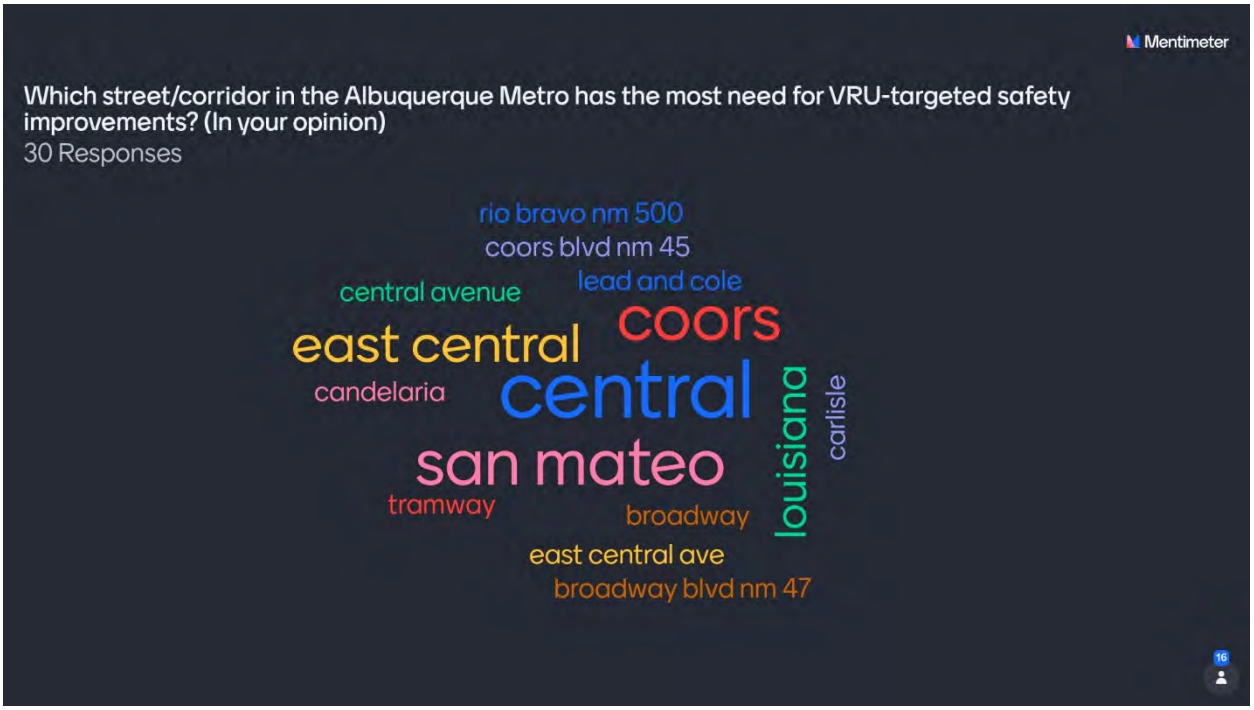
Equity



Most frequent equity indicator suggestions:

- Income: 10 instances
- Age: 6
- Race: 6
- Car ownership: 3
- Ethnicity: 3
- Poverty: 3
- Youth: 3

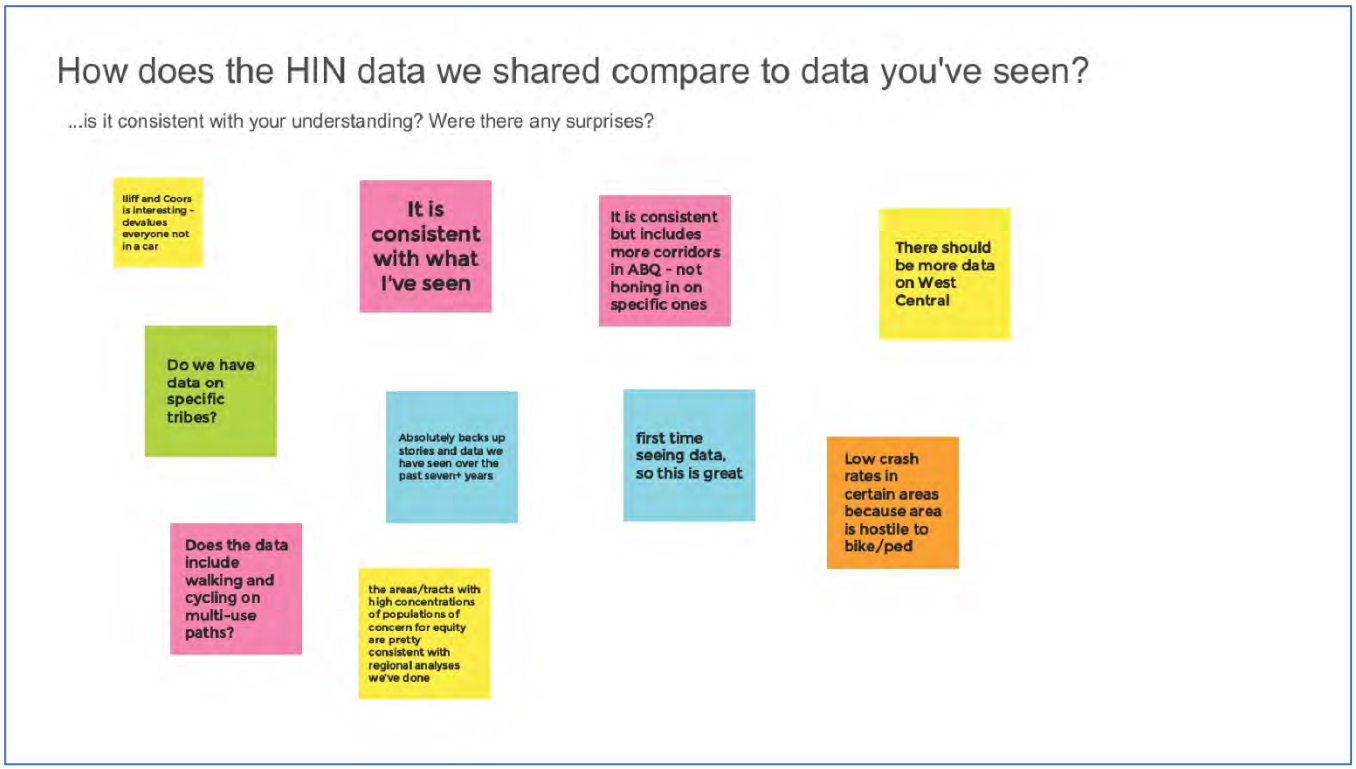
Corridors Most in Need of Improvement



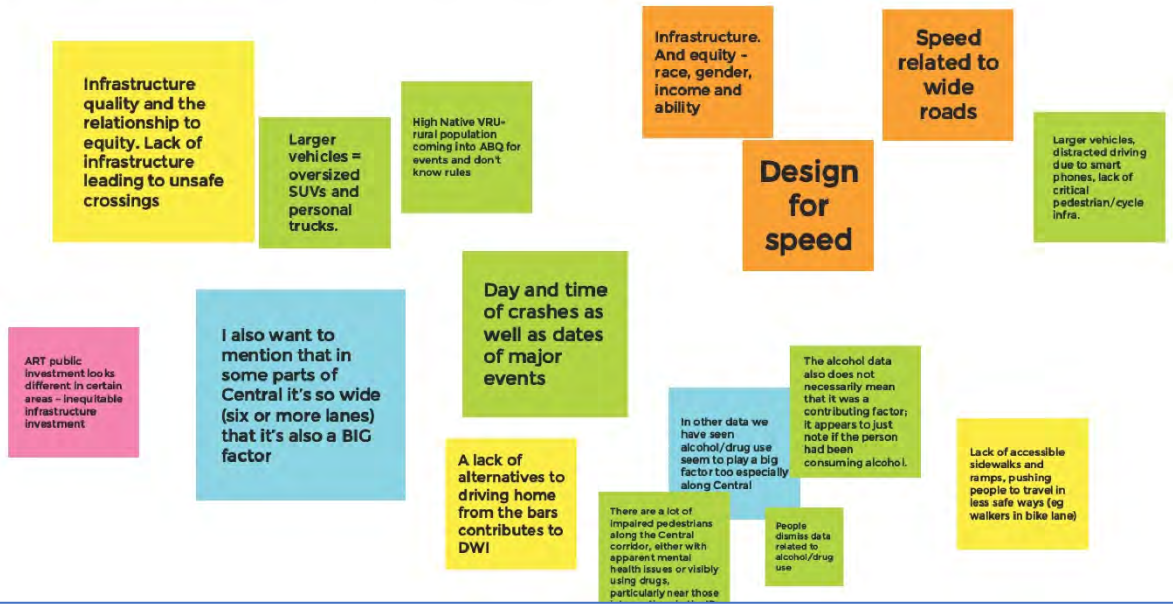
Most frequently suggested corridors in need of improvement:

- Central: 11 instances
- Coors: 6
- San Mateo: 5
- East Central: 4

Jamboard Comments

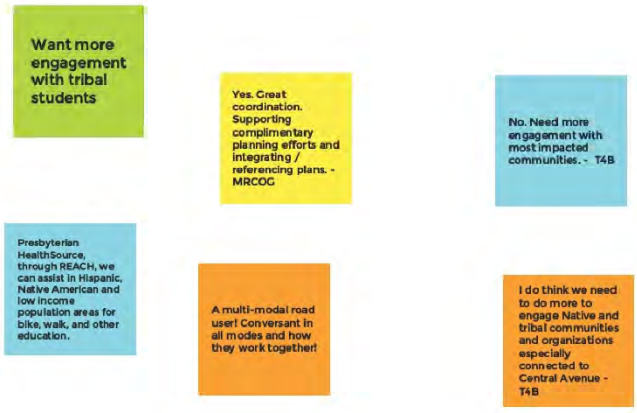


What do you believe are the main contributing factors related to VRU fatalities and serious injuries (speed of traffic, time of day, etc.)?

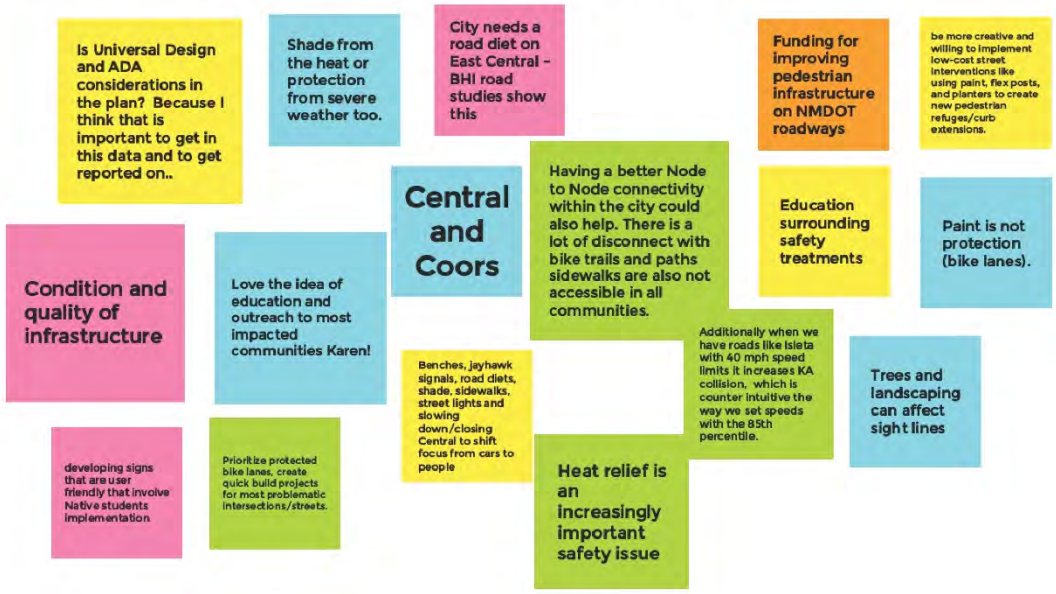


Do you feel that your group is adequately represented in statewide transportation planning? What has been effective? What could work better (in the next phase of this project)?

Please include the group you are representing in your answer (advocacy, youth, etc.).

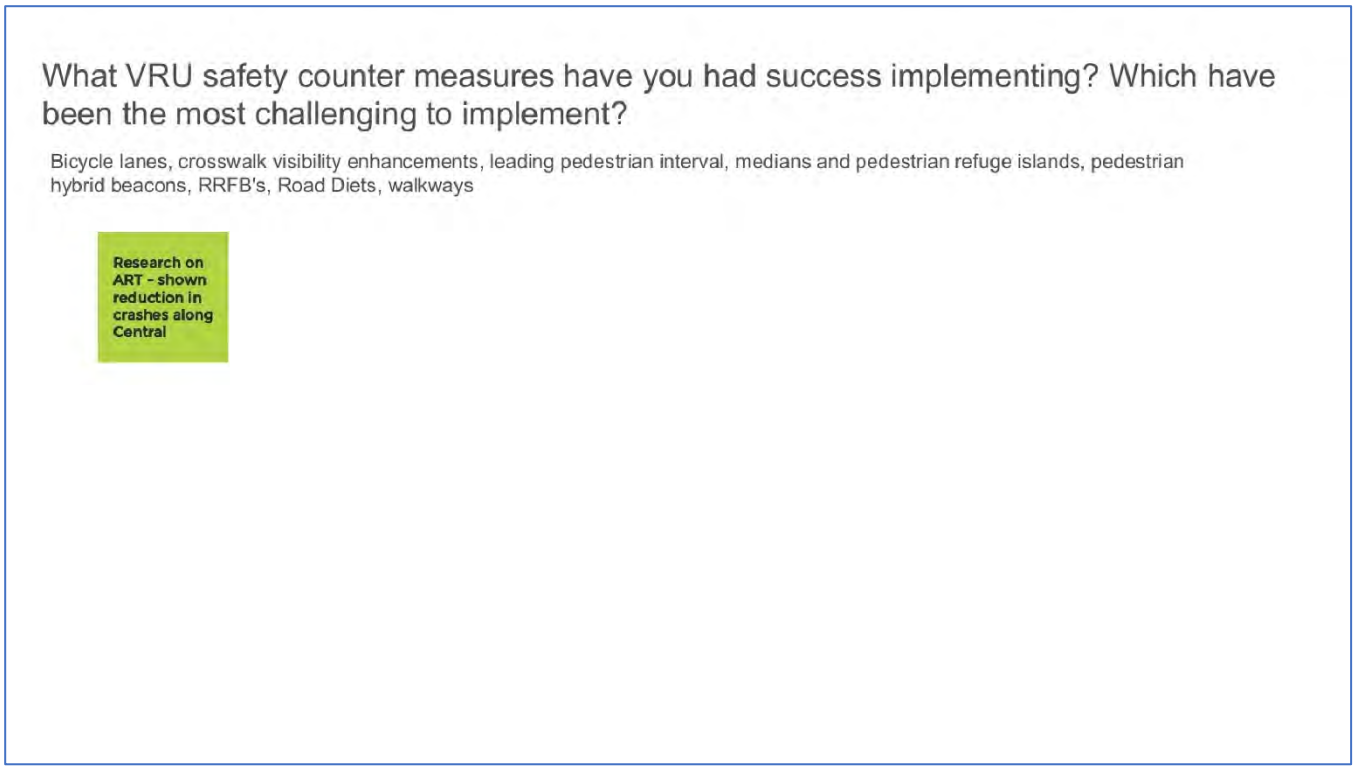


What are your top priorities to improve safety for vulnerable road users?



What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?





1.1.3 Meeting 2 Notes: McKinley and San Juan Counties

Attendees

NMDOT

Rosa Kozub, NMDOT
Jason Coffey, NMDOT

Project Team

Kim Kolody, Jacobs
Brandon Gonzalez, Alta Planning + Design
Krista Flynt, Alta Planning + Design
Kelly Dunn, Alta Planning + Design
Anthony Rios-Gurrola, Alta Planning + Design
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio
Claire Jordy, Groundwork Studio

Stakeholders

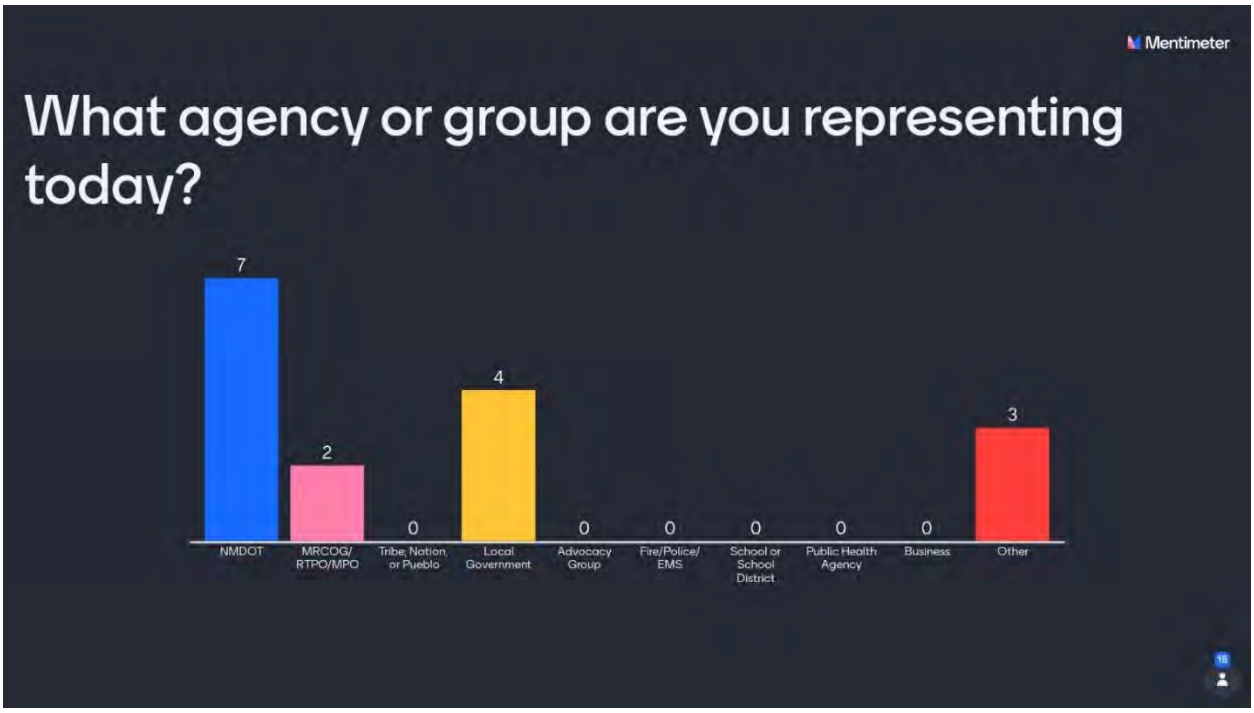
Luis Melgoza, FHWA
Neala Kreuger, NMDOT
Jayson Grover, NMDOT District 6 Traffic Engineer
Lisa Vega, NMDOT District 6 Engineer
Angelica Trujillo, NMDOT CMAQ Coordinator
Sullivan Moore, NMDOT

Alicia Ortiz, NMDOT, Acting Modal Executive Director
JoAnn Garcia, NMDOT
Peter Koeppel, Farmington MPO
Lt Tammy Houghtaling, McKinley County Sheriff's Office
Rodney, McKinley County Roads
Dustin Middleton, Cibola County Office of Emergency Management
Sheriff James Maiorano III, McKinley County Sheriff's Office (based in Gallup)
Alicia Santiago, City of Gallup
Prudence Brady, City of Bloomfield
Lou Ann Davis, Town of Kirtland
Robert Hamblen, City of Gallup
Casey Yazzie, City of Gallup GIS Department Coordinator
Demetrius Henry - City of Farmington
Dale Davis, 505 Cycles/Endeavor NM
Debra Yazzie
Michael, Gallup Main Street
Robin Garrison and Jennine Sanchez Disability Rights NM
William Yarborough, Grants MainStreet Project
Karen Waconda-Lewis, Presbyterian Community Health

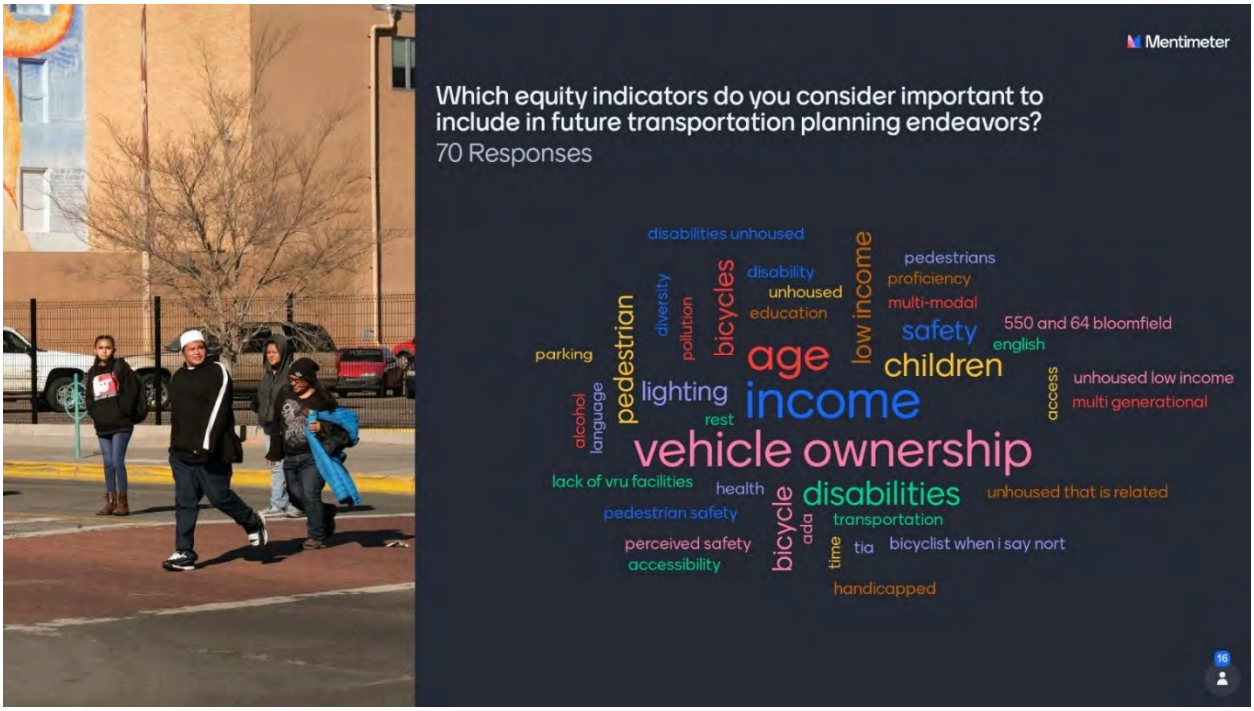
Discussion and Questions During Overview Presentation

Comment 1: Mentimeter isn't accessible to everyone; consider accommodations and/or alternatives for the disability community.
Question 1: Why wasn't Cibola County included in the study?
Response: McKinley and San Juan were in the top two; Cibola did not rise to the top; we do have other ways to engage and participate; we had to follow the data; clarification that the statewide analysis does include Cibola County
Comment 2: I thought the Mentimeter was a great way to involve us.
Comment 3: I think there are many households in the Native community do not have access to a car or they share cars so that may be why, as pedestrians, they are disproportionately affected.
Question 2: Does it include motorcycles?
Response: No. The definition of vulnerable road user *came from IIJA/BIL.*
Question 3: There are long stretches of rural highways with wildlife. Does the data include collisions involving wildlife?
Response: No, collisions were only included if they involved a pedestrian or bicyclists.
Comment 4: "There are more people using scooters and electric bikes...slow moving, with fast moving vehicles."
Comment 5: It has already discussed with NMDOT, but for the Gallup area, many of the collisions deal with inebriated individuals. The sheriff asked if the data detailed who was intoxicated, pedestrian/bicyclist or motorist? Project team stated the data provided did distinguish. Someone from sheriff's office checked if that is addressed in the collision report form. The sheriff wanted to make sure we made it clear that it's not always the driver who is under the influence in collisions.

Mentimeter Responses



Equity



Most frequent equity indicator suggestions:

- Income (9 instances)
- Vehicle Ownership (7)
- Age (6)
- Children (3)
- Disabilities (3)

Corridor Most in Need of Improvement



Most frequently suggested corridor most in need of improvement:

- US 64 through various towns (4)
- US 491 in Gallup (3)
- NM 516 in Farmington (2)
- US 66 in Gallup (2)
- I-40 (2)
- Aztec Ave in Farmington (2)

Intersection Most in Need of Improvement



Most frequently Submitted Intersections in Need of Improvement:

- 64 and 550 in Bloomfield was the only intersection to be listed more than once. It was submitted three times.
- Many other intersections with Hwy 54 were also submitted.

Jamboard Discussion and Comments

Jamboard Question 1: What are your top priorities to improve safety for VRUs?



- In Grants, they are looking at improving crossing on Santa Fe Ave. This is predominantly a commercial corridor where drivers are more likely to interact with pedestrians; many people crossing illegally, and the two legal crossings are difficult to get to and/or are too far apart; individual hears from commercial vendors that they don't get a lot of pedestrian patrons because of the roads are unsafe so a safer pedestrian experience could have a positive impact on economic development. On High Street, individual stated they see people buying alcohol at the liquor store on 1st Street and then cross the street midblock to the park; East Santa Fe has a lot of alcohol establishments which may contribute to the high incidence of collisions.

- One individual said he has asked for more signage on the roadways telling motorists to share the road with bicyclists (he stated he is an avid bicyclist); it would be a low-cost solution, but it has not been implemented; He also noted that better sidewalks are needed. In some areas there are gaps or existing sidewalks have fallen into disrepair.

- Pedestrian islands are needed at busy intersections along Old Route 66 in Gallup; currently, the north side of the street is not pedestrian friendly; it is right next to the railroad so there's not enough room for sidewalks; pedestrian islands are also needed in places in the downtown area where there are multilane roadways intersect; pedestrian islands would be especially helpful for people using a wheelchair.

- One participant wrote: "smart road design" in the chat. The consultant team asked for elaboration. They responded saying they were new to transportation planning, so they were not quite able to give examples, but NMDOT has considered incorporating crash data and traffic count data in their planning efforts; ultimately, they want to use data to inform the design of their roads whenever potential projects are identified. They also want to address other areas such as seatbelt usage and high pedestrian corridors.

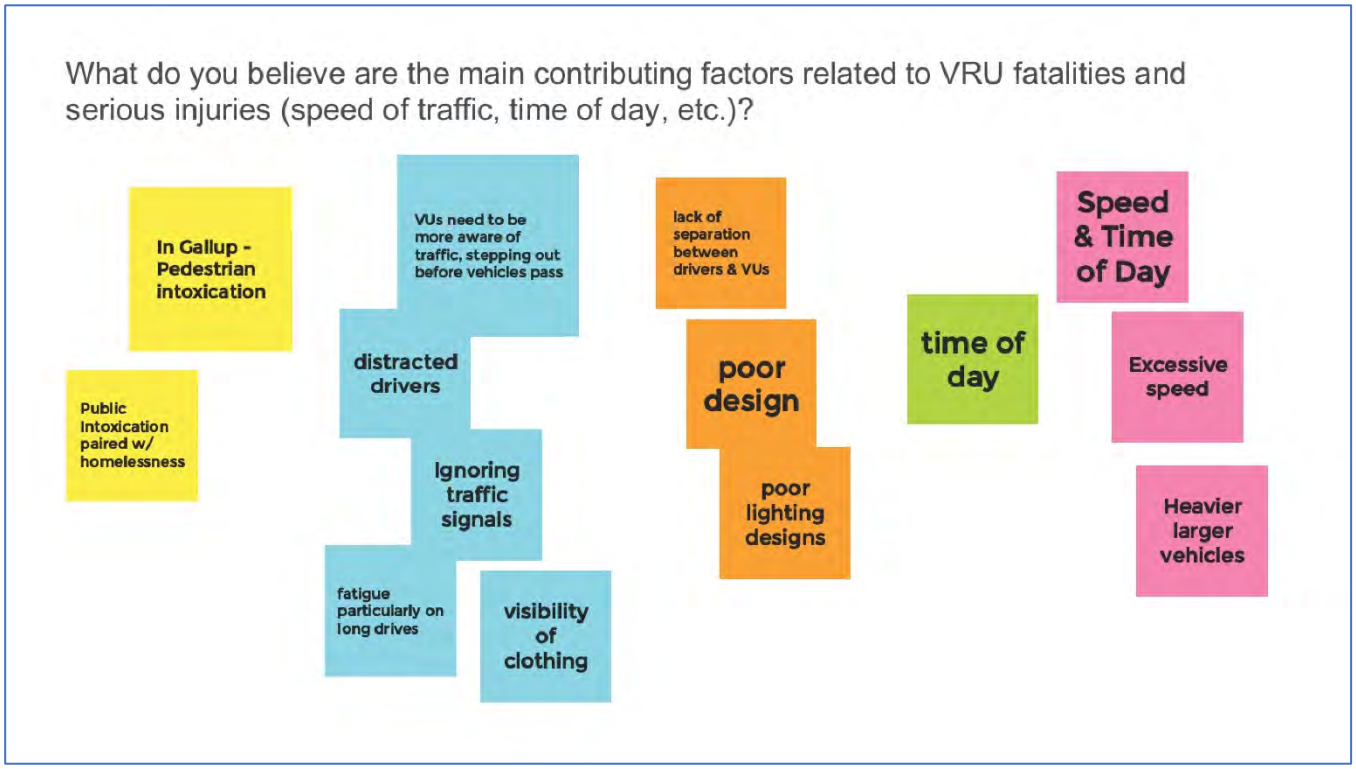
- One individual noted there is a pedestrian hybrid beacon (PHB) on one major corridor (I think it was in Grants). They also stated that they have seen close calls but thinks in general they help reduce collisions.
    - NMDOT reassured the individual that NMDOT plans to install more PHBs in the next 5-10 years across the state.
- Another individual said there was a study that was conducted to consider the addition of bike facilities on a specific roadway. Note taker was not able to hear to which roadway they were referring (check recording).

Jamboard Question 2: What do you think are the main barriers to implementing strategies, policies and projects that improve safety outcomes for VRUs?

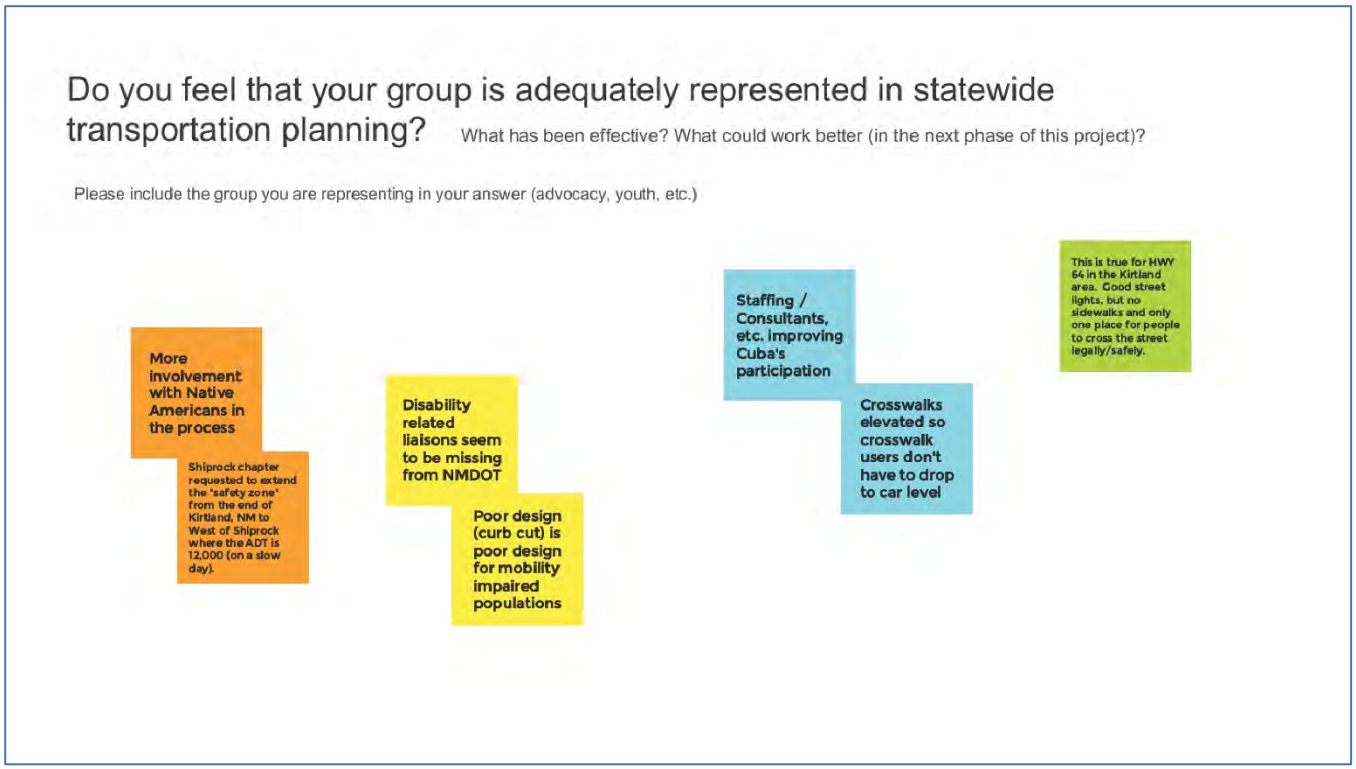


- It was stated that NMDOT does not allow lane reductions. At the local government level, they want to reduce lanes to make the roadway safer for pedestrians but, it's at odds with keeping traffic moving.
- The project team asked if there was anyone from tribal areas with questions or comments but there was no response.
- Someone entered in the chat: "lack of support from leadership". When asked for clarification, they noted it was tribal leadership.
- Someone from NMDOT noted that there were great ideas expressed by different agencies/departments, but the information doesn't get passed up. More coordination is needed.

Jamboard Question 3: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?



- Group 1 did not have enough time to get to this question, but participants were still encouraged to add responses after the Jamboard session ended.
- **Jamboard Question 4: Do you feel that your group is adequately represented in statewide transportation planning?**



- Group 1 did not have enough time to get to this question, but participants were still encouraged to add responses after the Jamboard session ended.

1.1.4 Meeting 3 Notes: Doña Ana County

Attendees

Client

Rosa Kozub, NMDOT
Jason Coffey, NMDOT
Shannon Glendenning, NMDOT

Project Team

Tommy Myszka, Jacobs
Kim Kolody, Jacobs
Brandon Gonzalez, Alta Planning + Design
Krista Flynt, Alta Planning + Design
Anthony Rios-Gurrola, Alta Planning + Design
Amy Bell, Groundwork Studio
Maren Neldam, Groundwork Studio

Stakeholders

Luis Melgoza, FHWA NM

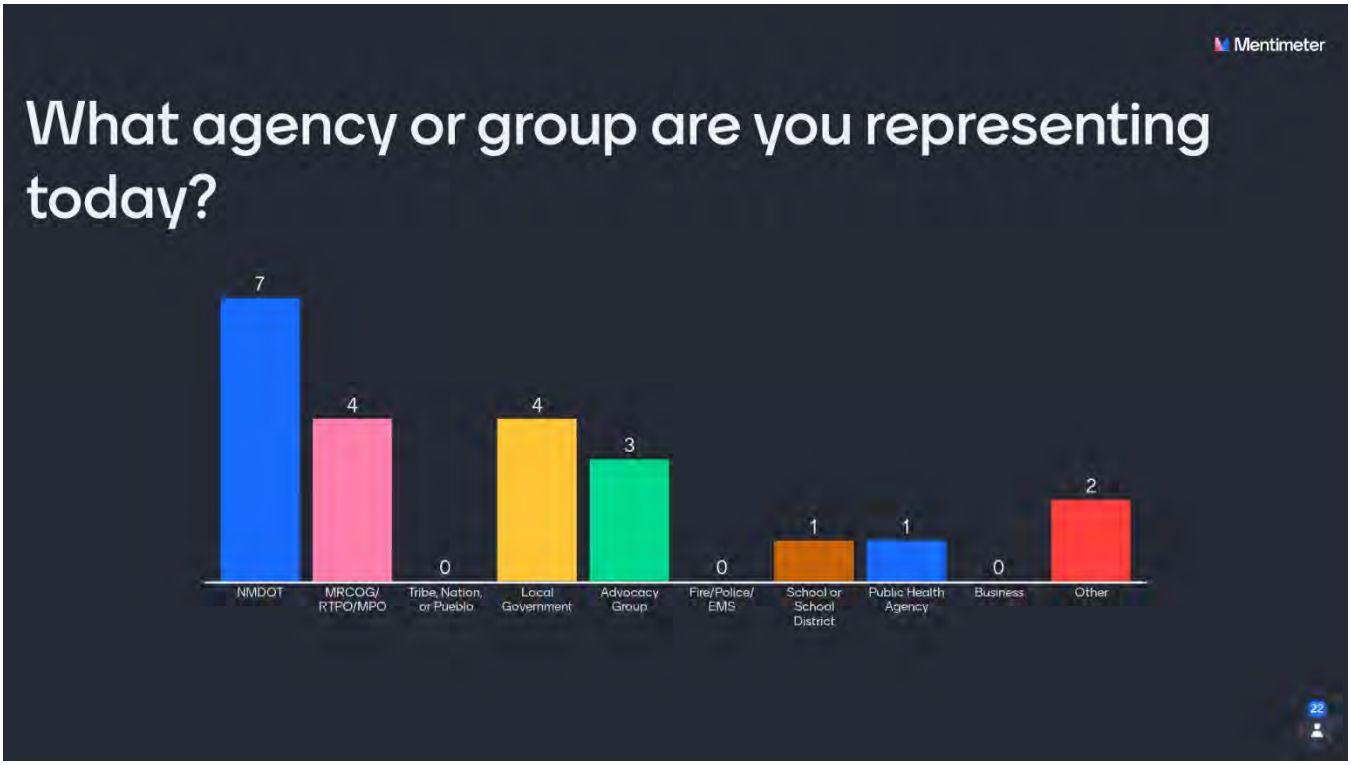
Angelica Rubio, State Legislator, District 35, Las Cruces
Jessica Griffin, NMDOT Planning Division Director
JoAnn Garcia, NMDOT Planning Division
Valerie Sherman, NMDOT-Las Cruces Planning
Ami Evans, District 1, PIO
Aaron Chavarria, District 1 Engineer
Andrew Guerra, District 1, Traffic
Anne Guayante, El Paso MPO
Gerardo Fierro, El Paso MPO
Liz Reed, Dona Ana County Community and Constituent Services Department
Susie Cordero, Doña Ana County, Community and Constituent Services Department
Mark Aasmundstad, Southwest Bike Initiative
Donald Wilson, Velo Cruces and VRUNM
Barbara Toth, Founder and Executive Director of VRUNM
Kat Provenghi, Mesilla Valley MPO
Dominic Loya, Mesilla Valley MPO
Andrew Wray, Mesilla Valley MPO
George Pearson, Velo Cruces
Nicole Martinez, MV Community of Hope, Las Cruces
Olaf Kula, Resident and Wheelchair/Handcycle User

Presentation Questions/Comments

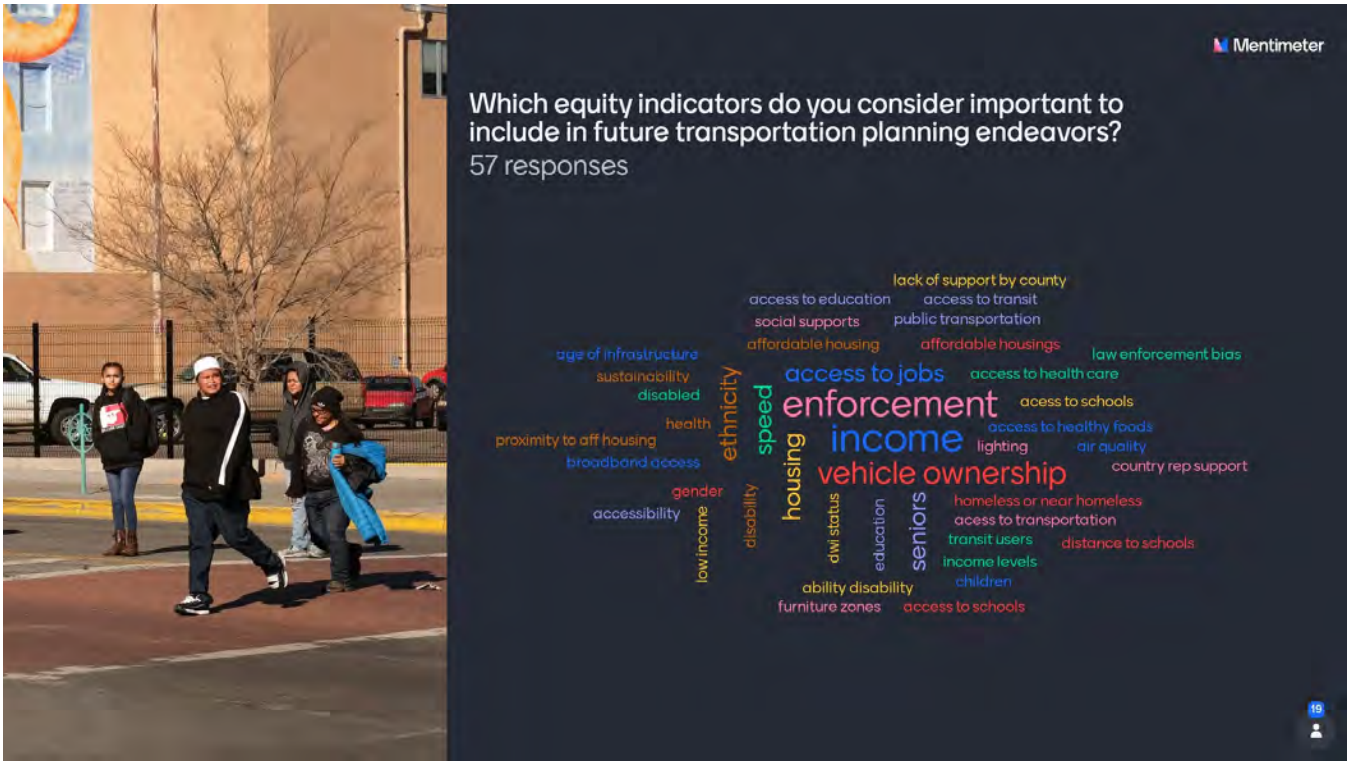
Comment 1: "Husband nearly killed on bicycle. Obvious driver fault. No citation. Not investigation. Not termed serious injury, although it WAS. Since husband was hurt, conversations with law enforcement have been largely unsatisfactory. Rather a lot of victim-shaming/blaming related to his episode and others in our community. Knowing that at least OUR situation not even represented as "serious injury" is galling. Broken back, partially severed spinal cord."
Question 1: Are KA numbers all vulnerable road user or just pedestrians?
Response: The data was combined in this presentation, but an analysis was done of each mode separately.
Comment 2: Many shared use roadways with an indicated bike lane, do not extend the bike lane through the intersection.

Mentimeter Responses

Responses to Mentimeter questions have been included below.



Equity



Most Frequent Submissions for Equity Indicators:

- Access (8) (respondents were referring to access to transportation, schools, transit, jobs etc.)
- Income (7)
- Affordable housing (4)
- Vehicle Ownership (3)
- Schools (3)

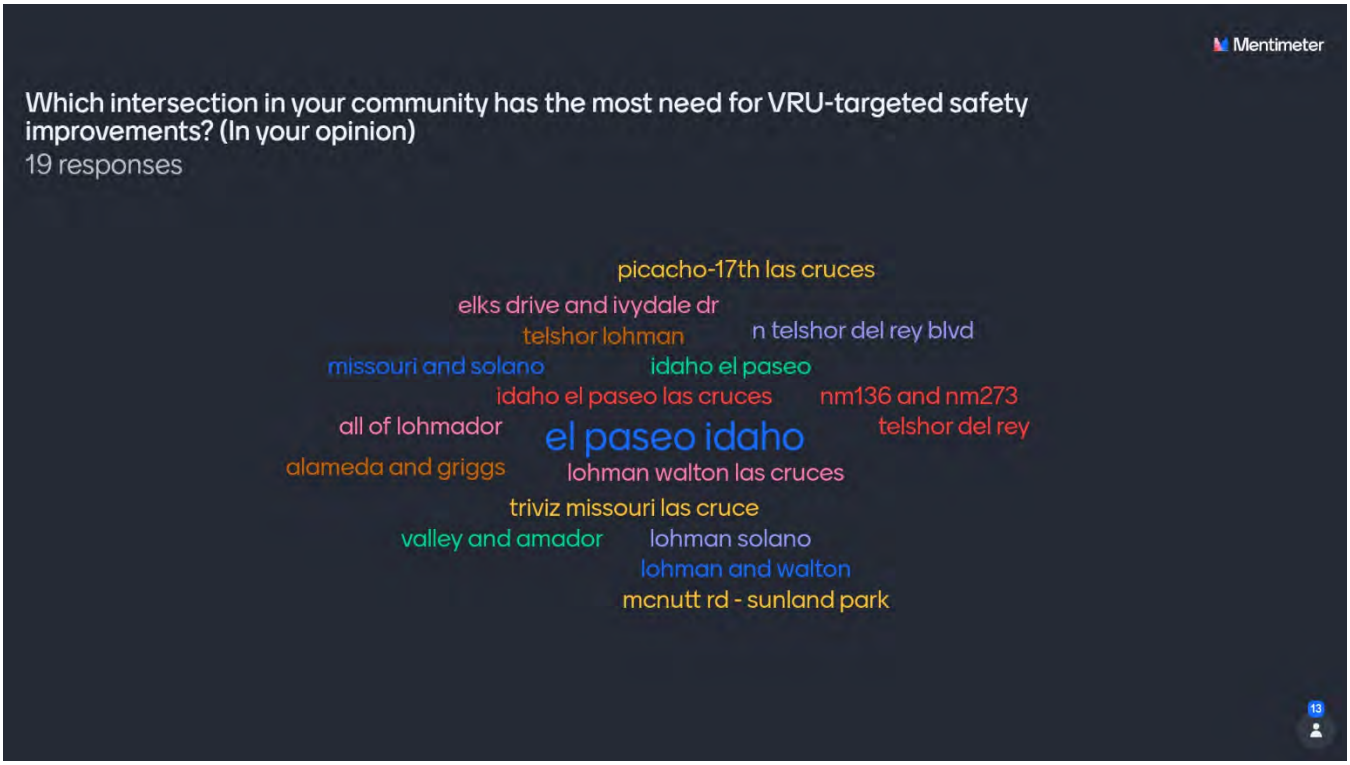
Corridors Most in Need of Improvement



Most Frequent Submissions for Corridors Most in Need of Improvement

- Lohman in Las Cruces (5 submissions)
- Picacho in Las Cruces (3)
- Amador in Las Cruces (3)
- Telshor in Las Cruces (3)

Intersections Most In Need of Improvement



Most Frequent Submissions for Intersections Most in Need of Improvement:

- El Paseo and Idaho Ave in Las Cruces was submitted three times.
- Telshor and Del Rey Blvds in Las Cruces (2)

Jamboard Discussion and Comments

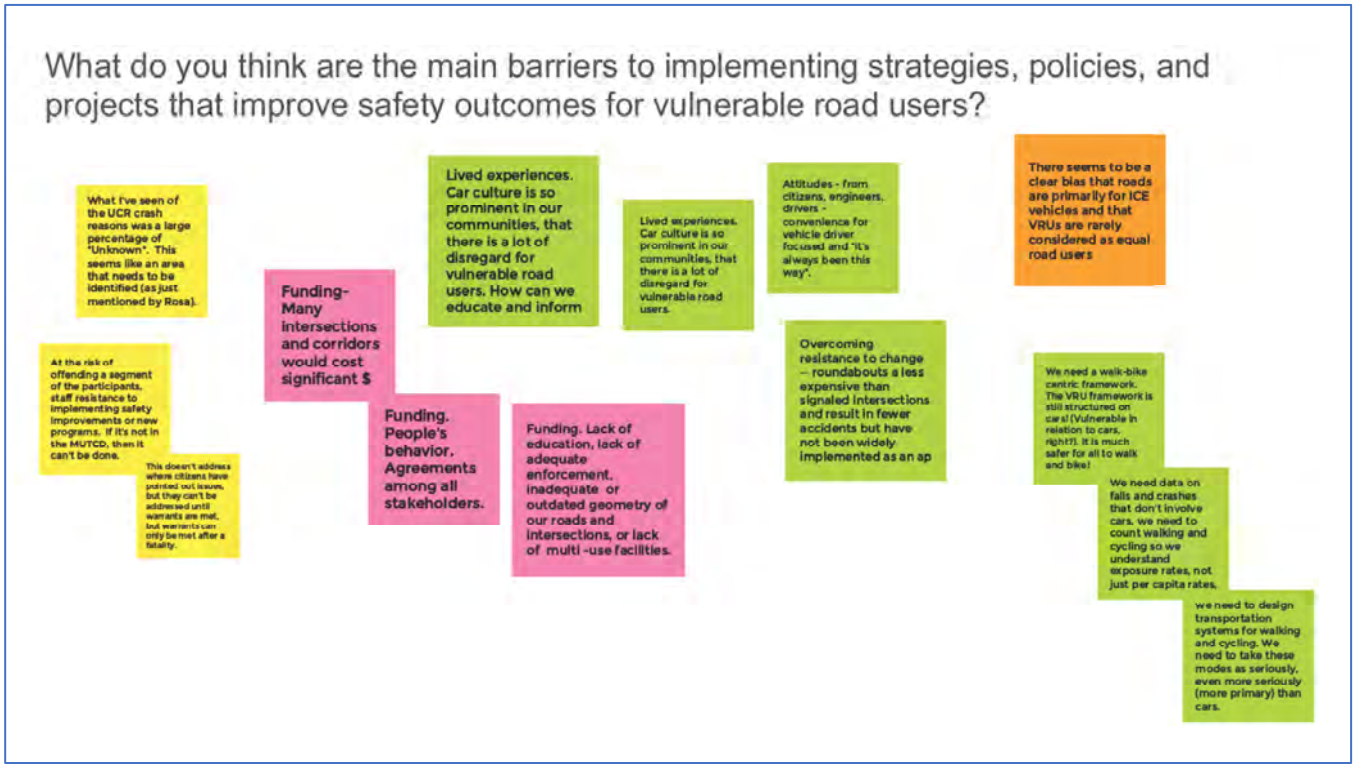
Jamboard Question 1: What are your top priorities to improve safety for VRUs?



- One participant noted that there used to be better connectivity in Las Cruces. He feels current planning is making it more convenient for cars but less safe for pedestrians.
- One NMDOT employee stated he sees a lot of times where pedestrians do not wait for traffic signals to cross or he sees people waiting in median.
- One participant who works at a shelter stated that their shelter is across the street from another shelter and people routinely travel between the two. She asked for improvements for safer crossings including adding a button at the traffic signal.
- One participant asked if a mechanism similar to Amber Alerts exists for texting safety reminders to motorists?
- Response: The project team stated they were not aware of any sort of mechanism.
- One participant said she knows there are federal funds available for transportation projects which considers nearby affordable housing. She asked if there is an opportunity to collaborate to tap into those resources?
- Someone asked if New Mexico law state that pedestrians in crosswalks have right-of-way.
- NMDOT replied NM is a yield state so drivers must yield to pedestrians when crossing at a crosswalk.
- “Earlier today, there was discussion about an approach that allows pedestrians a few seconds to enter the crosswalk before vehicles are given a green light. Are there any statistics about how many collisions are caused by cars turning right on red?”
- Response: Data on right on red turns was not available. The data showed collisions were more likely to happen when driver was travelling straight.
- One participant asked if stats were available for motorists who turn in front of bikes, motorcyclists, etc.?

- The data did have information which could be cross tabulated to answer that question but there was not enough the time to look at every specific collision.
- One participant asked if lowering the speed limit could be investigated. The current 40 mph limit is in the 80% to 90% fatality rate.
- Those speed limits are set at the municipal level. A traffic impact analysis would not look at lowering speed; tends to focus on volumes and traffic patterns.
- Someone noted traffic counts should be conducted this month.
- A participant asked who identifies the 15% Pedestrian Error in the crash reports? Is it the officer? It would be at the officer's discretion which may be biased.
- It is the officer, and it is based on their own assessment. There are discussions regarding additional training for on filling out collision reports.
- A large percentage of the UCR crash reasons were marked "Unknown". This seems like an area that needs to be identified.
- One person noticed the Chair for the County of Doña Ana might be on this call and City of Las Cruces staff. They asked if the county and city have a masterplan to prioritize pedestrian safety currently?
- The group was reminded that the focus of this is NMDOT roads.

Jamboard Question 2: What do you think are the main barriers to implementing strategies, policies and projects that improve safety outcomes for VRUs?

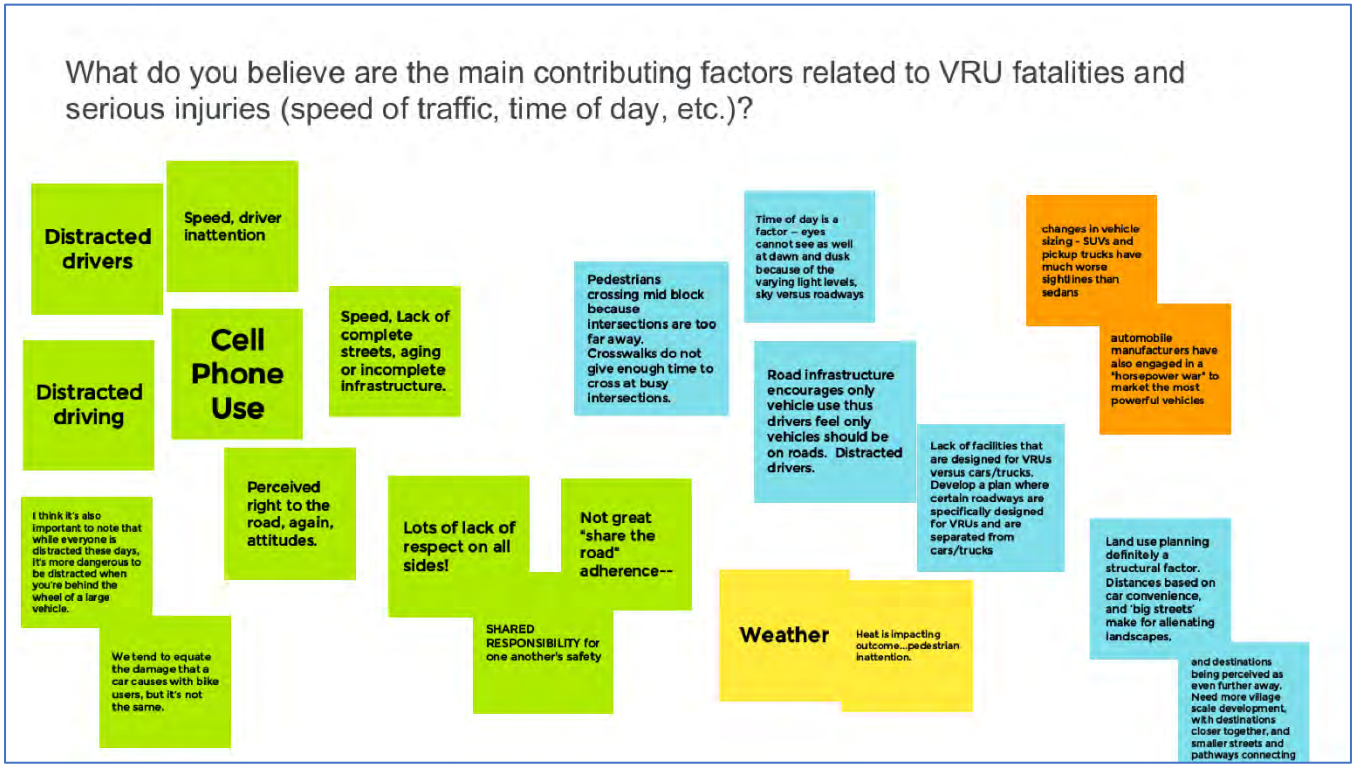


- One participant state it is the lived experience. Car culture is so prominent in the communities, that there is a lot of disregard for vulnerable road users. How can we educate and inform that is more effective?

- No specific response.

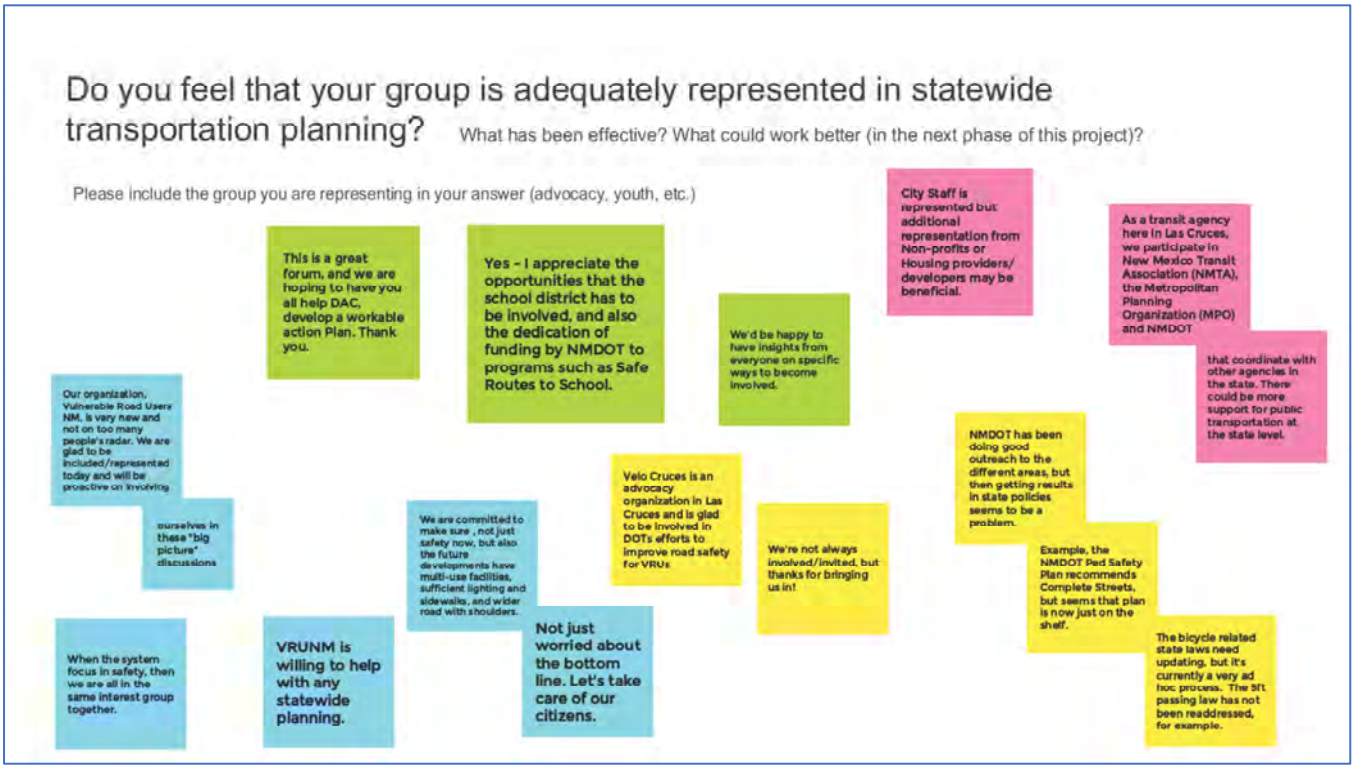
- "100% agree. Blank entries or unknowns or NA are not very useful for us on any analysis tasks. Our analysis can't do much with that type of info. When we talk with law enforcement, we always encourage them to fill out a complete report with no blanks or unknowns."
- If there are projects in the pipeline, if there is an area in need of safety improvement, is that taken into account?
- Short answer: yes. They try to integrate into their HSIP.

Jamboard Question 3: What do you believe are the main contributing factors related to vulnerable road user fatalities and serious injuries?



- No particular questions asked out loud; all comments recorded in Jamboard

Jamboard Question 4: Do you feel that your group is adequately represented in statewide transportation planning?



- One participant stated that NMDOT has been doing good outreach to the different areas, but then getting results in state policies seems to be a problem. For example, the NMDOT Pedestrian Safety Plan recommends Complete Streets, but seems that plan is now just on the shelf. They also stated that bicycle-related state laws need to be updated, but it's currently a very ad hoc process. The 5ft passing law has not been readdressed, for example.

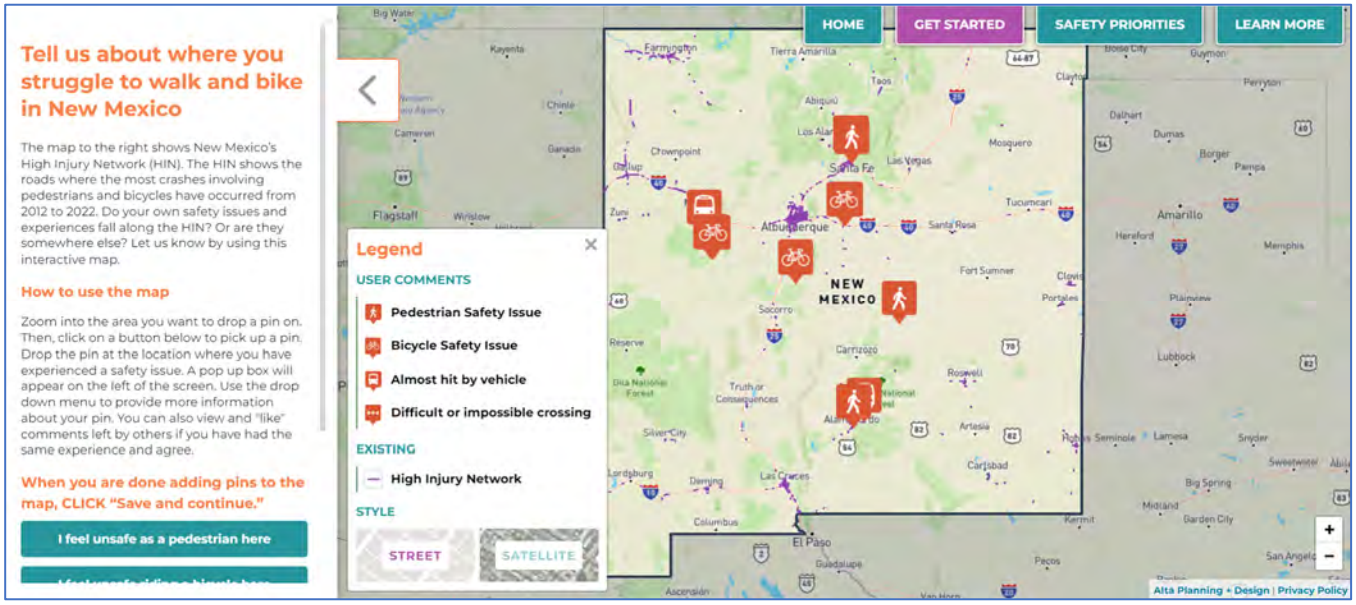
- NMDOT responded that there is internal work being done to integrate Complete Streets in other processes. As far as state laws, those need to be changed by the state legislature.

Jamboard Question 5: Additional Comments



1.2 Virtual Engagement

1.2.1 Web Map and Survey



The following memo summarizes the comments received via the interactive web map which allowed visitors to add location pins and comments that address safety concerns as part of the NMDOT Vulnerable Road User Assessment. A total of 24 participants contributed to the web map.

The web map went live on August 1, 2023. The website was hosted at https://nmdotvru.altaplanning.cloud/ and is still open and available for comment as of September 2023. On September 14th, 2023, all posted comments and survey responses were collected for inclusion in the NMDOT VRU Safety Assessment. Future comments will contribute to the 2024 NMDOT Strategic Highway Safety Plan.

Spatial Distribution

In total, 115 comments were recorded on the web map. The geographic distribution of the comment was:

- Las Cruces Metro: 48 (44.4%)
- Albuquerque Metro: 45 (41.7%)
- Santa Fe: 9 (8.3%)
- Aztec: 5 (4.6%)
- Other: 1 (0.9%)

These locations correspond to the areas where stakeholder meetings were conducted. The web map was publicized during the stakeholder meetings to solicit feedback.

Comment Categories

Participants were first prompted to select the type of issue. A total of 115 comments were recorded. Participants were then prompted for more specific comments to describe the issue. There was also the ability to “like” or “dislike” an already recorded comment. A total of 24 “likes” were recorded. The percentages below reflect the percentages of comments and likes that were made about each safety issue.

Pedestrian Safety Issue

- Unsafe driver behavior and/or speeding occurs here: 20 (14.4%)
- There isn’t a sidewalk: 8 (5.8%)
- It's difficult for pedestrians and drivers to see each other at this location: 6 (4.3%)
- There isn't a crosswalk: 2 (1.4%)
- Other: 2 (1.4%)
- The sidewalk is broken, has obstacles, is narrow, or is uncomfortably close to traffic: 1 (0.7%)

Bicycle Safety Issue

- There isn’t a bicycle facility (ex. bike lane or shared use path) on this road: 25 (18.0%)
- Other: 20 (14.4%)
- The existing bicycle facility doesn’t feel safe to use: 16 (11.5%)
- Unsafe driver behavior and/or speeding occurs here: 8 (5.8%)

Almost Hit by Vehicle

- I was on a bicycle: 4 (2.9%)
- I was walking or using a mobility assistance device like a wheelchair: 3 (2.2%)

Difficult or Impossible to Cross

- There is no place to cross the road: 6 (4.3%)
- The existing crossing feels unsafe to use: 5 (3.6%)
- There isn’t enough time at this intersection to cross: 4 (2.9%)
- Other: 2 (1.4%)

Comment

- Open-ended responses: 7 (5.1%)

Open-ended and “other” web map pin comment Themes

Participants were given the option to enter open ended responses using the map pins. This section will describe themes from those 26 comments.

Safety Issues

A common theme which applied to both pedestrians and bicyclists was safety. Comments noted the lack of lighting on trails which made them feel unsafe. Participants also complained about poor asphalt conditions, specifically cracks and potholes. These conditions are difficult for bicyclists and unsafe to people with disabilities to navigate. For bicyclists, the presence of debris or gravel from access roads make for unsafe conditions in the bike lane. Lastly, many comments advocated for safer streets for all users. Improvements such as medians, sidewalks and quality bike facilities would slow down traffic and make pedestrians and bicyclists feel safer.

Traffic Signals

Comments relating to traffic signals were exclusively entered as a bicycle safety issue. Most commonly, participants were frustrated by the fact that most signals do not detect bicyclists at intersections. Long wait times result in bicyclists crossing intersections on a red light, putting them in dangerous situations. Another participant noted that traffic signals change too quickly from yellow to red which does not allow enough time to brake safely (it is unclear if they meant it was not enough time for motorists or bicyclists).

Bike Facilities

The last common theme was related to bike lanes, the lack of, or safety of, existing lanes. Some comments addressed the lack of continuity and safety of existing bike facilities. In some areas, the bike lane ends abruptly or there is a need for buffered bike lanes to make bicyclists feel safer from fast moving traffic. Road diets were also suggested for segments in Albuquerque where possible.

Survey Responses

A three-question survey followed the web map to gather further information from stakeholders and the public. 8 of the 24 web page visitors completed the survey.

Question 1: My community Needs...

This question was a check box question. Respondents could select up to 3 of the available options. Responses varied between respondents, with most responses only received one selection.

- Safer intersections for people walking or biking (4 responses)
- Safer bike facilities (4 responses)
- The ability to walk and bike safely to more destinations around town (3 responses)
- More bike facilities (2 responses)
- More safe places to cross busy roads (2 responses)
- Better and safer driver behavior (1)
- Increased enforcement of roadway rules/laws to reduce vehicle speeds (1)
- To reduce vehicle speeding (1)
- Students to be able to walk and bike safely to school (1)

Question 2: Is there anything else the NMDOT should know about walking and biking in your community? We want to hear from you in your own words.

- Shoulders on numerous roads and highways are inadequate for pedestrian and/or bicycle traffic. Gravels and debris clutter the shoulders (if any), forcing travel towards the vehicular lanes. Vehicles do not yield, slow down or pass appropriately for any number of road users. Right on red at intersections is one of the more dangerous situations as few ever stop and or yield to pedestrian and bicycle. Bicycle riders can have a tendency to pass vehicles on the right at stop signs, not obeying traffic rules.
- There are dangerous gaps in the bike commuting network. The streets are designed for drivers - specifically speed, not safety. As a driver, I find it difficult to maintain the posted speed limit in the ABQ metro. The streets are designed for and encourage speeding. Improved and consistent bike infra would slow drivers - and make all streets safer for everyone, drivers, peds, and cyclists.
- There are main roads to the schools that lack bike lanes, crosswalks, and sidewalks.
- ….until we have accessible facilities everywhere, dirt trails/sidepaths, and wide shoulders are better than nothing.
- The bike infrastructure is fractured on the East Mesa in Las Cruces--there are bike lanes but most don't connect. There are bike lanes on Engler Rd for example but no lanes on Jornada or Mesa Grande--main roads that connect to schools and towards commercial centers. There are bike lanes on the frontage roads along I-70 but no bike lanes or multi-users paths into the Rinconada commercial center. Also, there's a multi-user path on a section of Sonoma Ranch but only on the West side. There are no bike lanes or multi-user paths on Sonoma Ranch between Bataan Memorial E and Northrise only a sidewalk--making it unsafe to bike through. Downtown is 8 miles away from where I live but biking there safely requires a convoluted route through subdivisions. I'd love to leave my car at home and be able to bike downtown or even to the grocery store safely.
- The bike lanes are often filled with gravel and trash pushed aside by traffic with many dead birds and built-up feces in the bike lanes under bridges that make biking unpleasant.

Question 3: Are there any recently completed projects in your community that have improved your ability to walk and bike safely? Where is the new project?

- The Arroyo Hondo Trail and underpass under I-25 is essential.
- The multi-user paths along Red Hawk Golf Rd and the northern part of Sonoma Ranch.

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
37	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	2	316, Girard Boulevard Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
90	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	Christian Challenge - NMSU, 1313, East University Avenue, Las Cruces, Doña Ana County, New Mexico, 88001	Las Cruces	Dona Ana
107	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	7400, Dripping Springs Road, Organ Mesa Ranch, Doña Ana County, New Mexico, 88011	Organ Mesa Ranch	Dona Ana
106	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	2	6543, Dripping Springs Road, Doña Ana County, New Mexico, 88011	unknown	Dona Ana
34	Bicycle Safety Issue	Other	On trash day, there are trash cans in the bike lane and you have to ride into traffic	2	1573, Lead Avenue Southeast, Lucaya House Apartments, Downtown Albuquerque, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
35	Bicycle Safety Issue	Other	Bike lane suddenly merges with traffic	1	1302, Carlisle Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
50	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	7631, Comanche Road Northeast, Vista Encantada, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
47	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	5799, Osuna Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
52	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	1898, University Boulevard Southeast, Kirtland Addition, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
29	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	1	7099, Lomas Boulevard Northeast, East End Addition, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
27	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	San Mateo Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
28	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	San Mateo Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
48	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	Extra Space Storage, 4909, Juan Tabo Boulevard Northeast, Eisenhower Area, Albuquerque, Bernalillo County, New Mexico, 87111	Albuquerque	Bernalillo
38	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	4698, 4th Street Northwest, Lee Acres, Albuquerque, Bernalillo County, New Mexico, 87107	Albuquerque	Bernalillo
25	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	1	4317, Hannett Avenue Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
108	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	1	NMSU Center for the Arts, 1000, East University Avenue, Las Cruces, Doña Ana County, New Mexico, 88001	Las Cruces	Dona Ana
97	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	1	4007, Colt Road, Telbrook, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
54	Bicycle Safety Issue	Other	The diversion ditch bike trial has many underpasses. They are unlit and often have homeless people living there. the city needs to light the underpasses and someone from the city needs to come through daily to clear the path. It is not safe for the homel	1	Pan American Freeway, Albuquerque, Bernalillo County, New Mexico, 87107	Albuquerque	Bernalillo
46	Bicycle Safety Issue	Other	The traffic signal on Constitution does not detect bicycle traffic. So if a car does not trigger the light, bicycles are invisible, and wait indefinitely, as bicycles are disregarded in the cycle. The traffic engineers recently added shadows on Constitut	1	Constitution Avenue Northeast, Mesa Village, Albuquerque, Bernalillo County, New Mexico, 87112	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
84	Bicycle Safety Issue	Other	Due to low traffic volume, adding a buffered bike lane would be beneficial on this road segment between Jefferson and San Pedro.	0	4758, McLeod Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
78	Bicycle Safety Issue	Other	Efforts should be considered in regards to dieting this road from 6 lanes to 4 lanes with a protected bike lane on each side as well as wider sidewalks.	0	1514, Avenida CÃ©sar ChÃ¡vez Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
132	Bicycle Safety Issue	Other	It is difficult from a bike to see oncoming traffic while trying to merge into the bike lane	0	Bataan Memorial West, Spaceport City, Las Cruces, Doña Ana County, New Mexico, 88052	Las Cruces	Dona Ana
79	Bicycle Safety Issue	Other	It makes no sense seeing that one side of Central has a buffered bike lane on one side but the other side the buffered bike lane dissapears the more eastbound you go from Unser to Coors.	0	Central Avenue Southwest, Albuquerque, Bernalillo County, New Mexico, 87121	Albuquerque	Bernalillo
82	Pedestrian Safety Issue	Other	Lots of aggressive driver behavior and very outdated asphalt. Must be miserable for disabled folks to use this intersection when they have no other option.	0	6800, Indian School Road Northeast, Uptown, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
80	Bicycle Safety Issue	Other	NMDOT needs to find a way to either keep the multi use path, under the I-40 bridge clean of dangerous debris or to find a more viable way to extend the bike lane going under I-40 instead of merging with traffic.	0	497, Tramway Boulevard Northeast, La Cuesta, Albuquerque, Bernalillo County, New Mexico, 87123	Albuquerque	Bernalillo
45	Almost hit by vehicle	I was on a bicycle	None	0	3599, Coal Avenue Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
26	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	Indian School @ San Mateo, Indian School Road Northeast, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
71	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	133, University Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
43	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	UNM Resident Theatre Group`, 1705, Mesa Vista Road Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
73	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Saint Charles Borromeo Catholic Church, 1818, Coal Place Southeast, Silver Hill, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
33	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Louisiana Boulevard Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
44	Pedestrian Safety Issue	The sidewalk is broken, has obstacles, is narrow, or is uncomfortably close to traffic	None	0	1128, University Boulevard Northeast, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
30	Difficult or impossible crossing	There is no place to cross the road	None	0	Cafe Trang, 230, Louisiana Boulevard Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
32	Difficult or impossible crossing	There is no place to cross the road	None	0	7639, Central Avenue Southeast, International District, Albuquerque, Bernalillo County, New Mexico, 87108	Albuquerque	Bernalillo
76	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Burger King, 2110, Carlisle Boulevard Northeast, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
72	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	0	CNM Main Campus, University Boulevard Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
40	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	University Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
49	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Tramway Trail, Antelope Run, Albuquerque, Bernalillo County, New Mexico, 87111	Albuquerque	Bernalillo
74	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Saint Charles Borromeo Catholic Church, 1818, Coal Place Southeast, Silver Hill, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
41	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Planning and Campus Development, 1837, Lomas Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
70	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Central Avenue Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87131	Albuquerque	Bernalillo
42	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	801, Yale Boulevard Northeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
51	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	7609, Montgomery Boulevard Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
39	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	1340, Lomas Boulevard Northeast, Martineztown-Santa Barbara, Netherwood Park, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
55	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Speedway, 416, North Main Avenue, Aztec, San Juan County, New Mexico, 87410	Aztec	San Juan
104	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	4498, Remington Road, Cassidy at Sundance Acres, Doña Ana County, New Mexico, 88011	Cassidy at Sundance Acres	Dona Ana
101	Almost hit by vehicle	I was on a bicycle	None	0	7737, North Frontage Road, Las Cruces, Doña Ana County, New Mexico, 88007	Las Cruces	Dona Ana
134	Almost hit by vehicle	I was walking or using a mobility assistance device like a wheelchair	None	0	5258, Peachtree Hills Road, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
135	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	Rincon Mesa, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
130	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	McGuffey Street, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
133	Pedestrian Safety Issue	It's difficult for pedestrians and drivers to see each other at this location	None	0	5363, Peachtree Hills Road, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
102	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	941, South Melendres Street, J A Gustafson, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
124	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
103	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	682, West Picacho Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
109	Difficult or impossible crossing	There is no place to cross the road	None	0	4855, Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
129	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Northrise Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
116	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
118	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
121	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Circle K, 4675, Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
127	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	Bataan Memorial East, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
99	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	7264, South Main Street, Mesilla Park, Las Cruces, Doña Ana County, New Mexico, 88047	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
120	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	4201, Sonoma Ranch Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
128	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	3393, Rinconada Boulevard, Las Cruces, Doña Ana County, New Mexico, 88011	Las Cruces	Dona Ana
94	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	301, South Reymond Street, Brownlee, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
91	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	185, South Reymond Street, Brownlee, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
98	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	1700, South Fairacres Road, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
110	Difficult or impossible crossing	There isn't enough time at this intersection to cross	None	0	5001, Midway Avenue, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
131	Pedestrian Safety Issue	There isn't a crosswalk	None	0	5300, McGuffey Street, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
115	Pedestrian Safety Issue	There isn't a crosswalk	None	0	4898, Engler Road, Dos Suenos Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
117	Pedestrian Safety Issue	There isn't a sidewalk	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
122	Pedestrian Safety Issue	There isn't a sidewalk	None	0	Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
111	Pedestrian Safety Issue	There isn't a sidewalk	None	0	7989, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
112	Pedestrian Safety Issue	There isn't a sidewalk	None	0	7959, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
113	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6889, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
114	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6821, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
125	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6618, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
126	Pedestrian Safety Issue	There isn't a sidewalk	None	0	6527, North Jornada Road, Los Enamorados Estates, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
136	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Las Cruces Gospel Rescue Mission, 1050, West Amador Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
119	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Bataan Memorial East, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
123	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	6757, Mesa Grande Drive, Las Cruces, Doña Ana County, New Mexico, 88012	Las Cruces	Dona Ana
89	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	1098, Ivydale Drive, Country Club Estates, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana
63	Almost hit by vehicle	I was on a bicycle	None	0	West Alameda Street, Santa Fe, Santa Fe County, New Mexico, 87501	Santa Fe	Santa Fe
68	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	3570, Yucca Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
67	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	2499, Rodeo Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
64	Difficult or impossible crossing	The existing crossing feels unsafe to use	None	0	2, 1807, 2nd Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
65	Difficult or impossible crossing	There is no place to cross the road	None	0	Saint Michaels Drive, Santa Fe, Santa Fe County, New Mexico, 87605	Santa Fe	Santa Fe
62	Difficult or impossible crossing	There is no place to cross the road	None	0	999, Railfan Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
53	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	South Saint Francis Drive, Santa Fe, Santa Fe County, New Mexico, 87504	Santa Fe	Santa Fe
66	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Santa Fe High School, 2100, Yucca Street, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
69	Pedestrian Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	Santa Fe British Motors, 990, West Cordova Road, Santa Fe, Santa Fe County, New Mexico, 87505	Santa Fe	Santa Fe
92	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	5201, Remington Road, Telbrook, Doña Ana County, New Mexico, 88011	Telbrook	Dona Ana
59	Almost hit by vehicle	I was on a bicycle	None	0	179, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan
105	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	Sonoma Ranch Boulevard, Doña Ana County, New Mexico, 88004	Unknown	Dona Ana
100	Bicycle Safety Issue	The existing bicycle facility doesn't feel safe to use	None	0	Baylor Canyon Drive, Doña Ana County, New Mexico	Unknown	Dona Ana
24	Difficult or impossible crossing	There is no place to cross the road	None	0	I 40, Cibola County, New Mexico, 87026	Unknown	Cibola
96	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	5199, Snow Road, Doña Ana County, New Mexico, 88005	unknown	Dona Ana
60	Bicycle Safety Issue	There isn't a bicycle facility (ex. bike lane or shared use path) on this road	None	0	166, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
61	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	338, Road 3000, San Juan County, New Mexico, 87410	unknown	San Juan
58	Bicycle Safety Issue	Unsafe driver behavior and/or speeding occurs here	None	0	134, Road 3100, San Juan County, New Mexico, 87410	unknown	San Juan
87	Difficult or impossible crossing	Other	The light signals don't detect bicycles.	0	Rio Bravo Boulevard Southeast, Albuquerque, Bernalillo County, New Mexico	Albuquerque	Bernalillo
86	Bicycle Safety Issue	Other	The new traffic light changes too frequently and changes from yellow to red too quickly to brake safely. I don't believe this new light has made this stretch of Lead/Coal any safer. It's done the opposite by giving road users more to think about. Adding	0	401, Walter Street Southeast, Martineztown-Santa Barbara, Downtown Albuquerque, Albuquerque, Bernalillo County, New Mexico, 87102	Albuquerque	Bernalillo
83	Bicycle Safety Issue	Other	There is no good reason why the bike lane should end after Indian School. After the lane ends, you are either forced to share the road with drivers who can sometimes become impatient with your presence on a bicycle or you ride on the sidewalk and risk ge	0	2200, San Pedro Drive Northeast, Uptown, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
93	Bicycle Safety Issue	Other	This is absolutely crazy, so cars can go faster the shoulder was shoved to one side only while the other side has nothing.	0	5201, Remington Road, Telbrook, Doña Ana County, New Mexico, 88011	Telbrook	Dona Ana
95	Bicycle Safety Issue	Other	This is crazy concrete barriers were added so that cars have to go around. No considerations for cycling.	0	Mesilla Industrial Machining, 995, West Hadley Avenue, Las Cruces, Doña Ana County, New Mexico, 88005	Las Cruces	Dona Ana

OBJECT ID	Pin Category	Pin Subcategory	Additional Comments	Likes	Address of Pin (Approximate)	City	County
85	Bicycle Safety Issue	Other	This segment of Jefferson needs to be dieted from 4 lanes to 2 lanes due to low traffic volume. Sidewalk desperately needs to be widened especially for disabled folks who might live nearby.	0	4671, Jefferson Street Northeast, Albuquerque, Bernalillo County, New Mexico, 87109	Albuquerque	Bernalillo
81	Difficult or impossible crossing	Other	Traffic light does not detect bicycles. Have almost been hit because of vehicles speeding and disobeying red lights. I feel like changing this intersection to a roundabout would be a safer option to deter speeding and cyclist won't have to wait at a ligh	0	1798, San Pedro Drive Northeast, Winrock South, Albuquerque, Bernalillo County, New Mexico, 87110	Albuquerque	Bernalillo
77	Bicycle Safety Issue	Other	We need to make an effort to diet University Blvd. from 6 lanes to 4 lanes with protected bicycle ways and wider, smoother sidewalks.	0	194, University Boulevard Southeast, Silver Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo
88	Pedestrian Safety Issue	Other	Yale should reevaluate the median design to be more pedestrian friendly. A median with vegetation and pedestrian crossings to avoid intersections would make this stretch of Yale feel more safer.	0	Guava Tree Cafe, 216, Yale Boulevard Southeast, Nob Hill, Albuquerque, Bernalillo County, New Mexico, 87106	Albuquerque	Bernalillo

What are your top priorities to improve safety for vulnerable road users?

	Comments	Pedesrian Infrastructure improvements	Bike Infrastructure Improvements	Education	Enforcement	Speed reduction	Separation/ Barriers between vehicles and VRUs	Universal design/ADA	Road diets	Planning	Road Design	Signage	Shade/weather protection	Maintenance	Street lights	Data	Policy	Additional notes
ALBUQUERQUE	Is Universal Design and ADA considerations in the plan? Because I think that is important to get in this data and to get reported on ••							1								1		
	Shade from the heat or protection from severe weather too												1					
	City needs a road diet on East Central - BHI road studies show this								1									Infrastructure improvements that reflect road safety audits
	Funding for improving pedestrian infrastructure on NMDOT roadways	1																
	Be more creative and willing to implement low-cost street interventions like using paint, flex posts, and planters to create new pedestrian refuge/curb extensions	1																Low cost interventions to create new pedestrian infrastructure
	Condition and quality of infrastructure	1																
	Love the idea of education and outreach to the most impacted communities			1														
	Central and Coors	1																Improvements to Central and Coors intersection
	Having a better Node to Node connectivity within the city could also help. There is a lot of disconnect with bike trails and paths. Sidewalks are also not accessibile in all communities	1	1															Bike network connectivitiy
	Education surrounding safety treatments			1														
	Paint is not protection for bike lanes		1				1											Physical barriers for bike lanes
	Developing signs that are user friendly that involve Native students implementation											1						
	Prioritize protected bike lanes, create quick build projects for most problematic intersections/streets.	1	1															Quick build projects - low cost interventions
	Benches, jayhawk signals, road diets, shade, sidewalks, street lights and slowing down/closing Central to shift focus from cars to people	1				1		1	1				1		1			Pedestrian-centered design
	Additionally when we have roads like Isleta with 40 mph speed limits it increases KA collision, which is counter intuitive the way we set speeds with the 85th percentile					1												
	Trees and landscaping can affect sight lines																	Make sure trees and landscaping don't impede sitelines
	Heat relief is an increasingly important safety issue												1					
	Taking a systemic approach to facilitating , cycling and rolling travel, taking as seriously as travel to design for as we take for cars	1	1								1							Pededstrian/cyclist centered design
	Prioritize outreach to multimodal users community wide. Experiential input can point to many simple ways to minimize vulnerable user exposure			1														
	Focus on walking and cycling modes for their own qualities, dynamics, and merits, not just in relation to motorized travel, They are basic and fundamental to transportation and human life	1	1															Pededstrian/cyclist centered design
	ABQ TOTAL	**9**	**5**	**3**	**0**	**2**	**1**	**2**	**2**	**0**	**1**	**1**	**3**	**0**	**1**	**1**	**0**	
Northwest Corner	Liquor stores not selling by x time				1													
	Sidewalks are in disrepair	1																
	Cleaning of shoulder of roads would encourage use by bicyclists													1				cleaning of road shoulder
	More regular enforcement of posted speed limits would help in the Kirtland area				1													Kirtland area speed enforcement
	Vehicle/pedestrian barriers along the US 491 (3 miles route) in Shiprock, NM	1																
	Pedestrian Hybrid Beacons	1																Pedestrian Hybrid Beacons
	School Zone, vehicle/pedestrian west of US 491/US 64 intersection in Shiprock					1												School zone - US 491
	In Grants - increasing safe crossings, crosswalks along Santa Fe ave. Commercial corridor. Pedestrians don't use legal crossings because they aren't convenient. You have to walk a mile	1																Grants mainstreet - safe crossings
	Raised pedestrian crossings or pedestrian bridges	1					1											Pedestrian bridges
	more pedestrian reguge zones on larger roads	1					1											
	Road diet on Rt 66 Gallup								1									Gallup road diet - Rt 66
	Include medians as part of road diet - maybe on 491	1							1									US 491 road diet and pedestrian improvements
	Intersection safety - Audio Safety improvements at crossings. Native Americans have a higher rate of glaucoma							1										Audio improvements at crossings
	Improve intersection timing to allow for varied mobility.							1										Intersection timing
	Bike paths have protected crossings		1															
	Smart road design										1							
	Buffer for cyclists, ridges and reflectors for warning drivers		1				1											
	Center street pedestrian islands would help on wide roads in busy intersections (mid-crossing) in Gallup, downtown on old Rt 66	1					1											Gallup downtown pedestrian improvements - reguge islands
	Reduce Speeds					1												
	Improve pedestrian access	1																

	Comments	Pedesrian Infrastructure improvements	Bike Infrastructure Improvements	Education	Enforcement	Speed reduction	Separation/ Barriers between vehicles and VRUs	Universal design/ADA	Road diets	Planning	Road Design	Signage	Shade/weather protection	Maintenance	Street lights	Data	Policy	Additional notes
	Safe systems approach - looking at ways that we can mitigate and reduce injuries and fatalities associated with crashes, rethinking how we design our roads.										1							
	Road diets								1									
	4 way crossing at Burnham Jct of US 491/N5. Need signage on 491 approaching the intersection											1						Signage at Burnham Jct
	Public education and outreach			1														
	Health education			1														
	Signage											1						
	Seat belt usage																	
	Northwest Corner TOTAL	**9**	**2**	**2**	**2**	**2**	**4**	**2**	**3**	**0**	**2**	**2**	**0**	**1**	**0**	**0**	**0**	
	Las Cruces - There used to be better connectivity. It seems like now the bike lane or shoulder just disappears. Planners failing to recognize they are impeding safety of VRUs		1							1								Connectivity
	How does the discussion we are having today interact with Vision Zero? Has the NM DOT adopted Vision Zero? Has Dona Ana County adopted Vision Zero?									1								Alignment with local plans
	Reduce speed					1												
	Are their any statistics about how many collisions are caused by cars turning right on red?															1		
	I see the Chair for the County of Doña Ana might be on this call and City of Las Cruces staff. Does the county and city have a masterplan to prioritize pedestrian safety currently?									1								Planning coordination
	Does New Mexico law include that pedestrians in crosswalks have right a way? I'm originally from New York State and that is the law there. There is various signs in downtown area Protecting pedestrian right-of-way through intersections. When vehicles turn across pedestrian traffic when peds have the right of way, it undermines confidence in marked																1	Pedestrian-centered policy
	Crosswalks and signal effectiveness (including when right on red is permitted)	1																Signals
	I'd like to see consistent use of the term VRU, inclusive rather than simply pedestrians			1													1	Signal effectiveness
	Dona Ana County just received $400K, grant money for SS4A, to create a Safety Action Plan, which includes all these items, but in the unincorporated areas.									1								
	There isn't a button to push to cross the street near the shelter. Hopefully this isn't a conversation blaming VRUs. Drivers are not very mindful of pedestrians																	Need for signalized crossing
	Earlier today George talked about an approach that allows pedestrians a few seconds to enter the crosswalk before vehicles are given a green light	1																Signal timing - leading pedestrian interval
	Bike lanes on Amador!		1															Bikes lanes on Amador
	Top priorities: Protected bike lanes.		1				1											
	In road/hwy planning, would be good to reevaluate how to improve infrastructure, and not just an add-on, but true inclusive design.	1						1										Universal Design
	Adding (and regularly maintaining) striping/signage for crosswalks/bicycle lanes	1	1											1				
	Look to solutions such as crosswalks	1																
	Bike lanes are not maintained. Bike lanes often have broken pavement or other road hazards.													1				
	Bus is another issue. Some people mention going from bus to medical appointment and being forced to cross against traffic as the crosswalk is not near enough	1																Crossings near bus stops
	Education of both VRUs and vehicle drivers.			1														
	Education for VRUs and vehicle drivers. Have observed pedestrians walk into street, not looking both ways.			1														
	EDUCATION and raise awareness			1														
	Specific education for local governing bodies. For example the Doña Ana County Commissioners could benefit from a toolkit to understand these items. They have recently had problems			1														Transportation safety tool kit for local leaders
	Co-location of Improvements and Affordable Housing, Improvements to Amador/Lohman especially near MVCoH, El Paseo Rehab, TIA is pending for that area hopefully we can identify improvements.	1								1								Coordinate improvements with affordable housing development
	Better engineering and lighting.										1				1			
	RE: TIA by Community of Hope: Will lowering the speed limit be investigated. Currently 40mph (isn't flashing light for 30mph just advisory?) which is in the 80% to 90% fatality rate.					1												
	Stronger enforcement (speed) on Elks Drive from the Elks Lodge heading north for approx. 1/2 mile. It's become a drag strip. A lot of the vehicles are running well over 90 to 100 mph				1	1												
	Enforcement.				1													
	I understand that there are a few areas that are REQUIRING investigation if a VRU is involved. In some places it's specificly if someone is killed or seriously injured, sometimes anytime first responders were called, sometimes ANY VRU involvement. Lack of investigation is problematic				1													
	Enforcement				1													
	Consistent investigation would give much-needed info for addressing various issues				1													
	Enforcement - lack of citations is often referred to by folks who talk about VRUs				1													
	Who identifies the 15% Pedestrian Error in the crash reports? Probably officer? This could tend to prejudice the reporting based on officers opinion.				1													Police bias against pedestrians, assume pedestrian error or fault
	DOÑA ANA TOTAL	**7**	**4**	**5**	**7**	**3**	**1**	**1**	**0**	**5**	**1**	**0**	**0**	**2**	**1**	**1**	**2**	
	GRAND TOTAL	**25**	**11**	**10**	**9**	**7**	**6**	**5**	**5**	**5**	**4**	**3**	**3**	**3**	**2**	**2**	**2**	

What do you think are the main barriers to implementing strategies, policies, and projects that improve safety outcomes for vulnerable road users?

	Comments	NMDOT Policies/ roadway design	Car dependency/ car centrism	Ineffective leadership/ collaboration	lack of public interest/public attitude	Road design	Data tracking	Staffing/ capacity	Funding	Priorities	Education	Infrastructure	Additional Comments
ALBUQUERQUE	Speed of roadways on DOT roadways and resistance to lowering speed limits	1											
	Car dependency and vintage street design. Stroads		1			1							
	We need data on walking a cycling crashes and falls that not involve motor vehicles						1						
	Lack of support for strategies that implement tactical urbanism or creative, grassroots, and community based approaches that can show big impact from affordable and quick build interventions	1											
	Alignment behind shared responsibility among multiple stakeholders (enforcement, engineering, planning, etc.)			1									
	Resistance to road diets/reducing LOS for vehicles - safety should be a priority over LOS	1											Safety should be prioritized over LOS
	Language and interpretation barriers, especially representing NA										1		
	Fear of trying something different (new/different) because of lawsuits	1											fear of lawsuits preventing change
	Aging Infrastructure											1	
	Limited pots of funding - get diverted to squeeky wheels from privileged places								1				
	Politics, not prioritizing safe streets for all users		1										
	Lack of staff to implement projects							1					
	ABQ TOTAL	**4**	**2**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	
Northwest Corner	Often not enough room for sidewalks												Mentioned during conversation about rail lines
	Roadway design standards are strict, not felxible	1											
	Restrictions that DOT has on how the highway can be used. It can be difficult to get approval reduce flow on highways which are also mainstreet	1											
	Roadway design - numbers of lanes, difficult to change design for pedestrian safety					1							
	NM 118 West side Gallup by Truck Stops, no sidewalks, very poor lighting, pedestrians walking on roadways and crossing roadway after dark												
	Limited or lack of partnership with tribes			1									
	Funding								1				
	local capacity even when there is funding							1					
	limited funding often a constrant on implementing strategies to improve vulnerable road users so executing plans that accommodate limited funding to prioritize p							1					
	Disabilities and low-income populations are frequently considered lower priority									1			
	Priorities and competing needs									1			
	lack of leadership support. Tribal leadership having other priorities			1									
	Lack of communication, particularly with Tribal land policies. Timing is delayed			1									
	We perceive a lack of communication/coordination between the NMDOT planning bureau and the local district with regard to what is prioritized			1									
	Lack of public participation for safety				1								
	It appears that people just don't or are not concerned about others, or signs or laws				1								
	Northwest Corner TOTAL	**2**	**0**	**4**	**2**	**1**	**0**	**2**	**1**	**2**	**0**	**0**	

	Comments	NMDOT Policies/ roadway design	Car dependency/ car centrism	Ineffective leadership/ collaboration	lack of public interest/public attitude	Road design	Data tracking	Staffing/ capacity	Funding	Priorities	Education	Infrastructure	Additional Comments
DOÑA ANA	But will the Chair and Commission support or will they fight against it and allow developers to do whatever they want at the risk of road/street safety? Did the Commission just not vote to not have to install lights and sidewalks in a community recently? It is unclear what their priority is.												
	understand roads and safety design and care more about industrial parks than communities and also want to pave dead end roads.												
	What I've seen of the UCR crash reasons was a large percentage of "Unknown". This seems like an area that needs to be identified (as just mentioned by Rosa).						1						
	At the risk of offending a segment of the participants, staff resistance to implementing safety improvements or new programs. If it's not in the MUTCD, then it can't be done. This doesn't address where citizens have pointed out issues, but they can't be addressed until warrants are met, but warrants can only be met after a fatality.	1											
	Funding- Many intersections and corridors would cost significant $												
	Funding. People's behavior. Agreements among all stakeholders.												
	Funding. Lack of education, lack of adequate enforcement, inadequate or outdated geometry of our roads and intersections, or lack of multi -use facilities.					1			1		1	1	
	Lived experiences. Car culture is so prominent in our communities, that there is a lot of disregard for vulnerable road users. How can we educate and inform		1										
	Attitudes - from citizens, engineers, drivers - convenience for vehicle driver focused and "it's always been this way".				1								
	Overcoming resistance to change — roundabouts a less expensive than signaled intersections and result in fewer accidents but have not been widely implemented as an ap		1		1								
	We need a walk-bike centric framework. The VRU framework is still structured on cars! (Vulnerable in relation to cars, right?). It is much safer for all to walk and bike!		1										
	We need data on falls and crashes that don't involve cars, we need to count walking and cycling so we understand exposure rates, not just per capita rates,						1						
	We need to design transportation systems for walking and cycling. We need to take these modes as seriously, even more seriously (more primary) than cars.		1			1							
	There seems to be a clear bias that roads are primarily for ICE vehicles and that VRUs are rarely considered as equal road users		1										
	DOÑA ANA TOTAL	**1**	**5**	**0**	**2**	**2**	**2**	**0**	**1**	**0**	**1**	**1**	
	GRAND TOTAL	**7**	**7**	**5**	**4**	**4**	**3**	**3**	**3**	**2**	**2**	**2**	

What are the main contributing factors related to VRU fatalities and serious injuries?

	Comments	Driver inattention/Distracted Driving	Road Design	VRU Infrastructure	Car centrism/ Disregard for pedestrian safety	Speed	Large vehicles	Time of Day	Impairment/ Intoxication	Equity	Pedestrian behavior	Weather	Planning	Lack of knowledge about road rules	Additional notes
ALBUQUERQUE	Infrastructure quality and the relationship to equity. Lack of infrastructure leading to unsafe crossings			1						1					Inequitable infrastructure
	Larger vehicles - oversized SUVs and personal trucks						1								
	High Native VRU rural population coming into ABQ for events and don't know rules													1	Inequitable infrastructure
	Infrastructure and equity - race, gender, income and ability			1						1					
	Speed related to wide roads		1			1									
	Design for speed		1			1									
	Larger vehicles						1								
	Distracted Driving	1													
	lack of critical pedestrian/cyclist infrastructure			1											Lack of infrastructure
	ABQ Rapid Transit (ART) public investment looks different in certain areas - inequitable infrastructure investment			1						1					Inequitable infrastructure
	I also want to mention that in some parts of Central it's so wide (six or more lanes) that it's also a big factor		1												
	Day and time of crashes as well as dates of major events							1							
	A lack of alternatives to driving home from the bars contributes to DWI								1						Lack of transportation options
	There are a lot of impaired pedestrians along the Central Corridor, either with apparent mental health issues or visibly using drugs								1						
	In other data we have seen alcohol/drug use seem to play a big factor too especially along central								1						
	people dismiss data related to alcohol/drug use														Concern that if drugs/alcohol are a contributing factor, then it won't be considered an issue of road design and other solutions won't be explored
	ABQ TOTAL	**1**	**3**	**4**	**0**	**2**	**2**	**1**	**3**	**3**	**0**	**0**	**0**	**1**	
Northwest Corner	In Gallup - pedestrian intoxication								1						
	Public intoxication paired w/homelessness								1						
	VRUs neet to be more aware of traffic, stepping out before vehicles pass										1				
	ignoring traffic signals	1													
	fatigue, particularly on long drives	1													
	visibility of clothing										1				
	lack of separation between drivers & VRUs		1												lack of separation between VRUs and cars
	poor design		1												
	poor lighting design		1												
	Time of day							1							
	Speed & time of day					1		1							
	excessive speed					1									
	heavier larger vehicles						1								
	Distracted drivers	1													

	Comments	Driver inattention/Distracted Driving	Road Design	VRU Infrastructure	Car centrism/ Disregard for pedestrian safety	Speed	Large vehicles	Time of Day	Impairment/ Intoxication	Equity	Pedestrian behavior	Weather	Planning	Lack of knowledge about road rules	Additional notes
	Northwest Corner TOTAL	**3**	**3**	**0**	**0**	**2**	**1**	**2**	**2**	**0**	**2**	**0**	**0**	**0**	
DOÑA ANA	Distracted drivers	1													
	Distracted driving	1													
	Speed, driver inattention	1				1									
	Cell Phone Use	1													
	Speed, Lack of complete streets, aging or incomplete infrastructure.		1	1		1									
	I think it's also important to note that while everyone is distracted these days, it's more dangerous to be distracted when you're behind the wheel of a large vehicle. We tend to equate the damage that a car causes with bike users, but it's not the same.	1													
	Lots of lack of respect on all sides!				1										
	Not great "share the road" adherence--				1										
	SHARED RESPONSIBILITY for one another's safety				1										
	Time of day is a factor — eyes cannot see as well at dawn and dusk because of the varying light levels, sky versus roadways							1							
	Road infrastructure encourages only vehicle use thus drivers feel only vehicles should be on roads. Distracted drivers.	1			1										
	Lack of facilities that are designed for VRUs versus cars/trucks. Develop a plan where certain roadways are specifically designed for VRUs and are separated from cars/trucks				1										
	Land use planning definitely a structural factor. Distances based on car convenience, and 'big streets' make for alienating landscapes, and destinations being perceived as even further away. Need more village scale development, with destinations closer together, and smaller streets and pathways connecting				1								1		
	changes in vehicle sizing - SUVs and pickup trucks have much worse sightlines than sedans						1								
	automobile manufacturers have also engaged in a "horsepower war" to market the most powerful vehicles						1								
	Pedestrians crossing mid block because intersections are too far away. Crosswalks do not give enough time to cross at busy intersections.		1	1											Infrequent crossings encourage unsafe behavior
	Time of day is a factor — eyes cannot see as well at dawn and dusk because of the varying light levels, sky versus roadways							1							
	Lack of facilities that are designed for VRUs versus cars/trucks. Develop a plan where certain roadways are specifically designed for VRUs and are separated from cars/trucks			1											lack of pedestrain infrastructure
	Weather											1			
	Heat is impacting outcomes - pedestrian inattention											1			
	Perceived right to the road, again, attitudes.				1										
	DOÑA ANA TOTAL	**6**	**2**	**3**	**7**	**2**	**2**	**2**	**0**	**0**	**0**	**2**	**1**	**0**	
	GRAND TOTAL	**10**	**8**	**7**	**7**	**6**	**5**	**5**	**5**	**3**	**2**	**2**	**1**	**1**	

Do you feel that your group is adequately represented in statewide transportation planning?

	Comments	More tribal engagement needed	More engagement with impacted communities	Better incorporation of outreach into policy	More engagement with disabled communities	Additional Comments
ALBUQUERQUE	Want more engagement with tribal students	1				
	Yes, great coordination. Supporting complimentary planning efforts and integrating/referencing plans - MRCOG					
	Presbyterian Health Source (through REACH) - we can assist in Hispanic, Native American and low income population areas for bike, walk, and other education	1				
	A multi-modal road user - conversant in all modes and how they work together					
	No. Need more engagement with most impacted communities		1			
	I do think we need to do more to engage Native and tribal communities and organization especially connected to Central Ave	1				
	ABQ TOTAL	**3**	**1**	**0**	**0**	
DOÑA ANA	Our organization, Vulnerable Road Users NM, is very new and not on too many people's radar. We are glad to be included/represented today and will be proactive on involving ourselves in these "big picture" discussions					
	When the system focus in safety, then we are all in the same interest group together.					
	VRUNM is willing to help with any statewide planning.					
	We are committed to make sure , not just safety now, but also the future developments have multi-use facilities, sufficient lighting and sidewalks, and wider road with shoulders. Not just worried about the bottom line. Let's take care of our citizens.					
	Velo Cruces is an advocacy organization in Las Cruces and is glad to be involved in DOTs efforts to improve road safety for VRUs					

	Comments	More tribal engagement needed	More engagement with impacted communities	Better incorporation of outreach into policy	More engagement with disabled communities	Additional Comments
	We're not always involved/invited, but thanks for bringing us in!		1			
	NMDOT has been doing good outreach to the different areas, but then getting results in state policies seems to be a problem. Example, the NMDOT Ped Safety Plan recommends Complete Streets, but seems that plan is now just on the shelf.			1		
	The bicycle related state laws need updating, but it's currently a very ad hoc process. The 5ft passing law has not been readdressed, for example.					
	City Staff is represented but additional representation from Non-profits or Housing providers/ developers may be beneficial.					Involve development/housing community
	As a transit agency here in Las Cruces, we participate in New Mexico Transit Association (NMTA), the Metropolitan Planning Organization (MPO) and NMDOT that coordinate with other agencies in the state. There could be more support for public transportation at the state level.					More support for public transit
	Yes - I appreciate the opportunities that the school district has to be involved, and also the dedication of funding by NMDOT to programs such as Safe Routes to School.					
	This is a great forum, and we are hoping to have you all help DAC, develop a workable action Plan. Thank you.					
	DOÑA ANA TOTAL	**0**	**1**	**1**	**0**	
	GRAND TOTAL	**3**	**2**	**1**	**0**	

NMDOT VRU Safety Assessment Appendix E: Summary of Document and Plan Review

New Mexico Department of Transportation

NMDOT Vulnerable Road User Assessment
October 23, 2023

NMDOT
NEW MEXICO DEPARTMENT OF TRANSPORTATION

Summary

The review of documents and plans specific to New Mexico Department of Transportation (NMDOT) involves a thorough examination of relevant state, local, and MPO documents. This process is essential for ensuring that the goals, priorities, and projects are consistent across various safety plans and programs. For NMDOT, a series of safety-related programs have been introduced in recent years, each addressing different areas of concern. The primary areas of focus include the safety of bicyclists and pedestrians, as well as equity concerns.

The NMDOT Pedestrian Safety Action Plan and Pedestrian and Bicyclist Safety Program Plan are notable examples, aiming to improve the safety of and facilities for pedestrians and bicyclists. These plans rely on data-driven methods to understand the root causes of crashes and aim to raise public awareness about sharing the road through outreach efforts. Other significant plans published between 2015 and 2022 that address the safety of bicyclists and pedestrians include the NMDOT Prioritized Statewide Bike Plan, Mid-Region MPO Regional Transportation Safety Action Plan, various Local Road Safety Plans, Mesilla Valley MPO Safety Report, Gallup Area Transportation Safety Plan, and plans produced by the Navajo Nation. These plans are dedicated to enhancing numerous safety-related aspects and policies, including:

1. The development of a comprehensive system of biking infrastructure.
2. Creating a data-driven framework that incorporates the Safe System Approach.
3. The prioritization of safety improvements on local streets and roads.
4. Launching safety campaigns tailored for law enforcement agencies, engineers, community leaders, and pedestrian advocates, among others.

Figure 1 provides a visual representation of both the discussion level and frequency of each of the three primary areas of concern (pedestrians, bicyclists, and equity) in the 17 documents and plans that were reviewed by the project team. If a primary area of concern was not discussed in a document or plan, then a tally would be assigned to the light blue bar for “Not Discussed” – indicating the primary area of concern was not mentioned in the document/plan. If a primary area of concern was the main topic of discussion of a document or plan (Example: the NMDOT Pedestrian Safety Action Plan focusing primarily on pedestrian related discussions), then a tally would be assigned to the green bar since it was the focus of discussion.

As seen in the figure, the safety of vulnerable road users, particularly bicyclists and pedestrians, is a top priority amongst many of the documents and plans that were reviewed. This is illustrated by showing that bicyclists were the focus of discussion (left green bar) nine times in a document/plan, as pedestrians were discussed the focus of discussion (middle green bar) eleven times in the 17 documents/plans that were reviewed.

Although equity has not been a consistent area of concern historically, it is noteworthy that equity has become a prominent topic for discussion in the documents/plans published after 2018 and has gained significant attention in recent years.

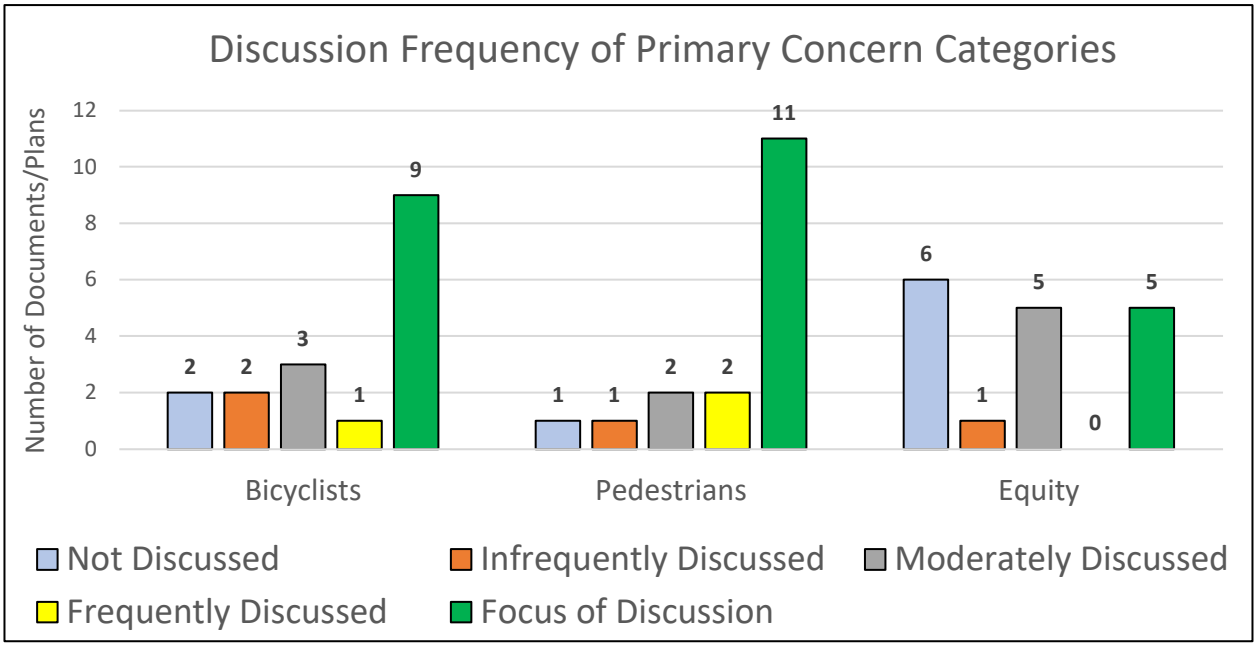


Figure 1

Secondary areas of concern focus on ADA compliance, environmental justice, and the coordination of diverse strategic priorities and plans. While prioritizing projects and strategies has consistently been given significant attention, areas like ADA compliance and environmental justice have not been as prominently featured in many safety-related plans. However, plans such as the NMDOT Strategic Highway Safety Plan, NMDOT Highway Safety Plan, NMDOT Prioritized Statewide Bike Plan, various Metropolitan Transportation Plans, and various Local Road Safety Plans have addressed these secondary concerns comprehensively. These plans have targeted various aspects of safety including:

1. Reducing fatal and incapacitating crashes.
2. Development and funding of statewide and community-level strategies with the most significant impact on reducing crashes and fatalities.
3. The establishment of a data-driven framework that integrates the Safe System Approach.

Although ADA compliance and environmental justice have historically received limited attention, various Metropolitan Transportation Plans and the NMDOT ADA Transition Plan have played a crucial role in elevating these concerns in recent years. The core objectives of these plans involve equipping NMDOT staff and the residents of New Mexico with policies, procedures, and practices that meet the requirements of Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990. They also promote alternative fuels and alternative modes of transportation for significantly reducing the environmental impact of built environment. Figure 2 illustrates these various secondary concern categories and their frequency of being addressed in different plans and programs.

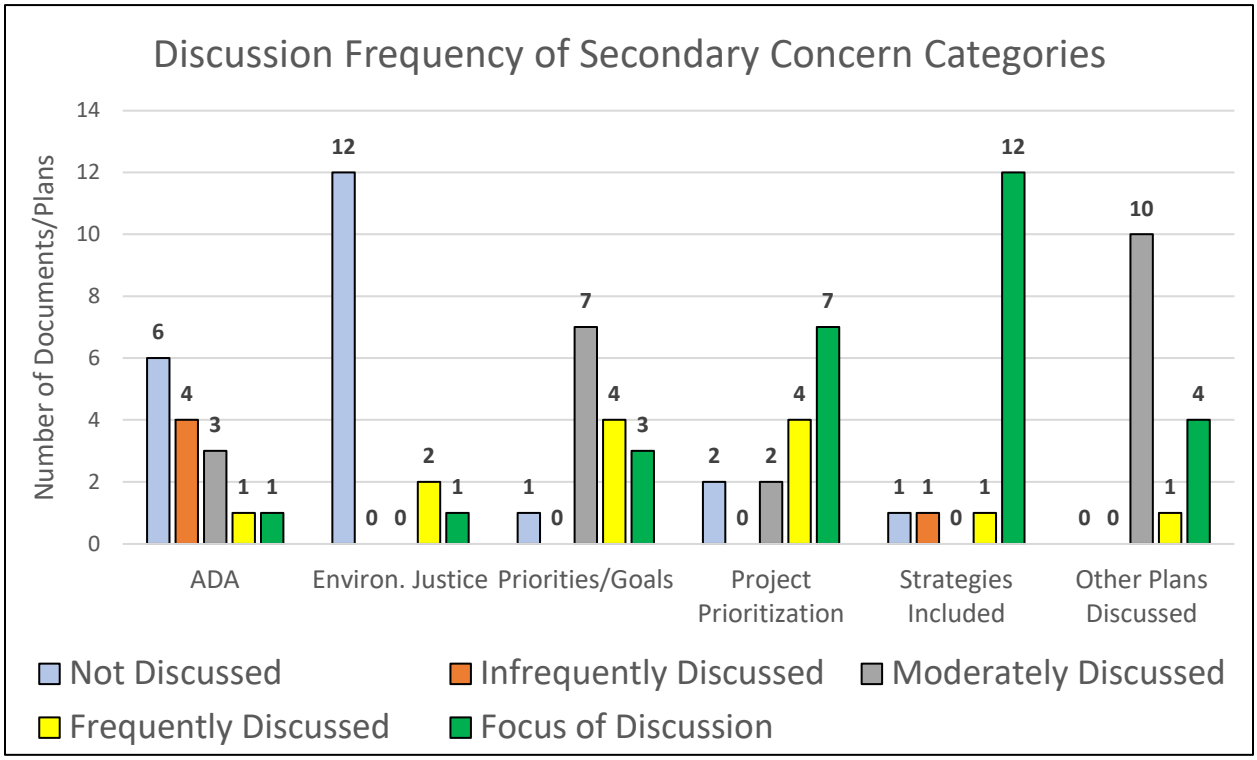


Figure 2

A complete list of the 17 documents and plans that were reviewed is included below.

1. NMDOT's 2021 Strategic Highway Safety Plan
2. NMDOT's Statewide Transportation Plan (Long Range Plan/NM 2045 Plan)
3. NMDOT's Highway Safety Plan
4. NMDOT's Pedestrian Safety Action Plan
5. NMDOT's Pedestrian and Bicyclist Safety Program Plan
6. NMDOT's Prioritized Statewide Bike Plan
7. NMDOT's Location Studies Procedures
8. NMDOT's Design Manual
9. Mid-Region MPO's Metropolitan Transportation Plan
10. Mid-Region MPO's Regional Transportation Safety Action Plan
11. Farmington MPO's Local Road Safety Plan
12. Santa Fe MPO's Local Road Safety Plan
13. Mesilla Valley MPO's Safety Report (2013)
14. NMDOT's Gallup Area Transportation Safety Plan

15. Navajo Nation's Corridor Safety Analysis and Recommendations (FHWA Local Road Technical Assistance)
16. NMDOT's ADA Transition Plan
17. NMDOT and University of New Mexico's Center for Injury Prevention, Research and Education "Look For Me" Program

New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

target zero NM
SAFE ROADS FOR ALL

A comprehensive strategy to achieve zero traffic deaths through the ***Target Zero*** initiative.

VISIT THE NMDOT WEBSITE TO DOWNLOAD THE PLAN

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