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## December 2023

Prepared by:


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TABLE OF CONTENTS ..... 2
LIST OF FIGURES ..... 3
LIST OF TABLES ..... 4
ACKNOWLEDGMENTS ..... 5
PROJECT LEADERSHIP ..... 3
ACRONYMS ..... 4
EXECUTIVE SUMMARY ..... 5
INTRODUCTION ..... 4
Regional Overview ..... 4
Plan Development ..... 4
PROMOTING A CULTURE OF SAFETY ..... 5
Community Engagement ..... 5
Safe System Approach. ..... 7
REGIONAL SAFETY PERFORMANCE ..... 10
Crash Trends ..... 10
Crash Characteristics. ..... 11
Pedestrian Safety Performance ..... 15
Bicyclist Safety Performance ..... 16
Crash Data Analysis by Jurisdiction ..... 17
Summary ..... 20
VISION AND EMPHASIS AREAS. ..... 21
Vision. ..... 21
Emphasis Areas ..... 21
NETWORK SCREENING AND AREAS OF OPPORTUNITY ..... 23
SAFETY STRATEGIES ..... 30
Combining Crash Modification Factors ..... 39
IMPLEMENTATION PLAN ..... 40
Participants ..... 40
Incorporating Safety into the Project Development Process ..... 40
Safety Performance Reporting ..... 42
Policies and Guidelines ..... 43
Safety Projects ..... 46
Equity Analysis ..... 54
Funding Sources ..... 56
Project Timelines ..... 58
Grants Applications ..... 58

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$\qquad$APPENDIX
APPENDIX A: STAKEHOLDER INPUT SUMMARY ..... II
APPENDIX B: PUBLIC ENGAGEMENT SUMMARY ..... III
APPENDIX C: SAFETY PERFORMANCE AND EQUITY ANALYSIS TECHNICAL MEMORANDUM ..... IV
APPENDIX D: EPDO METHODOLOGY ..... V
APPENDIX E: TOP 20 PRIORITY LOCATIONS BY AGENCY ..... VI
APPENDIX F: COMPLETE STREETS AND VISION ZERO ..... VII
APPENDIX G: RECOMMENDED PROJECTS ..... VIII
APPENDIX H: STORY MAPS ..... IX
List of Figures
Figure 1: Top 5 Safety Concerns Observed by Respondents ..... 6
Figure 2: Safe System Approach (Source: FHWA) ..... 7
Figure 3 Risk of Death for a Pedestrian at Speed ..... 9
Figure 4:MetroPlan Crashes by Severity ..... 10
Figure 5: MetroPlan Crash Trend ..... 11
Figure 6: MetroPlan Crashes by Manner ..... 12
Figure 7: MetroPlan Crashes by Light Condition ..... 12
Figure 8: Suspected Serious Injury \& Fatal Cashes Percentage ..... 13
Figure 9: MetroPlan Fatal and Serious Injury Characteristics ..... 15
Figure 10: Pedestrian Crashes by Severity ..... 16
Figure 11: Bicyclist Crashes by Severity ..... 16
Figure 12: Crashes by Jurisdiction ..... 17
Figure 13: Average Annual Crash Rate per 100,000 Population ..... 18
Figure 14: Average Annual Fatal Crash Rate per 100,000 Population ..... 19
Figure 15: Average Annual Serious Injury Crash Rate per 100,000 Population ..... 19
Figure 16: Intersections with high crash severity score (100 is the most severe) ..... 23
Figure 17: Segments with high crash severity score ..... 24
Figure 18: MetroPlan High Injury Network Preview ..... 25
Figure 19: Emphasis Area Screening Results for Intersections ..... 28
Figure 20: Emphasis Area Screening Results for Segments ..... 29
Figure 21: Equity Analysis ..... 55

## List of Tables

Table 1: MetroPlan Crash Violation by Severity ..... 14
Table 2: Crash Severity by Jurisdiction ..... 17
Table 3: Crashes by Jurisdiction ..... 17
Table 4: Crash Manner by Jurisdiction ..... 18
Table 5: MetroPlan Emphasis Areas ..... 21
Table 6. Priority Intersections by Crash Severity Score ..... 26
Table 7. Priority Roadway Segments by Crash Severity Score ..... 27
Table 8: WACOG Project Prioritization Safety Scoring ..... 41
Table 9: WACOG Project Prioritization Bicycle and Pedestrian Scoring ..... 42
Table 10: MetroPlan Project Selections ..... 48
Table 11: MetroPlan Systemic Project Selections ..... 51
Table 12: Proportion of Fatal or Suspected Serious Injury Crashes in Disadvantaged Areas from 2017 to 2021 ..... 54
Table 13: Summary of Overlap Between Regional Priority Projects and Disadvantaged Areas ..... 55

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## Acronyms

ACIS - Arizona Crash Information System
ADOT - Arizona Department of Transportation
BIL - Bipartisan Infrastructure Bill
CMAQ - Congestion Mitigation and Air Quality Improvement
CMF - Crash Modification Factor
CYMPO - Central Yavapai Metropolitan Planning Organization
DOT - Department of Transportation
DPS - Department of Public Safety
ETC - Equitable Transportation Community
FARS - Fatality Analysis Reporting System
FHWA - Federal Highway Administration
FTA - Federal Transit Administration
HRRR - High Risk Rural Road
HSIP - Highway Safety Improvement Program
MPO - Metropolitan Planning Organization
NACOG - Northern Arizona Council of Governments
NHTSA - National Highway Traffic Safety Administration
RTSP - Regional Transportation Safety Plan
SHSP - Strategic Highway Safety Plan
SS4A - Safe Streets and Roads for All
STB - State Transportation Board
T2 - Technology Transfer
TIP - Transportation Improvement Program
VMT - Vehicle Miles Traveled
EM

VMT - Vehicle Miles Traveled

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## Executive Summary

MetroPlan led the development of a Regional Transportation Safety Plan (RTSP) for the MetroPlan region. MetroPlan worked in partnership with the Central Yavapai Metropolitan Planning Organization (CYMPO) and Northern Arizona Council of Governments (NACOG) through a planning committee consisting of staff members from these three regional planning agencies. The committee provided oversight for the development of a RTSP for the individual regions. MetroPlan will lead the implementation and monitoring of its RTSP.

This RTSP establishes a framework for reducing fatal and serious injury crashes on public roads in the MetroPlan region by identifying crash trends, emphasis areas, performance measures, high-risk crash locations, funding resources, and potential projects.

A crash analysis was performed for the MetroPlan region based on the most recent five years of available crash data: January 1, 2017, to December 31, 2021. Over this period, 10,076 reported crashes occurred, with 57 fatalities and 2,360 injuries in the MetroPlan region.

- Intersection crashes account for the highest number of fatal plus serious injury crashes at 44\%
- Lane departure crashes represent the second highest number of fatal plus serious injury crashes at 42\%
- Nighttime crashes represent the third highest number of fatal plus serious injury crashes at $30 \%$
- Of the 139 pedestrian-involved crashes, $11 \%$ resulted in fatalities, while $19 \%$ were reported as suspected serious injuries
- Of the 151 bicycle-involved crashes, $2 \%$ resulted in fatalities, while $16 \%$ were reported as suspected serious injuries
- "Speed Too Fast For Conditions" and "Failed To Yield Right Of Way" are the top crash violations in the region
The most common manners of collision in all crashes were rear end (31\%), single vehicle (23\%), and angle (Front To Side)(Other Than Left Turn) (16\%).

MetroPlan supports the elimination of traffic fatalities and serious injuries and will adopt a "Vision Zero" policy as part of its Vulnerable Road Users Safety Action Plan that commences next spring.

The following emphasis areas were identified for the MetroPlan region:

## BEHAVIORAL

- Speeding/Aggressive Driving
- Impaired Driving
- Distracted Driving
- Bicycle
- Pedestrian
- Nighttime


## OPERATIONAL

- Bicycle
- Pedestrian
- Intersection
- Lane Departure
- Nighttime
- Speeding/Aggressive Driving

Areas listed in both columns present opportunities for both behavioral and operational solutions.
The RTSP identified the intersections and segments with the highest crash severity using the Equivalent Property Damage Only (EPDO) network screening performance measure from the AASHTO Highway

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Safety Manual, 1st Edition (HSM). The priority locations from the network screening were developed from the highest EPDO scoring locations in each jurisdiction.

Employing the Safe System Approach as the framework, specific strategies were identified. These strategies revolve around the fundamental elements of the Safe System, namely Safe Roads, Safe Speeds, Safe Road Users, Safe Vehicles, and Post-crash Care.

Using input from stakeholders, the public, crash data analysis, network screening, and individual agency input, potential safety projects within the region were identified and prioritized. Implementation by local jurisdictions will be subject to their discretion, budget and capital programs. The projects are intended to provide safety improvement to the region and further the region's safety goals.

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## Introduction

## Regional Overview

The Northern Arizona region is a vast area covering 47,967 square miles with a population of 529,137. The region includes four counties, five tribes, 22 incorporated cities and towns, and two Metropolitan Planning Organizations (MPOs) - Central Yavapai MPO and MetroPlan. The MPOs conduct transportation planning for the urbanized areas surrounding Flagstaff (MetroPlan) and the Central Yavapai Region (CYMPO), which includes Prescott, Prescott Valley, Chino Valley, and Dewey-Humboldt. MetroPlan is governed by an executive board, management committee, and technical advisory committee that are composed of elected officials, management, and technical staff, respectively, from member entities.

## Plan Development

A Regional Transportation Safety Plan (RTSP) was developed in 2018 by MetroPlan in collaboration with the CYMPO and NACOG. The purpose of the RTSP was to address safety from a holistic, regional perspective to reduce the risk of death and serious injury to all transportation users. To continue efforts to reduce fatal and serious injury crashes in the Northern Arizona region, NACOG, CYMPO, and MetroPlan managed the development of this update to the 2018 RTSP.

During the past 5 years (2017-2021), 689 people have died and over 11,000 people have been injured in traffic crashes within the three planning regions, highlighting the critical need for these regions to update their RTSP. Of these crashes, the MetroPlan region experienced 10,076 reported crashes, with 57 fatalities and 2,360 injuries.

A planning committee consisting of staff members from NACOG, CYMPO, and MetroPlan provided oversight for the development of the RTSP. These agencies will lead the implementation and monitoring of the RTSP in their respective regions. Additional guidance was provided by the NACOG, CYMPO, and MetroPlan Technical Advisory Committees.

Separate reports are produced for each regional agency. The following information pertains to MetroPlan only.

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## Promoting a Culture of Safety

The region is committed to promoting a culture of safety. To meet the "Toward Zero Deaths" goal set by the region, a culture of safety is needed, from the regional level to the agency level, to the individual road user. Establishing a culture of safety requires the collaboration among and responsibility of all who develop, prioritize, fund, plan, use and enforce the transportation system. Key attributes of a successful culture of safety include:

- Prioritize people, starting with the most vulnerable users of the system, with equity and sustainability
- Focus on messaging, education and public outreach at all phases of planning, design, maintenance and enforcement
- Adopt a Safe System approach
- Develop interagency initiatives that reach from top to bottom by incorporating safety principals into policies within an organization


## Community Engagement

Introduction
Engaging with the community is a cornerstone in the development of a comprehensive transportation safety plan. Community engagement and outreach initiatives play a pivotal role in fostering collaboration between local residents, stakeholders, and transportation authorities to address safety concerns effectively. Through open dialogue, active participation, and a shared understanding of community needs, a transportation safety plan can be tailored to reflect the unique challenges and priorities of the area.

Regional Transportation Safety Plan Surveys, Interactive Mapping, and Stakeholder Interviews
In engaging the community, community members and other interested stakeholders were invited to complete surveys in-person at community events, organization/committee meetings or online. Each RTSP regional planning agency partner disseminated the surveys by leveraging their own communication and social media channels. The surveys were open for approximately three months and closed on May 12, 2023. Additionally, the stakeholders including tribal communities, ADOT, counties, cities, and towns, were engaged to provide their input on safety issues and locations in their jurisdiction. A summary of this stakeholder effort can be found in Appendix A.

The primary means of solicitating comments on the experiences of the community through driving, bicycling and pedestrian transportation came in the form of a survey designed by the project team. The survey questions considered feelings around safety, observations of drivers, bicyclists and pedestrians and ideas to contribute to the study team on making changes to roadways or enhancing safety messages and education. There were two versions of the survey created. A longer survey consisted of twenty questions, while a truncated, shorter survey consisted of four questions. The data from both versions were analyzed together. A summary of the survey and its results can be found in Appendix B.

Community members were also encouraged through traditional and social media and the Flagstaff Community Forum to register their comments and concerns through an interactive mapping tool, Social Pinpoint. Hundreds of comments and dozens of locations were received in the MetroPlan region. A summary of results may be found in Appendix B.

## Summary Of Findings

Responders from the MetroPlan region primarily identified as motorists (55\%) and feel safe on the roads and streets as drivers and motorcyclists. The responders identifying as pedestrians and bicyclists felt less safe. Overall, responders feel the following behaviors of drivers are hurried, distracted, and inattentive.
Figure 1 represents the top five safety concerns observed by responders.


Figure 1: Top 5 Safety Concerns Observed by Respondents

Responders feel that distracted driving, speed and intoxication are the primary causes of crashes with distracted driving receiving a great amount of attention. They feel public agencies should provide more enforcement and make roadway improvements. Responders believe that if people would drive the speed limit, be aware, not use cellphones while driving, and try to be example citizens, it would make it safer to travel through the region. In addition to what responders said about other people, they believe that if they themselves were more aware, advocated, and drove within the speed limit, it would make driving in the region safer.

In the mapping (Social Pinpoint) exercise, many bicyclists' concerns are about specific roads and intersections they believe are dangerous for various reasons, including that road geometry makes turning difficult for bicyclists, it's difficult for vehicles to see bicyclists, the roadway is not well maintained, and crosswalks are not well marked. There are several concerns regarding the Flagstaff Urban Trail System, including maintenance, lack of connectivity, lack of signs and signals, and dangerous vehicle crossings. Other bicyclists' concerns include snow removal, debris in bike lanes, speeding, and distracted driving.

The drivers in Social Pinpoint expressed concerns about right and left turns throughout Flagstaff. Some requested turn lanes and signals be added and others expressed concern about drivers not obeying speed limit and traffic control such as "no left turn" signs. Other driver concerns include snow removal, potholes, and congestion due to poor signal timing and a lack of parking.

The most common pedestrian concerns are not having crosswalks, having dangerous crosswalks, and not having sidewalks in specific locations. Other concerns included distracted drivers not yielding to pedestrians and speeding.

Specific locations, not in priority order, that were highlighted for safety concerns by multiple citizens in the Social Pinpoint survey include:

- US 180 (Fort Valley Road)/Forest Avenue
- US 180 (Fort Valley Road)/Schultz Pass Road
- US 180 (Fort Valley Road)/Fratelli Pizza (just south of Meade Lane)
- US 89/Snowflake Drive
- Route 66/Lockett Road/Kaspar Drive
- Route 66/Ponderosa Parkway
- Route 66/Railroad Spring Boulevard
- Humphreys Street/Elm Avenue
- Butler Avenue/Beaver Street
- Milton Road/Butler Avenue
- Butler Avenue/Huntington Drive/Ponderosa Parkway
- Butler Avenue/Lone Tree Road/Colorado Street
- Lone Tree Road/Zuni Drive/Coconino Community College Driveway


## Safe System Approach

The MetroPlan RTSP adopts the Safe System approach ${ }^{1}$ which is based on the principles that the human body is vulnerable, humans make mistakes, and it is unacceptable that these mistakes result in death and injury. It is critical to design and operate the roadway system to keep impact energy on the human body at tolerable levels. Shared responsibility by all stakeholders is key, making it important that the stakeholders are collaborative and engaged partners when developing and implementing the MetroPlan RTSP.

The FHWA has recognized the Safe System approach as a method for eliminating traffic fatalities and serious injuries for all roadway users. The Safe System approach moves beyond the traditional approach of reacting strictly based on crash history by proactively identifying risk factors associated with severe crash types


Source: FHWA.
Figure 2: Safe System Approach (Source: FHWA) and implementing safety countermeasures systemically based on those factors. This RTSP includes the systemic implementation of strategies. All parts of the transportation system need to be strengthened to

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build in redundancy to accommodate failures of the system. Examples of redundancy include the installation of curve warning signs to alert motorists of conditions in which a slower speed is necessary combined with speed feedback signs and education and enforcement campaigns that help avoid behaviors that may result in crashes.

This RTSP uses the five elements of the Safe System approach as the framework for integrating emphasis areas and strategies. These elements encompass the 4Es of safety (Engineering, Education, Enforcement, and Emergency Response) and accommodate human error:

Safe Roads: The roadway is the platform in which users move across the system. Safe roads incorporate engineering-related strategies during planning, design, construction, maintenance, and operations to prevent crashes and manage impacts to keep kinetic energy at tolerable levels should a crash occur.

Safe Road Users: This represents all users of all modes of travel. Their capabilities are influenced by factors such as age, level of impairment, and other behaviors. System owners and other stakeholders can use strategies such as signing, enforcement, and education campaigns to address these limitations and encourage behavior change.

Safe Speeds: As speeds increase, the risk of death and serious injury dramatically increases. This is especially true for pedestrians (See Figure 3) where the risk of death doubles for a pedestrian when speeds increase from 32 mph to 42 mph , and triples at 50 mph . Safe speeds increase the likelihood of an individual surviving a crash. Appropriate speed limits and signing, as well as radar speed feedback signs, help reduce the speed of users. These can be reinforced with enforcement and education campaigns.

Safe Vehicles: Safe vehicles incorporate new technology and other features to prevent crashes from occurring, and if they do, reduce the severity of a crash.

Post-Crash Care: Post-crash care is critical when a crash occurs, and a person is injured. This includes first responders being able to quickly locate and respond to the crash and stabilize and transport the individual. This also includes accurate and complete data collection and sharing of the data to facilitate improved decision-making and investments specific to safety.

## The average risk of death for a pedestrian rises dramatically as speeds increase.



Figure 3 Risk of Death for a Pedestrian at Speed

Ultimately, the Safe System approach puts safety at the forefront and shifts how transportation investments are prioritized. MetroPlan and its stakeholders, through their combined efforts and application of the Safe System approach during the development and implementation of the RTSP, can have success in reducing traffic fatalities and serious injuries on its roadways.

## Regional Safety Performance

A review of the region's current safety performance was conducted to help identify safety issues. The Arizona Department of Transportation's (ADOT) Crash Information System (ACIS) was used to retrieve the crash data. ACIS is a comprehensive database system that collects, manages, and maintains traffic crash information within the state of Arizona. The most recent 5 years of crash data (2017-2021) was analyzed to determine existing crash performance, identify regional emphasis areas, and establish performance metrics to track future progress. A technical memorandum detailing the broad regional safety performance effort can be found in Appendix D.

## Crash Trends

Figure 4 illustrates the distribution of crashes by severity for the 5 -year period for the MetroPlan region. A total of 10,076 crashes occurred during this five-year period and among them fatal and serious injury crashes accounted for approximately 3 percent of the total crashes while no injury crashes accounted for approximately 76 percent of the total crashes.


Figure 4:MetroPlan Crashes by Severity
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Figure 5 shows the annual crash frequency from 2017 to 2021. The trend indicates a rise in crashes of approximately 4 percent over the 5 years, with a significant decrease in 2020 that can be mainly attributed to the reduced traffic volumes associated with the pandemic. The $4 \%$ rise may be compared to an approximate $5 \%$ increase in population.


Figure 5: MetroPlan Crash Trend

## Crash Characteristics

Figure 6 shows the distribution of crashes by manner. "Rear End" crashes are the most prevalent, accounting for nearly $31 \%$ of all incidents among the various crash manners. This is followed by "Single Vehicle" and "Angle" manner at approximately $23 \%$ and $16 \%$ of all crashes, respectively.

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MetroPlan Crashes by Manner


Figure 6: MetroPlan Crashes by Manner
Figure 7 displays the distribution of crashes by light condition. "Daylight" condition has the highest number of crashes with total number of 7,063 crashes. This is followed by "Dark Lighted" and "Dark not Lighted" condition with 1,200 and 1,099 crashes respectively.


Figure 7: MetroPlan Crashes by Light Condition

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Figure 8 represents percentage of suspected serious injury and fatal crashes by light conditions. "Daylight" crashes are the most prevalent, accounting for nearly $62 \%$ of all crashes. This is followed by "Dark not Lighted" condition at approximately $17 \%$ of all crashes.


Figure 8: Suspected Serious Injury \& Fatal Cashes Percentage

Table 1 shows crash violation by severity. "Speed Too Fast For Conditions" and "Failed To Yield Right Of Way" are the top crash violations.


Table 1: MetroPlan Crash Violation by Severity

| Violation | No Injury | Possible <br> Injury | Suspected <br> Minor <br> Injury | Suspected <br> Serious <br> Injury | Fatal | Grand <br> Total | \% of MPO <br> Crashes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Speed Too Fast <br> For Conditions | 2,184 | 404 | 312 | 49 | 11 | 2,960 | 29.4 |
| Failed To Yield <br> Right Of Way | 1,136 | 225 | 254 | 57 | 7 | 1,679 | 16.7 |
| No Improper <br> Action | 1,184 | 77 | 112 | 12 | 5 | 1,390 | 13.8 |
| Unknown | 645 | 62 | 62 | 23 | 9 | 801 | 7.9 |
| Followed Too <br> Closely | 543 | 99 | 48 | 3 | 1 | 694 | 6.9 |
| Unsafe Lane <br> Change | 566 | 37 | 24 | 3 | 1 | 631 | 6.3 |
| Other | 432 | 44 | 45 | 13 | 2 | 536 | 5.3 |
| Failed To Keep In <br> Proper Lane | 329 | 31 | 55 | 14 | 8 | 437 | 4.3 |
| Made Improper <br> Turn | 292 | 33 | 29 | 11 | 2 | 367 | 3.6 |
| Disregarded <br> Traffic Signal | 156 | 48 | 41 | 10 | 1 | 256 | 2.5 |

The crash data was evaluated to determine the factors that contributed to the highest percentage of fatalities and serious injuries. The top contributing crash characteristics are shown Figure 9. Intersection crashes account for the highest number of fatal plus serious injury crashes at $44.3 \%$, with Lane departure and Nighttime ranking below at $42.1 \%$ and $30.4 \%$ respectively. These crash characteristics helped identify the emphasis areas as described in the next section.
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Figure 9: MetroPlan Fatal and Serious Injury Characteristics

## Pedestrian Safety Performance

Figure 10 shows the distribution of pedestrian crashes by injury severity. Over the span of 2017 to 2021, there were a total of 139 pedestrian-involved crashes. Of these, $11 \%$ resulted in fatalities, while $19 \%$ were classified as suspected serious injuries. Additionally, stakeholder feedback indicated that alcohol is involved in several of the pedestrian fatalities.


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Figure 10: Pedestrian Crashes by Severity

## Bicyclist Safety Performance

Figure 11 shows the distribution of bicycle crashes by injury severity. Over the span of 2017 to 2021, there were a total of 151 bicycle-involved crashes, with $2 \%$ resulting in fatalities, while $16 \%$ were classified as suspected serious injuries.


Figure 11: Bicyclist Crashes by Severity

## Crash Data Analysis by Jurisdiction

A crash data analysis was completed for each jurisdiction. Aspects such as five year crash count, crash severity, crash manner, and crashes per 100,000 population are shown in Figure 12 to Figure 14 and Table $\mathbf{2}$ to Table 4 below. Note that Coconino County data only covers areas of the County that are within the MetroPlan boundary.


Figure 12: Crashes by Jurisdiction

| Jurisdiction | No Injury | Possible <br> Injury | Suspected <br> Minor Injury | Suspected <br> Serious Injury | Fatal | Grand <br> Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coconino County | 1,296 | 144 | 235 | 43 | 24 | 1,742 |
| Flagstaff | 6,363 | 961 | 804 | 173 | 33 | 8,334 |
| MetroPlan | $\mathbf{7 , 6 5 9}$ | $\mathbf{1 , 1 0 5}$ | $\mathbf{1 , 0 3 9}$ | $\mathbf{2 1 6}$ | $\mathbf{5 7}$ | $\mathbf{1 0 , 0 7 6}$ |

Table 3: Crashes by Jurisdiction

| Jurisdiction | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 1 9}$ | $\mathbf{2 0 2 0}$ | $\mathbf{2 0 2 1}$ | Grand <br> Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coconino | 347 | 382 | 350 | $\mathbf{2 8 2}$ | 381 | 1,742 |
| Flagstaff | 1,786 | 1,823 | 1,849 | 1,036 | 1,840 | 8,334 |
| MetroPlan | $\mathbf{2 , 1 3 3}$ | $\mathbf{2 , 2 0 5}$ | $\mathbf{2 , 1 9 9}$ | $\mathbf{1 , 3 1 8}$ | $\mathbf{2 , 2 2 1}$ | $\mathbf{1 0 , 0 7 6}$ |

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Table 4: Crash Manner by Jurisdiction

| Crash Manner | Flagstaff | Coconino County |
| :---: | :---: | :---: |
| Angle (Front To Side)(Other Than Left Turn) | 1,502 | 69 |
| Head On | 160 | 22 |
| Left Turn | 921 | 64 |
| Other | 412 | 79 |
| Rear End | 2,881 | 251 |
| Rear To Rear | 9 |  |
| Rear To Side | 44 | 1 |
| Sideswipe Opposite Direction | 120 | 32 |
| Sideswipe Same Direction | 1,023 | 138 |
| Single Vehicle | 1,184 | 1,079 |
| U Turn | 13 | 2 |
| Unknown | 65 | 5 |
| Grand Total | $\mathbf{8 , 3 3 4}$ | $\mathbf{1 , 7 4 2}$ |



Figure 13: Average Annual Crash Rate per 100,000 Population


Figure 14: Average Annual Fatal Crash Rate per 100,000 Population


Figure 15: Average Annual Serious Injury Crash Rate per 100,000 Population

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## Summary

The MetroPlan crash rates (crashes per 100,000 population) are in line with the state crash rates, with the region having a slightly higher serious injury crash rate and a slightly lower fatal crash rate than the state. Within the region there is a significant difference in urban (Flagstaff) and rural (Coconino County) crash rates, with the County having much higher fatal and serious injury crash rates. Rural crashes typically occur at higher speeds than urban crashes and have a higher percentage of run-off-road crashes, both of which lead to higher fatal and serious injury crash rates.

Crash manner distribution is also different between Coconino County and Flagstaff, with approximately $76 \%$ of the County crashes involving lane departure, while approximately $64 \%$ of the City crashes were intersection related. Given the distinctions between urban (Flagstaff) and rural (Coconino County) areas, safety strategies employed to address crashes will be different.

## Vision and Emphasis Areas

## Vision

The RTSP aligns with the Federal Highway Administration's (FHWA) Vision of "Toward zero deaths and serious injuries on the Nation's roadways" along with the 2019 Arizona Strategic Highway Safety Plan (SHSP) Vision, "Toward Zero Deaths by Reducing Crashes for a Safer Arizona." A priority action in the City of Flagstaff Active Transportation Master Plan (ATMP) is to adopt a comprehensive transportation safety action plan with the explicit intent and goal to eliminate traffic fatalities and serious injuries. MetroPlan will develop a Vision Zero policy with the Vulnerable Road Users Safety Action Plan starting in Spring 2024.

## Emphasis Areas

Emphasis areas represent the crash types and factors associated with high frequencies of fatal and serious injury crashes in the region. Directing safety initiatives towards these specific areas helps to achieve the RTSP vision. Table 5 presents the number of crashes, fatal crashes, and suspected serious injury crashes for each safety factor, and compares these figures to the statewide data. Highlighted factor rows are areas of concern where the region is higher than the state for that factor or crash severity.

| Factor | Crashes | \% of <br> Crashes | \% of State <br> Crashes | Serious <br> Injury <br> Crashes | \% of <br> Crashes | \% of <br> State <br> Crashes | Fatal <br> Crashes | \% of <br> Crashes | \% of <br> State <br> Crashes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Unrestrained | 795 | 7.9 | 8.2 | 32 | 14.8 | 19.9 | 18 | 31.6 | 35.2 |
| Motorcycle | 119 | 1.2 | 2.2 | 22 | 10.2 | 18.6 | 4 | 7.0 | 16.9 |
| Intersection | 5,122 | $\mathbf{5 0 . 8}$ | 48.0 | 106 | 49.1 | 44.1 | 15 | 26.3 | 28.6 |
| Lane Departure | 3,201 | 31.8 | 32.0 | 82 | 38.0 | 46.1 | 33 | 57.9 | 61.7 |
| Pedestrian | 150 | $\mathbf{1 . 5}$ | 1.4 | 30 | $\mathbf{1 3 . 9}$ | 11.9 | 16 | $\mathbf{2 8 . 1}$ | 24.5 |
| Bicycle | 152 | $\mathbf{1 . 5}$ | 1.0 | 24 | $\mathbf{1 1 . 1}$ | 5.1 | 4 | $\mathbf{7 . 0}$ | 3.4 |
| Nighttime | 2,369 | 23.5 | 25.3 | 54 | 25.0 | 33.8 | 29 | $\mathbf{5 0 . 9}$ | 48.6 |
| Speeding/ <br> Aggressive <br> Driving | 3,171 | 31.5 | 35.2 | 60 | 27.8 | 32.1 | 18 | $\mathbf{3 1 . 6}$ | 30.7 |
| Impaired Driving | 569 | $\mathbf{5 . 6}$ | 5.0 | 44 | $\mathbf{2 0 . 4}$ | 16.0 | 21 | 36.8 | 39.5 |
| Young Driver | 4,207 | $\mathbf{4 1 . 8}$ | 37.1 | 77 | $\mathbf{3 5 . 6}$ | 31.0 | 11 | 19.3 | 24.4 |
| Older Driver | 1,622 | 16.1 | 17.1 | 31 | 14.4 | 18.5 | 14 | $\mathbf{2 4 . 6}$ | 19.3 |
| Weather | 1,868 | $\mathbf{1 8 . 5}$ | 5.0 | 29 | $\mathbf{1 3 . 4}$ | 4.1 | 6 | $\mathbf{1 0 . 5}$ | 4.0 |
| Animal | 645 | $\mathbf{6 . 4}$ | 1.7 | 0 | 0 | 0.4 | 0 | 0 | 0.3 |
| Distracted <br> Driving | 1,013 | $\mathbf{1 0 . 1}$ | 8.1 | 23 | $\mathbf{1 0 . 6}$ | 7.3 | 3 | $\mathbf{5 . 3}$ | 5.0 |

Note: Factors that are highlighted in yellow have a higher percentage than the State.

NORTHERN ARZONA

Based on a combination of crash data analysis results, survey results, and stakeholder input, below are the emphasis areas for MetroPlan:

## BEHAVIORAL

- Speeding/Aggressive Driving
- Impaired Driving
- Distracted Driving
- Nighttime
- Bicycle
- Pedestrian


## OPERATIONAL

- Bicycle
- Pedestrian
- Intersection
- Lane Departure
- Nighttime
- Speeding/Aggressive Driving

Italicized items appearing in both categories have high potential for both behavioral and operational solutions. Strategies for MetroPlan's Safety Emphasis Areas are provided in a later section.

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## Network Screening and Areas of Opportunity

Priority intersections and segments in the region were identified by reviewing the annualized/normalized crash severity scores from the network screening results for the region. Crash severity score weights each crash by severity using the Equivalent Property Damage Only (EPDO) method (See Appendix D). Network screening results can be visualized in the web map located at https://arcg.is/09qaSC and in Figure 16 and Figure 17. The web map also overlays U.S. Department of Transportation's (USDOT's) definition of areas of persistent poverty as well as transportation and historically disadvantaged communities. These layers are explained further in the Equity Analysis section of this plan.


Figure 16: Intersections with high crash severity score (100 is the most severe)

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Figure 17: Segments with high crash severity score

High injury networks (HINs) were constructed for the region for the 90th percentile of all crash severity score locations. HINs are a blend of analysis and judgment to provide a large enough share of the roadway network to be meaningful but not so large as to lack utility in prioritizing and communicating roadway safety needs to the public. Unlike intersection or segment hot spot analysis, HINs can identify entire corridors that have experienced patterns of crashes.

The HINs developed for the region can be viewed in the web map located at:
https://kai.maps.arcgis.com/apps/instant/basic/index.html?appid=388eef13040a4fb7b86aac2a827b42a 8. A preview of this interactive map is shown below in Figure 18.

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Figure 18: MetroPlan High Injury Network Preview
The priority locations were developed from the highest scoring locations in the region. The resulting list of priority intersections for MetroPlan are provided in Table 6. The resulting list of priority roadway segments for MetroPlan are provided in Table 7. As a note, locations were also developed for each county, local jurisdiction, and tribal nation within the three regional jurisdictions.

Table 6. Priority Intersections by Crash Severity Score
$\left.\left.\begin{array}{|c|c|c|}\hline \text { ID } & \text { Intersection Name } & \text { Annualized Crash Severity } \\ \text { Score }\end{array} \right\rvert\, \begin{array}{cc}486.34 \\ \hline \mathbf{1} & \text { MARKETPLACE DR \& US 89 }\end{array}\right] 276.67$

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Table 7. Priority Roadway Segments by Crash Severity Score

| ID | Roadway Segment | Segment <br> Length <br> (mi) | Annualized <br> Crash Severity <br> Score | Normalized <br> Crash Severity <br> Score |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | I-40 WB/I-17 NB Connector <br> Between I-40 WB and I-17 NB | 0.5 | 200.41 | 430.79 |
| $\mathbf{2}$ | I-40 EB <br> Between 0.6 mi east of Country Club Dr and East <br> of 4th St | 2.0 | 546.97 | 273.48 |
| $\mathbf{3}$ | I-40 WB <br> Between 1.5 mi East of Beulah Blvd and 2.2 mi <br> East of Beulah Blvd | 0.7 | 182.38 | 268.93 |
| $\mathbf{4}$ | Milton Rd <br> Between Route 66 and Forest Meadows St | 1.0 | 210.74 | 210.74 |
| $\mathbf{5}$ | I-17 NB <br> Between North of Old Munds Hwy and 0.8 mi <br> South of Mountainaire Rd | 3.1 | 612.58 | 199.71 |
| $\mathbf{6}$ | US-180 <br> Between Rain Valley Rd and El Paso Flagstaff Rd | 0.9 | 178.59 | 198.39 |
| $\mathbf{7}$ | SR-89A <br> Between Pine del Dr and 1 mi south of Pine del <br> Dr | 1.0 | 180.99 | 184.15 |
| $\mathbf{8}$ | Cedar Ave <br> Between 4th St and Gemini Rd | 1.2 | 206.73 | 167.95 |
| $\mathbf{9}$ | Soleire Ave <br> Between Country Club Dr and Elk Run St | 1.2 | 196.62 | 167.84 |
| $\mathbf{1 0}$ | US-89 <br> 3.5 mi north of Kaitlin Way and Kaitlin Way | 3.5 | 573.29 | 161.49 |

Priority locations that scored highest in crash severity scores within each of the region's agencies were developed. Where feasible, the top 20 intersection and segment priority locations for each of the region's agencies were listed and can be found in Appendix $\mathbf{E}$.

Network screening was also conducted for the following factors, also known as the safety emphasis areas:

- Aggressive Driving
- Lane Departures
- Older (64+) Road Users
- Younger (Under 25) Road Users
- No or Unknown Restraints
- Inclement Weather Conditions
- Distracted Driving
- Pedestrian- or Bicyclist-Involved
- Motorcycle-Involved
- Animal-Involved

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- Night or Dark Conditions

The emphasis area screening results for intersections and roadway segments can be visualized via web maps at https://arcg.is/9rGqfo and https://arcg.is/1TyLGi, respectively. A preview of two of these is shown in Figure 19 and Figure 20.


Figure 19: Emphasis Area Screening Results for Intersections


Figure 20: Emphasis Area Screening Results for Segments

## Safety Strategies

MetroPlan and its stakeholders evaluated the results of the data analysis and the safety concerns and priorities of the region, and using the " 4 E " (Education, Engineering, Enforcement and Emergency Response) and Safe System approaches as the framework, established the strategies represented in the RTSP. Each Safe System element (Safe Roads, Safe Speeds, Safe Road Users, Safe Vehicles, and Post-crash Care) represented in the following strategy lists acts as the pillar for which implementation occurs. Each of these elements identifies emphasis areas and strategies which when implemented with leadership, stakeholder support and community input will help achieve the RTSP's safety goals. MetroPlan in conjunction with partner agencies will pursue the implementation of the Safe System approach.

MetroPlan used multiple resources in developing appropriate safety strategies, including:

- FHWA's Proven Safety Countermeasures
- National Highway Traffic Safety Administration's (NHTSA) "Countermeasures that Work" ${ }^{2}$
- FHWA's Crash Modification Factors Clearinghouse ${ }^{3}$

The effectiveness of an engineering related action item is measured by a crash modification factor (CMF) and its associated crash reduction factor (CRF) from the FHWA Crash Modification Factors Clearinghouse. NHTSA's publication Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices contains star ratings for behavior (education and enforcement) related countermeasures that are used most regularly by State Highway Safety Offices and have the most evidence of effectiveness.

A CMF is an estimate of the change in crashes expected after implementation of a countermeasure. For example, an intersection is experiencing 100 angle crashes per year. If you apply a countermeasure that has a CMF of 0.80 for angle crashes, then you can expect 80 angle crashes per year following the implementation of the countermeasure ( $100 \times 0.80=80$ ). A CRF is the inverse of a CMF and is typically expressed as a percentage.
(Source: FHWA CMF Clearinghouse)

## Behavior Countermeasure Star Ratings

$\star \star \star \star$ or $\star \star \star \star \star$ Effective
$\star \star \star$ Promising, and Likely To Be Effective
ش $\boldsymbol{\pi}$ Effectiveness Still Undetermined
$\star$ Limited or No High-Quality Evaluation Evidence
(Source: NHTSA Countermeasures That Work)

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OFFICE OF SAFETY
Proven Safety Countermeasures
SPEED MANAGEMENT


Variable Speed Limits
SP\&ㅏㅏ Appropriate Speed Limits for All Road Users

## ROADWAY DEPARTURE




Enhanced Delineation for Horizontal Curves

Longitudinal Rumble Strips and Stripes on Two-Lane Roads


Roadside Design Improvements at Curves

Median Barriers

## INTERSECTIONS



Dedicated Left and RightTurn Lanes at Intersections

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


Yellow Change
Intervals

PEDESTRIANS/BICYCLES


Rectangular Rapid Flashing Beacons (RRFB)


Medians and Pedestrian Refuge Islands in Urban and Suburban Areas


Pedestrian Hybrid Beacons


Road Diets (Roadway Reconfiguration)

CROSSCUTTING
 Management


Road Safety Audit

FHWA proven safety countermeasures (Source: FHWA)

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The following are strategies that the stakeholders deemed as providing a significant opportunity to reduce traffic related fatalities and serious injuries in the region. Each emphasis area includes the 4E categories, safety strategies, the Safe System Approach elements associated with each strategy, and the effectiveness star rating from the NHTSA, and associated CRF range.

## 1. Lane Departure

## Education

- Launch public awareness campaigns to educate drivers about the risks of lane departure and the importance of staying within their lanes, especially in curves and during inclement weather. (Safe Road Users | 3 star)
- Include lane departure prevention and safe driving practices in driver education and training programs. (Safe Road Users | 1-2 star)


## Engineering

- Identify and prioritize high-crash (fatalities and serious injuries) and high-risk segments for lanedeparture crashes to be addressed through infrastructure improvements. (Safe Roads / 3 star)
- Install centerline and edge-line rumble strips, especially on two-lane roads. (Safe Roads / 12-37\% reduction in lane departure crashes)
- Enhanced Delineation for Horizontal Curves: chevrons, post-mounted delineators, oversized signs, brighter/wider markings, enhanced guardrail delineation, post-mounted retroreflective sheeting, pavement markings through horizontal curves and tangent approaches. ("Curve Ahead," "Slow") or dynamic speed-actuated feedback warning signs, and LED raised pavement markers. (Safe Roads and Safe Speeds | 6-22\% reduction in road departure crashes)
- Utilize high-friction surface treatments. (Safe Roads / 5-17\% reduction in road departure crashes)
- Where feasible, install a combination of shoulder rumble strips with additional shoulder widening, or where feasible, pave existing shoulders, widen existing paved shoulders, or establish gravel/stabilized "usable" shoulder extension at $1 \mathrm{~V}: 20 \mathrm{H}$ slope or flatter, particularly where paved shoulder width is less than 8 feet. (Safe Roads / 11-51\% reduction in road departure crashes)
- Remove/relocate objects within the recovery area along the side of the road in high-risk locations. (Safe Roads | 8-44\% reduction in road departure crashes)
- Apply paving technologies to negate vertical drop-offs and facilitate driver ability to maintain vehicle control under instances of lane departure, such as Safety Edge. (Safe Roads and Safe Vehicles | $21 \%$ reduction in road departure crashes)
- Conduct slope flattening, repair, restoration, and maintenance to reduce the likelihood of rollover on $>33 \%$ slopes, or recovery on $>25 \%$ slopes. (Safe Roads and Safe Vehicles / $4 \%$ reduction in road departure crashes)
- Improve shoulders by dispersing aggregate along the road edge to provide a more stable recovery area beyond the edge of pavement. Millings or aggregate are dispersed at 1V:6H or flatter. (Safe Roads | $8-44 \%$ reduction in road departure crashes)

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- Median Barriers. (Safe Roads / 97\% reduction in road departure crashes)


## 2. Speeding

## Education

- Run public awareness campaigns to educate drivers about the dangers of speeding and aggressive driving by using emotional appeals, statistics, and real-life stories to convey the message. (Safe Road Users and Safe Speeds / 3 star)
- Mandate defensive driving courses and education programs for drivers cited for speeding or aggressive driving. (Safe Road Users and Safe Speeds / 3 star)
- Reward and incentive programs to encourage safe driving behaviors, such as obeying speed limits and avoiding aggressive driving. (Safe Road Users / 3 star)


## Engineering

- Install decreased speed limit sign. (Safe Roads | 9-21\% reduction in crashes)
- Dynamic speed feedback sign that has data collection features (speed, volume). (Safe Roads and Safe Speeds / $5 \%$ reduction in crashes)
- Traffic Calming Measures: Installing speed humps, rumble strips, chicanes, and raised crosswalks. (Safe Roads and Safe Speeds / 32\% reduction in crashes)
- Identify locations with a high frequency of speed-related crashes for targeted enforcement (GIS heat maps can be generated for law enforcement). (Safe Roads / 3 star)
- Install traffic calming to reduce speeds (e.g. speed humps, road diets, curb bulb-outs). Road diets reduce the number of lanes and lane widths. Curb bulb-outs narrow the street width at intersections. (Safe Roads / 29\% reduction in crashes)
- Improving sightlines, adding clear and visible signage, and optimizing lane widths. (Safe Roads / 20-41\% reduction in crashes)


## Enforcement

- Targeted enforcement in school zones and locations with speeding-related crashes. (Safe Road Users and Safe Roads | 2 star)
- Installing automated speed cameras that automatically issue citations to drivers who violate traffic laws, including speeding. (Safe Speeds and Safe Roads / 5 star)
- High-Visibility Enforcement: Police officers use highly visible patrol cars and uniforms to increase their presence on the road, discouraging aggressive behaviors. (Safe Speeds, Safe Roads, and Safe Road Users | 2 star)
- Regulate policies for car manufacturing to use advancements in vehicle technology, such as adaptive cruise control and lane-keeping assistance. (Safe Speeds, Safe Roads, and Safe Road Users / 2 star)


## Emergency Response

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- Traffic Incident Management: Efficient management of traffic incidents can prevent. secondary crashes caused by aggressive driving around accident scenes. Quick clearance of the road can reduce congestion and frustration. (Post-Crash Care)


## 3. Impaired Drivers

## Education

- Improve public awareness of and access to alternate forms of transportation (e.g. transit, taxicabs, ride share). (Safe Road Users / 3 star)
- Inform the public of the dangers of impaired driving and establish positive social norms that make driving while impaired unacceptable. (Safe Road Users / 3 star)
- Inform and encourage the public to use designated drivers and establish a positive social norm related to their use. (Safe Road Users | 2 star)


## Enforcement

- Conduct high-visibility impaired-driving enforcement initiatives. (Safe Road Users | 4-5 star)
- Work with the court system to promote policies and practices that result in the imposition of stricter driving laws and penalties for impaired driving convictions. (Safe Road Users 13-5 star)
- Conduct high-visibility, saturated impairment enforcement campaigns. (Safe Road Users / 4 star)
- Increase the enforcement of drug-impaired driving by law enforcement. (Safe Road Users / 3 star)


## 4. Distracted Driving

## Education

- Run public awareness campaigns to educate drivers about the dangers of distracted driving. (Safe Road Users / 1 star)
- Utilize D3 Arizona campaign materials and public service announcements D3Arizona.org (Safe Road Users / 1 star)
- Schools and community organizations collaborate with agencies to integrate distracted driving education into curricula and outreach programs targeting young drivers and emphasizing safe driving habits. (Safe Road Users / 1 star)
- Encourage hands-free technology, such as Bluetooth devices, for phone calls and navigation can reduce manual distractions. (Safe Road Users / 1 star)
- MetroPlan encourages drivers to pull over while communicating as the safest approach.
- Peer-to-Peer Influence; Programs encourage young drivers to influence their peers positively by speaking out against distracted driving and setting good examples. (Safe Road Users / 1 star)
- Insurance Incentives: Collaborating with insurance companies to offer discounts to policyholders who use tracking devices that monitor safe driving behaviors, including avoiding distractions. (Safe Road Users / 1 star)


## Engineering

- Collecting and analyzing data on distracted driving incidents to identify trends, high-risk areas, and demographics prone to distraction. (Safe Roads)
- Installing center line and edge line rumble strips. (Safe Roads / 8-39\% reduction in crashes)


## Enforcement

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- Regulating policies for vehicle manufacturers to design and promote in-car technology that minimizes distractions, such as voice-activated controls and heads-up displays. (Safe Vehicles)
- Actively enforce distracted driving laws and issue citations to offenders. (Safe Road Users / 4 star)
- Corporate Policies: Agencies work with companies to establish distracted driving policies for their employees who drive as part of their job. (Safe Road Users / 1 star)


## 5. Bicycle

## Education

- Collaborating with schools to establish safe routes for students to bike to school. (Safe Road Users | 2 star)


## Engineering

- Creating and maintaining dedicated bicycle lanes and paths. (Safe Roads / 27-49\% reduction in rashes)
- Creating protected bike lanes by striping buffers or physical barriers. (Safe Roads | 23-53\% reduction in crashes)
- Designing intersections with features like bike boxes, advanced stop lines, and clear signage helps prevent conflicts between cyclists and turning vehicles. (Safe Roads / 20-39\% reduction in crashes)
- Traffic Calming Measures to make roads safer for cyclists. (Safe Roads and Safe Road Users |25$51 \%$ reduction in crashes)
- Ensuring that road surfaces are well-maintained helps prevent accidents caused by potholes and other road hazards. (Safe Roads / 17-57\% reduction in crashes)
- Collecting and analyzing data on bicycle accidents to identify high-risk areas. (Safe Roads)
- Conduct Safe Routes to Schools studies. (Safe Roads, Safe Speeds and Safe Road Users | 3 star)


## Enforcement

- Helmet Laws: requiring cyclists, especially children, to wear helmets. (Safe Road Users / 4 star)
- Advocating and implementing laws that protect the rights and safety of cyclists. (Safe Road Users | 4 star)
- Reinstitute required bicycle education classes for violators of bicycle laws. (Safe Road Users / no rating - local recommendation)


## 6. Pedestrian

## Education

- Promote and implement processes, practices, and procedures within local agencies to incorporate pedestrian safety into roadway improvements funding prioritization processes. (Safe Road Users, Safe Speeds and Safe Roads | 1-4 star)
- Build upon existing "best practices" guides for high-exposure bicycle and pedestrian crossing nodes. (Safe Roads / 1-4 star)
- Include Distracted Walking in regional educational programs. (Safe Road Users / no rating - local recommendation)


## Engineering

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- Identify and prioritize intersections and segments of roadways with the highest number of pedestrian crashes that can be addressed through infrastructure improvements. (Safe Roads)
- Promote requirements for pedestrian safety to be considered during development review processes. (Safe Roads)
- Promote and implement practices to set appropriate speed limits that consider the pedestrian environment and safety. (Safe Roads and Safe Speeds / 3 star)
- Collect data on pedestrian volumes to help assess safety risk. (Safe Roads)
- Prepare a "best practices" guide for the design of pedestrian accommodation at roundabouts. (Safe Road Users / 1 star)
- Identify high-risk locations for potential implementation of enhanced pedestrian crossings that would have a favorable benefit/cost ratio. (Safe Roads)
- Install Pedestrian Hybrid Beacons (PHBs). (Safe Roads / 12-45\% reduction in crashes)
- Install medians and pedestrian crossing islands. (Safe Roads | 46-56\% reduction in crashes)
- Leading Pedestrian Intervals. (Safe Roads / 13\% reduction in crashes)
- A leading pedestrian interval (LPI) gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication. With this head start, pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn left.
- Road Diets. (Safe Roads / 19-47\% reduction in crashes)
- A Road Diet typically involves converting an existing four-lane undivided roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane (TWLTL).
- Walkways (sidewalks, paths, shoulders). (Safe Roads / 65-89\% reduction in crashes)
- Lighting and illumination. (Safe Roads / 59\% reduction in crashes)
- Curb extensions. (Safe Roads / 11\% reduction in crashes)
- Advanced yield/stop lines. (Safe Roads / 11\% reduction in crashes)
- Transit stop improvements. (Safe Roads / 12-45\% reduction in crashes)
- Left-turn prohibitions. (Safe Roads | 5-19\% reduction in crashes)
- Right turn on red prohibitions. (Safe Roads | 28\% reduction in crashes)
- Conduct RSAs. (Safe Roads / 1-4 star)
- Conduct Safe Routes to School Studies. (Safe Roads / 3 star)


## Enforcement

- Conduct targeted enforcement in high-pedestrian activity and high-crash areas. (Safe Road Users | 3 star)


## 7. Intersections

## Education

- Build upon and distribute educational materials related to intersection safety. (Safe Road Users / 1 star)
- Build upon existing "best practices" guides for high-risk intersections. (Safe Roads / 1-4 star)
- Partner with local professional societies to hold an annual workshop to educate roadway designers on safety tools available to assess and improve substantive safety. (Safe Road Users | 1 star)

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- Educate policymakers on the benefits of engineering strategies to increase the use of those strategies. (Safe Roads / 1 star)


## Engineering

- Consider adopting Intersection Control Evaluation (ICE) policies and procedures to evaluate and select the geometry and control for an intersection. (Safe Roads)
- Identify individuals or groups of intersections with fatal and serious injury crash patterns that can be addressed through infrastructure upgrades or improvements. (Safe Roads)
- Evaluate left-turn phasing practices and policies. (Safe Roads)
- Review and update corridor traffic signal timing and coordination on a regular schedule (every three to five years minimum). (Safe Roads)
- Improve traffic signal timing and coordination between jurisdictional signal systems to improve operations and reduce driver frustration. (Safe Roads)
- Implement systemic improvements based on identifying characteristics of high-risk intersections. (Safe Roads)
- Enhance the existing network screening methodology for intersections and segments. (Safe Roads)
- Reduced Left-Turn Conflict Intersections. (Safe Roads | 30-54\% reduction in crashes)
- Reduced left-turn conflict intersections are geometric designs that alter how left-turn movements occur to simplify decisions and minimize the potential for related crashes. Two highly effective designs that rely on U-turns to complete certain left-turn movements are known as the restricted crossing U-turn (RCUT) and the median U-turn (MUT).
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections. (Safe Roads | 10-15\% reduction in crashes)
- This systemic approach to intersection safety involves deploying a group of multiple lowcost countermeasures, such as enhanced signing and pavement markings, at many stopcontrolled intersections within a jurisdiction. It is designed to increase driver awareness and recognition of the intersections and potential conflicts.
- Left and Right Turn Lanes at Two-Way Stop-Controlled Intersections. (Safe Roads | 14-48\% reduction in crashes)
- Appropriate Yellow Change Intervals. (Safe Roads | 8-14\% reduction in crashes)
- Roundabouts. (Safe Roads / 78-82\% reduction in crashes)
- Corridor Access Management. (Safe Roads | 5-31\% reduction in crashes)
- Access management refers to the design, application, and control of entry and exit points along a roadway. This includes intersections with other roads and driveways that serve adjacent properties.
- Improve left-turn lane offset to create a positive offset. (Safe Roads / $38 \%$ reduction in crashes)
- Protected-only left-turn phasing. (Safe Roads / 51-77\% reduction in crashes)
- Flashing yellow arrow. (Safe Roads | 19\% reduction in crashes)
- Turn lane channelization. (Safe Roads | 33\% reduction in crashes)
- Clear sight triangles. (Safe Roads | 48\% reduction in crashes)
- Improve visibility of signals. (Safe Roads / $29 \%$ reduction in crashes)
- One signal head per lane. (Safe Roads / 46\% reduction in crashes)
- Larger (12") signal heads. (Safe Roads | 42\% reduction in crashes)
- Reflective border for signal backplates. (Safe Roads / 15\% reduction in crashes)
- Conduct RSAs during the design phase. (Safe Roads)

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## Enforcement

- Install red-signal enforcement lights to assist enforcement of red-light runners. (Safe Road Users | 2 star)
- Encourage and expand the data-driven speed and red-light running enforcement, including the use of technology to assist enforcement. (Safe Road Users)
- Conduct targeted enforcement of high crash-risk intersections. (Safe Road Users | 2 star)
- Utilize automated enforcement at high crash risk intersections where appropriate. (Safe Roads and Safe Road Users | 2-45\% reduction in crashes)


## Emergency Response

- Evaluate Emergency Vehicle Preemption system implementation practices. (Post Crash Care)
- Expand deployment of Emergency Vehicle Preemption systems. (Post Crash Care)


## 8. Nighttime

## Education

- Promote the use of high-visibility clothing for pedestrians and cyclists can make them more visible to drivers at night. (Safe Road Users)
- Run public awareness campaigns about the dangers of drowsy driving, which is more common at night. (Safe Road Users)
- Promote the use of vehicles with adaptive headlights that adjust their intensity and direction based on vehicle speed and steering angle. (Safe Road Users)


## Engineering

- Maintain and upgrade street lighting to ensure well-lit roadways, intersections, and pedestrian crosswalks. (Safe Roads)
- Use Reflective Signage and Markings for road signs, lane markings, and pedestrian crosswalks to enhance visibility at night. (Safe Roads)
- Provide roadside assistance services, especially in areas with limited services, ensuring that motorists who encounter problems at night can receive help quickly. (Post Crash Care)
- Install emergency call boxes along highways and remote roads, allowing motorists to call for assistance in case of emergencies. (Post Crash Care)
- Design roadways that enhance nighttime safety, such as improved sightlines, well-placed signage, and delineation of curves and intersections. (Safe Roads)
- Implement Animal Detection Systems that detect the presence of wildlife on the road and warn drivers of potential hazards at night. (Safe Roads)


## Enforcement

- Enhanced Police Presence during nighttime hours can discourage speeding and reckless driving. (Safe Road Users | 2 star)

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## Combining Crash Modification Factors

According to U.S FHWA Investigation of Existing and Alternative Methods for Combining Multiple CMFs, "A CMF is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site." CMFs are calculated based on observational studies, experiments, or historical data, and they represent the change in crash frequency after implementing a safety measure.

In numerous safety projects, multiple safety measures are implemented at specific locations. Each safety measure holds a distinct CMF. To determine the cumulative safety impacts of these measures at a site, combined CMF methods are employed. Below is one of the methods for combining CMFs.

$$
\begin{array}{ll}
\mathrm{CMF}_{\mathrm{t}} & =\mathrm{CMF}_{1} * \mathrm{CMF}_{2} * \ldots * \mathrm{CMF}_{\mathrm{n}} \\
\mathrm{CMF}_{\mathrm{t}} & =\quad \mathrm{CMF} \text { for the combined treatments } \\
\mathrm{CMF}_{1} & =\quad \mathrm{CMF} \text { for the first treatment } \\
\mathrm{CMF}_{2} & =\quad \mathrm{CMF} \text { for the second treatment } \\
\mathrm{CMF}_{\mathrm{n}} & =\quad \mathrm{CMF} \text { for the } \mathrm{n}^{\text {th }} \text { treatment }
\end{array}
$$

Listed in the strategies section above are crash reduction factors (CRFs). To convert a CRF to a CMF for use in the equation above, use CMF = 1 - (CRF/100).

## Implementation Plan

## Participants

MetroPlan has the primary leadership role and acts as the primary contact for the RTSP. MetroPlan will work with partner agencies to be make traffic safety a more proactive community endeavor. Based upon strategies formulated in this plan, the City of Flagstaff, Coconino County, ADOT, and law enforcement will participate in executing the implementation plan. MetroPlan will collaborate with partner agencies to proactively engage the community in enhancing traffic safety.

## Incorporating Safety into the Project Development Process

Safety is often viewed as an "extra" or "add-on" or even a nuisance to incorporate into a project, when in fact safety elements should be mainstreamed and explicitly considered on every project. Traffic safety programs, projects and policies included in an agency's Long-Range Transportation Plan, Comprehensive Plan and/or Master Plan have a higher likelihood of being implemented. The following should be pursued for inclusion in an agency's policies, future Capital Improvement Plans (CIP) and updates to plans to ensure safety is an explicit consideration in projects:

1. Include systemic safety improvements in projects. Many of the FHWA Proven Safety Countermeasures are appropriate for systemic implementation (https://safety.fhwa.dot.gov/provencountermeasures/)



Sidewalks


Lighting


Shoulder Improvement
2. Develop evaluation criteria to pursue safety in project programming or consider making the following adjustments:

- Strengthen evaluation criteria for proposed projects in regional Transportation Improvement and Maintenance Programs (TIMP) to include safety elements.
- Give higher priority to projects that address RTSP Emphasis Areas
- Give higher priority to locations experiencing fatal and serious injury crashes
- Give higher priority to projects incorporating multiple safety countermeasures
- Give higher priority to smaller scale projects that can be implemented systematically

MetroPlan will incorporate safety into its prioritization process for pursuing grants and will further address project prioritization in its Vulnerable Road Users Safety Action Plan.

Some examples of incorporating safety into project programming include:

- The Sun Corridor Metropolitan Planning Organization (SCMPO) Regional Transportation Plan (RTP) 2040 includes safety in its Project Scoring and Prioritization Criteria. The RTP project scoring criteria assigns up to 20 points (out of 100) to a project that improves safety by implementing an FHWA proven safety countermeasure or a recommendation from the SCMPO STSP.
- The Western Arizona Council of Governments (WACOG) Project Application form includes safety criteria in project development and prioritization. Table 8 and Table 9 show the safety and bicycle and pedestrian project scoring criteria used by WACOG.

Table 8: WACOG Project Prioritization Safety Scoring

| SAFETY SCORING CRITERIA |  |  |  | 25 Points |
| :---: | :---: | :---: | :---: | :---: |
| Check all that apply |  |  |  |  |
| Safety <br> Countermeasure | Yes $\square$ | No $\square$ | Project incorporates one or more of the FHWA or WACOG STSP (Safety Plan) safety countermeasures AND/OR addresses a specific location with identified safety deficiencies | Points Available $\text { Yes }=20, \mathrm{No}=10$ |
|  | Yes $\square$ | No | Does roadway exhibit a five (5)-year historic fatal and total crash rate above the State average? | Points Available $\text { Yes }=5, \mathrm{No}=2.5$ |
| Safety Total: |  |  |  |  |

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Table 9: WACOG Project Prioritization Bicycle and Pedestrian Scoring

| BICYCLE, PEDESTRIAN, AND TRANSIT MOBILITY | 15 Points <br> Available |
| :--- | :--- |

Improves bus, bicycle, or pedestrian operations, safety, convenience and comfort, e.g., bike lanes, bus stops, ADA ramps \& sidewalks, etc.

Check all that apply

|  | Yes | No | Project provides tangible improvement <br> Bicycle, <br>  <br> Transit | $\square$ |
| :--- | :--- | :--- | :--- | :--- |$| \square$

- ADOT's Planning-to-Programming (P2P) process incorporates safety into its scoring for Modernization projects by assigning values to the expected reduction in crashes as a result of the project, and if the project has been identified in the state's Strategic Highway Safety Plan.
- The Northwest Arkansas MPO uses a 20-point system to prioritize its Surface Transportation Program projects. Safety accounts for three points maximum and is based on the 3-year average crash rate. If the crash rate in the project area is higher than the statewide average for similar facilities, the project receives three points. If the crash rate is near the statewide average, the project receives two points. Projects with a crash rate below the statewide average are awarded one point.
- The Androscoggin Transportation Resource Center, an MPO in Maine, includes a safety component in the TIP prioritization process for all projects. The MPO's prioritization process awards points to transportation projects that correct a safety problem at an identified high-crash location. The safety score is based on the state's list of high-crash locations for the preceding 3year period. However, a project can also receive a partial safety score if it has an identifiable crash pattern that can be corrected, even if it is not on a high-crash location link/node. The intent is to award points to projects that address safety problems, regardless of whether they contain a highcrash location.


## Safety Performance Reporting

The FHWA's final rule concerning the "National Performance Management Measures: Highway Safety Improvement Program" became effective on April 14, 2016. This rule outlines specific procedures, data guidelines, reporting mandates, and potential consequences for safety performance within State Departments of Transportation (DOT) and Metropolitan Planning Organizations (MPO) levels. The rule
intends to enhance the utilization of data to enhance transportation planning and project development, with the primary goal of diminishing fatalities and severe injuries. Key aspects of this rule incorporate:

- Five Performance Measures are required:

1. Number of Fatalities
2. Rate of Fatalities per 100 million vehicle miles traveled (VMT)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100 million VMT
5. Number of Non-motorized Fatalities and Serious Injuries

- Annual reporting required
- A target to be set for each of the 5 performance areas
- 5 -year rolling averages are used to smooth variability in data

States were required to establish statewide targets for these five performance measures by August 31, 2017 for calendar year 2018, and annually thereafter. MPOs were required to establish targets specific to the MPO planning area for the same five safety performance measures for all public roads in the MPO planning area within 180 days after the State establishes each target or adopt the State's targets. COGs and local agencies are not required to establish safety performance measures or targets, but it is recommended. MPOs may select one of the following options for each individual safety performance measure:

- Agree to support the State target; or
- Establish specific targets for a safety performance measure (number or rate).

MetroPlan adopts the ADOT Safety Projections. Metroplan will collaborate with local agencies, such as the City of Flagstaff, on annual reporting for the region.

## Policies and Guidelines

## Safe Streets and Roads for All Action Plans

Consider developing a Safe Streets and Roads for All (SS4A) Action Plan. The SS4A Action Plan allows for an agency to pursue program funds for projects through the Bipartisan Infrastructure Law established Safe Streets and Roads for All (SS4A) discretionary program with $\$ 5$ billion in appropriated funds over 5 years, 20222026. The plan typically consists of 8 essential components: leadership commitment and goal setting, planning structure, safety analysis, engagement and collaboration, equity considerations, policy and process changes, strategy and project selections, and progress transparency. This RTSP qualifies as an SS4A Safety Action Plan.


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## APPROACH

Zero is our goal. A Safe System is how we get there.

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

MetroPlan, through its Vulnerable Road Users Safety Action Plan commencing next spring, will adopt a "Vision Zero" type initiative to target fatal crashes. Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. First implemented in Sweden in the 1990s, Vision Zero has proved successful across Europe and is gaining momentum in the United States. A core principle of the vision is that "Life and health can never be exchanged for other benefits within the society". The City of Tempe has recently adopted a Vision Zero policy:

## (https://www.tempe.gov/government/engineering-and-transportation/transportation/vision-zero)

A presentation and comparison between rural and urban agency vision zero policies is found in Appendix F.

## Complete Streets

Complete Streets policies formalize a community's intent to plan, design, and maintain streets so they are safe for all users of all ages and abilities. Policies direct transportation planners and engineers to consistently design and construct the right-of-way to accommodate all anticipated users, including pedestrians, bicyclists, public transportation users, motorists, and freight vehicles. Complete Streets can be achieved through a variety of policies; ordinances and resolutions; rewrites of design manuals; inclusion in comprehensive plans; internal memos from directors of transportation agencies; policies adopted by city and county councils; and executive orders from elected officials, such as Mayors or Governors. All policies should include the 10 elements of a Complete Streets policy (https://smartgrowthamerica.org/resources/elements-complete-streets-policy/).

Safe Streets Save Lives

Policies
Practices Projects

Network

## 10 Elements of a Complete Streets Policy

1. Establishes commitment and vision
2. Prioritizes underinvested and underserved communities
3. Applies to all projects and phases
4. Allows only clear exceptions
5. Mandates coordination
6. Adopts excellent design guidance
7. Requires proactive land-use planning
8. Measures progress
9. Sets criteria for choosing projects
10. Creates a plan for implementation

A presentation and comparison between rural and urban agency complete streets policies is found in Appendix F.

## Active Transportation Plans

Active Transportation Plans address pedestrian and bicyclist issues, but they also help improve safety for all road users. The City of Flagstaff's 2022 Active Transportation Master Plan includes several priority safety action recommendations that this RTSP endorses, including:

- Re-establish a communitywide Safe Routes to School (SRTS) program
- Adopt a formal Complete Streets policy
- Implement road diets (reducing the number of travel lanes and/or effective width of the road to improve safety). Candidate locations include:
- Aspen Ave - Humphreys to Elden
- Beaver St - Butler to Columbus
- Birch Ave - Humphreys to Elden
- Butler Ave - Continental to end
- Country Club Dr - Soliere to Oakmont
- Fremont Blvd - Mountain to Kramer
- Lake Mary Rd - High Country to J.W. Powell
- San Francisco St - Butler to Columbus

Metroplan, recently awarded Safe Streets and Roads for All (SS4A) Grant, which is to be used to pursue Safe Routes to School projects.

## Road Safety Assessments

A Road Safety Assessment (RSA) is a formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. ADOT conducts RSAs for local

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agencies as a free service through its Traffic Safety division; the RSA application can be accessed at https://azdot.gov/sites/default/files/2023-06/rsa-application.pdf.

MetroPlan will coordinate with regional agencies to program RSA's in areas that are planned for capital projects withing the high injury network in advance of design.

## Fatal Crash Team

Metroplan should consider forming a fatal crash investigation team of engineering, planning, law enforcement, and risk management to meet quarterly to analyze fatal crashes in the region. Also, law enforcement Crash Reconstruction Teams could be a for source of information while acknowledging legal limitations. Another opportunity of the team to gather information would be with the Coconino County Child Fatality Review Team where relevant traffic-related deaths could be disseminated to local agencies in addition to the Arizona Department of Health Services.

The City of Casa Grande is a good example of conducting multidiscipline evaluations of fatal crashes. Another example is Pinal County, which conducts evaluations of fatal crashes with the County Sheriff's Office, County Risk Management, and County Traffic Engineering.

## Predictive Crash Analysis

Predictive crash analysis is an emerging process that can be a great tool for assessing and mitigating potential risks on roadways before the occurrence of a crash. By leveraging cutting-edge technology, advanced statistical models, and collaborating with other local agencies, this analysis is intended to anticipate potential crash hotspots in the roadway network and identify safety concerns proactively.

## Safety Projects

Using the input from stakeholders, public survey, crash data analysis, network screening, and individual agency input, projects within the region were identified. The projects are intended to provide safety improvement to the region and further the region's safety goals. Utilizing the safety performance and areas of opportunity identified, a short list of high crash hotspots for each agency was developed. These, along with lists of public comments and agency priority locations, informed the final selection of project locations.

Upon the identification of locations for improvements, each locations' crash history was reviewed to inform which safety emphasis area and associated strategies should be utilized to mitigate the potential for future crashes or safety concerns at the location. Following the selection of improvements and strategies for each location, an opportunity to provide input on the selected improvements was provided to each respective agency. This provided local support for the projects and increased the likelihood of project implementation in the future.

Individual projects for each agency are outlined in Table 10 below. The project's location, selection method(s), and recommended scope provide a foundation for each agency to pursue the projects as desired. Further details, such as the project's coordinates and a high-level cost estimate in 2023 dollars, are provided in Appendix G. Also included are individual improvements and their high-level unit cost. This is included to provide flexibility to the listed projects where an agency could add or remove items from the project's scope as desired.

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Systemic projects typically provide a better opportunity for an agency to address larger and multi-location safety issues on their road network. By combining a similarly scoped project into a larger systemic project, not only are more areas of concern addressed, but typically a higher project benefit to cost ratio can be achieved to better the chances of securing funding for the project. Therefore, a list of systemic projects stemming from the list of individual projects was developed for the region's agencies, found in Table 11. A visual story map display of the network screening, emphasis area, and project selections can be found by visiting the online website (https://arcg.is/vOzTSO) or in Appendix $\mathbf{H}$.

Where recommendations include bike lanes on ADOT facilities, maintenance agreements with local agencies will be required. Where recommendations include crosswalks, warrant studies are recommended and may be required. Recommendations that include lighting, compliance with local Dark Skies requirements should be pursued.

| MetroPlan Project Selections |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope |
| Flagstaff | ADOT | Milton Rd \& Riordan Rd | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Improve traffic signal timing and coordination, left turn phasing evaluation/improvement, and high-visibility crosswalks |
| Flagstaff | Flagstaff | Rt 66 \& Ponderosa Pkwy | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install high-visibility crosswalks, speed feedback signs, and protected bicycle lanes |
| Flagstaff | Flagstaff | State Route 89A (Milton Rd) \& Butler Ave | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install green bicycle lane crossing markings, improve traffic signal timing and coordination, and reflective signal head tape |
| Flagstaff | ADOT | Country Club Dr \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape, speed feedback signs at approaches, green bicycle lane crossing markings, and improve traffic signal timing and coordination |
| Flagstaff | Flagstaff | Rt 66 from Country Club Dr to San Francisco St | Segment | Agency Comment/ Top Crash Hotspot | Install speed feedback signs, green bicycle lane crossing markings, and improve traffic signal timing and coordination |
| Flagstaff | Flagstaff | Butler Ave from Mustang Wy to I-40 | Segment | Agency Comment/ Top Crash Hotspot | Install green bicycle lane crossing markings, sidewalks, and bicycle lanes |
| Flagstaff | Flagstaff | Cedar Ave from Gemini Rd to West St | Bicycle/ Pedestrian | Public Comment/ Top Crash Hotspot | Install protected bicycle lanes, green bicycle lane crossing markings, HAWK/PHB midblock crossing at trailhead, and additional roadway lighting |
| Flagstaff | Flagstaff | Rt 66 \& Milton Rd | Intersection | Public Comment/ Top Crash Hotspot | Maintain turning sight distance (vegetation/tree removal), install enhanced pedestrian crosswalks, bicycle lanes to intersection, and green bicycle lane crossing markings |

## MetroPlan Project Selections

| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff | Rt 66 \& Fanning Dr | Intersection | Public Comment/ Top Crash Hotspot | Install enhanced crosswalks, a leading pedestrian interval, and reflective signal head tape |
| Flagstaff | ADOT | US 89 \& Cummings St (Mall Driveway) | Intersection | Public Comment/ Top Crash Hotspot | Install enhanced crosswalks, a leading pedestrian interval, and reflective signal head tape |
| Flagstaff | ADOT | US 89 \& Snowflake Dr/Trails End Dr | Intersection | Public Comments/ Top Crash Hotspot | Maintain intersection sight distance and install speed feedback signs at approaches |
| Flagstaff | Flagstaff | Butler Ave \& Huntington Dr | Intersection | Agency Comment/Public Comments | Install green bicycle lane crossing markings and reflective signal head tape |
| Flagstaff | Flagstaff | Rt 66 \& Railroad Spring Blvd | Intersection | Agency Comment/Public Comments | Maintain turning sight distance (vegetation/tree removal), install crosswalk, and consider installing traffic signal control |
| Flagstaff | ADOT | US 89 from Snowflake Dr to Country Club Dr | Segment | Top Crash Hotspot | Install speed feedback signs and conduct targeted speed enforcement |
| Flagstaff | Flagstaff | Milton Rd from Rt 66 to Forest Meadows St | Segment | Top Crash Hotspot | Install speed feedback signs, improve traffic signal timing and coordination, and conduct targeted speed enforcement |
| Flagstaff | ADOT | US 180 \& Forest Ave | Intersection | Public Comments | Refresh/enhance pavement markings, maintain turning sight distance (vegetation/tree removal), and intersection consider traffic signal control |
| Flagstaff | ADOT | US 180 \& Schultz Pass Rd | Intersection | Public Comments | Refresh/enhance pavement markings, install reflective signal head tape, install flashing yellow left turn phase |
| Flagstaff | Flagstaff | Lockett Rd \& Kasper Dr | Intersection | Public Comments | Install stop bars, crosswalk, maintain intersection sight distance, and no U-Turn signage |
| Flagstaff | Flagstaff | Elm Ave \& Humphreys St (US 180) | Intersection | Public Comments | Refresh/enhance pavement markings and install crosswalks |


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| :---: | :---: | :---: | :---: | :---: | :---: |
| MetroPlan Project Selections |  |  |  |  |  |
| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope |
| Coconino County | ADOT | Townsend Winona Rd \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape, traffic signal ahead warning signage, and reduce speed limit at approaches |
| Coconino <br> County | ADOT | Silver Saddle Rd \& US 89 | Intersection | Top Crash Hotspot | Install reflective signal head tape and all protected left-turn phasing, |
| Coconino County | ADOT | US 89 from North of Lenox Park to 3.3 mi North of Lenox Park | Segment | Top Crash Hotspot | Install/maintain ROW animal barrier fencing, animal warning signage, median barrier, and speed limit reduction during adverse weather with dynamic speed limit signs |
| Coconino County | ADOT | US 89 from 3.5 north of Kaitlin Way to Kaitlin Way | Segment | Top Crash Hotspot | Install/Maintain ROW animal barrier fencing, speed limit reduction during adverse weather with dynamic speed limit signs, and street lighting |
| Coconino County | ADOT | US 89 from South of Elden Springs Rd to Townsend Winona Rd | Segment | Top Crash Hotspot | Install/Maintain ROW animal barrier fencing, speed limit reduction during adverse weather with dynamic speed limit signs, and street lighting |


| MetroPlan Systemic Projects |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Roadway Ownership | Intersection/Segment | Project Type | Selection Method | Scope |
| Flagstaff | Flagstaff/ ADOT | - Milton Rd \& Riordan Rd <br> - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - US 180 \& Schultz Pass Rd | Intersection | Agency <br> Comment/Public Comment/Top Crash Hotspot | Improve traffic signal timing and coordination, left turn phasing, and pedestrian interval evaluation/improvement |
| Flagstaff | Flagstaff/ ADOT | - Milton Rd \& Riordan Rd <br> - Rt 66 \& Ponderosa Pkwy <br> - Cedar Ave from Gemini Rd to West St <br> - Rt 66 \& Milton Rd <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - Lockett Rd \& Kasper Dr <br> - Elm Ave \& Humphreys St (US 180) | Intersection | Agency <br> Comment/Public Comment/Top Crash Hotspot | Install enhanced pedestrian crosswalk |
| Flagstaff | Flagstaff | - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - Butler Ave \& Huntington Dr <br> - US 180 \& Schultz Pass Rd | Intersection | Agency <br> Comment/Public Comment/Top Crash Hotspot | Install reflective signal head tape |

## MetroPlan Systemic Projects

| Location | Roadway Ownership | Intersection/Segment | Project Type | Selection Method | Scope |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff | - Rt 66 \& Ponderosa Pkwy <br> - Country Club Dr \& US 89 <br> - Rt 66 from Country Club Dr to San Francisco St <br> - US 89 from Snowflake Dr to Country Club Dr <br> - Milton Rd from Rt 66 to Forest Meadows St | Intersection/ Segment | Agency Comment/Public Comment/Top Crash Hotspot | Installing speed feedback signs |
| Flagstaff | Flagstaff | - Rt 66 \& Ponderosa Pkwy <br> - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 from Country Club Dr to San Francisco St <br> - Cedar Ave from Gemini Rd to West St <br> - Rt 66 \& Milton Rd <br> - Butler Ave \& Huntington Dr | Intersection/ Segment | Agency <br> Comment/Public Comment/Top Crash Hotspot | Install improved bicycle lanes |
| Flagstaff | Flagstaff | - Rt 66 \& Milton Rd <br> - Rt 66 \& Fanning Dr <br> - US 180 \& Forest Ave <br> - US 180 \& Schultz Pass Rd | Segment/ Intersection | Agency <br> Comment/Public Comment/Top Crash Hotspot | Refresh pavement and markings |
| Flagstaff | Flagstaff | - Rt 66 \& Milton Rd <br> - Rt 66 \& Railroad Spring Blvd <br> - US 180 \& Forest Ave <br> - US 180 \& Fratelli's Driveway (S of Meade Ln) <br> - Lockett Rd \& Kasper Dr | Intersection | Agency <br> Comment/Public Comment/Top Crash Hotspot | Sight distance improvement/maintenance (vegetation/tree removal) |

## MetroPlan Systemic Projects

| Location | Roadway Ownership | Intersection/Segment | Project Type | Selection Method | Scope |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff | - Rt 66 \& Railroad Spring Blvd <br> - US 180 \& Forest Ave | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Consider installing a traffic signal |
| Coconino County | ADOT | - Townsend Winona Rd \& US 89 <br> - Silver Saddle Rd \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape |
| Coconino County | ADOT | - Townsend Winona Rd \& US 89 <br> - US 89 from North of Lenox Park to 3.3 mi North of Lenox Park <br> - US 89 from 3.5 north of Kaitlin Way to Kaitlin Way <br> - US 89 from South of Elden Springs Rd to Townsend Winona Rd | Intersection/ Segment | Agency Comment/ Top Crash Hotspot | Speed management strategies; such as reducing speed limit at approaches or during adverse weather conditions |
| Coconino County | ADOT | - US 89 from North of Lenox Park to 3.3 mi North of Lenox Park <br> - US 89 from 3.5 north of Kaitlin Way to Kaitlin Way <br> - US 89 from South of Elden Springs Rd to Townsend Winona Rd | Segment | Agency Comment/Top Crash Hotspot | Install/maintain ROW fencing |

## Equity Analysis

Equity is a fundamental consideration of the U.S. Federal Highway Administration's (FHWA) Safe System Approach, particularly given that pedestrian and bicyclist fatality rates on a per-capita basis vary by race, ${ }^{4}$ income, age, and gender to varying degrees in varying places. ${ }^{5}$ These outcomes better prioritize project development and underscore the need to explicitly examine correlations between sociodemographic and risk factors related to roadway infrastructure and operations. Furthermore, an equity analysis ideally encompasses more than just safety analysis, given known limitations of crash data (e.g., underreporting or near misses) and the lack of systemic exposure estimates to contextualize risk.

It is important to note that vulnerable populations such as the very young, elderly, and those facing economic challenges are often disproportionately affected by transportation disparities. This demographic is less likely to have access to personal vehicles, relying heavily on alternative modes of transportation like walking, cycling, or public transit. As a result, they face increased vulnerability to road accidents and may encounter greater risks due to limited mobility options. Addressing these disparities is crucial in ensuring equitable and safe mobility for all members of the community. Additionally, Stakeholders identified some standing groups and schools from which valuable equity perspectives can be gained including the Commission on Adaptive Living, the Coordinated Mobility Council, Killip Elementary School, Coconino High School, and Coconino County's Advisory Councils. Killip Elementary School and Coconino High School currently have limited bus services. That necessitates consideration of safe walking and bike routes for students commuting to school. Additionally, stakeholders highlighted Milton Road, US 89 near Flagstaff Mall, and the Sunnyside neighborhood as areas with concentrated crash occurrences.

USDOT's Equitable Transportation Community (ETC) Explorer ${ }^{6}$ and RAISE Persistent Poverty ${ }^{7}$ tools were used to identify priority equity areas in the study regions. Table 12 provides the total number and the percentage of fatal or suspected serious injury crashes in disadvantaged areas in MetroPlan region. As the table demonstrates, more than one third of all reported fatal or suspected serious injury crashes occur in disadvantaged areas in the MetroPlan area at $37.6 \%$, as compared to the regional average of serious injury or fatal crashes at $2.7 \%$. Equity analysis results can be visualized in the web map located at https://arcg.is/09qaSC.

Table 12: Proportion of Fatal or Suspected Serious Injury Crashes in Disadvantaged Areas from 2017 to 2021

| Regional <br> Jurisdiction | Number of Fatal or <br> Suspected Serious <br> Injury Crashes in <br> Region | Number of Fatal or <br> Suspected Serious Injury <br> Crashes in Disadvantaged <br> Areas in Region | \% of Fatal or Suspected <br> Serious Injury Crashes <br> in Disadvantaged <br> Areas in Region | Overall \% of Fatal <br> or Suspected <br> Serious Injury <br> Crashes in Region |
| :---: | :---: | :---: | :---: | :---: |
| MetroPlan | 258 | 97 | $37.6 \%$ | $2.7 \%$ |

Table 13 illustrates the disadvantaged areas in relation to the priority locations identified prior at the census tract level for MetroPlan. Figure 21 summarizes the total number of priority projects within a disadvantaged area for the region.

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Table 13: Summary of Overlap Between Regional Priority Projects and Disadvantaged Areas

| Regional <br> Jurisdiction | Number of Priority <br> Intersection Projects in a <br> Disadvantaged Area | Number of Priority Segment <br> Projects in a Disadvantaged <br> Area | Total Number of <br> Priority Projects in a <br> Disadvantaged Area |
| :---: | :---: | :---: | :---: |
| MetroPlan | 6 | 5 | 11 |

MetroPlan will, depending on local policy, encourage local agency safety investments in these disadvantaged areas and prioritize future planning efforts withing disadvantaged areas.


Figure 21: Equity Analysis

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## Funding Sources

Funding is critical to implement the strategies and action items in this RTSP and may come from a variety of sources: Federal, State, local, and the private sector. These include standard funding program mechanisms and grants as well as new initiative grants. Some sources of funding include the following:

- Local Agency Funding. Local agencies have various funding sources that can be used to improve and maintain streets and roads and perform other safety activities. Consideration of the RTSP strategies during the allocation of funding, especially for maintenance activities or other street and road improvement projects can support implementation of the RTSP.
- ADOT Railroad-Highway Grade Crossing Program administers approximately $\$ 2,300,000$ annually for improving safety at public railroad crossings. A diagnostic review team consisting of representatives from ADOT, the Arizona Corporation Commission, FHWA, the Railroad and the Road Sponsor (State, City, County, or Tribe) evaluates railroad crossings and develops a list of potential projects.
- The High Risk Rural Road (HRRR) funding set-aside was eliminated in the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) federal legislation. That set-aside has been replaced with a Special Rule that requires states with an increase in fatality rates on rural roads to obligate 200\% of the state's 2009 HRRR funding amount, which was \$1,800,000 in Arizona, meaning $\$ 3,600,000$ of HSIP funds would be required to be used on HRRRs. The use of HRRR-related HSIP funding would become an option for the MetroPlan member agencies if Arizona is ever found to have an increase in fatalities on rural roads over the most recent two years.
- AZ State Match Advantage for Rural Transportation (SMART) Fund. The AZ SMART Fund was established by the Arizona Legislature in 2022 to assist eligible cities, towns, counties and the Arizona Department of Transportation (ADOT) in competing for federal discretionary surface transportation grants. The Fund is administered by ADOT, and all awards must be approved by the State Transportation Board (STB).
- Highway Safety Improvement Program (HSIP.) The Highway Safety Improvement Program (HSIP) provides federal funds for projects which aim to reduce traffic fatalities and serious injuries on public roads, including tribal lands and roads owned by non-state entities. ADOT manages Arizona's HSIP funds, which are approximately $\$ 65$ million annually. HSIP funds are distributed after ranking applications based on benefit/cost analysis. The next call for Arizona HSIP project applications is scheduled for January 2024.
- Safe Streets and Roads for All. The Bipartisan Infrastructure Law (BIL) establishes the new Safe Streets and Roads for All (SS4A) discretionary program that will provide \$5-6 billion in grants over the next 5 years. Funding supports regional, local, and Tribal initiatives through grants to prevent deaths and serious injuries on roads and streets. This funding can be used for safety planning and for safety project design and construction.
- Federal Section 164 Impaired Driving Repeat Offender Safety Program Funding. ADOT uses its allocated Federal Section 164 program funds to maintain and expand impaired driving enforcement activities statewide.

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- Congestion Mitigation and Air Quality Improvement (CMAQ) Program. These federal funds are made available to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. MetroPlan complies with the Clean Air Act is not eligible for CMAQ funds for this time.
- Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program. The SMART program was established to provide federal grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety.
- Federal Lands Access Program. This program, administered through FHWA, provides funding for a wide range of transportation projects that provide access to, are adjacent to, or are located within Federal lands.
- Rural Surface Transportation Grant Program. The Rural Surface Transportation Grant Program (RSWG) provides funding for projects the aim to improve transportation infrastructure in rural areas. The aim of the program is to increase connectivity, improve safety, improve quality of life, and generate regional economic growth in rural communities.
- Promoting, Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT)Grant. The PROTECT grant program provides funding through the BIL for projects that ensure transportation resilience. Examples of these types of projects include community evacuation plans and natural disaster planning efforts.
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant. The RAISE grant awards funding through the BIL for transportation and infrastructure projects. This program replaces the previous Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) grant programs. This funding program allows for multi-jurisdictional projects, which often have a difficult time obtaining funding, to be funded with federal dollars. Approximately half of the overall RAISE grant funding monies will be awarded to rural communities.
- Infrastructure for Rebuilding America (INFRA) Grant. The INFRA grant program awards funding through the BIL for projects that improve safety, accessibility, efficiency, and reliability of the movement of freight and people in rural and urban areas. The aim of the program is to reduce congestion, reduce supply chain bottlenecks, and generate economic benefits.
- Tribal Transportation Program (TTP) Safety Funds. Each year two percent of the available TTP funds are set aside to address safety issues within tribal communities. Funding is available to Tribal entities in four categories including safety planning, engineering improvements, enforcement/EMS, and education. There are no tribal communities within the MetroPlan area.
- Governor's Office Of Highway Safety. The Governor's Office of Highway Safety (GOHS) administers NHTSA funding through grant applications. Typical projects include law enforcement activities such as targeted DUI checkpoints and improvements to crash data collection. Local agencies have

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utilized GOHS funding to purchase portable speed feedback trailers to rotate placement on streets experiencing speed-related crashes. GOHS funds have also been used in educational efforts, for example, to conduct mock crash demonstrations at high schools during prom season. Annual funding available through GOHS is approximately $\$ 8,000,000$ in Arizona.

## Project Timelines

Key funding source application tentative dates are:

- ADOT HSIP: January-April 2024
- SS4A Grants: February-April 2024
- GOHS Grants: January-March 2024

Safety projects should be programmed and completed as soon as possible, and generally within a 1 to 5 year period, depending on the complexity of the project.

## Grants Applications

Projects for safety improvements that intend to address safety issues in the region often start with a wellcrafted grant funding application. Whether the grant is federal, state, or local in nature, basic information requirements of most grants can be the same. The RTSP provides some of these information requirements to agency(s) so that a grant application can be completed. The primary information provided for a project in the RTSP are the project scope, high-level cost estimate, benefit strategy/CMF, and regional support.

Project scopes in the RTSP are available for individual projects or systemic projects for some agencies in the project selection section. The scope of each of these could be used in their entirety or in addition to further scope identified by the agency. Projects that are not identified in the RTSP could also be based on one or multiple of the RTSP's regional emphasis areas or strategies and could be match with high crash locations in the agency as they are shown in the Regional Safety Performance section of the RTSP.

High-level project cost estimates for individual projects, systemic projects, or individual improvement unit costs identified in the RTSP are available. For projects that were not selected from the identified project lists, the improvement unit costs could be used to aid in constructing a project cost estimate. These cost estimates can be leveraged in the grant development process to expedite the application preparation time.

Benefits of projects that are either scoped in the RTSP or use the identified safety strategies can be quantified in support of a benefit-cost analysis. Each project listed in the RTSP uses strategies and CMFs identified for those strategies to provide a quantifiable value of societal benefit in crash reduction. The CMFs of multiple improvements can be combined using the combined crash modification factor formula to leverage their benefits. The CMFs should be applied only to crashes that occurred at the improvement location(s) and during the prospective grant's years of interest.

NACOG
Northern Arizona Council of Governments Apache - Coconino - Navajo - Yavapai

## Appendix

The MetroPlan Regional Transportation Safety Plan (RTSP) was crafted in collaboration with the CYMPO and NACOG region. Any data related to that presented in this report for NACOG and CYMPO region can be accessed upon request by contacting the agency in question directly or through the following representatives:

## NACOG:

Jennifer O'Connor
119 East Aspen Avenue
Flagstaff, AZ 86001

## CYMPO:

Vincent Gallegos
1971 Commerce Center Cir. Suite E
Prescott, AZ 86301
A. Stakeholder Input Summary
B. Public Engagement Summary
C. Safety Performance and Equity Analysis Technical Memorandum
D. EPDO Methodology
E. Top 20 Priority Locations by Agency
F. Complete Streets and Vision Zero
G. Recommended Projects
H. Story Maps

Appendix A: Stakeholder Input

## Summary

SAFETYPLAN
Greenlight

Traffic Engineering

## Stakeholder Input Summary

## NACOG <br> Northern Arizona <br> Council of Governments <br> Apache - Coconino - Navajo - Yavapai <br> fir

Presented by: Greenlight
Traffic Engineering

## MetroPlan Stakeholders

Greenlight
Traffic Engineering
Feedback received from the following stakeholders:

1. Coconino County

- Nate Reisner, Assistant County Engineer

2. City of Flagstaff

- Paul Mood, City Engineer
- Jeff Bauman, Traffic Engineer
- Martin Ince, Multimodal Transportation Planner
- Matthew Schmidt, Police Officer
- Ryan Turley, Police Lieutenant

3. Northern Arizona University

- Andrew lacona, Administrator
- Bradley Mihalik, Deputy Police Chief


## MetroPlan Stakeholders

Greenlight
Traffic Engineering

Pending feedback from the following stakeholders:

1. Coconino County Sheriff

- Gerrit Boeck, Police Commander

2. Mountain Line Transit

- Jim Wagner, Operations Manager


## MetroPlan Stakeholders

## Focus areas:

- Intersections
- Pedestrians
- Bicycles
- Faded pavement markings
- Lane-keep behavioral issues
- Vulnerable road users (electric scooters and electric skateboards)
- General disregard for traffic control devices
- Non-university cut-through traffic congestion on NAU campus


## MetroPlan Stakeholders

## Locations:

- Milton Rd/University Ave
- Milton Rd/ Malpais Ln
- Milton Rd/ Riordan Rd
- Milton Rd/ Rt 66
- E Rt 66/ Ponderosa Pkwy
- Fourth St/ Butler Ave
- Huntington Dr, Ponderosa Pkwy to Fourth St
- Country Club Dr/ US 89
- University Dr/ Knoles Dr
- McConnell Dr, Pine Knolls Dr to Knoles Dr
- San Francisco St/ McConnell Dr (mentioned multiple times)
- Leupp Rd/ Townsend Winona (current RSA being conducted)
- Lake Mary Rd/ South of Upper Lake Mary
- Old Rt 66, Bellemont Camp Rd to E Bellemont Rd

NACOG
Northern Arizona

## Appendix B: Public Engagement

## Summary

## NORTHERN ARIZONA

## REGIONAL TRANSPORTATION SAFETY PLAN

Metropolitan Planning Organization for the Greater Flagstaff Region (MetroPlan)

Report from stakeholders, community surveys and Social Pinpoint mapping tool outreach conducted between February and May 2023.

## PREPARED BY:

The Barnhart Company

## TABLE OF CONTENTS

## CHAPTER 1: SURVEY RESULTS

INTRODUCTION .....  3
SURVEY DELIVERY. .....  3
REGIONAL TRANSPORTATION SAFETY PLAN SURVEYS .....  3
SURVEY RESPONSES BY QUESTION .....  4
TRAVELING IN THE COMMUNITY. ..... 5
MAKING YOUR COMMUTE SAFER ..... 5
DEMOGRAPHICS/RESPONDENT CHARACTERISTICS ..... 7
OVERALL SURVEY RESULTS BY REGION ..... 10
CHAPTER 2: MAPPING TOOL (SOCIAL PINPOINT) RESULTS
INTRODUCTION ..... 10
ALL REGION MAPPING TOOL RESULTS ..... 11
ALL REGION SENTIMENT TOTALS. ..... 12
ALL REGION RESPONSES FOR EACH CATEGORY OF CONCERN. ..... 12
METROPLAN RESPONSES FOR EACH CATEGORY OF CONCERN ..... 12
SUMMARY OF FINDINGS - METROPLAN ..... 59

## APPENDICES

## APPENDIX A: TWENTY QUESTION SURVEY

## APPENDIX B: TRUNCATED FOUR QUESTION SURVEY

APPENDIX C: SURVEY QUESTION \#7
APPENDIX D: SURVEY QUESTION \#8
APPENDIX E: SURVEY QUESTION \#9
APPENDIX F: SURVEY QUESTION \#10

## CHAPTER 1: SURVEY RESULTS

## INTRODUCTION

Northern Arizona Council of Governments (NACOG), Central Yavapai Metropolitan Planning Organization (CYMPO), and MetroPlan are partnering to update its Regional Transportation Safety Plan (RTSP).

The RTSP will:

- Address safety from a holistic perspective to reduce and prevent serious injuries and fatalities on our regional roadways.
- Engage stakeholders and the public with vested interests in transportation planning and safety.
- Establish an equity framework for participation, prioritization, and implementation.
- Build relationships with organizations serving underserved communities.
- Establish a framework identifying objectives, strategies, and performance measures for transportation safety that are consistent with state and national safety standards.
- Expand and refine recommendations for programmatic elements in safety education, enforcement, and evaluation.
- Create a prioritized list of safety projects, implementation schedules, and funding.


## SURVEY DELIVERY

Community members and other interested stakeholders were invited to complete the surveys in-person at community events, organization/committee meetings or online. Each RTSP joint venture partner disseminated the surveys by leveraging their own communication and social media channels. The surveys were open for approximately three months and closed on May 12, 2023.

## REGIONAL TRANSPORTATION SAFETY PLAN SURVEYS

The primary means of solicitating comments on the experiences of the community through driving, bicycling and pedestrian transportation came in the form of a survey designed by a combination of RTSP joint venture and the consultant team. The survey questions considered feelings around safety, observations of drivers, bicyclists and pedestrians and ideas to contribute to the study team on making changes to roadways or enhancing safety messages and education. There were two versions of the survey created. A longer survey consisted of twenty questions (Appendix A), while a truncated, shorter survey (Appendix B) consisted of four questions. The data from both versions were analyzed together. The survey and mapping results in this report are from the MetroPlan region only, results for NACOG and CYMPO are represented in individual reports for their regions.

## SURVEY RESPONSES BY QUESTION

Survey question \#1 - Primarily, I'm responding as a.... Motorist, Bicyclist, Pedestrian, or Other


Overall survey results for NACOG, CYMPO and MetroPlan

Survey question \#2 - How frequently have you observed drivers doing the following? Never, Occasionally, or Often

|  | Never | Occasionally | Often |
| :---: | :---: | :---: | :---: |
| Impaired driving, walking, or biking | 20\% | 68\% | 12\% |
| Distracted driving, walking, or biking (such as texting or talking on cell phone, eating, etc.) | 3\% | 29\% | 68\% |
| Speeding | 1\% | 27\% | 72\% |
| Not stopping completely at stop signs | 4\% | 41\% | 55\% |
| Not stopping at crosswalks | 7\% | 43\% | 50\% |
| Not crossing at crosswalks | 5\% | 50\% | 45\% |
| Riding their bike against traffic | 16\% | 64\% | 20\% |
| Not yielding to other vehicles, bicycles, and pedestrians | 7\% | 57\% | 36\% |
| Speeding or passing in school zones | 38\% | 45\% | 17\% |
| Illegal/unsafe turns | 13\% | 58\% | 29\% |
| Tailgating/following too closely | 5\% | 42\% | 53\% |
| Failing to use turn signal | 2\% | 37\% | 61\% |
| Not stopping for a red light | 24\% | 56\% | 20\% |
| Passing illegally (hill or curve, across double yellow line, a stopped school bus picking up children) | 31\% | 54\% | 15\% |
| Driving too slowly | 29\% | 57\% | 14\% |
| Not wearing seat belts | 66\% | 28\% | 6\% |
| Other (please specify) |  |  |  |

## TRAVELING IN THE COMMUNITY

Survey question \#3 - (Think of your daily travel when answering the following questions.) How safe is it on the roads and streets for the following people? Very Safe, Unsafe, Safe, or Very Safe

|  | Very Unsafe | Unsafe | Safe | Very Safe |
| :--- | :---: | :---: | :---: | :---: |
| Drivers | $1 \%$ | $14 \%$ | $70 \%$ | $15 \%$ |
| Pedestrian | $17 \%$ | $48 \%$ | $32 \%$ | $3 \%$ |
| Bicyclist | $31 \%$ | $50 \%$ | $17 \%$ | $\mathbf{2 \%}$ |
| Motorcyclist | $7 \%$ | $43 \%$ | $47 \%$ | $3 \%$ |
| Elderly and/or disables person | $34 \%$ | $44 \%$ | $21 \%$ | $\mathbf{1 \%}$ |

Survey question \#4 - How safe do you feel traveling on area roads and streets? Very Unsafe, Unsafe, Safe, or Very Safe

| Very Unsafe | Unsafe | Safe | Very Safe |
| :---: | :---: | :---: | :---: |
| $6 \%$ | $38 \%$ | $51 \%$ | $5 \%$ |

Survey question \#5 - What words best describe the behavior of drivers on area roads and streets? Courteous, Frustrated/Angry, Hurried, Distracted, Inattentive, Intoxicated, No Different Than Anywhere Else, or Other.

| MetroPlan |  |
| :--- | :--- |
| What words best describe the behavior of drivers on area roads and streets? |  |
| Hurried | 314 |
| Distracted | 315 |
| Inattentive | 224 |
| Frustrated/Angry | 128 |
| Same as everywhere | 113 |
| Courteous | 91 |
| Intoxicated | 6 |

Survey question \#6 - When driving around pedestrians/cyclists how often do you fear for their safety? Never, Sometimes, Often, Very Often, or I Don't Drive

| Never | Sometimes | Often | Very Often | I don't drive |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{5 \%}$ | $\mathbf{3 6 \%}$ | $\mathbf{3 4 \%}$ | $\mathbf{2 4 \%}$ | $\mathbf{1 \%}$ |

## MAKING YOUR COMMUTE SAFER

Survey question \#7 - What do you think is the primary cause of crashes in your community? The tables below represent the number of comments made based on common topics. Not all comment topics are captured in the tables. Actual comments can be seen in Appendix C.

Safe Streets Save Lives

| Topic | MetroPlan |
| :--- | :---: |
| Driver Habits | $\mathbf{3 1}$ |
| Speed | $\mathbf{7 4}$ |
| Distraction | 228 |
| Cellphone Use | $\mathbf{2 2}$ |
| DUI | $\mathbf{4}$ |
| Driver Age | $\mathbf{0}$ |
| Impatience | $\mathbf{5}$ |
| Road Conditions | $\mathbf{3 6}$ |
| Traffic Volumes | $\mathbf{3 3}$ |
| Weather | $\mathbf{2 0}$ |

Survey question \#8 - What is one thing you think public agencies could do to make it safer to travel in your community? The tables below represent the number of comments made based on common topics. Not all comment topics are captured in the tables. Actual comments can be seen in Appendix $\boldsymbol{D}$.

| Topic | MetroPlan |
| :--- | :---: |
| Traffic Signals | $\mathbf{1 1}$ |
| Enforcement | $\mathbf{9 0}$ |
| Roadway Maintenance | $\mathbf{3 1}$ |
| Roadway Improvements | $\mathbf{6 5}$ |
| Public Transit | $\mathbf{1 5}$ |
| Education | $\mathbf{1 3}$ |
| Bike/Ped Improvements | $\mathbf{1 4 2}$ |

Survey question \#9 - What is one thing you think people should do to make it safer to travel in your community? The tables below represent the number of comments made based on common topics. Not all comment topics are captured in the tables. Actual comments for each region can be seen in Appendix $\boldsymbol{E}$.

| Topic | MetroPlan |
| :--- | :---: |
| Pay Attention | $\mathbf{0}$ |
| Example Citizens | $\mathbf{4 6}$ |
| Drive Speed Limit | $\mathbf{9 6}$ |
| Being Courteous | $\mathbf{2 9}$ |
| No Cellphones | $\mathbf{7 1}$ |
| Being Aware | $\mathbf{1 0 4}$ |
| Plan Travel | $\mathbf{1 0}$ |

Survey question \#10 - What is one thing you could do to make it safer to travel in your community? The tables below represent the number of comments made based on common topics. Not all comment topics are captured in the tables. Actual comments can be seen in Appendix F.

| Topic | MetroPlan |
| :--- | :---: |
| Advocate | 43 |
| Being Aware | 73 |
| Being Courteous | 10 |
| Defensive Driving | 11 |
| Drive Speed Limit | 33 |
| Example Citizens | 42 |
| Plan Travel | $\mathbf{3 8}$ |

Survey question \#11 - Do you have a specific place/places where you think roadway safety could be improved; if so, are you able to locate those place/places on a map?

- Yes, I do know of a place/places where safety could be improved and would like to identify them on an interactive map. (Please scan the QR code at the bottom of this survey to identify the place/places on the map you think can be improved). Results from respondents selecting a location on the map will be illustrated on the mapping tool (Social Pinpoint) portion of the summary.
- Yes, I do know of a place/places where safety could be improved but prefer not to use the interactive mapping tool. (Please describe the place/places and the safety concern as precisely as possible in the spaces provided below.)


## DEMOGRAPHICS/RESPONDENT CHARACTERISTICS

The responses to the RTSP survey represent the perspectives of a unique blend of individuals connected in some way to the Northern Arizona region. The characteristics, including gender, age, and geographic defined areas of differing outlooks in the region.

Survey question \#12 - Where do you live? (Resulting analysis produced the following input. As a point of interpretation, the differing font sizes are determined by the frequency by which a word is mentioned).

## Flagstaff

Survey question \#13 - Select the age category that best describes you. 18-24 years old, 24-40 years old, 41-64 years old, 65 years or older, or Decline to answer


Survey question \#14 - Are you Hispanic, Latino or Spanish origin? Yes, No, or Don’t Know/Decline to Answer


Survey question \#15 - How do you describe yourself? American Indian or Alaska Native, Asian, Black, or African American, Native Hawaiian or Other Pacific Islander, White/Caucasian, More than One Race, Don't Know/Unsure, or Decline to Answer


- . $8 \%$ American Indian / Alaskan Native
- . $6 \%$ Asian
- . $4 \%$ Native Hawaiian or Other Pacific Islander
- 79.1\% White / Caucasian
- $4.5 \%$ More than one race
- . $8 \%$ Don't know / Unsure
- $13.8 \%$ Decline to answer

Survey question \#16 - What is your highest grade of school or year of college that you have completed? Grade School (grades 1-11), High School Degree (grade 12 or GED), Some college, Bachelor's Degree, Post-Bachelor's Degree, or Don't know/Decline to Answer


- $1 \%$ Grade School (grades 1-11)
- $32 \%$ Bachelor's degree
- $2 \%$ High School Degree (Grade 12 or GED)
- $51 \%$ Post-bachelor's degree
- $11 \%$ Some college / associate degree
- $3 \%$ Don't know/Decline to answer

Survey question \#17 - What best describes your current employment situation? Full-time employee, Part-time employee, Unemployed, Student, Retired, or Other N/A

Survey question \#18 - Which of these conditions, if any, create difficulties for getting you where you want to go? Seeing, Hearing, Moving, Handling items, Memory, or processing or Other

(0) 38\% Seeing - $20 \%$ Moving造 15\% Handling items<br>© 12\% Hearing<br>9\% Memory<br>5\% Health 1\% Anxiety

Survey question \#19 - Which of the following income groups includes your total household income for 2022 before taxes? Up to $\$ 25,000, \$ 25,000$ to $\$ 49,900, \$ 50,000$ to $\$ 74,900, \$ 75,000$ to $\$ 99,900$, $\$ 100,000$ to $\$ 149,000, \$ 150,000$ and over, or Don't know/Decline to Answer
$2 \%$ - Up to $\$ 25,000$
$9 \%$ - $\$ 25,000$ to $\$ 49,9000$
11\% - \$50,000 to \$74,9000
18\% - \$75,000 to \$99,9000
23\% - \$100,000 to \$149,000
$16 \%$ - \$150,000 +
21\% - No answer

Survey question \#20 - How do you describe your gender? Female, Male, Trans/Non-binary, or Decline to Answer


## OVERALL SURVEY RESULTS BY REGION

$\square$

## CHAPTER 2: MAPPING TOOL (SOCIAL PINPOINT) RESULTS

## INTRODUCTION

In addition to gathering data from stakeholders and the community in the Northern Arizona region, the study team utilized a mapping tool called Social Pinpoint. Participants used Social Pinpoint to locate areas of concern where they don't feel safe driving, biking, or walking. The Social Pinpoint map has a boundary drawn in pink around the NACOG region and boundaries that illustrate where the CYMPO (red) and MetroPlan (blue) regions are located. These boundaries aid in the distinction between areas of concern within each region. https://nacog.mysocialpinpoint.com/nacog-stsp\# .


## ALL REGION MAPPING TOOL RESULTS

Participants were asked to place pins on the map to show where they believe there is an area of concern for drivers, cyclists, and pedestrians. There was a total of $\mathbf{1 , 2 6 4}$ areas of concern identified. The following is a breakdown of each category.

## Category Totals



## ALL REGION SENTIMENT TOTALS

Participants placed pins to identify areas of concern, in addition to leaving comments to describe what concerns them the most about each area. The comments ranged from positive, neutral, mixed, and negative. Below is a general overview of the sentiment based on participant comments.


## ALL REGION RESPONSES FOR EACH CATEGORY OF CONCERN

The comments for each area of concern are noted below for all regions combined.


- Bicyclist: $\mathbf{3 7 4}$ comments
- Driver: $\mathbf{5 5 2}$ comments
- Pedestrian: $\mathbf{3 3 8}$ comments


## METROPLAN REGION RESPONSES FOR EACH CATEGORY OF CONCERN

The comments for each area of concern are noted below for the NACOG region.

| Area of <br> Concern for Bicyclists | Area of Concern for Drivers | Area of Concern for Pedestrians |
| :---: | :---: | :---: |

- Bicyclist: 268 comments
- Driver: $\mathbf{2 1 2}$ comments
- Pedestrian: $\mathbf{2 1 1}$ comments


## AREA OF CONCERN - BICYCLIST

The comments for Area of Concern - Bicyclist within the MetroPlan region are listed in the table below. The table includes the comment and a link to where the concern was identified on the mapping tool (Social Pinpoint).

| Bicyclist | Comment |
| :---: | :---: |
| 1. | There should be a FUTS crossing here, providing priority to non-motorized users and treatments to slow down speeding drivers coming down the hill on San Francisco. |
| $\underline{2 .}$ | There should be a major FUTS crossing here, providing priority to non-motorized users, including traffic calming to slow down drivers who speed coming down Knoles. |
| 3. | No shoulder/bike lane/ or sidewalk on this section of West bound JW Powel. |
| 4. | No shoulder/bike lane |
| 5. | FUTS is not well maintained and therefore not usable for road cyclists. An improved bike lane in both directions would be better... cars often struggle to get around cyclists who are avoiding the bumpy section of FUTS |
| $\underline{6 .}$ | Path under freeway is crumbling and difficult for cyclists to use. |
| $\underline{7}$ | No road shoulder on this section of Zuni (both sides of the road), and the edges of the road are crumbling/filled with potholes, so cyclists must ride in the center of the road. This combined with the curves on Zuni make it dangerous for cyclists to ride this section. |
| $\underline{8 .}$ | Bicycling on Milton road is very dangerous, birth sides don't have bike lanes |
| 9. | The traffic control change here is a disaster. One lane turns into three with minimal markings and almost no clarity. The Enterprise-Huntington-Butler intersection should be converted to a traffic circle and bicycles and pedestrians should be given priority by elevating them above the traffic. |
| 10. | The traffic control change here is a disaster. One lane turns into three with minimal markings and almost no clarity. The Enterprise-Huntington-Butler intersection should be converted to a traffic circle and bicycles and pedestrians should be given priority by elevating them above the traffic. |
| 11. | Vehicles are often moving at excessive speeds on Cedar Hill ( $50-60 \mathrm{mph}$ ). This makes the space dangerous for pedestrians and bicyclists alike |
| 12. | The intersection at Fanning and Linda Vista is a disaster for pedestrians and bicyclists |
| 13. | There is minimal shoulder and no bike or pedestrian lane along W Rte. 66 even out to the Picture Canyon preserve. |
| 14. | Bicyclists and runners prolifically use Lake Mary Rd. I was almost run off the road by a car who honked and sped past me and my group of bicyclists. We were being courteous to the drivers and were biking on the side of the road as far as we could to the right. I would love to see a path dedicated to bicyclists and pedestrians on this road that spans its way from the city to Lake Mary. A way to peacefully enjoy the views and nature without needing to worry about safety of my life. |
| 15. | There are a lot of runners \& bicyclists that use Townsend-Winona road. I would love to see a path dedicated to bicyclists and pedestrians on this road. |


| 16. | Cars come down this hill way faster than the speed limit and with the curves in the road and often debris in bike lanes this is dangerous for bikers and then the speed also creates safety issues further down the road at the roundabout. Reduce car speed on this section of road. |
| :---: | :---: |
| 17. | The fort valley trail crossing over 180 is very dangerous for bicycle and pedestrians |
| 18. | This crosswalk is very dangerous for bicycles. Drivers on 180 are traveling at a high rate of speed and often do not see those in the crosswalk. |
| 19. | Most traffic that leaves the Smoker's neighborhood turns left onto Hwy 89 \& crosses crosswalk. A crosswalk on the right side would add lots of safety. Bikes can't trigger traffic light so use crosswalk and Most drivers don't see them. Xwalk on Maverick side would add to safety. |
| $\underline{20 .}$ | A lot of bikes use this route and go past Target, but I've seen a lot of close calls with cars turning out |
| 21. | The paved trail/sidewalk here is in such bad shape it is unrideable for my bike. The joints in the pavement are huge and can cause a crash. The road lacks bike lanes. |
| $\underline{22 .}$ | The shoulder is not well-marked or maintained for safe bicycle travel on either side of the street. Westbound traffic merges just west of Woodlands village and this area is especially narrow and hazardous for bikes. |
| 23. | Bike lanes are not present or not maintained. Traffic is very fast, and people are often speeding. The hill to the west of this intersection makes left-hand turns for cars tricky and crossing for bikes and pedestrians extremely dangerous. |
| $\underline{24 .}$ | No bike lane. |
| $\underline{25 .}$ | Creating a FUTS trail over as much of the old informal "Elks Lodge Trail" as possible would be a great addition to the community trail system and be safer for pedestrians, cyclists, and drivers. Taking advantage of the disruption from the expansion of the Switzer Water Main to do this would be a good time to do this. I recognize not all private property owners along this stretch to Mt. Elden Lookout Road would agree with my opinion on this. |
| 26. | No bike lane on Beulah, which is a problem for both cyclists and drivers. Beulah isn't wide, so when there is a cyclist, driver going in the same direction will often end up partially driving in the opposite direction lane. |
| 27. | It's hard to do anything in this intersection. There aren't enough turn lanes. Maybe a bike lane and/or a 4-way stop would also be good? Or a crosswalk? |
| 28. | There needs to either be a 4-way stop, a light, or several more turn lanes at this intersection. |
| $\underline{29 .}$ | Bicyclists have trouble turning left from Trails End Dr. onto westbound HWY 89 or crossing over to Snowflake Dr. |
| 30. | Hard to cross intersection- lots going on for drivers and cyclists |
| 31. | With the massive amount of construction work traffic is horrific, unsafe, and the plans for traffic patterns and when lanes will be improved are not known. It is a totally unsafe area for biking to work. |
| 32. | Bicyclists do live across the street or will need to cross the street to get to the bus stop. There have been a few accidents due to there not being a proper crosswalk/stop light here. |
| 33. | Bike lane on southbound Beaver ends abruptly and traffic lanes merge at a relatively high speed. |


| 34. | Biking east and west on Butler is very dangerous. Vehicles are often traveling $45+\mathrm{mph}$, changing lanes, and making turns. The curbs put in place for a "protected bike lane" here don't seem to make things any safer. Cars whip into the slots between the curbs when they need to make turns. A protected pathway away from this "highway" is needed for bike and pedestrian safety. |
| :---: | :---: |
| 35. | The bike lane isn't large here and cars are making right turns into businesses and at intersections and merging into the right lane for upcoming right turns. |
| 36. | Difficult to get to the FUTS here with all the busy driveway crossings |
| 37. | The FUTS interface here is a little tough to navigate, must either ride through cinders to get to the Pine Knoll Trail or backtrack to the intersection to cross which can be tough from a stop during certain times of day. |
| 38. | No separated bike lane on San Fransisco. |
| 39. | FUTS trail is wonderful, but because not on roadway, causes concern for bicyclists who have greater speeds than pedestrians. Vehicles tend to only look Left for oncoming vehicles. They need to look both ways, for users of FUTS, before crossing and entering traffic on 180 |
| 40. | Roadway storm drains located IN the bike lanes, forcing bicyclists to either ride over or around. Both options put bicyclists at risk for crash. |
| 41. | The bike lane is too narrow for vehicle speeds. Forces bikes to ride on the sidewalk against traffic if traveling eastbound. The FUTS trail is difficult because the dirt is dry and difficult to maintain traction and wet/snowy in winter. Need additional bike infrastructure (i.e... buffered or separated bike lanes or widen sidewalk to FUTS width and change intersection to allow bicyclists to cross safely to correct side of roadway. |
| 42. | Needs crosswalks on both sides of the roadway at this intersection. No safe way for bicyclists to cross from the FUTS trail to Switzer Canyon and end up on the correct side of the road. Current crossing has bicyclists crossing against traffic and difficult to navigate crossing with high traffic volume |
| 43. | LOVE the separated bike lanes on this stretch of Butler. Vehicle speeds need to be decreased from Sawmill to Milton. Current speeds 35 mph . Speeds need to decrease to 30 mph , like Milton speeds through town. Both drivers and bicyclists need education on how to share the roadway and navigate new bike infrastructure |
| 44. | Needs a stop sign or continued bike lanes on University. Current traffic calming measures are not appropriate. Bicyclists and vehicles try to share the same roadway space when the bike lane disappears. Vehicle speeds, while posted 25 mph , are closer to 35 mph , in a neighborhood. We need to be proactive before a fatality occurs |
| 45. | No bike lanes on Woodlands, the entire length of the roadway. Vehicle speeds are posted at 40 m . |
| 46. | High traffic, needs signaled crosswalk |
| 47. | Very strange biking conditions on John Wesley Powell Blvd when going east bound to try to link to the trail here |
| 48. | Very difficult to navigate these roundabouts as bicyclist on John Wesley Powel Blvd |
| 49. | Very difficult to cross this bridge, John Wesley Powell Blvd when sheep tunnel is snowed in or flooded. |
| 50. | Very difficult to cross S. Lake Mary Rd from Zuni Dr. to connect to a trail here. |
| 51. | Snow abatement cinders are still in bike lanes on Huntington Dr. in April. |


| 52. | Bike lane has debris and cinders depending on the time of year, very difficult to make a left turn with the curb dividers. |
| :---: | :---: |
| 53. | Left turns from Butler Ave into this parking lot have a very hard time seeing cyclists on the FUTS trail here. |
| 54. | Snow impacts block this trail for cyclists, then snow melts block the trail, then monsoon storm flows block the trail. Trail is a major safe route for cyclists and pedestrians, but is blocked half the year |
| 55. | Bike lane disappears and the $A B$ shoulder is difficult to navigate on a bike |
| 56. | Very difficult to turn left from westbound Butler Ave to southbound Lone Tree. The left turn signal precedes pedestrian crossing on the west side going north or south. Frequently vehicles do not stop for pedestrians or cyclists. |
| 57. | This intersection has killed a bicyclist and placed several in the hospital |
| 58. | Have nearly been struck by vehicles turning left onto 4th Ave from 4th street during rush hour traffic. |
| 59. | Highspeed traffic on 4th street and minimal separation means I'm breathing exhaust the entire ride up and down 4th Street. |
| 60. | I have noticed several bicyclists illegally crossing this intersection, and other intersections, causing vehicular traffic with the right of way to have to stop and nearly hitting the bicyclist. There needs to be a way to provide more bicyclist rider education and enforcement on bicyclists. |
| 61. | Overall, the entire stretch of FUTS trail here north is getting so broken up and weathered, it is not great to ride on. Some of the gaps in the pavement are so wide they are jarring. If a cyclist is not constantly paying attention to both cars and the trail surface, crashes are very possible. Poor surface all the way to the end at Schultz Rd. |
| 62. | This is an area of concern I have for drivers, bicyclists, and pedestrians. The FUTS travels in both directions, on the west side of the highway here. People making right turns do not look for northbound pedestrians and bicyclists. |
| 63. | Vehicles coming out of neighborhood go past stop line well into the FUTS path before stopping if they do at all. I barely miss getting nailed weekly. The drivers are only looking north for traffic to enter Hwy 180, so they never even look south. No drivers stop at the stop line, look for path traffic and then move forward to see traffic after stopping. Every crossing along this stretch is like this, riding on 180 northbound is safer sad. |
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| 68. | This is an area of concern I have for drivers, bicyclists, and pedestrians. It is almost impossible to cross the highway to get to the FUTS in a safe manner. I rode my bicycle out here once and will never do it again because it was so dangerous. |
| 69. | Vehicles coming out of neighborhood go past stop line well into the FUTS path before stopping if they do at all. I barely miss getting nailed weekly. The drivers are only looking north for traffic to enter Hwy 180, so they never even look south. No drivers stop at the stop line, look for path traffic and then move forward to see traffic after stopping. Every crossing along this stretch is like this, riding on 180 northbound is safer sad. |
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| 72. | Takes quite some time for vehicles to stop for pedestrians and cyclists waiting to cross the crosswalk. Many vehicles are speeding and come around the corner so fast northbound it can be sketchy to cross. Never sure if they will see me and stop. |
| 73. | Bike lanes get destroyed by bus stopping here. After 180 was re-paved, bus broke what tiny bike lane was here in just a couple of months. Another pinch point for bikes going south. |
| 74. | Bike lanes narrow southbound here, so it is very uncomfortable to ride when a car passes. I tried to ride faster or slow down to avoid a car passing me at the same time. Many places on Hwy 180 the bike narrows that it is not the correct width nor safe. |
| 75. | Vehicles running red light and speeding on Hwy 180. Nearly hit by vehicle at $45 \mathrm{mph}+$ who went through red light so late I was already halfway across. I was terrified as I felt the suction of the vehicle nearly pull my off my bike and the drivers stopped at the intersection were stunned. I had to stop and sit down after crossing to stop shaking to keep riding home. |


| 76. | This is the only way in the downtown area to get from downtown to campus without potentially having to wait for a train, and it's difficult to see vehicles coming down the side streets onto Milton, and it's difficult for the vehicles to see bicyclists. The sidewalk is also very tight in this area, and the road is very dangerous to ride on, so there is a lot of accident potential. |
| :---: | :---: |
| 77. | The whole length of Milton is just plain frightening for cyclists. |
| 78. | There is no way for bicycles to travel west and stay on Butler Ave through this intersection without pushing 18 -wheelers out of the way with their bodies to get over to the left turn lanes. The underpass is only helpful if you are traveling south/southeast through the intersection (and it's downright frightening if you're a woman alone). If you try to cross all the streets to get west, you are dodging vehicles that don't expect you to be there. It's scary. |
| 79. | There is no safe place for bicycles to cross here, forcing bicycles to travel the wrong way and on the sidewalk if they want to go north on Milton toward Old Town neighborhood. |
| 80. | I use this intersection to access Rt 66 Urban trail from downtown. There is no bike lane here and vehicles on Verde who want to turn west often creep out ahead of the vehicle next to them on Verde, thus kind of squeezing the bicyclist. If I use the walk button provided, I am now on the sidewalk and I never feel safe crossing with the walk button without first assuring myself that a driver turning west is aware of me. |
| 81. | I have observed numerous vehicles heading north at this intersection disobeying the stop sign. Twice I have almost been hit by these vehicles while on my bike. Had I not been paying attention I would have been hit. I assume this would also be an intersection of concern for pedestrians. |
| 82. | The concrete bike path with vertical posts needs to be taken out. It is very dangerous to bicycle in this lane. The cinders, snow, trash, and trash/recycle cans create safety hazards. The concrete barriers keep cyclists from avoiding cars that are poking out of side businesses and homes to enter the street. When riding in the lane, it is difficult to turn across two lanes of traffic to make a left turn onto a side street. Just looking over your shoulder to see if it is safe can cause a collision |
| 83. | For some reason, some cars don't want to stop to let a bike cross at the school. An overpass for pedestrians and bikes would not only solve a safety issue but would help with the traffic congestion. |
| 84. | Bike lanes need to be developed between Little America to Fox Glenn. Good work on 4th street from 66 and Butler but I will not ride my bike on Butler between I 40 and Fox Glenn. |
| 85. | No room for bikes no bike lanes |
| 86. | No room for bikes or bike lanes-Dangerous for bicyclists. |
| 87. | Need Pedestrian and bike bridge over 4th this intersection is no fun on a bike |
| 88. | This intersection is terrible for bikes and pedestrians. Need dedicated bike path for Arrowhead and RT66 and dedicated path/lanes connecting to east side dedicated path and a bridge. A bridge across the RT 66 and train tracks would be ideal |
| 89. | Essentially need pedestrian and bike bridges here and dedicated paths on all of cedar or some dedicated bike pathway to traverse this N E part of Flagstaff, very scary and unsafe. |


| 90. | Safe dedicated Paved Bike path on Cedar needed that would function for both directions and street made wider for bike lane. Eastbound sidewalk extended without crossing on-ramp or dedicated westbound on-ramp closed or reworked and maybe utilize the open space. |
| :---: | :---: |
| 91. | Intersection is so large it is fearful to move into the area. |
| 92. | Intersection is so large it is difficult to see every direction at once or to avoid turning vehicles. |
| 93. | The bike lane moves from against the curb to away from the curb to allow room for parking cars. People tend to park right where the bike lane changes, leaving no option for the bicyclist other than to move into the lane of traffic because the bike lane is blocked by the parked car. |
| 94. | Bike lane ends at intersection. Vehicles fail to use turn signals for right turn so bicyclists need to take over the entire lane to be safe. But some cars still attempt to pass bikes in the intersection. |
| 95. | Create better connections between path under freeway and University Heights in both directions. |
| 96. | Drivers tend not to stop at crossing, even if you press the button. |
| 97. | FUTS is very dangerous here. There are no markings to indicate that it's a FUTS. You allow left turners to cross over the FUTS (that should be stopped). Private parking lots do nothing to prevent conflicts at the FUTS crossings. |
| 98. | This is a dangerous crossing for bikes and peds, as drivers turning right from Route 66 to Ponderosa are driving too fast and not looking for through non-motorized traffic. Perhaps a no right turn on red or some kind of preferred crossing for nonmotorized users. |
| 99. | Plow and sweep the protected bike lanes. Better yet, raise them up to sidewalk level and make one big elevated FUTS path. |
| 100. | Tow cars that park in the bike lane. Plow the streets properly in the winter. Create no parking zones to allow plows to do their job on certain days of the week |
| 101. | Dangerous intersection for cyclists and pedestrians. Right-turning motorists do not stop for either. Create a lead time for non-motorists to cross on the walk/bike signal BEFORE motorists can turn. Better yet, prohibit right turns on red at this intersection. Create automatic walk signals at this intersection instead of forcing bikes and peds to push buttons. |
| 102. | This area is unusable in winter because it doesn't get plowed or swept. Bike lane should be added at intersection with Beulah, not removed to offer 3 lanes for motor vehicles ( 1 left and 2 straight). Perhaps offer connection to Beulah with bike lane on Beulah as well, then a way for cyclists to turn left safely onto McConnell. |
| 103. | FUTS crossing has no markings or signal. It should give priority to peds and bikes. |
| 104. | 100\% reliable bike loop detectors needed on Plaza Way |
| $\underline{105 .}$ | Plaza Way needs a bike lane |
| 106. | Route 66 needs a bike lane or FUTS path. It used to have one heading westbound, but you removed it in favor of adding another car/ truck lane. |
| 107. | Woodlands Village needs a bike lane or, preferably, a FUTS path, as bike lanes become useless in the winter and spring. |
| 108. | An easement here would be a huge improvement for bicycles. |


| 109. | So difficult and scary to cross from forest onto fort valley. This cuts off bicycle and pedestrian traffic from access to the urban trail system. A light here would make such a difference in safety and accessibility. |
| :---: | :---: |
| 110. | Hazardous place for a cyclist to turn left onto Forest. Only slightly less hazardous to use the crosswalk |
| $\underline{111 .}$ | Northbound cyclists are hit here regularly. |
| 112. | Terrible road conditions. Snowbowl must be held accountable for the road conditions and fix them accordingly. I'd assume Mountain Capital Partners could afford to resurface the road. |
| 113. | Shoulder very narrow in this area, an extremely dangerous combo with afternoon sunlight in westbound driver's field of view. |
| 114. | The Sketchy area connects east to west Flagstaff. Road could use a bike lane or widening. Cars regularly speed in this area. Going to get worse with the new buildings in the area as well as the JWP extension. |
| 115. | All roads and intersections in the City of Flagstaff need improvements in bicycle safety. Bike lanes are often absent or unsafe. All roads need bike lanes and bike lanes should not be on the same level as cars. |
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| 132. | All roads in the City of Flagstaff need improvements in bicycle safety. Bike lanes are often absent or unsafe. All roads need bike lanes and bike lanes should not be on the same level as cars. |
| 133. | The problem here is that the trail just abruptly ends. Fast bikers that are not aware could crash. After the trail ends the only alternatives for southbound riders are to ride the wrong way in the northbound bike lane or cross the very busy road where drivers are going $40-50 \mathrm{mph}$ and ride on the southbound shoulder. There needs to be a proper southbound bike lane. The Country Club Trail needs to be extended all the way to Old Walnut Canyon Rd where there needs to be a protected intersection. |
| 134. | All roads in the City of Flagstaff need improvements in bicycle safety. Bike lanes are often absent or unsafe. All roads need bike lanes and bike lanes should not be on the same level as cars. |
| 135. | This intersection needs an underpass solution. It's a very busy intersection with drivers making right turns while looking left. Very dangerous for bikers and pedestrians. |
| 136. | This intersection needs an underpass/overpass solution. It's a very busy intersection with drivers making right turns while looking left. Very dangerous for bikers and pedestrians. |
| 137. | This is a crossing of two major trails, the Route 66 trail, and the Arizona Trail. This intersection just screams for an underpass solution. It's a very busy intersection with drivers making right turns while looking left. Very dangerous for bikers and pedestrians. |
| 138. | There is no good way to get on a bicycle from Butler and Beaver onto Rte. 66. Milton is very dangerous and unpleasant. |
| 139. | The protection added to the bike lanes on Butler are wonderful, but they are always full of debris (or snow or ice). Could they be cleaned more frequently to make them more usable and safer? |


| 140. | This overpass to get to Kiltie and popular trails off Woody Mountain road is very dangerous for cycling (and walking/rolling). There is another comment to this effect already, but it's so bad I wanted to leave another one. |
| :---: | :---: |
| 141. | Deadly intersection for bikers. Lots of car traffic is going too fast. Poor visibility for eastbound drivers driving into the sun. |
| 142. | Motorists often make their turn into the bike lane here, pushing bicyclists off the road. |
| 143. | Trash and recycle cans block the bike lanes. These businesses do it on purpose, but it is going to kill someone someday. I work at the hospital and ride at night, those trash cans can sneak up on you even with good head lights. |
| 144. | Taking Clay eastbound to cross Milton onto Butler- the traffic lights do not recognize bikes. If there isn't a car also crossing Milton eastbound, the light won't turn green for bikes. This happens especially in the early mornings. It forces bikes to either run a red, or cross to the northbound pedestrian crosswalk, then cross the street again to get back on the eastbound lane. |
| $\underline{145 .}$ | People are always parking in the bike lane, forcing us to merge into vehicle traffic |
| 146. | The lack of bike lanes on Woodlands is a huge concern. The 40 mph traffic is too fast, especially at the south bound where people are coming off 66, speeding and not paying attention. The safest choice is to ride on the sidewalk but you're worrying about pedestrians, cinders, and turning cars. |
| 147. | An extension of the Urban Trail is needed to the " Y " and future expansion beyond that. An urban trail should eventually extend to the forest border on Mt. Elden Lookout Rd. |
| 148. | Parents routinely park in the bicycle lane waiting for students and are preventing bicycles, cars, and pedestrians. Enforcement and signage are needed. |
| 149. | Trash and recycle cans blocking lane for bikes |
| $\underline{150 .}$ | Beulah between Fort Tuthill and Flagstaff has no bike lanes and traffic moves fast. The FUTS option is slower because it is not paved and less direct. |
| 151. | SOUTH MILTON ROAD is NOT safe for cyclists. The passage under the railroad bridge is antiquated, with cracked cement. It forms a dirty pond/ice rink in winter and is not big enough for cyclists AND pedestrians. The whole town is cyclist unsafe - but especially this major corridor. An alternative to major work on S Milton is to make cycle safe routes parallel. Please DO this ASAP. I cycle ALL the time (every day) - more people would join me, if it was safe. |
| 152. | This is the only route for bikes to get out of Flag for long rides. There is not enough shoulder for bike anywhere on Lone Tree and the potential development of Pine Canyon property -- multi driveways - on the east side of the road will make this even more unsafe than it is. |
| 153. | There's no bike lane and a very narrow shoulder that makes navigation difficult for bike traffic leaving the university at peak times |
| 154. | Given that Beulah runs parallel to I-17 and that the interstate is tailored to high-speed car travel, it's reasonable that other modes of travel would be given some priority on this road. There's no bike lane despite this being a popular cycling route. Despite the interstate running adjacent, motorists often treat this road like the speed limit is 70 |
| 155. | Narrow roadway with no room for bicycles. The shoulders are dirty and rough and are not allowed for road bikes. Traffic is high volume and with no turnoffs or center lane for turning. |


| 156. | Drivers approaching Fort Valley Road from the west do not stop before the crosswalk as required by law. This is dangerous for bicyclists and pedestrians using the FUTS. |
| :---: | :---: |
| 157. | The Ft. Valley multi-use trail is in such disrepair that it damages bikes to use. Being the the trail is so damaged, many cyclists are forced onto the road which lacks safe bike infrastructure going southbound. This is particularly dangerous near the fire station between Blue Willow and where the FUTS crosses at Sechrist. |
| 158. | Cyclists trying to turn left onto Fremont from 180 have no safe way of merging from the bike lane or trail onto a safe turn lane. Especially with Snowbowl traffic, both cars and bikes turning into the Cheshire neighborhood must make dangerous moves just to turn. A protected light is necessary. |
| 159. | This short path across private property is essential access between the city and the National Forest for bikes and pedestrians. An easement should be acquired and maintained as part of the FUTS trail system. |
| 160. | I'm a bicycle commuter. I work near the airport and live on Hospital Hill. The intersection at butler and lone tree, north bound, is far and away the sketchiest place on my ride. Just a matter of time before someone gets taken out here. |
| 161. | Woodlands Village Blvd. needs a bike lane. It's especially risky when a cyclist needs to cross to the center lane to go straight across W. Rt. 66. |
| 162. | The bike/pedestrian path ends abruptly here. There needs to some be safe, direct, clear route across HWY 180 |
| 163. | A crosswalk is needed here for bicyclists using the Karen cooper trail so motorists (esp. those speeding to/from the HS ) are reminded bikes are crossing. |
| 164. | Vehicles tend to park on the Southeast corner of Lake Mary and JW Powell. They park there to access trails and bike on Lake Mary road. This causes drivers traveling South on JW Powell to pull way out into Lake Mary road so they can see around the cars parked on the corner for traffic while making a left or right. They often run the stop sign to do so. There is a right and left turn lane, and the right turn lane blocks the view of Pedestrians and bicycles when crossing in the crosswalk. |
| 165. | The city does not plow the fourth street bike lanes or sweep the gravel. Super dangerous. |
| 166. | No bike lane! I ride to FAC a lot and never know if I should compete with pedestrians on the sidewalk or risk riding in the street alongside cars that might turn right and run into me |
| 167. | Was struck on my bike by a car at this intersection |
| 168. | Please consider a bridge on the FUTS where the water crosses. <br> Otherwise, pedestrians and cyclists end up backtracking to S Knoles and there is neither a bike lane nor a sidewalk on the north side of McConnell westbound for a block. This area of the FUTS is currently flooded. And, for those of us who must ride in the night/dark, the urban trail through here is scary so having a near-street alternative that is safe from vehicles would be great. It's only one block that is in need. |
| 169. | This area is very busy and dangerous for bicycles trying to get to the bike path on the other side of rt 66 . There are lots of cars that aren't watching for cyclists and pedestrians. |
| $\underline{170 .}$ | Often trash and recycling cans in the bike lane |
| 171. | Going downhill the bike lane ends in traffic. Vehicles on E Cherry Ave do not look for bikes and will barely stop at sign. |
| 172. | The terminus of the FUTS trail at the athletic club does not provide any sort of safe transition to the roadway for cyclists. Especially southbound to turn on Walnut Canyon |


|  | Rd which accesses popular bike trails, the best option for cyclists is to ride against traffic on the very narrow shoulder. |
| :---: | :---: |
| 173. | I was cycling northbound on San Francisco and crossing Butler when a car on Butler ran a red light and nearly hit me |
| 174. | A bus stop + park $n$ ride lot would be awesome here. Giving folks the option to bike or drive to a close bus stop would be much appreciated. Also, a bus stop at the airport seems like it would be very functional. |
| 175. | There is no marked/signed crossing where the Sinclair Wash Trail crosses S Knoles Dr. So, close the McConnell/Knoles intersection this is a very dangerous "midblock" crossing. |
| 176. | Turning left from the bike lane on Butler pretty much anywhere along the roadway is harrowing. There's no safe place to exit the protected bike lane and cross multiple lanes of traffic. Protected intersections at the signals would help a lot. |
| 177. | Nearly impossible to safely transition from the bike lane on Beulah to left turn on Lake Mary Rd. Competing with multiple lanes of very high-speed traffic. |
| 178. | If your intention is to head west from the underpass to connect to Babbot Dr./Manning CP Trail (heading south), you must ride on the sidewalk in the wrong direction and navigate the busy Sam's driveway which most drivers are looking towards the left for oncoming traffic and not you are coming from the right. There is no signage stating this is a shared trail or wayfinding that would help all users be respectful of each other. It's always a point of stress while riding. |
| 179. | The connectivity from FUTS/the bus stop on Route 66 is not great and requires a lot of interaction with vehicles if you're walking or bicycling because the only crosswalk is on the west side. No crossing on the east side of the intersection. Heading north on Arrowhead becomes an uncomfortable and long process. |
| 180. | A great opportunity to serve the people using this FUTS trail: have all motor vehicle traffic stop at this intersection at the same time to allow safe passage of people needing to get from one part of the FUTS to the next. Build it into the signal, just like in Boston. |
| 181. | I have a vision of Flagstaff in which all these horrendous 5-lane roads are reduced to 4 lanes with trees and a curb separating the newly formed bike/ped lane from the motorized vehicles going 45 mph . Wouldn't that be lovely! |
| 182. | You must have a death wish to ride a bike on Milton. I do so at 5:30am and only then. Is this the way we want our city to be? A full travel lane separated from cars by Jersey barriers would be great. This street is 2 lanes in each direction with the suicide lane down the middle. Surely one of these could be converted. Traditional bike lanes such as exist here are no match for the amount and speed of traffic here |
| 183. | This intersection has been crying out for a traffic light to stop all traffic in all directions to allow peds/bikes to safely get across for decades |
| 184. | There is no safe place for cyclists who get pushed off the road when turning east onto Townsend Winona from 89 since a curb was added and large rocks on the other side of it. Best solution: dedicated bike path SEPARATE from roadway all the way along TW Rd |
| 185. | Lots of fast-moving vehicles plus foot/bike traffic here. <br> In Boston all traffic in every direction stops for pedestrians at 4way intersections with lights in busy areas. I would love to see that here. That's what truly prioritizing foot traffic looks like. In Boston, pedestrians can safely cross diagonally if they want to which saves time. |
| 186. | The roads in the historic downtown neighborhood are notorious among the local bicyclists for cars running stop signs and endangering bicyclists and other drivers. |


|  | There have been multiple instances in the downtown neighborhood of me personally experiencing this. It would be greatly appreciated if the downtown neighborhood had stop lines on the road to help drivers recognize where they are supposed to stop and who has the right of way. Additional signage/sign visibility may also be useful. |
| :---: | :---: |
| 187. | Driver's turning into the gas station without checking bike lane. |
| 188. | Paint bike lanes or wide shoulder from City limits to Townsend Winona at a minimum, Silver Saddle would be ideal. |
| $\underline{189 .}$ | Way too much traffic on Bonito Street in the mornings. Bonito has become a cut through for people wanting to avoid Humphrey's - to access Sechrist, FALA, and Snowbowl. I thought it was supposed to be a bike route, but it's unsafe as such, especially with cars parked on both sides year-round. This area is supposed to be one of Flagstaff more bikeable/walkable neighborhoods and the answer is not to redesignate the streets for more traffic. |
| $\underline{190 .}$ | My son couldn't commute to Coconino high school or access forest trails near buffalo park because of this dangerous intersection |
| 191. | Curb cuts should align with the trail/how traffic moves. On Dory bicyclists must make two short 90 degree turns to follow the path |
| 192. | Vehicles move too fast on Wild West to see when pedestrians or bicyclists are waiting to cross at the park. A stop sign would improve pedestrian and cyclist crossings. No parking near the cross walk would help cars see, too. |
| 193. | The Country Club bike path that crosses over I-40 is consolidated on the east side of the road, which places cyclists on the sidewalk riding against traffic all the way to Cortland Blvd (past Oregano's). There is no easy way to cross Country Club or Cortland to travel with traffic. |
| 194. | No bike lanes on McConnell once on campus can make it challenging during heavy NAU commute times. |
| $\underline{195 .}$ | Forest Meadows St between Beulah and Woodlands Village needs better plowing during snow. The bike lane and most of the east bound car lane are covered in snow making it dangerous for a biker. The road doesn't get much sun so even on the cleared section it is very icy, and it doesn't seem like plows come back to clean it up after the snow ends. |
| 196. | Old Munds is fine if you are an avid cyclist, but the Kachina and Mountainair communities need to be connected to Flagstaff via a paved FUTS trail. more people would bike or bike to town, its nearly as fast. |
| 197. | A paved shoulder or FUTS-type trail to connect Mountainair to the park in kachina would be great |
| 198. | Bike path entrance and bridge overpass at 4th/Solaire must be kept clear of snow and ice. |
| $\underline{199 .}$ | Woodlands Blvd. needs a bike lane. The speed of drivers and lack of bike lane makes this street very dangerous for cyclists. |
| $\underline{200 .}$ | With the speed of cars coming down the hill and the sun coming up in the mornings I no longer commute on route 66 because of the lack of bike lane and speed of the average driver. |
| $\underline{201 .}$ | It would be nice if there was a bike specific way to get from 4th street north to the FUTS on 66. The safest way seems to be getting on the sidewalk near aqua plex then crossing the dirt onto the patch under the 4th street bridge. |


| 202. | The FUTS path ends on 66 at San Francisco. On 66 there is no bike lane after San Francisco. This leaves me with little good options to get to my neighborhood on Santa Fe. Usually, I am forced to ride with traffic on the 66. |
| :---: | :---: |
| 203. | City fails to clear the bike lane of snow and ice forcing me to ride on 66 |
| 204. | City Plows and leaves snow and ice into the 4th street bike lanes. The south bound bike lane has literally not existed since December. a snow removal plan would be nice. |
| $\underline{205 .}$ | On a bicycle in the morning merging traffic at Milton and west Rte. 66 is the most dangerous part of my ride. Cars trying to turn right must merge across the bike lane. |
| 206. | The bike lane/shoulder is very narrow/non-existent in this area making it very dangerous for cyclists. |
| 207. | Cherry Ave bike lane NEVER plowed in winter, rarely has cinders removed well after car lanes are cleared. Multiple houses place trash cans in bike lane for full week and is never resolved even after multiple complaints. |
| 208. | Within protected bike lanes, S -bound on Beaver, trash cans are commonly left in the bike lane. These hazards can consume the whole width of bike lane and cyclists are blocked in due to curbs on both sides. Trash cans should be left on the sidewalk both by their owners and by city workers. |
| $\underline{209 .}$ | Long-term ice presence (weeks) after snowstorms on the $S$ side of road, make portions of bike lane hazardous. The road is often clear for a long time, but Ebound bike lanes are impassable. Targeted use of salt and hand tools could help. |
| $\underline{210 .}$ | South side of Butler from around Warner's to ACE, there are long-term black ice features that cover the entire bike lane after snowstorms for weeks (to months this year). These are very hard to see at night. Often the main motor vehicle lanes will be clear for a long time, but the bike lane is impassable. Some targeted use of salt or hand tools could reduce this hazard. |
| $\underline{211 .}$ | During the mornings, people will cut through Clay Ave to try and avoid traffic on 66/Milton. This causes huge backups along the entirety of Clay Ave to Blackbird Roost. Especially by Clay Ave and S Florence/S Malpais Ln. At the stop sign, people will block the 4-way stop so people/cars/bikes cannot pass. Cars will try and squeeze by and drive in the bike lanes to go straight to Butler or turn onto Milton/66. Frustration is high in the mornings and people are more prone to make risky moves. |
| $\underline{212 .}$ | All of Milton is a suicide zone for bikes. There need to be bike lanes on this major thoroughfare so that cyclists can travel across town without putting themselves at enormous risk every time. |
| $\underline{213 .}$ | The curb to protect cyclists on the east side of roads prevents cyclists from accessing bike lane from trail behind Bashas. Why does trail not go directly to Bashas parking lot? |
| $\underline{214 .}$ | The bike lane on Woody Mountain often has cinder or debris forcing me into the car lane. This is scary as the speed limit is 40 mph . The bike lane abruptly ends as you approach Route 66 forcing you to merge with cars that pass then are looking to make a right-hand turn. |
| $\underline{215 .}$ | The only paved access for bicyclists between Kachina-Mountainaire and Flagstaff is I-17 |
| 216. | Route 66 pedestrian path does not clear of snow in a way in which I can safely ride my bike without having to frequently get off and walk it over ice or slush. This has happened many times in the past even a week or more after our latest snow. |
| 217. | The I-40 overpass does not have a bike or pedestrian lane, it is narrow, and car visibility to bikes and pedestrians is limited because of the rise of the bridge. There |


|  | are neighborhoods and whole businesses back here that people commute to/from, and this should be improved upon. |
| :---: | :---: |
| 218. | Intersection (?) of Forest Ave and Fort Valley is extremely dangerous for bicyclists. Coming down the trail behind Bashas, you choose to either cross Forest, where cars NEVER yield, and ride on northbound Ft Valley where the sidewalk is discontinuous, and the shoulder not protected from cars speeding along the highway. Or you can cross Fort Valley at the crosswalk that cars don't notice, and ride on the trail, where you pray that cars turning onto Ft Valley from Coconino estates will see you |
| $\underline{219 .}$ | Route 66 here is terrible for bikes. There is often debris in the bike lane, the lane is narrow when going West/non-existent, cars are going fast and making turns that are difficult on this road. |
| 220. | No sidewalks and little shoulder on east side of San Fran as you come up the hill. Cars go fast but bikes go slow headed up the hill. The only section without protection is the most dangerous |
| 221. | The urban trail becomes a sidewalk, and heading west, that intersection is extremely dangerous. Getting back onto the urban trail heading south consists of having to get onto the road at a major highway on/off ramp or illegally using the sidewalk. The intersection is massive, and full of distracted drivers. I rarely feel safe riding through, or even walking through. I have gotten close to being hit by a car here. Some kind of bridge would make heading west or south feel so much safer. |
| 222. | Downtown section of San Francisco St requires bikes to take the lane, but drivers don't yield to bikes and try to run you over. Doors opening from parked cars endanger inexperienced bicyclists who ride too close to parked cars. |
| 223. | When traveling from Clay to Butler across Milton the light does not detect a bike is present causing you to have cross twice using the dangerous crosswalks. Drivers don't yield to bikes in this intersection. |
| $\underline{224 .}$ | No bike lane on Woodlands 40 mph is too fast to ride in the road |
| $\underline{225 .}$ | No shoulder at all. No bike lane/path. No walking paths. |
| $\underline{226 .}$ | No shoulder at all. No bike paths. No walking paths. |
| $\underline{227 .}$ | No shoulder at all. No bike lane/path. No walking paths. |
| $\underline{228 .}$ | On May 28th, 2021, I was run over by a tow truck that ran a red light at the intersection of Beaver and Butler, we were headed southbound. Martin Ince did a presentation on bicycle/car crash data and this intersection, San Fran, and Butler and pretty much all of Milton were the spots where the most incidence of collisions happened. PLEASE do whatever is possible to make these intersections SAFER. These are main pedestrian thoroughfares for students and centrally located pedestrians. |
| 229. | A *really* bad place for a left turn! for *all* modes of transport using or crossing the road. |
| 230. | Thorpe Rd. from W. Cherry to N. Bonito has many drivers who ignore the speed LIMIT (including the buses) and that they are passing through a PARK past neighborhood and an elementary school. This area is dangerous for bicyclists and pedestrians. There are people crossing from the ball fields parking lot to the disk golf course and trails, Kinlani and Clark Homes students going to and from school, crossing to use the park facilities and to go to other areas of town. |
| 231. | I have almost been hit by a car using this strange "on ramp" to cedar. Why is it even there. There is only local traffic using it. |


| 232. | Bike lanes blocked by snow |
| :---: | :---: |
| 233. | As a westside commuter (who avoids Milton at all costs), it would be nice to have a way to cross the tracks somewhere along Coconino Ave. |
| 234. | Defensive bike riding is required when traveling along the FUTS on Fort Valley. Vehicles turning out of Coconino Estates onto Fort Valley frequently pull into the crosswalks without looking both ways for pedestrians. |
| $\underline{235 .}$ | The Historic Route 66 and Woody Mountain Road is extremely dangerous for bikers. Vehicles traveling west on 66 cut the left-hand turn onto Woody so severely they cross the left and right turn lanes on Woody. Part of the problem is the way the traffic lines are painted on 66 (they stop too early, so people turn prematurely). With the added housing developments in this area of town, we really need a stop light here. |
| 236. | When will Southside residential streets be plowed in a timely manner? Sometimes they are never plowed! This has been a problem for decades. When can Southside get the respect, it deserves? |
| $\underline{237 .}$ | Why put tall buildings close to the street? This just creates ice on the streets that stays around a long time. We already knew this was bad from observing and living with downtown buildings and now it is a City policy for new construction. Please reverse this policy and stop building such large and tall buildings! |
| 238. | Downtown streets desperately need resurfacing! Crossing large cracks ruins bike wheels and if parallel to line of travel wheels can get caught in the cracks and cause the bicyclist to go down--I know from experience. |
| 239. | People regularly run stop signs on N . Bonito St. Check the police records for the numerous accidents. Very scary for bikes and peds. |
| 240. | No pavement marking indicating bicyclist place on highway north/south bound, highspeed intersection |
| $\underline{241 .}$ | Limited shoulder, high speed traffic, no signage/lane markings indicating bicycles may be present, the only way to get to Townsend Winona/Highway 89 northbound for bicyclists on pavement. |
| $\underline{242 .}$ | Dangerous crossing for bicyclists, suggestion to close or better control slip lane. |
| $\underline{243 .}$ | Many folks ride and run out here (including Olympic athletes) \& something a bit more separated than a wide shoulder would be preferable. Often there are rocks, accident trash, glass on the shoulder, which can force you on the road. Plus, many drivers go 70$80+\mathrm{mph}$ on this 50 mph road. |
| 244. | Lots of folks use HWY 180 as a loop to/from forest road. The bike lane changes size several times \& there are some decent bumps/cracks/holes in the pavement close to the edge of the road. I think the FUTS should be extended to at least Snow Bowl road if not a bit further. This would allow more bike commuters from the neighborhoods outside of town. Many drivers are courteous, but it only takes one not paying attention to kill you on a bike, especially at HWY speeds. |
| 245. | No space for bikes. I had a driver yell at me one time for being in the lane. That's the only place a bike can be. I think yet again take a lane for bikes slow traffic down. Speed limit is again 40 mph through here, which is way too fast for a city. |
| 246. | In the winter or muddy weather this is an important road for those looking to get on longer rides (we often/usually can't ride our trails). Provide a better/wider/safer space for bikes--cars are going FAST toward/away from the interstate. Driver education on how to pass bikes safely is lacking in at least $1 / 3$ of them. |


| 247. | The past 2 summers certain drivers have been using this road as a raceway, which is <br> dangerous for everyone. We are in a city, so the speed limit should never be 40 <br> mph (kills more peds/bikers when accidents happen). This road needs to be narrowed <br> with less lanes for cars. This could also help in the winter with plowing and ice concerns. <br> When plows go through, they put more snow on sidewalks corners (which never get <br> plowed more than once). |
| :--- | :--- |
| $\underline{\text { 248. }}$ | Add striping for a bicycle left turn lane for bicycles traveling north on TW. |
| $\underline{249 .}$ | Biking on the east/west roads in this area (Aspen, Birch, Cherry, etc.) is dangerous due <br> to the many vehicles that don't stop when driving north or south on Bonito, etc. This has <br> been a serious concern for the last 20 years and I have witnessed so many vehicles cruise <br> right through the stop signs, or slow down a bit, and move into the intersection. I <br> ride these streets E-W and slow down/stop at nearly every intersection if a car is present, <br> until I make eye contact and they stop. |
| $\underline{250 .}$ | Very hard intersection to cross from west to east in this large intersection. Feels very <br> unsafe given vehicles turning south from Butler onto Lone <br> Tree and vehicles turning east onto Butler from Lone |
| Tree. Butler from Milton to east of Lone Tree has always felt unsafe to bike. The |  |
| pilot bike lanes made this feel a bit safer, but lots of cinders in the lane sometimes and |  |
| those are very slippery for bikes. |  |\(\left|\begin{array}{l}Dangerous to cross the crosswalks at Butler and Milton/66 intersection, particularly the <br>

north/south crosswalk. As a bicyclist, I prefer to cross over to the south corner of Clay <br>
Ave. and cross to the east to Butler with the green light for cars. However, this is often <br>
impossible as there is no way to activate the green light heading east if a car doesn't <br>
activate it. Why not install a button for a biker to activate here? Install it immediately <br>
adjacent to the bike lane (not on the post)!\end{array}\right|\)

|  | out of the Walmart parking lot and hotel parking lot adjacent to the trail so there <br> is a lot of potential for vehicle-pedestrian or vehicle-bicyclists' collisions. A flashing <br> crosswalk (as there is on Butler) would allow pedestrians and bicyclists to safely cross and <br> be highly visible to vehicle traffic. |
| :--- | :--- |
| $\underline{258 .}$ | Townsend Winona is a terrifying road to bike down. The cars drive fast, it is curvy and <br> there is very little shoulder to ride on. |
| $\underline{259 .}$ | Bicycle paths just disappear as you get beyond the mall. With rising housing <br> costs, more people are living in areas like Doney Park and want to commute by bike too. |
| $\underline{260 .}$ | l desperately wish to bike east on Cedar, but the high speeds of traffic and the downhill <br> make the bike line insufficient, in my opinion. Expanding the sidewalk to a dedicated bike <br> path would help make things safer. Once this is done, more people would <br> bike commute meaning less traffic on the road for drivers. |
| $\underline{261 .}$ | Bicycle crossing from triangle to north side of Cedar is scary. Cars seem to think an <br> "on ramp" is an opportunity to speed up and the crossing is around a bend in the road, <br> so drivers not paying attention could miss it. |
| $\underline{262 .}$ | Bicycle access to and throughout Doney Park is not safe. Very few bike <br> lanes or paths established. |
| $\underline{263 .}$ | Please turn this sidewalk into a wide path for bikes and peds. The urban trail on the south <br> side of the road is a lovely option but not during winter. |
| $\underline{264 .}$ | It would be so nice to have a separate bike path on this interchange that would connect <br> to the sidewalk going over Cedar. Drivers are often looking left while merging and I think <br> it would keep everyone safer. It would also be nice to widen the sidewalk over Cedar to <br> be more of a bike path to better accommodate bikes and peds. Cedar is too dangerous to <br> ride in, even a protected bike lane is not a safe choice. |
| $\underline{265 .}$ | No safe connection from westside to eastside for cyclists except to go through this <br> very unsafe intersection. |
| $\underline{266 .}$ | While heading south at this intersection, I often feel invisible to northbound left turn <br> drivers, they frequently keep turning left in front of me even when I <br> have the right of way. |
| $\underline{\text { Forest, Beal, bike way, dog leg turn }}$ |  |
| $\underline{268 .}$ | No bike lanes. Dangerous for bicyclists... especially when there's snow. |

## AREA OF CONCERN - DRIVER

The comments for Area of Concern - Driver within the MetroPlan region are listed in the table below. The table includes the comment and a link to where the concern was identified on the mapping tool (Social Pinpoint).

| Driver | Comment |
| :---: | :---: |
| 1. | No shoulder on overpass or at round about. Lot of runners and cyclists use this overpass, and you can't see incoming vehicles so it's difficult to know when to pass. |
| $\underline{2 .}$ | Cars going south on Beaver have no idea if on-coming traffic (coming from NAU) has right of way because there is no green turn-signal... |
| 3. | The double turn lane (one after the other) here makes it hazardous for drivers who are trying to turn as well as drivers who are trying to continue Lake Mary |
| 4. | Exiting commercial vehicles need wider turn radius, come too close to pedestrian divider (left turn onto CC). This causes the off-tracking hazard on driver side of the commercial vehicle and has caused collision with vehicle moving through the turn next to CV. |
| 5. | The lack of adequate student parking at Basis causes students to park along the entire length of Pine Cliff Drive, often blocking resident mailboxes and creating visibility hazards for residents trying to exit their driveways. The exclusive use of this street for all-day parking by students also eliminates parking capacity for residents and their guests, contractors, and service providers. |
| 6. | At Basis drop-off/pick-up times traffic is frequently completely blocked on Pine Cliff Dr due to parents' cars lined up in traffic lanes waiting to get into the school parking lot. A large offstreet pick-up area needs to be constructed to maintain traffic flow. |
| 7. | People drive too fast, speed limit is 55 , people drive $65+$, no police officers on standby observing. Too many accidents, hear sirens every day going northward on the 89 . Within the past 2 years I have lived here, there have been two motorcycle accidents at the intersection of Burris lane, a very traumatic and sad sight to see. Still, no one slows down, they don't care who they hurt, too dangerous even for pedestrians, 89 is a danger zone!! |
| 8. | Bad visibility turning left onto 180 from Piute and cars are going way more than posted 35 mph. |
| 9. | Cars turning left from Beaver to Butler from the inside lane too often travel directly into the outside lane of Butler; meaning outside lane left turn traffic has to be incredibly alert. |
| 10. | For Westbound traffic, it narrows to 1 lane going straight. In morning "rush-hour" there is a line of cars in the left lane waiting to continue straight. Meanwhile multiple other cars in the right lane fly past the row of patient drivers and then cut into the left lane. Multiple collisions have occurred and many more close calls. Would be great if there's a safe way to ease this congestion. |
| 11. | For Westbound traffic, it narrows to 1 lane going straight. In morning "rush-hour" there is a line of cars in the left lane waiting to continue straight. Meanwhile multiple other cars in the right lane fly past the row of patient drivers and then cut into the left lane. Multiple collisions have occurred and many more close calls. Would be great if there's a safe way to ease this congestion. |
| 12. | So many vehicles speed on this street daily. I am aware that lots of people cut through the neighborhood using this street, and it is a danger to all driving/walking/biking/living there. |


| 13. | So many vehicles speed on this street daily. I am aware that lots of people cut through the neighborhood using this street, and it is a danger to all driving/walking/biking/living there. |
| :---: | :---: |
| 14. | Dutch Bros creates a dangerous mess of traffic here and should not be allowed to operate a "drive-through." |
| 15. | The confluence of Kasper and Santa $\mathrm{Fe} / 66 / 180$ onto Lockett here means that rightturns from Santa Fe/66/180 onto Lockett can be incredibly dangerous as two vehicles heading west on different roads reach the intersection at the same time. The foot/bicycle path here is super dangerous because of all the confusing auto traffic. There should be a right-turn only from Lockett onto Santa $\mathrm{Fe} / 66 / 180$ and no turns from Santa $\mathrm{Fe} / 66 / 180$ onto Lockett. Or this should be turned into a low-speed roundabout. |
| 16. | At least once a week I see someone turn north on Beaver despite the obvious One-Way signs. This entire section of downtown should be converted to pedestrian- and bicycle-only. |
| 17. | The traffic control change here is a disaster. One lane turns into three with minimal markings and almost no clarity. The Enterprise-Huntington-Butler intersection should be converted to a traffic circle and bicycles and pedestrians should be given priority by elevating them above the traffic. |
| 18. | There is minimal shoulder and no bike or pedestrian lane along W. Rte. 66 all the way to the Picture Canyon preserve. |
| 19. | I have seen walkers on this dark road late at night. It's a super long road, but I'm wondering if there's any way to increase the safety for bikers and walkers here? |
| $\underline{20 .}$ | This intersection (Sunset and Cedar) is often very busy. There is a school here and many people park on the street. It is very difficult to see traffic traveling on Cedar when trying to cross Cedar on Sunset. A four-way stop sign here would be a big improvement for the safety of everyone. Thanks |
| 21. | Area of concern for everyone, not just drivers: some people use Soliere as a shortcut/frontage road, and go well over the speed limit, especially at the curve near Country Club. Speeding drivers frequently make dangerous attempts to pass cars going the speed limit, endangering the bus. Speeding drivers display road rage. Bikers have been killed. There is also no sidewalk for the last stretch (along the curve near Country Club), making it incredibly dangerous for pedestrians who walk it anyway. |
| $\underline{22 .}$ | CHANGE TO A ROUNDABOUT! This intersection would operate more safely with a roundabout. It would force the max speed to be 20-25 MPH and allow vehicles, peds, and bikes to get through the intersection. It would also eliminate most of serious vehicular accidents. |
| 23. | This light is timed very poorly. People constantly run this red light to get through it. It causes back up at the lights proceeding it on route 66 |
| $\underline{24 .}$ | This intersection has two sides and merges onto route 66. People cannot safely merge or cross route 66. |
| $\underline{25 .}$ | Left hand turn onto route 66 hazard. Vehicles on route 66 are going too fast to safety merge. |
| $\underline{26 .}$ | The light on this intersection needs to be timed better with the light on Humphries. Drivers often get "stuck" in the intersection because there is a delay in the Humphries light turning green. Dangerous for drivers, pedestrians, and bicyclists. |
| 27. | Better parking monitoring along the roads south to the HS. Cars park along both sides making it so only one car can pass in either direction at a time, making it dangerous for drivers, pedestrians, and bicyclists. |


| 28. | Right hand turn lane is needed here. |
| :---: | :---: |
| $\underline{29 .}$ | The lights here need to be better coordinated with the light at Clay. There are ALWAYS cars backed up into the intersection going northbound in the mornings. The intersection needs better, fresh markings. It's a little bit of a free-for all. |
| 30. | The lights in all directions at this intersection need to be better coordinated in ALL directions. Turn signals are non-existent, too short, or out of sync with the flow of traffic. The timing of lights on this intersection needs to be better coordinated with the Milton/Rte. 66 light. |
| 31. | Need a light at this intersection. Dangerous--especially during morning commute. Impossible to make a left-hand turn when I-40 traffic is diverted to Rte. 66. SLOWER speed limit needed on W. Route 66!!!!! |
| 32. | Westbound traffic merges just west of Woodlands village. Drivers are often speeding and "racing" to merge or unaware that they need to merge. |
| 33. | This area in the am between 730 and 830 is wild. |
| 34. | Common place for wrong way drivers to try to go North on Beaver. Maybe additional signage? |
| 35. | Common spot for drivers in the right lane to turn left onto birch, crossing a line of traffic. |
| 36. | At the light there are often people who are turning left from 89 onto Smokerise OR people who are coming from the KOA across to Smokerise that run the light. There have many times of near collisions. |
| 37. | Unable to make a left turn from Trail End Drive onto 89 because there is no light at that intersection. |
| 38. | The traffic lights on Fort Valley Road at the intersections of Humphreys, Beaver, San Fransisco are not synced during the morning hours of school and work traffic. Since these intersections are very close to each other, the traffic backs up terribly. The lights at these intersections on Fort Valley need to be synced together during the morning school and work traffic hours. |
| 39. | As others have noted, out of town drivers assume these intersections are 4 way stops and pullout in front of through traffic from WC Riles or stop on west bound Birch. It does seem like "Through traffic does not stop" under the stop signs around downtown would be helpful. |
| 40. | This intersection has cars coming down Lone Tree around a blind corner at 35 mph . There is no right turn lane, so the cars attempting a right turn onto Zuni must slow down all traffic coming behind them Lone Tree nearly to a stop. This spot gets icy in the winter and receives very little sunlight due to the pine trees around it. It feels unsafe. |
| 41. | Why is this the only road that avoids train flow West of 4th avenue? Why are there no other roads to the downtown area that are not interrupted by railroad crossings? A bridge over the railroad tracks at Blackbird Roost and Lower Coconino St would allow another option to reach a high flow area around the Thorpe Complex, the future Indigenous Community Center/gardens, and the schools like Marshall and Flagstaff High. We need another option other than the bottleneck here. |
| 42. | Natural obstructions to views, specifically large tree sprouts along both directions (especially surrounding street light posts), make this a dangerous turnout in either direction any time outside of winter, or even then it is hard to see. HOA landscaping for Railroad Springs has refused to trim them, saying that because the sprouts are along the sidewalk/light posts, that it is a city issue and needs to be addressed by the city. |


| 43. | Unsafe for drivers and bicyclists due to very poor road conditions. Road is within city limits, please pave this road. |
| :---: | :---: |
| 44. | Road not paved. Not safe for most vehicles. |
| 45. | Vehicles including heavy trucks travel up and down JW Powell at rates higher than the advertised 40 mph speed limit. This is a danger to cyclists as well as wildlife that frequently cross the road. This is only going to get worse as JW Powell is pushed through to fourth Street. |
| 46. | This intersection is a nightmare during rush hour when trying to turn left from Zuni onto Lone Tree. Traffic on Lone Tree rushes through at a high rate of speed endangering motorists as well as cyclists and pedestrians. There should at least be a roundabout to slow down traffic and allow people to merge onto Lone Tree safely. |
| 47. | Trying to make a left- or right-hand turn onto HWY89 is very difficult here. Often drivers must go around the entire neighborhood to get to Empire or Smokerise to make a turn. The speed limit increased rapidly at this curve of 89 , and it's very unsafe. but driving into the neighborhood increases traffic in those areas that were previously safer. |
| 48. | When trying to make a left or right hand turn here, traffic is often too fast and backed up. It's hard for bikers and pedestrians to get through this intersection. There are also not enough streetlights on lone tree. |
| 49. | Drivers have trouble turning left from Trails End Dr. onto westbound HWY 89 or crossing over to Snowflake Dr. |
| 50. | Sacred Peaks Health Center has populated the area with patients, driving out of this location has become a hazard with oncoming traffic from the west. If taking a left from the stop sign oncoming traffic is zooming by with no care in the world. |
| 51. | The traffic through this intersection has greatly increased since the healthcare center and the increased housing development have come to the neighborhood. Trying to turn toward town from Trail's End is very dangerous given the volume and speed of traffic on Highway 89. Many people alternately use neighborhood streets to avoid having to make this dangerous turn greatly increasing traffic through this neighborhood. |
| 52. | Patients of Sacred Peaks Health Center trying to take a left onto 89 from Trails End take a big risk. The cars driving along 89 are traveling at greater than 45 mph and decisions must be made quickly. I think a traffic light would be helpful at this intersection. It could possibly save lives. |
| 53. | This is the main exit for patients and employees leaving the Sacred Peaks Health Center. The roads are usually very busy and there is only one turning lane where cars go both ways which can be very dangerous for a head-on collision. A stop light at this exit would be very helpful. |
| 54. | Cars do try and turn left or right here at the stop sign but considering how fast cars are going it is hard to do so. There have been a few accidents due to there not being a proper crosswalk/stop light here. We must use residential roads to get onto highway 89 and I am sure residents do not like the number of cars going through here at all hours of the day. |
| 55. | Over 100 accidents have been documented on this road this winter. Many of these are selfinflicted (driving into a ditch) but some of these affect the passengers and property of other vehicles. Also, while I am a cyclist, I think cycling on this road during ski season is very dangerous to not only the cyclist but also motorized vehicles. Adding bikes into the mix of heavy two-way traffic, potholes, and left over sinters is a recipe for fatal accidents. |


| 56. | I've almost been t-boned multiple times trying to get to Sprouts or nearby businesses. Cars often travel at a high rate of speed on Riordan Ranch St. and the visibility is often poor due here. |
| :---: | :---: |
| 57. | The W University / Milton intersection is very unnerving when traveling on Milton. Cars regularly make risky turns onto Milton or off Milton here. Cars stack up trying to turn left off northbound Milton which can block traffic. Cars move two lanes left after making the right turn from W . University near Target trying to go left on W. University on west side of Milton. |
| 58. | The bike lane and sidewalk ending here can create a conflict with all three while approaching the Grand View intersection. |
| 59. | Cyclist not using the FUTS trail ride in the road, creates a dangerous situation for both. |
| 60. | Right in - Right out is a joke, no one obeys this. |
| 61. | Stop control for WC Riles St but through street on Aspen causes confusion for out-of-town drivers. Suggest making the intersection of WC Riles and Aspen an all way stop. |
| 62. | Very icy in the winter, easy to slide into the intersection |
| 63. | Lane restrictions create hazard to large vehicles along Butler Ave., SF Street and Beaver St. |
| 64. | Red light runners in all directions at intersection of Rte66/Humphreys |
| 65. | Traffic signals at Humphreys/Rte. 66 and Humphreys/Aspen need to be timed such that traffic entering northbound on Humphreys off Rte. 66 don't block the intersection of Humphreys and Route 66. |
| 66. | Had a near miss here with a child riding a bike, he came down the steep FUTS trail into High Country Trail and drivers had to swerve into the other lanes to miss him. |
| 67. | Street parking on the west side of San Francisco can inhibit cross traffic and make this crossing of Dale very dangerous. |
| 68. | Parking at brewery marks this a one lane road, causes some issues for pedestrians, cyclists, and drivers alike. |
| 69. | Cars parked along the trailer park block the site visibility at the Main St interstation. Maple becomes a one lane street and cars travel very quickly on Maple. |
| 70. | Echo the comment about the curb barriers creating small turn lane gaps, often see drivers miss the turn lane and make an abrupt right into parking lots form the travel lane. |
| 71. | Vehicle was hit near during the holidays here when the intersection didn't clear after the first train. |
| 72. | Frequent collisions at this intersection. Lack of right turn lane causes long backups, seems to lead to risky decisions for both those making the right onto Switzer Canyon and the left. |
| 73. | A few minutes before school ends and when students do get out, parents are lined up and stopped/parked on Fremont, the left southbound lane is a parking lot every weekday afternoon. Add this to students running out into the road, scary. |
| 74. | It is near impossible to turn right out of here at peak traffic times during the winter. I have seen drivers get impatient and cut other people off turning onto the highway because they have waited so long and have not seen a break in the traffic. |
| 75. | This is an area of concern I have for drivers, bicyclists, and pedestrians. The FUTS travels in both directions, on the west side of the highway here. People making right turns do not look for northbound pedestrians and bicyclists. |
| 76. | This is an area of concern I have for drivers, bicyclists, and pedestrians. I have observed a lot of teenagers trying to cross the street on foot to access the businesses, and there is not a crosswalk. I worry about hitting a pedestrian here when I am driving. I wish there were a crosswalk. |


| 77. | Lack of streetlights in this area and FREQUENT deer crossings and collisions with vehicles every year. |
| :---: | :---: |
| 78. | Desperately need a 25 mph sign here. As soon as people pass the apartment complex adjacent to the freeway, they immediately speed up. |
| 79. | Potholes |
| 80. | Potholes |
| 81. | Many times, drivers speed up to gain momentum for the hill up W. Summit Ave. They typically cut the oblique corner taking up the entire street crowding oncoming traffic that is coming down the hill. As for downhill traffic typically, the pattern is crowding the center of the street and rolling through the stop signed intersection. |
| 82. | This should be a right turn only at an intersection for cars. Too many close when people get desperate trying to turn left here. |
| 83. | Turning left onto the 66 from Railroad Springs is dangerous during heavily trafficked times. Traffic is going at high speeds on the 66, and you wind up timing your turn between cars going both directions. |
| 84. | Please don't put distracting or blocking artwork in the round about. It will become a safety hazard for traffic, pedestrians, and bicycles. |
| 85. | North/south traffic tends to run the stop sign at Leroux and Elm. Enforcement of speed limit would help. |
| 86. | The building on the NE corner blocks the view of oncoming traffic down Beaver requiring cars to pull into Beaver to get a glimpse of oncoming traffic. This presents two hazards. One for cars turning off Beaver and for those turning on to Beaver. This is especially problematic when they have the glass windows covered with shades. Is there a way to require the building to keep the shades up on this non-conforming structure for safety? |
| 87. | The speed limit on Butler should be reduced to 35 the entire length. Cars along this stretch drive as fast as 60 mph , which makes for a very dangerous situation for cars entering in and off River Run. |
| 88. | Too many people still attempt to turn left in to and out of this spot even though it is a right turn in/out only. The signage and barriers for this need to be more explicit like how it is handled at the Super Walmart. |
| 89. | Difficult to cross- a lot of traffic. Dangerous for pedestrians. Vehicles on 89 turning right going too fast. |
| 90. | I think the junction of University and Milton is being addressed this year (yea!), but I have never understood why the lights along Milton are in such opposing sequences. While it has gotten better through the years, it's still way worse than anyplace I have ever li ed (and I moved around a lot!). All the thousands of cars stopping and accelerating creates a lot of unnecessary pollution and, on the safety side, encourages frustrated drivers to run red lights, which happens a lot too. |
| 91. | Traffic turning right from 89 makes cars get stuck here for long periods of time, causing congestion. Some bypass the car line on Casper by speeding through the Nimarcos parking lot to beat other cars. Cars also cut through the hotel parking lot (in between Fanning and Lockett) to get to Fanning because the line of cars is often shorter. Line of cars from Fanning backed up all the way to 89. |
| 92. | 89-Cummings intersection. The light to turn left is too short, need more time added. Many accidents here are with people turning left. Dangerous for al |
| 93. | Cedar Hill- McMillan Mesa- Drivers often going speeds over $50-60 \mathrm{mph}$. |


| 94. | Drivers turn left into the maverick where there is "no left turn" signage |
| :---: | :---: |
| 95. | There road markings have faded so much on this area, it's like one big lane. |
| 96. | Eastbound traffic on E. Butler turning right onto E. Butler does not see the southbound traffic on Huntington Drive turning left onto eastbound E. Butler. |
| 97. | Many accidents from westbound Plaza Way vehicles turning left onto southbound Woodlands Village Blvd. |
| 98. | Traffic on eastbound Route 66 is coming fast into town. A traffic circle here would go far to slow traffic to urban speeds. |
| 99. | Northbound S Milton Rd traffic turning left onto W Forest Meadows need to be turning into the right lane to continue W Forest Meadows past Beulah. I frequently see southbound S Milton Rd traffic turning right against the red light, and into oncoming left turning traffic forcing left turners into the left lane when they need to be in the right lane. |
| 100. | Need a traffic light here. Coming out of the south end of Snowflake it is nearly impossible to turn left. A light on this end of Snowflake would allow one to travel further north to make a left turn. |
| 101. | They should just mow down the Mandarin Buffet and expand Route 66 into NAU as a main entrance. This would alleviate the back-up at Riordan Rd., and maybe make an attractive entrance to the campus, continuing onto Tormey Drive. |
| 102. | Not enough lanes for people exiting the gas station, entering Dunkin parking lot, and people just trying to get to NAU campus via Riordan Road. |
| 103. | There used to be a No Left Turn sign at the exit from Chick-Fil-A. Even so, people would ignore it. Cars try to turn into the exit, despite the concrete barrier, then give up and decide to turn properly at the light, often almost colliding with cars entering the left-turn lane where indicated. Much congestion once you make the turn because the drive-thru customers are blocking Riordan Road. |
| 104. | Turning left off Milton into the Townsite neighborhood (toward Lowell Observatory) is challenging for people familiar with the intersection, much less people new to town. It's hard to see oncoming traffic due to the left-turn lane at Humphrey's, then yield to cars exiting Milton from the East, then look out for the crosswalk, and hope that other cars observe the stop signs! An overhaul of this corner might alleviate other problems regarding flooding, pedestrian and cyclist crossing issues. |
| 105. | In Lone Tree, every school day from 8-8:30 AM the north-bound traffic is backed up south of Pine Knowles due to 6,8 , or 10 cars all waiting to make an illegal left-hand turn from the Northbound Lone Tree into the Kinsey School parking lot. I have also experienced, when traveling southbound, cars jumping out, RIGHT IN FRONT OF MY CAR, out of the parking lot, crossing the double yellow line and making an illegal lefthand turn to the northbound traffic. Please put up a concrete barricade. |
| 106. | I have seen and been the car that almost got hit by a driver who suddenly turned onto Turquoise from the roundabout after missing the right-hand lane exit that they should have taken. This is a busy intersection that needs attention. |
| 107. | Snow clearance in the winter is unsatisfactory on Kiltie. Thousands of people drive this route every day and we need it to be much safer. There is constantly snow and ice, and with the curves and inclines it's very dangerous to drive there. |
| 108. | Water pools at this intersection in times of rain or snowmelt |
| 109. | We REALLY need to be able to turn left here into this shopping area! The only option is McConnell, which is tight and a terrible main through road, and going in |


|  | behind the old IHop and coming from the back of the shopping center. Neither is a very good option |
| :---: | :---: |
| $\underline{110 .}$ | Is this an official crosswalk? There is no way to tell? |
| $\underline{111 .}$ | When traveling along woodlands towards Beulah, there are three lanes that intersect Beulah. We need signs above that show what each lane of travel is. Many times, people turn left in the middle lane when it is indicated only straight and right turns should be in that lane. |
| 112. | When heading west on Forest, it is difficult to make the right lane a right-turn-only. In times of high traffic, a line will form in the only straight lane, and then cars will try to merge into that line. This is especially problematic because in the morning, most of this traffic will turn left on Beaver into the hospital. It may be difficult, but it would be ideal to have two westbound lanes between San Francisco and beaver, so Hospital traffic can turn left, and other cars can continue straight |
| 113. | Many drivers don't seem to know to yield to vehicles already in the roundabout. I think the city needs to better educate drivers about the rules. |
| 114. | People cut through the Goodwill parking lot to avoid the light on Switzer and 66. |
| $\underline{115 .}$ | Parents routinely ignore traffic rules and just idle in the middle of the roadway, waiting for students and impeding traffic. All that is needed is traffic law enforcement. |
| 116. | A left turn signal is needed for northbound traffic that turns left onto Fremont. Summer Grand Canyon traffic and winter snow play traffic is extensive, and neighbors know that it is heavy, but a turn signal is needed. |
| 117. | Cross traffic routinely stops, then runs the stop sign on Cherry Ave., assuming that there is a stop sign for traffic heading north on San Francisco. It is bad and happens multiple times a day. Additionally, some northbound traffic on San Francisco stops at Cherry for no reason. All that is needed are small additional signs on Cherry Avenue stop signs that say, "Cross Traffic Does Not Stop". These small signs should be in use throughout Flagstaff |
| 118. | Northbound cars waiting to turn left from Milton to University are sometimes nearly hit head-on by cars speeding down the center lane southbound. Sometimes they ARE hit. Needs a barrier to stop southbound traffic before they collide with northbound cars. |
| 119. | Drivers turning right onto Milton aren't looking to their left, where bikes are speeding into the intersection northbound without stopping. I've seen more than one bike/car collision here. Need bike lanes that work so bikers don't illegally use the sidewalks. |
| 120. | Heading northbound on Milton and attempting to turn left onto W Clay Dr is dangerous for drivers because it doesn't have a turn signal at all. When traffic is thick on Milton, which is often, cars turning left onto W Clay must pull out into the middle of the intersection and wait until the light turns red for traffic to stop, then take the chance and go--which is dangerous and probably illegal. The simple addition of a short turn signal would help immensely. |
| 121. | Lack of safe design to accommodate northbound vehicles attempting to turn left onto Meade from Hwy 180 while southbound vehicles are attempting to turn left into pizza and coffee businesses. Very tight and unsafe convergences here must be addressed to avoid head-on collisions. This location is further complicated by bus stop pedestrians attempting to cross Hwy 180 here. |
| 122. | Vehicles waiting to turn into the restaurant often obstruct traffic on Hwy 180 in both directions. This is further complicated by vehicles entering 180 from the south, especially at release times from the high school. |
| 123. | Southbound traffic on Beaver cannot see traffic attempting to cross from Cherry (especially from Beaver left lane) due to parked vehicles on Beaver along the church |


|  | side. Removal of parking along this area near the intersection would greatly improve visibility and safety for drivers on both Beaver southbound and Cherry westbound. |
| :---: | :---: |
| 124. | Dangerous intersection. |
| $\underline{125 .}$ | Cara turning left have a very difficult time negotiating traffic both here and at bashas there needs to be a no left turn at these stops |
| 126. | Westbound traffic slow quickly to turn right here causing vehicles to leave the roadway where pedestrians are walking in dirt shoulder. Commercial trucks entering and exiting this intersection with no turn lanes or median. |
| 127. | There is going to be an accident on lone tree killing somebody at some point because there is no room for the bicycles to go next to the road making vehicles go into oncoming traffic |
| 128. | Drivers headed westbound on Route 66 turning into Kit Carson have no turn lane and often drive between vehicles quickly headed eastbound on Route 66. No turn lane so motorists that must stop before turning often obstruct westbound traffic and at time spilt the roadway partially obstructing eastbound traffic that does not stop. |
| 129. | Single lane east bound and single lane expanding to two lanes on Route 66 with drivers exiting gas station has resulted in motor vehicle accidents here. |
| $\underline{130 .}$ | This part of the hill approaching Kinsey is a totally BLIND turn heading south on Lone Tree, just before the school. Room for a dedicated TURN LANE? Any way to "shave down the height of that area so you can SEE before turning? |
| 131. | Vehicle entering Route 66 from Railroad Springs contend with many traffic pattern changes at this location leading to past accidents. |
| 132. | High density traffic entering and exiting this neighborhood with visibility obstructions from residences entering eastbound Route 66 from Northwestern. Many vehicle accidents from Northwestern to Railroad Springs on Route 66 here. |
| 133. | The turn lane from Ft. Valley on to Beal is a "two- ton- hold -your-breath-hope-not-to-crashawaiting "due to the lack of safe length of space for entering and turning left on to Beal heading north on Ft. Valley. |
| 134. | The intersection of Thompson and W. Rt. 66 is an area of concern for drivers, bicyclists, and pedestrians. At many times of day, W. Rt. 66 is extremely busy with fast-moving traffic, and it's very difficult to cross or to turn left from Thompson. This intersection needs a traffic light. |
| 135. | This intersection needs a stoplight. There is a health clinic located here and it's nearly impossible to turn left from Trails End Dr. to southbound Hwy 89. There is no center lane to turn into since that is the left turn lane for traffic turning from northbound 89 to Snowflake Dr. Pedestrians trying to cross without a crosswalk make it even more dangerous. Most local traffic ends up getting routed through Smokerise neighborhood instead. |
| 136. | Development in this corridor is making the wait times to enter/exit side streets very long. Traffic traveling on 180 going too fast. Need stop signs or traffic lights on 180. |
| 137. | Dangerous small lanes for traffic. |
| 138. | I-17 Southbound road surface is destroyed between airport and lookout: huge chunks of missing asphalt, enormous potholes, giant cracks, and so on. Extremely dangerous for highway driving. I've observed cars losing control and sitting on the shoulder with blown tires from an interstate pocked with craters. Yet absolutely no repairs are underway?! There are NO crews making emergency temporary repairs that are urgently needed. Nothing is being done on this treacherous stretch of road. Fix it. |


| 139. | Due to parking bump outs, you cannot safely see cars traveling south on Beaver when trying to merge from Benton traveling from the east |
| :---: | :---: |
| 140. | Vehicles tend to park on the Southeast corner of Lake Mary and JW Powell. They park there to access trails and bike on Lake Mary road. This causes drivers traveling South on JW Powell to pull way out into Lake Mary road so they can see around the cars parked on the corner for traffic while making a left or right. They often run the stop sign to do so. There is a right and left turn lane, and the right turn lane blocks the view of Pedestrians and bicycles when crossing in the crosswalk. |
| 141. | New school design leaves traffic blocking driveway when students are getting picked up. |
| 142. | Blind intersection for southbound cars. Dangerous for east bound cars. Need a warning sign about blind intersection for the south bound cars. |
| 143. | terrible intersection for residents of Mtn Dell and for those unfamiliar with local roads. MANY people coming from town (Lake Mary Rd) turns onto Palmer Ave by mistake. They end up driving up Palmer then must turn around and make that extreme right back onto to 89A |
| 144. | This intersection has become busy and challenging to navigate with traffic on Switzer and cars trying to make left hand turns out of the Frys lot and left hand turns out of the goodwill lot |
| 145. | During high flow events of the Rio de Flag, water backs up through the storm drains. This results in flooding more than 6 inches located on Route 66, beneath the railroad underpass. Could this be solved by raising the road? If not, adding a flashing caution sign for eastbound traffic would be helpful. |
| $\underline{146 .}$ | People run the University Ave stop signs a lot |
| 147. | I've witnessed many close calls as drivers attempt to access or exit McDonald's from Huntington and don't see other cars turning right (north) from Butler. That driveway should be removed. |
| 148. | I witness several illegal U-turns on Route 66 (in both directions) but primarily on the east side of Ponderosa as people are impatient waiting for the train/left turn onto Ponderosa Parkway. The center lane can get very long and block access for other drivers entering/exiting the shopping center, culvers, Starbucks, etc. These drivers will often block lanes to get in/out of these places. |
| 149. | I witness several illegal U-turns on Route 66 (in both directions) Typically in front of Bashas before the light. |
| 150. | Multiple wrecks occur here (sometimes monthly) due to traffic congestion and issues with line of site |
| 151. | Route 66 has developed several large potholes that patches no longer resolve. This creates unsafe driving conditions and damage to vehicles |
| 152. | Incredibly hard to see oncoming traffic when pulling out of the parking lot for HLC and Mountain View. Cars parked along the road obstruct views. |
| 153. | Extremely bad potholes, some large enough to wreck small automobiles. No excuse for not filling or taking an active role in repair. |
| 154. | This is one crazy traffic light. I moved to this side of town 2 years ago and I still haven't really figured it out. I enter the intersection in fear pretty much every time I'm turning south from Woodlands onto Beulah |
| 155. | Why are people in vehicles waiting in line to eat chicken waffles allowed to create a serious hazard for anyone in the southbound right lane here every night when the 40 mph traffic suddenly comes to a halt and becomes a take-out line? |


| 156. | Recently snow has piled up on the southwest corner of this intersection aggravating the preexisting problem of cars turning northbound from wild West onto high country Trail not being able to see cars traveling northbound on high country Trail. Those cars are traveling very fast. |
| :---: | :---: |
| 157. | Turning left (north) onto Lone Tree can be a challenge due to the traffic and speeds of other vehicles at this unsignalized intersection. This also creates bike/ped conflicts. |
| 158. | Exiting this driveway is a large power box. It blocks the view of any pedestrians or bicyclists approaching from the east. You also must drive forward to see traffic coming from the east which further blocks the crossing. |
| 159. | Help all schools take care of snow removal. Make their neighborhoods a priority. Residents that are near schools must put up with drop-off and pickup traffic blocking roads that are down to one lane. A cause of this is also residents piling snow in the streets that aren't being taken care of. |
| 160. | It's time to invest in real snow removal equipment for the city and start enforcing property owners to take care of their sidewalks. Intersection corners should be handled by the city. There are many great snowblower attachments for all sizes of equipment. Team up with local excavation companies to truck out snow. For one of the snowiest cities, flagstaff sure is very bad at moving snow. |
| 161. | Please figure out a way to eliminate fast food traffic from piling up on the streets. Canes and chick-fil-a are the biggest offenders. |
| 162. | Please remove the left turn lane until the university roundabout thing gets finished, so many tourists get stuck in the left-hand turn lane to nowhere. Then as they try to merge back, they mess up traffic. |
| 163. | The lanes need to be redesignated because the increase in traffic backs up from the butler light across the tracks. The southbound lanes should both be designated as straight through with the right lane being designated as a right turn and straight through. |
| 164. | Turning left off railroad springs Blvd. is very difficult and dangerous during rush hour in the morning and evening. A traffic light could help along with bike lanes and sidewalks. |
| 165. | Dangerous pull out of Burris lane onto HYW 89 I got hit on my motorcycle here in October of 2023 and have heard of others that died here. |
| 166. | Cars entering and leaving Cheshire have been involved in numerous accidents due to traffic from Snow Bowl. |
| 167. | Making a left turn onto 180 from Meade Lane can be impossible in the morning with traffic coming from Baderville and people going to Snowbowl. |
| 168. | 24/7 traffic! Roads are the last priority. All the flagstaff's traffic is by far the worst. No matter where you're at! Nothing but congestion, trains, and ridiculous barriers for bicyclists (Butler Ave). You cannot cross over traffic without risking death. No right-hand turn lanes to help reduce lanes being backed up. I personally know people that refuse to visit flagstaff solely on the fact that traffic is HORRIFIC! |
| 169. | The NW corner of University and Woodlands does not drain. Water freezes here and vehicles southbound on Woodlands that turn right can slide into eastbound vehicles on University. This large and sometimes icy puddle is also a barrier to pedestrians crossing Woodlands on the north side of the intersection. |
| 170. | The intersection of 4th Street and Cedar Ave has seen several car accidents. The intersection is very large, so cars turning left |


|  | from 4th into Cedar tend to dangerously turn in front of cars driving straight on 4th (who have the right of way). This could be solved with a change on the traffic light - if the left turning cars were only allowed to turn when the traffic light is red for those south bound on 4th. |
| :---: | :---: |
| 171. | No turn lane to River Run, can't to slow enough for safe turn from Butler, where traffic is fast, to avoid pedestrians/cyclists |
| 172. | Left turns for vehicles from University onto Milton are a major issue. Cars go very fast, and traffic usually causes backups. This would also apply to cars turning left from Milton to University as well. Cars usually must "floor it" to go, which can cause accidents and people to swerve into other lanes. |
| 173. | There should be a left turn light/arrow for drivers from Butler to San Francisco to get to campus. The turn lane can fill up and cause backup for drivers going straight on Butler toward Milton/66. |
| 174. | The flow of traffic and lack of synchronization of the traffic lights creates a severe backlog of traffic. This starts on 4th St at Butler and is greatly affected all the way up to Linda Vista. |
| 175. | Drivers coming from 66 will try to turn left onto Metz Walk at the lighted crosswalk. This backs up left turns onto Blackbird Roost from 66 since drivers will have to slowly inch out into 66 oncoming traffic to see and make a turn. I'm unsure why drivers think this is okay to do, but perhaps if there is a no-left turn sign? There's not really a place to turn onto Metz Walk, but they drive up into the left turn lanes to Blackbird Roost, if that makes sense. |
| 176. | The hill on Elliot St north of Clay Ave. Cars will quickly go up the hill and speed down Elliot to merge onto Blackbird Roost. There is a major blind spot due to the house on the corner and cars do not take it slowly. Several drivers will have near misses, with one usually having to swerve off to the side. Sometimes cars will go into the yard of the homeowner. It's also hard due to the alleyway off Elliot, since drivers cannot see and must quickly drive out before a speeding driver comes by |
| 177. | Drivers try to cut through the neighborhood to avoid traffic on Milton/66. This makes the roundabouts dangerous. There are no signs to tell drivers to yield. Drivers are already speeding, but this continues throughout the roundabout and merges onto the connecting road. I've seen people take the roundabout the wrong way and there are blind spots. You sometimes cannot see if another vehicle is coming unless you've merged into the circle. |
| 178. | Vehicles turning from Butler to Milton/66 tend to block and rush. Vehicles run red lights to try and turn when there's not enough time. It's unsafe for drivers trying to drive from Clay to Butler as people keep going on a red or block. This causes more frustration and people willing to run lights or swerve around other cars in the intersection. |
| 179. | Cars frequently speed and use the middle turn lane to pass. Fort Valley is perceived by cars as a highway, so they speed and pass each other. The speed limit and lack of enforcement makes it unsafe for turning traffic and bikes/pedestrians. |
| 180. | SW corner of Park and Cherry. There is a 7' tall pile of snow that goes out into the street. You cannot see traffic heading east on cherry when you're driving north on Park. |
| 181. | Intersection is difficult and dangerous to pull out of due to the speed and volume of traffic. A traffic light and/or lower speed limit would help immensely here. |


| 182. | People leave the Tavern country bar, or distracted drivers in general end up in the ditch or in this field several times each year. Now there are big boulders placed, to stop cars from hitting the landowner's fence. 25 MPH posted, 90 -degree turn. If you go in the ditch here, damage and injury is likely. |
| :---: | :---: |
| 183. | Ice and water build up here on Cherokee in the winter, and create a very deep and large pothole, dangerous in that one could lose control of vehicle and damage car as well (winter) |
| 184. | Roads too narrow for delivery trucks and resident parking. |
| 185. | The cement barricades on Butler are dangerous. This large storm has proven how bad they are. The snow was packed in the road, narrowing the driving lanes significantly. Yet the bicyclist chose to ride in the road instead of the cleared bicycle lane. |
| 186. | Motorists driving down the hill on E Bear Paw Dr to E Old Walnut Hills do not always stop appropriately at the stop sign to make a left-hand turn. The motorists often appear to be Wyndham staff or out of town vacationers staying at the townhomes. If Wyndham could help communicate with staff/temporary residents about the area periodically, it may help. The stop sign itself is well maintained. |
| 187. | Drivers living on Old Walnut Canyon appear to travel at a high rate of speed, especially as/after they pass Walnut Hills. |
| 188. | Slushy snow-covered roads and packed in ice dams on edges. |
| $\underline{189 .}$ | Snowbowl traffic can be *horrendous* all along the Humphreys and Ft Valley Rd corridor during ski season. Expansion of the ski area is making all Flagstaff residents suffer. |
| 190. | Cars can end up unable to leave the railroad tracks! |
| 191. | Switzer Canyon Dr has been designated as an alternate route to get from I17 to Snowbowl. Traffic coming down the hill cannot see the signage to turn left at Rt66 until they are almost at the intersection of SCR and Rt66. All that is needed is to trim tree limbs, so the sign is visible. |
| 192. | Due to the cement barriers between the bike lane and vehicle lanes, cars make sudden moves into the right turn lanes into Sawmill Place. Those entrances are not well marked and come up very quickly due to speed f traffic. |
| 193. | This intersection probably needs to be re-painted more often. With dual left turns in multiple directions without clear markings, I see vehicles cutting off other vehicles almost every time I drive through the intersection. |
| 194. | During significant snowstorms, snow is not completely cleared from Butler, leaving a significant ice berm in the turn lanes. This causes vehicles making left turns in either direction to block traffic in the left lane. I've witnessed many near misses from vehicles waiting to turn left from Butler onto Northbound San Francisco. |
| 195. | Cars coming northbound on high country are coming at a high speed (limit is 40 mph ) and around a corner and a hill. It is very difficult for drivers on Wild West to turn onto High Country. Speeds should be lowered, or even a stop sign added on High Country. This will only get worse with the new development coming. |
| 196. | People fly by going East and West on soldier at this point, no one obeys the speed limit which is way too high anyway especially for residents trying to get on to soldier. In the mornings trying to go to school it's a nightmare |
| 197. | West bound on University Dr as soon as you turn left off Beulah, there is a GIANT pothole. It must be four or five feet across and is a few inches deep. |
| 198. | The separated right lane on Forest for folks turning right onto Forest from San Francisco is awesome, but the paint is wearing away. I think this traffic feature is too unique for out-oftowners to quickly interpret i.e., drivers heading east on forest through the intersection will |


|  | change into the right lane before the solid white line ends. The line needs to be repainted more often to prevent misunderstanding. |
| :---: | :---: |
| 199. | Intersection of Pine Cliff/Cedar. It's a right turn only onto Cedar, but plenty of people are turning left. I think this intersection should be expanded to include the left turn. Maybe with a stop light, or with a dedicated left turn. The merge lane is awesome when turning right (only if isn't filled with snow). |
| 200. | Driving by Basis when the kids are let out is a nightmare. The school doesn't have enough space in the parking lot to accommodate the cars picking up kids, so the cars queue into the road blocking traffic for anyone not going to Basis. It's a two-way street, so any car wanting to go around the line must contend with opposing traffic also going around their line which causes a dangerous "chicken"-like game. Cars also fill into the bike lane preventing bike traffic. |
| 201. | South of Aspen/Beaver intersection, 3 lanes appear: left, straight, and right. The left lane splits further: a true left turn and a straight. Shouldn't this straight lane be indicated on the street paint prior (see red \& yellow circle in attached photo)? If driving south and wanted to go straight, you'd stay in the middle lane, but u wouldn't know there are 2 straight lanes due to the turn only paint in the left turn lane. White solid line separates There's a solid white line separating the |
| 202. | Oncoming vehicles turning into pizza and coffee businesses often create dangerous obstruction to vehicles attempting to turn left onto Meade entering N . Coconino estates neighborhood. |
| 203. | Eastbound traffic on 180 was seriously obstructed by cars waiting in line to turn into Mama Burger. (temporarily improved due to remodel closure). |
| $\underline{204 .}$ | The new lighted crosswalk is one of the most confusing and poorly marked sequence of lights I've ever seen. Needs better instructions for drivers since they can't seem to remember the difference between a flashing yellow, solid red, and then flashing red. Causes regular traffic backups and is unsafe for pedestrians since it distracts drivers from the focus on the pedestrian. |
| 205. | People risking their lives to get into the Culvers parking lot from northbound Ponderosa, cutting across rt. 66 and slamming on their breaks without signaling before getting into the center lane. |
| $\underline{206 .}$ | The southbound traffic light sometimes changes to red while the northbound turn arrow goes from flashing yellow, to solid yellow (as if it is about to turn red) and then to green, or something close. I have witnessed several close calls and had one myself where the northbound lanes have the right of way but due <br> to yellow light runners and the sequence of lights (which seems unusual vs the rest of the city) causes confusion for even resident drivers and has made for many unnecessary close calls. |
| 207. | Left through lane blocked by people turning left onto Humphreys. Right through lane blocked by people turning right against a train. Anyone eastbound forced to weave through stopped cars |
| $\underline{208 .}$ | Forest meadows and Beaullah. Worst intersection. So confusing with the turn lanes and a straightforward lane. This is near CoCos. Heading west. Really difficult for tourists as you think the one lane is also a straight and not just a turn left only. Bicyclists should just avoid it all together. |
| $\underline{209 .}$ | Thompson and rte. 66 need a stop light since building 2 new housing developments you cannot safely enter onto route 66 . We spoke to the city before and they agreed but nothing |


|  | has been done. And I see they are going to be adding another monster storage <br> space and more housing. |
| :--- | :--- |
| $\underline{210 .}$ | Too hard to see when turning out of Mountain Dell |
| $\underline{211 .}$ | Traffic exiting this neighborhood and turning left increasingly must accept smaller gaps, <br> while the e-w through traffic keeps going too fast. We need to accept some delay for E-W <br> travelers and place a traffic light so people can exit the RR Springs neighborhood. The re- <br> paint maybe helps stage a left turn but doesn't prevent collisions at too high <br> of a speed for city traffic. |
| $\underline{212 .}$ | Forest, Beal, bike way, dog leg turn. |

## AREA OF CONCERN - PEDESTRIAN

The comments for Area of Concern - Pedestrian within the MetroPlan region are listed in the table below. The table includes the comment and a link to where the concern was identified on the mapping tool (Social Pinpoint).

| Pedestrian | Comment |
| :---: | :---: |
| 1. | No shoulder on overpass. |
| $\underline{2}$ | It would be great to provide a pedestrian and cyclist path from this area to NAU. |
| 3. | The sidewalk is not maintained on the south side of Forest Meadows. You should require landowners to maintain sidewalks along their properties. Otherwise, sidewalks never get cleared of snow, ice, and cinders. As of May 14 , cinders are still covering this area. |
| 4. | When it rains this intersection floods and you need a kayak to cross the street. Pedestrians are out of luck. |
| 5. | Sidewalk missing from east side of Thomson, just south of Route 66. On snowy days, you need to walk in the street with traffic. On snowy days, sidewalks are not plowed, so you must walk in the street with traffic on icy roads. |
| $\underline{6 .}$ | 4th St. is a nightmare for pedestrians. Most of the east side of the street lacks sidewalks. There are many driveways along this street into which drivers turn without looking for pedestrians. It's not much better at cross streets. |
| 7. | Crossing Milton from Plaza is dangerous. Cars do not yield to pedestrians even when they have the walk signal. |
| 8. | Even when pedestrians have a crossing sign, the cars coming from University Heights (turning left onto Beulah) have sun in their eyes and don't yield. This is exacerbated by the fact that these cars don't have their own green turn signal (they only have yellow blinking turn signal) and therefore don't often wait for cars/bikes/pedestrians when they are turning left. |
| 9. | No sidewalk connecting Pinnacle Pines to Lone Tree and no way to get to FUTS from Pinnacle Pines entrance, so pedestrians are forced to walk in the road (Zuni)... sunset aligns with Zuni as well so it's even more dangerous at sunrise/sunset. |
| 10. | FUTS tunnel is often dark and scary for a single person to encounter a stranger while inside. |
| 11. | Sidewalks are too narrow to share with bicycles |
| 12. | There is no way for FALA students to walk or bicycle safely between FALA and the numerous residential neighborhoods on both sides of Hwy 180. There are no regulated crosswalks between FALA and Humphreys St and no safe shoulders, pathways, |


|  | or sidewalks. This leaves students needing to try to dodge fast traffic to cross the highway or to take long diversions away from the highway. The minimal shoulders also make this a dangerous stretch of road for bicyclists. |
| :---: | :---: |
| 13. | This is an extremely dangerous intersection for pedestrians and bicyclists due to the lack of high visibility of the crosswalk. At a minimum the intersection requires flashing lights and highly visible signage on Ft. Valley Rd. The low lighting provided by the streetlight here makes this a particularly dangerous intersection at dawn and dusk (rush hour many months of the year), when it is difficult to see pedestrians in the crosswalk. |
| 14. | Cedar has a very long area with no cross walks. <br> From the Cedar Safeway to MEMS is the space with no cross walks. I see lots of people running across the road on this stretch of Cedar. |
| 15. | This is a dangerous intersection for all involved. |
| 16. | Need some traffic control for children walking to Flag High, FJA, Marshall. |
| 17. | Trying to cross at this intersection (Humphrey's and Elm) while walking my kids to school is not ideal. There needs to be some sort of crosswalk as there are 3 schools (Flag High, FJA and Marshall, and 2 preschools) on the other side of Humphreys. To encourage more walking and biking from students and families, we need a safe place to cross this spot. Having to go down to Birch or up to Columbus to use the crosswalk is not the most efficient for busy families trying to get to school on time. |
| 18. | So many vehicles speed on this street daily. I am aware that lots of people cut through the neighborhood using this street, and it is a danger to all driving/walking/biking/living there. |
| 19. | So many vehicles speed on this street daily. I am aware that lots of people cut through the neighborhood using this street, and it is a danger to all driving/walking/biking/living there. |
| $\underline{20 .}$ | All the lanes in south downtown are too narrow for both vehicular traffic and parking. The business areas should be closed to automobiles and open to only bikes and pedestrians. |
| 21. | The streets are too narrow for parking on both sides of the street in addition to traffic. Downtown would be best converted to a pedestrian- and bicycle-only area. A multi-storied parking garage at Birch and Elden would be the right place to put autos. |
| $\underline{22 .}$ | The traffic control change here is a disaster. One lane turns into three with minimal markings and almost no clarity. The Enterprise-Huntington-Butler intersection should be converted to a traffic circle and bicycles and pedestrians should be given priority by elevating them above the traffic. |
| $\underline{23 .}$ | Vehicles are often moving at excessive speeds on Cedar Hill (50-60 mph). This makes the space dangerous for pedestrians and bicyclists alike. |
| $\underline{24 .}$ | The intersection at Fanning and Linda Vista is a disaster for pedestrians and bicyclists. |
| $\underline{25 .}$ | I often see pedestrians (school kids and others) trying to cross Humphreys Road. They must wait for the cars or go to the lights which are far in between. Maybe there could be a stop sign for a safe spot to cross. |
| $\underline{26 .}$ | Cars barely stop at intersections and in general go way too fast on all these roads and don't always yield to pedestrians. At busy times cars will be 2 across at the stop sign coming down ponderosa when there is only 1 lane. |


| 27. | This crosswalk is very dangerous for pedestrians. Drivers on 180 are traveling at a high rate of speed and often do not see those in the crosswalk. We need a pedestrian stoplight signal on 180 |
| :---: | :---: |
| 28. | There is a stop red light on Dortha and west Ave, but on west and six Ave it's just a yellow light and driver don't stop when is flashing they think is going to turn red. |
| 29. | Due to flood mitigation, sidewalks and bike paths were eliminated. One must walk in the narrow street coming from or to Safeway from Linda Vista at and past Grandview. When going north, cars are at your back. |
| 30. | This road (Neptune Dr.) is in an area with many people who walk or run regularly. There are no sidewalks or shoulders to speak of to share the road safely with motor vehicles. There are also many families with children and it's frightening to see moms with little kids or babies in strollers trying to enjoy a walk outside on this road. |
| 31. | This road should be closed to cars. Allow deliveries in the morning. This is filled with pedestrians and cyclists and the area would make a perfect public space like every international city has. |
| 32. | The sidewalk randomly ends on both sides of the road. There is not direct route for pedestrians between the south and north ends of this road. |
| 33. | Sidewalks have an effective width of 1 foot, usually blocked by trash bins. Cars speed by you and one slip on all the cinder on the sidewalk and you'll get run over. |
| 34. | 50/50 if drivers respect the crosswalk, even when lights flashing. |
| 35. | Pedestrian signals and crosswalk would be great here. The hill makes it hard to see and there are SO MANY cars as this is the primary way to access the main entrance of Flag High. |
| 36. | There is no sidewalk or way for people to walk on either side of the street. Westbound traffic merges just west of Woodlands village and this area is especially narrow and hazardous for pedestrians. |
| 37. | There is no sidewalk or way for people to walk on either side of the street. Westbound traffic merges just west of Woodlands village and this area is especially narrow and hazardous for pedestrians. |
| 38. | There is a stop sign here that no one obeys. Cars have begun not even slowing down when going through the intersection. The city garbage trucks and even the snowplows will run the stop sign. The plows sometimes go through at around 40 miles per hour. Local traffic also speeds through the intersection and there are several kids in the neighborhood. It's only a matter of time before someone gets hit here. |
| 39. | The sidewalks between San Francisco and Ponderosa Parkway have a layer of cinders on them, unsafe for skateboards and cyclists. |
| 40. | Disagree with the notion that downtown is unsafe for pedestrians. However, do agree that Aspen Ave from Beaver to WC Riles would be the prime location to make a ped and bike only corridor. In the same vein as Pearl St in Boulder, 3rd St Promenade in Santa Monica, these areas become the main hub for the city. The Wednesday night farmers seemed to be a big success when it moved downtown a couple years ago. |
| 41. | No pedestrian/bike crossings from FUTS to commerce in over 2/3 of a mile. |
| 42. | Dangerous crosswalk with drivers blowing through stop sign and minimal visibility of pedestrians exiting trail. |
| 43. | No continuous sidewalk on either side of road going down 66, unsafe for pedestrians trying to walk to and from neighborhoods like Railroad Springs |


| 44. | This crosswalk to/from Sechrist cross 180 is very dangerous. Few cars obey the speed limit. I cross it often and believe me it's dangerous for adults, not to mention children. Cars DO NOT abide by the speed limit even during school hours. Solar powered, digital "Your Speed is" signs need to be placed both north and south of this crossing. Also, the speed limit from the Nature Conservancy building to the Humphry intersection needs to be much more rigorously enforced for the safety of all |
| :---: | :---: |
| 45. | This crosswalk from Forest across 180 is so very dangerous! I personally have narrowly escaped being hit. The car drove up onto the sidewalk to miss me and I was carrying the little red flag that someone put there for use when crossing. I also witnessed a child crossing with his bike and a motorist narrowly missed hitting him. A pedestrian sign with blinking lights like the one on west Rte. 66 needs to be in place. This dangerous pedestrian crossing connects to the Urban Trail system. |
| 46. | There is a need for a traffic light for pedestrians, cyclists, and drivers who are coming to Sacred Peaks Health Center. There is also a new housing development which increased the intersection traffic. We also need Mountain Line bus stop close to Sacred Peaks Health Center for our patients. |
| 47. | Pedestrians have trouble crossing HWY 89 since closest bus stop is on Christmas Tree Ln. and Snowflake Dr. |
| 48. | This is not an entrance for vehicles to AZ State Land Trust. With unauthorized removal of the barriers by people it opens abuse by owners of offroad vehicles and endangers mountain bikers and hikers--not to mention forest fire poten This needs an extension of the metal barricade to protect the area. |
| 49. | This is a school zone area with the highest speed allowed 25 mph during the morning and afternoon. Most are 15 mph . Furthermore, it is rare to see it monitored and enforced by FPD. Even 35 mph is not enforced with many exceeding the limit. Two schools and a park ought to ensure enforcement. |
| 50. | Pedestrians would like to cross but they must go down the road by Maverik fuel station to cross or they jaywalk with oncoming traffic not slowing down. a TRAFFIC light would be great if one is placed here in this location by highway 89 and Trail End Dr. |
| 51. | Many of the patients of the healthcare facility located here are dependent upon the metro buses to get here. Many of these patients are physically disabled and must walk or otherwise make their way here from the nearest bus stop. |
| 52. | Sacred Peaks Healthcare facility is located here. As a Patient/employee who uses public transportation it is a very busy road and walking from the nearest bus stop is about half a mile away and another location is across the road in the residential area. There is no way to cross the road and it is even hard to get on the highway due to the highspeed traffic. |
| 53. | City of Flagstaff, region: The infrastructure is bus/pedestrian-hostile with poor accessibility. Reluctant to tell elderly or disabled loved ones and family members to visit Flagstaff. To function efficiently in Flag, you must have a vehicle. <br> Take cues from Europe, Japan, or basic planning curriculum at universities-improve wheelchair access, access for low-visibility people, and maneuverability for the young and elderly. Build walkable developments, more mixed use (less SFH, NIMBY zoning). |
| 54. | This major throughway should really have improved pedestrian access. There are no sidewalks along Fourth St or the sidewalks are in horrible condition. An elderly |


|  | friend tripped walking on Fourth and had a severe injury that took his life. Very poor for accessibility. |
| :---: | :---: |
| 55. | Pedestrians try and cross the busy Highway to get to the nearest bus stop. Many of our patients here at our clinic constantly request a crosswalk and/or stoplight here so they don't have to walk down to Maverick for the nearest bus stop. PLEASE TRY AND ADD A STOPLIGHT HERE! |
| 56. | There is a Health Care Center here and patients have complained about the traffic while trying to cross the street to get to the facility. Vehicles pass at high rates of speed and there is not enough time for people to cross the street due to the traffic speed. Some people ride the city bus and get dropped off on Snowflake Dr. and have a hard time getting across Highway 89. Elderly people use the Snowflake Dr. bus stop because the bus stop by the Maverick Gas station is too far to walk from. |
| 57. | Frequent pedestrian crossing, as health services are located on the east side of the road and the closest bus stop is on the west side. May benefit from a traffic light or pedestrian crossing light. |
| 58. | Pedestrian and bike rider hazard from lack of sidewalk for a span between FALA at 180 and Fremont, in front of Museum of No. AZ, all the way south past Creekside in front of housing, Fire Station, Grand Canyon Trust. Also, a need for a pedestrian crossing of 180 at the Museum of NO. AZ. |
| 59. | Fremont Rd. between the streetlights at 180 until Fremont to Peak View. This area has a playground at Fremont and Cooper. It's a hazard to children, families, and bike riders. There are 4 lanes-double the lanes on 180. That's too much for a residential area. The traffic dropping off and waiting for students at FALA creates a hazard $2 x$ a day. Parents need to be directed to the park. A pullout on 180 next to FALA should be used. |
| 60. | It would really be nice to have a light and crosswalk here. Cedar intersections are way too dangerous for children, the elderly, or anyone ill. There are major health services in this residential area. Trying to cross at Cedar with a walker or wheelchair .... so dangerous... but I have seen it. A lot of elderly people live in this area. There is an $\$ 800,000$ bridge across Cedar to Buffalo park, but no disabled crossing near 2 major sources of health services!! |
| 61. | Drivers rarely come to a complete stop at the stop sign going south on Bonito. I've been almost struck by both high school students and police cars (without their lights/sirens on). Honestly, this is the case for most stop signs in my neighborhood. |
| 62. | Sidewalk gets icy through here in the winter |
| 63. | Too much traffic at drop off and pick up times! There are 3 schools with parents waiting to drop or pick up kids and unexperienced drivers navigating driving to/from school. |
| 64. | School pick up and dismissal traffic is unreal! DeMiguel is a neighborhood school with children walkers/bikers. Too much traffic!!! |
| 65. | Crosswalk needs to be signaled, forcing vehicles to stop for pedestrians. |
| 66. | No compliance with school speed zones. Difficulties with kids crossing in crosswalk. Too much congestion and traffic during drop off and pick up times. |
| 67. | Drop off and Pick up at Thomas school creates traffic jams and congestion, blocks roadways and creates unsafe conditions for children/parents walking to and from school |
| 68. | Pick up and drop off at Knoles creates an unsafe situation for walkers and bikers. Too many cars waiting and blocking the roadway. |


| 69. | Too much traffic during school dismissal puts pedestrians (i.e., kids walking to and from school) at risk of crash. This area has been a concern since Basis school opened. Pick up and drop off need to be reconfigured and the school needs to partner with Mtn Line to bus kids rather than allow parents to block roadways at pick up times. |
| :---: | :---: |
| 70. | Need signaled crossing. Difficult to cross Humphreys with high traffic volumes. No marked crosswalks on Humphreys north of Cherry, until lighted crossing at Hwy 180. |
| 71. | High traffic, needs signaled crossing |
| 72. | It is difficult for vehicles to see pedestrians crossing Birch on Leroux, and vice versa, when cars are parked along the roadway (Birch). I suggest either a stop sign or a signaled crosswalk. |
| 73. | The downtown area is generally unsafe to walk with cars in the area. Recommend closing the street to traffic and allow busses only in downtown area |
| 74. | Hard to cross intersection as pedestrian on Lerox St. and Birch Ave. |
| 75. | Difficult to see pedestrians especially at night |
| 76. | Nearly struck pedestrians on Lone Tree Crossing |
| 77. | Crosswalk at the crest of the hill is a visibility problem. |
| 78. | No crosswalk to get across the street to the park. With four lanes of traffic frequently above the speed limit, I frequently run across the road to cross. Fremont would be much better off with two lanes of traffic and on-street parking on both sides. It hopefully would slow traffic through most of the neighborhood and make it safer to get across the street. Maybe the condo residents will park on the road instead of in the park spaces and the school (snow permitting). |
| 79. | This is an area of concern I have for drivers, bicyclists, and pedestrians. The FUTS travels in both directions, on the west side of the highway here. People making right turns do not look for northbound pedestrians and bicyclists. |
| 80. | This is an area of concern I have for drivers, bicyclists, and pedestrians. I have observed a lot of teenagers trying to cross the street on foot to access the businesses, and there is not a crosswalk. |
| 81. | Vehicles run the light and block the intersection making this crossing hazardous to the pedestrian crossing the street. |
| 82. | Once vehicles get to this intersection from the top of the hill at Lowell observatory and if they are not turning left onto Thorpe, they usually accelerate E. on W. Santa Fe Ave putting pedestrians and bicyclists at risk. |
| 83. | Vehicles tend to coast through the intersection in heading $\mathrm{N}, \mathrm{S}$, and E never even looking for pedestrian traffic |
| 84. | Many times, drivers speed up to gain momentum for the hill up W. Summit Ave. They typically cut the oblique corner taking up the entire street crowding oncoming traffic that is coming down the hill. As for downhill traffic typically, the pattern is crowding the center of the street and rolling through the stop signed intersection. |
| 85. | There is no place for pedestrians to cross here, and I often see people running across Milton just south of here. |
| 86. | I have observed numerous vehicles heading north at this intersection disobeying the stop sign. Twice I have almost been hit by these vehicles while on my bike. Had I not been paying attention I would have been hit. I assume this would also be an intersection of concern for pedestrians. |


| 87. | Cars turning right from Fort Valley onto Humphrey tend to keep rolling even if the pedestrian has the right of way to cross Eastbound. |
| :---: | :---: |
| 88. | To access the forest, I must cross this intersection (Humphrey/Elm) twice a day. If people drove the $25-\mathrm{mph}$ speed limit it would not be as dangerous, but with the hill you can't see the southbound traffic approach especially if they are speeding. People have rolled down their windows to cuss at me for crossing. A pedestrian signal would improve the chance of my and kids walking/biking to school survival. The traffic headed to Snow Bowl won't let you cross even if the traffic is backed up. |
| 89. | Cherry is becoming more and more problematic. There needs to be a safer way for pedestrians to walk downtown from the Cherry hill neighborhood. Cinders make the road slippery, and the lack of sidewalks make cars zoo ming up the street a real concern. There are sidewalks here and there, but some of them end after a few feet requiring people to enter the road to move around uneven ground separating sidewalks. |
| 90. | Crosswalks needed! |
| 91. | No sidewalks- no room for pedestrians |
| 92. | Casper- Linda Vista - No sidewalks or crosswalks. People must stand too close to the road to wait to cross. A lot of foot traffic due to hotel guests, vagrants, pizza shop. |
| 93. | Westbound vehicle traffic can be too speedy, especially when folks try to beat the Humphrys light. There is a park here with kids playing in all seasons (lots of snow play too), plus several special events throughout the summer. A trai crossing exists right here too. Lots of pedestrian traffic here and I'm always worried there may be a bad accident due to fast traffic. Traffic calming, a reduced speed limit, or better signing for the park is needed. |
| 94. | Red lights are commonly run by drivers, particularly those traveling on Humphrys. Drivers turning onto Humphrys sometimes are aggressive towards pedestrians in the cross walks that have walk sign |
| 95. | There needs to be a cross walk here |
| 96. | At sunrise it is nearly impossible to see pedestrians crossing Woodland Village Blvd. as the sun is directly in front of eastbound route 66 traffic. |
| 97. | Cars not fully stopping from northbound Beulah Blvd onto eastbound W Forest Meadows. Second right turn lane is difficult to see pedestrians already crossing. |
| 98. | Walk light does not work consistently when facing west from NE corner of Marketplace. Much of traffic turns right from the mall/Safeway and a working walk light is a necessity. |
| 99. | I couldn't figure out how to navigate this intersection safely on foot. Apparently, it is possible to do so but there are only two crosswalks. The "foot tunnel" does allow for safety if the pedestrian can figure out how to do so. |
| 100. | Homeowner is not clearing sidewalk. Now that the snow has melted cinders on the steep sidewalk are causing pedestrians to skid. This area gets a fair number of pedestrians. |
| 101. | Two way stop but frequently drivers on Hemberg don't stop for drivers on Steve's who have no stop sign. additionally, drivers come up Steve's very quickly from Linda vista and it is difficult to see them if you are crossing Steve's from Hemberg. |
| 102. | In a school zone, at a crosswalk going to the biggest east side park and I'd estimate maybe 1 in 8 cars will stop for you. Please place a stop light or another device to force cars to stop, or at least enforce crosswalk. This area is very dangerous. |


| 103. | Poor visibility around corner. Drivers speed on Linda vista. Area is high interest for pedestrians to cross from north to reach bushmaster or from south to get to Elden trails |
| :---: | :---: |
| 104. | The FUTS path along McConnell and the intersection at Beulah need to be plowed for pedestrians. Currently snowplows push mountains of snow onto the path, forcing pedestrians to scale a wall of snow and ice. |
| 105. | We need many more ped crossings on Milton. |
| 106. | The speed limit should be 25 and enforced by cameras. This road has a sidewalk on only one side of the road, so users are forced to cross from one side to the other. Additionally, many people live on the side of the street without a sidewalk, so they must cross, and it's often dangerous if someone is driving too fast around this corner. |
| 107. | Signal needed here. There are no pedestrian crossings along this stretch of Woodlands Village Blvd., and the speed limit is too high, especially for a road with blind curves and numerous driveways. |
| 108. | So scary to cross with young kids that we just don't ever do it, and instead drive the half mile to Jim Cullen park. A crosswalk with a light would make this so much better! |
| 109. | The city must enforce the ordinances related to sidewalk snow removal. Too many times this year I witnessed pedestrians walking in the road because businesses along this stretch did not shovel the sidewalks. This was most often well after 24 hours, when the snow had turned rock hard and had 0\% chance of being removed by the business. |
| 110. | On three occasions I have stepped off the curb with a pedestrian green light, only to have a halted right turn driver, looking to the left for cross traffic, lurk forward toward me. Right turns on red are a danger to all users of Flagstaff crosswalks. No vehicle should be permitted to enter or travel through a crosswalk on a red light. |
| 111. | All along Butler, very dangerous. I wind my way through parking lots. "Where The Sidewalk Ends" was a bestseller book of poetry in the 90's. It also could be a book about Flagstaff. Sidewalks end EVERYWHERE, even in areas where it makes being a pedestrian dangerous. |
| 112. | Switzer Canyon north of Fry's is very dangerous. There are parking lots with cars coming in and out, the car dealership parks its cars where there should be a sidewalk. No real obvious sidewalk makes it dangerous to ride bikes to Fry's with my kids. The E side of street is same way. |
| 113. | North San Francisco needs sidewalk all the way to the hospital. Very dangerous, both sides of the street the way it suddenly ends for a couple of blocks. |
| 114. | Flanked by two high-density apt buildings, there is a one-direction stop sign at this intersection but no pedestrian aids or crosswalk, though lots of pedestrians cross to get to NAU and shops. Not well lit at night. A two-way stop sign and flashing pedestrian signal would be helping pedestrians be seen and cross more safely. |
| 115. | Driver speeds are fast, and no one stops for pedestrians at the crosswalks on Ponderosa and Pinecliff. Speedbumps? |
| 116. | Houses backing on to Fremont rarely clear snow from the sidewalks behind them - are they responsible? |
| 117. | Sidewalks always covered with thick layer of cinders |
| 118. | Please, please continue the paved trail from W Dannielle Dr to the " Y " at Schultz Pass and Elden Lookout Road. Cars driveway over the 25 -speed limit and weave in and out |


|  | of the pedestrians and bikers along Schultz Pass Road. Continuing the bike/pedestrian path would also allow people to safely access the forest without parking cars along the gate at the end of the paved section of Schultz Pass Road. |
| :---: | :---: |
| 119. | A bridge for pedestrians, perhaps contoured with the railroad tracks, would be helpful here. There is no safe place for pedestrians to conveniently and quickly cross Milton in this section. |
| 120. | Unsafe intersection |
| 121. | Unsafe intersection |
| 122. | Worse intersection |
| 123. | No shoulder or sidewalks for pedestrians at this narrow stretch of Route 66 where westbound one lane opens to two lanes. Pedestrians must enter roadway to continue walking on north side of road. |
| 124. | One of the worse intersections |
| $\underline{125 .}$ | Pedestrians crossing from Kit Carson to the gas station have no crosswalk and a variety of vehicle traffic patterns that make it difficult to determine vehicle travel path. Westbound lanes go from one lane to two lanes, to one lane, to two lanes. |
| 126. | People speed down Sitegreaves to avoid Humphreys at peak hours. This is a residential street and should employ traffic calming measures to slow down vehicles |
| 127. | Vehicle speed on this road is too high especially with a daycare located here. Traffic calming measures would benefit the entire downtown neighborhood |
| 128. | Pedestrian crossing across Route 66 does not exist. Kids taking city bus that live west of Route 66 and Thompson must cross here to get to and from bus stop. Single lane traffic at busy intersection makes this high risk for all pedestrians trying to crossroads at this intersection. |
| 129. | Crossing the FUTS here is chaotic for everyone. A pedestrian underpass would solve many of these problems. |
| 130. | This would be a great place to implement a four-way pedestrian crossing or at least a leading pedestrian interval. I've experience plenty of time where traffic making left turns onto r66 prevent foot traffic from crossing. |
| 131. | Without a crosswalk connecting FALA/the bus stop to the neighborhood, kids are often darting into traffic before and after school, weaving through cars trying to get home. It's incredibly dangerous. Fremont does not need to be 4 lanes. |
| 132. | Have a few close encounters passing this crossing. Southbound drivers on Milton turn right onto Phoenix St. to avoid the congestion on Milton and are not always looking for pedestrians. Something like a continuous sidewalk would make this safer. |
| 133. | Getting from this bus stop over to Coconino Estates can be difficult. |
| 134. | No signed or painted pedestrian crosswalk connecting the FUTS Trail on the north side of Sitegreaves with the Wheeler Park sidewalk connecting to City Hall. The problem emerges when drivers, particularly westbound on Birch, speed up to beat the light at Humphreys, then carry their speed into the Wheeler Park zone. They encounter pedestrians and cyclists traversing the FUTS Trail to connect to Wheeler. Too much speed and too little safety for multimodal travel. Does not promote Flagstaff values |
| 135. | This intersection needs a crosswalk. Especially for patients of Sacred Peaks Health Center who walk, bike or ride bus to the clinic. The nearest bus stop is across the highway which requires some elderly and disabled patients to try to cross the |


|  | 4-5 lanes of 45-mph traffic to get to the clinic. The crosswalk would also benefit neighborhood families, bikers, and patrons of local churches and businesses. |
| :---: | :---: |
| 136. | No sidewalk, curb or gutter on east Thorpe Rd. This is a busy park location. The location is opposite the Senior Center. And there is a busy bus stop. But there is no sidewalk on the east side of Thorpe Rd. connecting the sidewalk at Birch to the sidewalk at Cherry. This is a stunning omission. The drainage detention area adjacent to the bus stop is (presumably) city owned. So, installation right-of-way - if necessary, at all - is under City control. Hard to imagine this oversight. |
| 137. | To cross here requires activating the flashing lights for both lanes/directions separately. Most users don't know that they must activate the next crosswalk once they reach the center island. Either install a sign on the island instructing users to activate the next cross walk signal or prioritize pedestrian use by activating the crosswalk lights in both directions/lanes using a single button. |
| 138. | Need a crosswalk here for pedestrians - school kids, wheelchair users, families are always running across highway to pizza, coffee, and bus stop! |
| 139. | This is a very dangerous area for pedestrians and cyclists. There needs to be a traffic light. The city needs to continue to not allow left hand turns off Forest and to close the road on snowy day. |
| 140. | Vehicles tend to park on the Southeast corner of Lake Mary and JW Powell. They park there to access trails and bike on Lake Mary road. This causes drivers traveling South on JW Powell to pull way out into Lake Mary road so they can see around the cars parked on the corner for traffic while making a left or right. They often run the stop sign to do so. There is a right and left turn lane, and the right turn lane blocks the view of Pedestrians and bicycles when crossing in the crosswalk. |
| 141. | The intersection of Elm and Humphries has many pedestrians crossing it. A big contributor is high school students. I have always been amazed that a major artery next to the entrance of a school does not even have a crosswalk. The second contributor to pedestrian traffic at this point is people from the east side of Humphries trying to reach Francis Short pond, FUTS trail system, Observatory trails, softball fields, disk golf and Thorpe park. When crossing here I typically must sprint. |
| 142. | In this area there is a missing sidewalk and the cars from the dealership park very close to the curb. |
| 143. | Drivers coming downhill are going fast, and at many of the pedestrian crossings drivers rarely stop for pedestrians. Would be great if cars couldn't see so easily across the roundabout. |
| 144. | No sidewalk on one side of the street, often see people crossing in random places to access the neighborhoods |
| 145. | Sections of missing sidewalk on both sides so a pedestrian must go into the street when walking in this area. |
| 146. | In the winter, the trail is unusably snowy and muddy. No sidewalk along Zuni from neighborhoods to Lone Tree is dangerous. |
| 147. | Would love to see one of the crosswalks installed here with blinking lights that instructs drivers to stop for the children crossing the highway to go to school. |
| 148. | Another great place for an all-way stop to let the flood of college kids safely get to class |
| 149. | Need crosswalk to Fratellis. |


| 150. | Crossing through the Humphrey's/180/Columbus intersection can be risky for pedestrians. Motorists turning from 180 to Humphrey's may not see pedestrians crossing from the shopping center to Humphreys because of being blocked by other cars. Pedestrians crossing from Humphrey's to the shopping center may also be missed by right turning traffic with left looking drivers. A pedestrian triggered red right arrow might help. Drivers being considerate of others would too. |
| :---: | :---: |
| 151. | Lots and lots of distracted driving and cell phone use by Humphrey's southbound traffic here. Pedestrians beware! Also, pedestrians would benefit from an automatic walking man light here, like those in the downtown core. Sometimes I'm too late with the button, or I assume I don't need to because there's someone on the other side of the street. Even though there's no green arrows here, motorists will honk at pedestrians if they cross on a green light for cars without a walking man. |
| 152. | This stretch of Butler has no sidewalks or paths where pedestrians can safely walk. There are bike lanes for most of this stretch, except for the Lake Elaine portion, and children walking home from school and adults exercising and accessing arterial streets use the bike lanes. The issue is that traffic travels on this stretch well over the posted speed of 40 mph . I use this stretch frequently for biking and walking and have had to jump or step off the bike lane because of inattentive drivers. |
| 153. | Vehicles move too fast on Wild West to see when pedestrians or bicyclists are waiting to cross at the park. A stop sign would improve the ped and cyclist crossing. No parking near the cross walk would help cars see, too. |
| 154. | No proper crossing or traffic control at Zuni for bikes and peds to connect to/from the FUTS |
| 155. | This bus stop is not ADA-compliant in any fashion. Most of the time the bus can't fully make it to the curb, so you must disembark partially in the street. This could pose issues for folks in wheelchairs. It also feels uncomfortable to get off onto Route 66. |
| 156. | A leading pedestrian interval would be great at this intersection due to how busy it is with pedestrians. Additionally, I've witnessed several close calls between cars turning left (in any direction) and people crossing during that time because they didn't know the cars had a left turn light. |
| 157. | A pedestrian scramble would be great at this intersection or a leading pedestrian interval. When this intersection is busy with cars and pedestrians it can get chaotic and unsafe for all users. |
| 158. | Cars parked on the sidewalk or halfway into driveways impede the ability to walk safely as you are pushed out onto the road. This also creates further challenges for people with disabilities as curb cuts are not always available since cars block them. More enforcement is needed to insure we can walk in our neighborhood safely. |
| 159. | Crossing 66 as both a pedestrian and bicyclist at this intersection feels very uncomfortable. It's so huge and the ped. A light countdown is not sufficient for those who walk slowly or have a disability. I've seen cars not yield or slow for bikes/peds, I've also seen peds run across (during left turns for cars) to the center island to quicken their trip. |
| 160. | The bus stop on the east side of 4th is non-existent. When you walk off the bus you are basically in the parking lot with a giant tree that you must navigate around by walking through the parking lot or in the bike lane to access the signalized crossing at 3rd. That tree also blocks the view of drivers as they approach the "bus stop". |


| 161. | Crosswalks aren't clearly marked - especially at night, have almost been hit by drivers at intersection of University and Forest Meadows by True North Dentistry |
| :---: | :---: |
| 162. | A FUT-type trail to kachina would be great. |
| 163. | Route 66 sidewalks are not cleared of snow and ice forcing pedestrians into the street. Bike lanes aren't clear either so pedestrian are forced into actual traffic lanes. |
| 164. | North 4th street missing sidewalks (various locations both sides of road); this should be a multimodal corridor - get the ROW to make it happen. |
| 165. | Missing sidewalks - Lockett/Kaspar/Hwy 89 intersection area is a mess for pedestrians, many tourists from hotel crossing to Nimarcos; kids walking to school and accessing bus stops; eliminate left turns from Kaspar onto Lockett would help with vehicle conflicts. |
| 166. | Cars on Soliere turning left (north) onto Country Club don't yield to pedestrians and bikes. |
| 167. | Lockett Rd. sidewalks and bike lanes covered in snow on both sides. How are kids supposed to get to school? Also, the "island" crosswalk at 4th/Cedar and corner at Lockett in front of library/CCC do not get adequately cleared. My child usually bikes or walks to/from school. Hasn't been able to bike since December between snow or heavy loose cinders, and walking has been hit or miss with all the snow berms, so I must miss work to drive to/from. |
| 168. | This is a busy pedestrian crossing with the FUTS and KOA campground on the north side of 89 and the Circle K and Smokerise neighborhood on the south side. Pedestrians may only cross at the west side of the intersection which puts them in the path of the two left turn lanes coming from Smokerise turning west on 89 . I regularly see near misses with cars failing to yield and almost hitting pedestrians. |
| 169. | Discontinuous sidewalk on Columbus, often blocked by trash cans. |
| $\underline{170 .}$ | No sidewalks on the East side of Lake Mary between Zuni and Anita. This side of Lake Mary is popular with pedestrians and cyclists who stay on the right side of Lake Mary and Beulah the whole way to McConnel and campus. With new apartments on Lake Mary at Mohawk, sidewalk consistency will be crucial on East side of Lake Mary Rd. |
| 171. | Cherry Ave has no sidewalks even though it is the major avenue to the neighborhood from downtown. Cars going to the Mormon Church and Airbnb's regularly speed well over the posted 25 mph limit around a blind corner. |
| 172. | Four-way stop at San Francisco and Franklin. There are a lot of students walking without looking. Vehicles try to rush at busy times (8 AM and when classes get out) and don't fully stop before rushing through the intersection. There needs to be a better system for this as ped/vehicle traffic has increased. |
| 173. | The lighted pedestrian crosswalk doesn't always work. A person will press it and immediately start walking (sometimes without looking). As a driver, I cannot always see a person crossing due to the sun, so those lights really need to work! If there's snow, this isn't maintained so pedestrians have a hard time crossing. They must struggle over burns, which is not accessible. |
| 174. | No sidewalk or proper crossing at 4th St and Butler. The sides of the road are very narrow, and there is no safe way to cross the drainage to get to the urban trails across Butler or to get to the sidewalk going to Butler toward Fox Glenn Park. |


| 175. | Unkept sidewalks and no walkways through roundabouts. Cars speed, as they're trying to cut through the neighborhood and get back to 66. Cars will not yield to roundabouts and it's hard for pedestrians to know when to walk. |
| :---: | :---: |
| 176. | There should be a walking path, cross walk, and bike parking area for the disc golf course. |
| 177. | Cinders not cleared from sidewalks |
| 178. | Cinders and ice not cleared from steep sidewalks. |
| 179. | No safe pedestrian crossing to/from bus stop. Discontinuous sidewalk on east side of Fort Valley. |
| 180. | No safe way to cross the street where Humphreys becomes Fort Valley. Cars continue to turn when pedestrian light is on. |
| 181. | Sidewalks desperately needed South of Butler, East of San Fran. |
| 182. | There are no walking paths or sidewalks in this entire community. In winter and spring, the roads are very neglected in terms of cinder debris. Very easy to slip when walking out of the way of traffic on the hills, toward the edge of the road, due to the amount of cinder build up, and one must walk in the road, there is no sidewalk, or walking paths. This neighborhood is all hills, very few flat areas, use extreme caution when walking in traffic. |
| 183. | No shoulder at all. No bike lane/path. No walking paths. This includes all Mountainair Rd and all community surface roads. Unsafe for cyclists quite often. Some community members also hate the children riding bikes in their neighborhood streets and get quite irate. |
| 184. | Lower Greenlaw is so unsafe to walk. No sidewalks and cars speeding with no traffic calming measures. Between cars parked on the street and if there is snow, pedestrians are forced to walk/play in the middle of the street. Cars use lower Greenlaw as a cut through and speed dangerously through the neighborhood. |
| 185. | Sidewalks not always clear - children, folks walking dogs, those getting to the bus stop needing to walk in the street |
| 186. | Silver saddle ends in a convenience at one end and a school (Cromer) just on the other end of Koch field road with a trailhead in the middle. There are not safe ways for kids (or adults) to get back on forth on foot, bikes, skateboards, scooters, horses etc. especially at the top of the hill just before Koch field road. |
| 187. | 89 is often used by people on foot and cyclists and very unsafe. I have been concerned as a driver for the wellbeing of pedestrians who walk the road during the day and night when visibility is limited and for bikers/scooter riders as well. |
| 188. | Too much drive through traffic heading west on W. <br> Birch at the end of the workday. People drive over the speed limit. Also, too much traffic heading east on W. Aspen. Not considerate, or safe. These are residential streets, not higher level, like collector streets (and should not be reclassified to carry more traffic just because people are cutting through!). |
| 189. | Serious parking issues with the events near City Hall that are not addressed. Happens with every Farmer's Market, Flea Market, fair, event, etc. People park too close to corners so peds and bikes cannot see clearly to cross intersections. People park too close to driveways and block resident access. We have asked for the Police to ticket people, but nothing happens. |


| 190. | People speed along Thorpe Rd. (aka Toltec--the maps are inconsistent). <br> Meanwhile many people park along Thorpe, Aspen, Birch, and Cherry to go <br> to the park, so crosswalks are also needed. There is <br> also a lot of noise from people accelerating too hard. For years we have asked <br> for the day and night speeding and noise to be addressed but get <br> to traction with the City or Police. |
| :--- | :--- |
| $\underline{191 .}$ | Dangerous crossing from FUTS path across Fort Valley to <br> trip generators including Fratelli's. |
| $\underline{\text { 192. }}$ | Dangerous crossing to Sechrist. |
| $\underline{\text { The area where the crosswalk is near the park is dangerous as people sped and there }}$ |  |
| are 4 lanes to cross. |  |


|  | quickly. The oldest was walking faster than mom, who was holding two kids, and almost <br> ran into a car. So, she set down the baby in the median to grab the toddler and get him <br> to the bus. The baby stayed in the road until I ran out to get it. I imagine she was just <br> flustered, but better city planning could have prevented it. |
| :--- | :--- |
| $\underline{\text { 206. }}$ | Right turn EB Rte. 66, pedestrian moving in same direction, right turn on red, left <br> turn light Rte. 66 WB. Eyes were on left turner, almost missed pedestrian, especially <br> with snow berms. |
| $\underline{207 .}$ | There is no crosswalk near Main and Cedar Ave, despite humans still needing to cross <br> here. I regularly see elementary aged children crossing here on their own to get to Killip. I <br> see people of all ages and of varying abilities to move fast trying to make it <br> across the street here. It's not a matter of discouraging people to cross here. I feel <br> that the city should add a crosswalk to make the reality of how people move a safer one. |
| $\underline{208 .}$ | The trail crossing is very poorly marked. Pedestrian crossing signal would be great. I <br> hesitate to stop to allow a pedestrian to cross, for fear that the car in the other lane won't <br> stop as well. In addition, with all the hotels on one side and restaurants and shops on the <br> others, but no safe pedestrian crossing, lots of jaywalking happens |
| $\underline{209 .}$ | Drivers turning off Clay aren't looking for pedestrian traffic from the student housing and <br> frequently have near misses. Traffic on W Rte. 66 is going too fast <br> for the pedestrian traffic. |
| $\underline{210 .}$ | Traffic is too fast on Butler for the pedestrian traffic. |
| $\underline{211 .}$ | Forest, Beal, bike way, dog leg turn |

## SUMMARY OF FINDINGS - METROPLAN

In addition to the data provided in this summary, a general summary of findings is as follows for MetroPlan:

Responders from the MetroPlan region primarily identified as motorists (55\%) and feel safe on the roads and streets as drivers and motorcyclists. The responders felt less safe as pedestrians and bicyclists. Overall, responders feel the following behaviors of drivers are hurried, distracted, and inattentive.

Other observations responders had as it relates to making commutes safer are that distracted driving, speed and roadway conditions are the primary causes of crashes. They feel public agencies should provide more enforcement, make bike/ped improvements, and make roadway improvements. Responders believe that if people would drive the speed limit, be aware, do not use cellphones while driving, and try to be example citizens, it would make it safer to travel through the region. In addition to what responders said about other people, they believe that if they were more aware, advocated, and drove within the speed limit, it would make driving in the region safer.

During the mapping (Social Pinpoint) exercise, many bicyclists' concerns are about specific roads and intersections they believe are dangerous for various reasons, including turning is difficult for bicyclists, it's difficult to vehicles to see bicyclists, the roadway is not well maintained, and crosswalks are not well marked. There are several concerns regarding the Flagstaff Urban Trail System, including maintenance, lack of connectivity, lack of signs and signals, and dangerous vehicle crossings. Other bicyclists' concerns include snow removal, debris in bike lanes, speeding, and distracted driving.

The driver expressed concerns about right and left turns throughout Flagstaff. Some requested turn lanes and signals be added and others expressed concern about drivers not obeying speed limit and traffic control such as "no left turn" signs. Other driver concerns include snow removal, potholes, and congestion due to poor signal timing and a lack of parking.

The most common pedestrian concern is not having crosswalks, having dangerous crosswalks, and not having sidewalks in specific locations. Other concerns included distracted drivers not yielding to pedestrians, speeding, and not having crosswalks.

## APPENDICES

## APPENDIX A: TWENTY QUESTION SURVEY

| Welcome to our safety survey! <br> Have you noticed an area that concerns you when driving, bicycling, or walking? Have you thought someone should know about that traffic problem? <br> The Northern Arizona Council of Governments (NACOG), MetroPlan, and Central Yavapai Metropolitan Planning Organization (CYMPO) need your input. Help improve traffic safety in your community by pinpointing worrisome areas and unsafe travel behaviors you have witnessed. <br> 1. Primarily, I'm responding as a.... <br> - Motorist <br> - Pedestrian <br> - Bicyclist <br> - Other (please specify): $\qquad$ |  |  |  |
| :---: | :---: | :---: | :---: |
| 2. How frequently have you observed drivers doing the following? | Never | Occasionally | Often |
| Impaired driving, walking, or biking |  |  |  |
| Distracted driving, walking, or biking (such as texting or talking on cell phone, eating, etc.) |  |  |  |
| speeding |  |  |  |
| Not stopping completely at stop signs |  |  |  |
| Not stopping at crosswalks |  |  |  |
| Not crossing at crosswalks |  |  |  |
| Riding their bike against traffic |  |  |  |
| Not yielding to other vehicles, bicycles and pedestrians |  |  |  |
| Speeding or passing in school zones |  |  |  |
| illegal/unsafe turns |  |  |  |
| Tailgating/following too closely |  |  |  |
| Failing to use turn signal |  |  |  |
| Not stopping for a red light |  |  |  |
| Passing illegally (hill or curve, across double yellow line, a stopped school bus picking up children) |  |  |  |
| Driving too slowly |  |  |  |
| Not wearing seat belts |  |  |  |
| Other (please specify) |  |  |  |

Traveling in the community - Think of your daily travel when answering the following questions.


| Drivers |  |  |  |
| :--- | :--- | :--- | :--- |
| Pedestrian |  |  |  |
| Bicyclist |  |  |  |
| Motorcyclist |  |  |  |
| Elderly and/or disables person |  |  |  |

4. How safe do you feel traveling on area roads and streets?

- Very Unsafe
- Unsafe
- Safe
- Very safe

5. What words best describe the behavior of drivers on area roads and streets?

- Courteous
- Distracted
- No different than
- Frustrated/Angry $\circ$ Inattentive
- Hurried
- Intoxicated
anywhere else

6. When driving around pedestrians/cyclists how often do you fear for their safety?

- Never o Sometimes o often o Very often o IDon't Drive
Making your community safer

7. What do you think is the primary cause of crashes in your community? $\qquad$
$\qquad$
$\qquad$
8. What is one thing you think public agencies could do to make it safer to travel in your community? $\qquad$ -
$\qquad$
$\qquad$
9. What is one thing you think people should do to make it safer to travel in your community?
$\qquad$
$\qquad$
$\qquad$

Sare Streets Sare Lives
10. What is one thing you could do to make it safer to travel in your community?
$\qquad$
11. Do you have a specific place/places where you think roadway safety could be improved; if so, are you able to locate those place/places on a map?

- Yes, I do know of a place/places where safety could be improved and would like to identify them on an interactive map. (Please scan the QR code at the bottom of this survey to identify the place/places on the map you think can be improved).
- Yes, I do know of a place/places where safety could be improved but prefer not to use the interactive mapping tool. (Please describe the place/places and the safety concern as precisely as possible in the spaces provided below.)

| Location/Concern \#1: |
| :--- |
| Location/Concern \#2: |
|  |
| Location/Concern \#3: |
|  |

## Demographics

12. Where do you live? $\qquad$
13. Select the age category that best describes you.

| $\circ$ | $18-24$ years old | $\circ$ |
| :--- | :--- | :--- |
|  | 41-64 years old | Decline to answer |

14. Are you of Hispanic, Latino, or Spanish origin?

- Yes
- No
- Don't know / Decline to answer

15. How do you describe yourself? (Select one)

- American Indian or Alaska Native ○ White/Caucasian
- Asian ○ More then one race
- Black or African American o Don't know / Unsure
- Native Hawaiian or Other Pacific Islander o Decline to answer

16. What is your highest grade of school or year of college that you have completed? (Select one)

- Grade School (grades 1-11) ○ Bachelor's Degree
- High School Degree (Grade 12 or GED) $\quad$ Post-Bachelor's Degree
- Some college / Associates Degree - Don't know/Decline to answer

17. What best describes your current employment situation? (Select one)

| $\circ$ | Full-time employee | $\circ$ |
| :--- | :--- | :--- |
| Ptudent |  |  |
| $\circ$ | Part-time employee | $\circ$ |
| Retired |  |  |
| $\circ$ | $\circ$ | Unemployed (please specify): |

$\qquad$
18. Which of these conditions, if any, create difficulties for getting you where you want to go? (Check all that apply) - Seeing o Memory or processing

- Hearing $\circ$ Other (please specify):
- Moving
$\qquad$
- Handling items $\qquad$

19. Which of the following income groups includes your total household income for 2022 before taxes?

20. How do you describe your gender? (Select one)

- Female $\circ$ Male o Trans/Non-binary ○ Decline to answer

If you'd like to receive updates regarding THIS PROJECT ONLY,
Question \#11 continued

| Please scan the QR code |
| :--- |
| to identify the place(s) |
| on the map you think |
| can be improved. |

## APPENDIX B: TRUNCATED FOUR QUESTION SURVEY

| Welcome to our safety survey <br> Have you noticed an area that concerns you when driving, bicycling, or walking? Have you thought someone should know about that traffic problem? |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| The Northern Arizona Council of Governments (NACOG), MetroPlan, and Central Yavapai Metropolitan Planning Organization (CYMPO) need your input. Help improve traffic safety in your community by pinpointing worrisome areas and unsafe travel behaviors you have witnessed. |  |  |  |  |
| 1. | Primarily, I'm responding as a... <br> - Motorist <br> - Pedestrian <br> - Bicyclist <br> - Other (please specify): |  |  |  |
| 2. How frequently have you observed drivers doing the following? |  |  |  |  |
|  |  | Never | Occasionally | Often |
| Impaired driving, walking, or biking |  |  |  |  |
| Distracted driving, walking, or biking (such as texting or talking on cell phone, eating, etc.) |  |  |  |  |
| Speeding |  |  |  |  |
| Not stopping completely at stop signs |  |  |  |  |
| Not stopping at crosswalks |  |  |  |  |
| Not crossing at crosswalks |  |  |  |  |
| Riding their bike against traffic |  |  |  |  |
| Not yielding to other vehicles, bicycles and pedestrians |  |  |  |  |
| Speeding or passing in school zones |  |  |  |  |
| illegal/unsafe turns |  |  |  |  |
| Tailgating/following too closely |  |  |  |  |
| Failing to use turn signal |  |  |  |  |
| Not stopping for a red light |  |  |  |  |
| Passing illegally (hill or curve, across double yellow line, a stopped school bus picking up children) |  |  |  |  |
| Driving too slowly |  |  |  |  |
| Not wearing seat belts |  |  |  |  |
|  | Other (please specify) |  |  |  |

Traveling in the community - Think of your daily travel when answering the following question.
3. How safe do you feel traveling on area roads and streets?

- Very Unsafe
- Unsafe
- Safe
- Very safe

Making your community safer
4. Do you have a specific place(s) that you think can be improved, if so, are you able to locate those place(s) on a map?

- Yes, I do know of a place(s) and would like to identify them on a map. (Please scan the QR code at the bottom of this survey to identify the place(s) on the map you think can be improved).
- Yes, I do know of a place(s) but can't identify them on a map. (Please describe the place(s) as precisely as possible in the space provided below)
$\qquad$
$\qquad$
If you'd like to receive updates regarding THIS PROJECT ONLY, please provide your contact information. Otherwise skip this question.
Name: $\qquad$
Organizations (if applies): $\qquad$
Question \#11 Continued
Please Scan the QR code to identify the place(s) on the map you think can be improved.


Emails: $\qquad$

Safe Strects Save Lives

## APPENDIX C: SURVEY QUESTION \#7

| Q7. What do you <br> think is the <br> primary cause of <br> crashes in your <br> community? | MetroPlan Region |
| :--- | :--- |
| Topic | Open-ended Responses |
| Accidents | Accidents happen. All over besides Flagstaff. |
| Driver habits | Following too close |
| Driver habits | Frustration |
| Driver habits | Aggressive drivers |
| Driver habits | Aggressive driving and distracted. |
| Driver habits | Aggressive driving, being distracted, intoxicated. |
| Driver habits | Aggressive or distracted motorist |
| Driver habits | Aggressive, distracted, and hurried driving. As well as every intersection in FLG is <br> just a little different so you never know what to do or expect. Even the pedestrian <br> crossing lights that are new around town that last few years are all constructed <br> differently so no one knows how to behave and that makes them super <br> dangerous. I feel less safe crossing than I did before. |
| Driver habits | Drivers who are not patient, attentive, or courteous |
| Driver habits | Driving too aggressively, inattention, inability to drive safely in the weather <br> conditions |
| Driver habits | Selfishness is the probably the root of rushing, not paying attention, not yielding, <br> tailgating |
| Rriver habits | Reckless inattentive driving, speeding, and non-adherence to driving rules or laws. |
| Driver habits | Reckless/distracted driving or unsafe modes of alternative modes of <br> transportation |
| Driver habits | Selfish, aggressive behavior |
| Driver habits | Road rage |
| Driver habits | Road rage due to City Councils "The Big Shift" idea!!! |
| Driver habits | Tail gaiting, drivers in a hurry, unskilled drivers who don't look before changing <br> lanes. High speed police chases. People don't know how to drive in the snow. I- <br> 17 is like off-roading now -- what terrible road surface conditions. |
| Driver habits | Tailgating / anger / rushing |
| Driver habits | Tailgating |
| Driver habits | Tailgating and driving too fast. Bicycles and pedestrians not obeying the law. <br> I've noticed unsafe behaviors coming more from pedestrians and cyclists, not <br> motorists. I've observed that motorists for the most parts yield to cyclists and <br> pedestrians. Cyclists and pedestrians, however, seem to have a sense of <br> entitlement in that they can cross wherever and whenever they want, without <br> regard to crossing signals, traffic laws, lights, etc. They are also often distracted <br> by cell pone use and have headphones on so they can't hear what's going on |
| Bikes | around them |


| Bikes | Lack of maintained bike lanes of course and the rotten weather second |
| :---: | :---: |
| Bikes | Lack of greenways/bike and pedestrian exclusive pathways |
| Bikes | Bike lanes without physical barriers and vertical separation; inconsistent sidewalks and sidewalks that are connected to the curb |
| Bikes | Bikes not being predictable or seen. People- not being seen and vehicle centric culture. Cars- drivers operating beyond their potential |
| Driver habits | Carelessness. So, people are in a hurry often distracted not caring about driving. |
| Driver habits | Disregard for others safety/lack of safety as a priority |
| Driver habits | Drivers not looking for cyclists, Drivers on their phones, and drivers who do not know how-to drive-in ice and snow |
| Driver habits | Drivers only concerned about themselves and getting to where the need to go and or being distracted by their phones and not paying attention to their surroundings. |
| Driver habits | Drivers who are selfish, impatient, and seemingly do not care about anyone except themselves v |
| Driver habits | Arrogance, not caring, not obeying traffic laws |
| Driver habits | Bad judgement |
| Driver habits | Careless driving, not being considerate of others. |
| Driver habits | Careless, inattentive drivers, speeding |
| Cars | Motorized vehicles |
| Cellphone | Using phone while driving |
| Cellphone | Cell phone distracted drivers |
| Cellphone | Cell phone distraction |
| Cellphone | Cell Phone Distractions |
| Cellphone | Cell phone use; speed; distractions |
| Cellphone | Cell phones |
| Cellphone | Cell phones |
| Cellphone | Cell phones and too much traffic |
| Cellphone | Cell phones, poor signage |
| Cellphone | Cell phones, speed and being distracted |
| Cellphone | Drivers on their cell phones |
| Cellphone | Phone use, not paying attention |
| Cellphone | Phones |
| Cellphone | Phones and one ways and badly placed stop signs |
| Cellphone | Phones, snow |
| Cellphone | Texting |
| Cellphone | Texting / phone use |
| Cellphone | Texting and red-light runners |
| Cellphone | Texting or inattention |
| Cellphone | Texting or otherwise inattentive and speeding |
| Cellphone | Texting while driving |
| Cellphone | Texting while driving. |


| Cellphone / DUI | Texting, alcohol |
| :--- | :--- |
| Distracted | Drivers pay no attention to pedestrians and cyclists. |
| Distracted | Failure to pay attention/impatience <br> Haven't looked at the numbers but distracted driving seems most likely. With a <br> large tourist population there also seems to be a lot of confusion from out-of- <br> town drivers who do not understand some of the local traffic quirks. It can be <br> hard to see peds and bikes who aren't wearing lights at night. Weather/sun glare <br> can be a factor too. Seems like this would be the case in most cities. |
| Distracted | Honestly, distracted driving or disobeying traffic laws. From my bike, I can see into <br> people's cars well and I would say about 1 in every 10 people, maybe every 1 in 8, <br> has their phone in their hand while driving, texting, talking, looking at directions, <br> doing I don't know what, but their eyes leave the road frequently. As a slower <br> mode of traffic, as well, I see people pull all kinds of illegal stunts to go faster, or <br> so it seems. Very callous attitudes. |
| Distracted | Human error |
| Distracted | Hurried and distracted |
| Distracted | Hurried and distracted drivers <br> Distracted |
| Distracted | Some poor intersection designs. Huge SUVs that kill anything smaller. |


| Distracted | Distracted driver |
| :--- | :--- |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted driver's |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers |
| Distracted | Distracted drivers (texting, phone, etc.) |
| Distracted | Distracted drivers / not enough buffered ped/bike |
| Distracted | Distracted drivers and bicyclist who do not follow traffic laws. |
| Distracted | Distracted drivers and poor infrastructure for non-car modes of transportation. |
| Distracted | Distracted drivers and poor traffic flow |
| Distracted | Distracted drivers and road shoulder space |
| Distracted | Distracted drivers from cell phone use |
| Distracted | Distracted drivers or out of town drivers unsure of where to go. |
| Distracted | Distracted drivers who are in a hurry and/or frustrated about congested streets |
| Distracted | Distracted drivers, cell phones |
| Distracted | Distracted drivers, cyclists not obeying traffic laws (such as riding in wrong |
|  | direction, not stopping at stop signs and lights) |
| Distracted | Distracted driving |
| Distracted | Distracted driving |
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| Distracted | Distracted driving |
| Distracted | Distracted driving (looking at cell phones) |
| Distracted | Distracted driving and cars feeling entitled to being the only form of accepted <br> transportation. Speeding for no reason and wanting to get to destinations as fast <br> as possible instead of just however long it takes. |
| Distracted | Distracted driving and cyclists acting like they get the best of the motorist and <br> pedestrian worlds |
| Distracted | Distracted driving and cyclists or pedestrians |
| Distracted | Distracted Driving and frustrated people in bad traffic. |
| Distracted | Distracted driving and trying to be in a rush. |
| Distracted | Distracted driving combined with very poor bicycle and pedestrian infrastructure |
| Distracted | Distracted driving due to cell phones |
| Distracted | Distracted driving is huge. People pay more attention to their phone and fast food <br> than they do driving and it's obvious. I think there is a lack of education among <br> drivers about how to drive safely and the Flagstaff Police do a poor job of <br> enforcement. In fact, the FPD does a poor job of driving safely on its own! Rarely <br> do they use blinkers, often distracted, and hurried. |
| Distracted | Distracted or inattentive drivers <br> DistractedDistracted or inattentive drivers/riders <br> Distracted driving is the primary cause. <br> Distracted <br> Distracted driving or not knowing the laws <br> Distracted |
| Distracted | Distracted driving or Unaware of non-car surroundings <br> following laws or believe they have right of way even when they do not. |
| Distracted | Distracted driving. I also think people seem to always be in a hurry and that being <br> in a car makes them anonymous. |
| Distracted | Distracted Driving. So many people are driving whilst being on their phone. |
| Distracted | Distracted driving/texting |
| Distracted | Distracted driving; driving too fast |


| Distracted | Distracted or inattentive driving |
| :--- | :--- |
| Distracted | Distracted or inattentive driving and poor road design |
| Distracted | Distracted or sleepy drivers |
| Distracted | Distracted rushing |
| Distracted | Distracted, driving, poor decision making. Being in a hurry. |
| Distracted | Distracted, following too close, impatient driving, see people running red lights <br> often. Traffic congestion |
| Distracted | Distracted/ impaired driving-- mainly cell phones, drunkenness, and sleepiness |
| Distracted | Distracted/aggressive driving |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction |
| Distracted | Distraction and impatience |
| Distracted | Distraction and lack of respect for alternative modes of transportation |
| Distracted | Distraction and speed |
| Distracted | Distraction or sun in eyes |
| Distracted | Distraction, being in a hurry, not considerate of others |
| Distracted | Distraction, ice/snow |
| Distracted | Distraction, narrow lanes, congestion, people seem to feel they have the right of |
| way no matter what they are doing. Lack of flowing routes for traffic, |  |
| Distracted | overpopulation. |
| distracted | distractions |
| Distracted | Distractions (phone use, etc.) and rushing/speeding |
| Distracted | Distractions during most times. Poor winter driving skills when it snows or is icy |
| likely due to limited winter driving experiences during lifetime. |  |
| Distracted | Don't know |
| Distracted | Driver error |
| Distracted | Driver inattention |
| Drivers being distracted and too hurried. Traffic being bumper to bumper |  |


| Distracted | Drivers not staying attentive to where they are going and to lack of situational <br> awareness. |
| :--- | :--- |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention |
| Distracted | Inattention (Q5, BTW, only allows 1 answer) |
| Distracted | Inattention and hurried driving. |
| Distracted | Inattention of driver and pedestrians |
| Distracted | Inattention or distracted driving, especially when tailgating. |
| Distracted | Inattention, distraction. Unfamiliarity with traffic signals (i.e., flashing yellow turn |
| arrow) |  |
| Distracted | Inattention, rushing somewhere. |
| Distracted | Inattention, speeding |
| Distracted | Inattention, texting, intoxication, inclement weather (snow and ice) |
| Distracted | Inattentive |
| Distracted | Inattentive |
| Distracted | Inattentive and distracted drivers |
| Distracted | Inattentive and distracted drivers |
| Distracted | Inattentive and reckless driving |
| Distracted | Inattentive and uninformed (lost tourists) drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers |
| Distracted | Inattentive drivers on cell phones. |
| Distracted | Inattentive drivers, hurried drivers, and drivers not following rules of the road |
| Distracted | Inattentive drivers. |
| Distracted | Inattentive drivers. Turning on a red light. |
| Distracted | Inattentive driving - rushing too much - lack of education and awareness of how |
| to drive with various kinds of road users like bicycles and many pedestrians |  |
| Distracted | Inattentive driving and cyclists that don't follow the rules of the road |
| Distracted | Inattentive or distracted driving |
| Distracted | Inattentive users |
| Distracted | Inattentive, hurried |
| Distracted | Inattentive, impatient drivers |
| Distracted | Inattentive, road conditions, hurried |
|  |  |


| Distracted | Inattentiveness |
| :---: | :---: |
| Distracted | Inattentiveness |
| Distracted | Inattentiveness |
| Distracted | Inattentiveness |
| Distracted | Inattentiveness |
| Distracted | Inattentiveness (by motorists), and pedestrians and bicyclists not being situation aware. |
| Distracted | Inattentiveness and speeding |
| Distracted | Not paying attention |
| Distracted | Not paying attention |
| Distracted | Not paying attention and speeding what |
| Distracted | Not paying attention in heavy traffic, blocking intersections |
| Distracted | Not paying attention to pedestrians/surroundings |
| Distracted | Not paying attention while driving; being distracted. Bicyclists in dark clothing with no lights at night. |
| Distracted | Not paying attention, on the cell phone |
| Distracted | Not paying attention. |
| Distracted | Not paying attention. |
| Distracted | Not paying attention. When I'm on my bike and stopped at a light, I see MANY people on their phones talking. |
| Distracted | Poor attention |
| Distracted | Driving too fast for conditions or to stop for traffic lights |
| Distracted | Inattentive and aggressive driving, lack of adequate pedestrian and cyclist route that are not on roads, lack of cross walks that stop all traffic for pedestrians, folks making illegal turns or other bad choices instead of choosing a safer but less expedient option, speeding |
| Distracted | Inattentiveness is caused by overcrowded roads and imperfect infrastructure. Existing infrastructure encourages car use for very short trips (sub mile) while also being incredibly hostile to bike/foot traffic. Milton is the greatest offender. Decreasing lane width and number, increasing *protected* bike infrastructure and consistent sidewalks will encourage people to stay off the roads even in extreme weather conditions. |
| Distracted | Inattentiveness, hurriedness |
| Distracted | Inattentiveness, poor understanding of traffic laws |
| Distracted | Lack of attention |
| Distracted | Lack of attention by car drivers and cyclists who don't follow traffic laws |
| Distracted | Lack of attention to variables on the road and following too closely to correct. |
| Distracted | Lack of attention. Being distracted. |
| Distracted | Lack of concentration on the job at hand whether driving a car, bike, or walking. |
| Distracted | Not obeying traffic laws. Distracted driving. |
| Distracted | People not paying attention |
| Distracted | People not paying attention and not enough shoulder, space, or safe bike lanes. |
| Distracted | People not paying attention on over congested + poorly designed roadways |


| Distracted | People not paying attention to the road |
| :---: | :---: |
| Distracted | People not paying attention, confusing traffic configurations, tailgating, speeding |
| Distracted | People not paying attention, running red lights, congested roadways. |
| Distracted | Poor situational awareness on the driver's part. |
| Distracted | Probably drivers not paying attention |
| Distracted | Rushing, inattention |
| Distracted | Not focusing on driving |
| Distracted / cellphone | Distracted driving, folks from out of town lost trying to look at phone |
| Distracted / speed | Hurried driving, cell phone use, lack of awareness of the rules of the road. |
| Distracted / speed | Hurried, distracted, and plain rude and aggressive drivers |
| Distracted / speed | Hurried, impatient, distracted driving. |
| Distracted / speed | Hurrying |
| Distracted / speed | Hurrying, distraction, |
| Distracted / speed | Speed, distracted driving |
| Distracted / speeding | Distracted driving, drivers in a hurry |
| Distracted / speeding | Distracted driving, red light running and speeding |
| Distracted / speeding | Inattention and speeding |
| Distracted / speeding | Inattention and speeding |
| Distracted / speeding | Inattention coupled with speeding |
| Distracted / speeding | Driving too fast, not paying attention |
| Distracted / weather | Distracted drivers, snow conditions |
| Distracted /speed | Speed and distracted driving. Aggressive driving. |
| Driver habits | Illegal traffic maneuvers at intersections |
| Driver habits | No one respects stop lines, including police |
| Driver habits | Selfish people thinking they can do whatever they want |
| Driver habits | Selfishness--not thinking of others |
| Driver habits | Sloppy driving by motor vehicle operators. |
| Driver habits | Stupid drivers. |
| Driver habits | Illegal U-turns between intersections. |
| Driver habits | Drivers |
| Driver habits | Drivers are unaccustomed to bike/ped traffic on the streets and so don't know to be aware of them. This is due to a lack of signage, appropriate right sizing of streets, use of traffic calming measures, and other safety mitigations options that are utilized in other cities, but not in Flagstaff. |
| Driver habits | Unsafe drivers |
| DUI | Impairment, speed, distraction |


| DUI | Street alcoholics |
| :--- | :--- |
| DUI | Drunk driving and college students, not knowing how to drive or other people out <br> of state |
| Education | The college population and influx of new out of town visitors is bringing nothing <br> but irresponsible drivers here |
| Education | Unskilled drivers |
| Education | Young drivers, drunk drivers, road rage, lack of respect |
| Education | Ignorant, overly bold student drivers |
| Education | Improper vehicle education in the U.S. a lack of traffic controls and pedestrian <br> accommodations. |
| Education is not a homogenous culture. It's a byproduct of unfamiliar tourists, students, |  |
| rez traffic and locals with different agendas, experience, and skill. |  |
| Education | lack of knowledge or care for safe driving practices, want to drive too fast |
| Education | NAU and tourist traffic |
| Education | NAU students and Valley drivers not following local laws (driving too fast and <br> aggressively) |
| Education | Ppl just do not remember their driving laws |
| Education | Impatience |


| Pedestrians | Studies have shown it is now pedestrian/car accidents that are most prevalent. Less people are being killed or injured on the highway and more walking as large trucks cannot see the pedestrians/bicyclists. The vehicles are too big. |
| :---: | :---: |
| Road conditions | Flagstaff's poor road design |
| Road conditions | Infrastructure design and car-centric everything |
| Road conditions | I've never seen a crash. What I've seen is too many lanes for driving and little or no place for pedestrians and bikes especially when there is snow |
| Road conditions | Lack of infrastructure and roadway congestion |
| Road conditions | Lack of proper infrastructure for street crossings and sidewards to walk along roads |
| Road conditions | Lack of road maintenance and proper pedestrian crossings, as well as nonseparated bike lanes. |
| Road conditions | Lack of signage and enforcement of safety laws for pedestrians and bikes. The city has prioritized cars. |
| Road conditions | Left hand turns |
| Road conditions | Not enough streetlights or railroad crossings |
| Road conditions | Prioritizing the safety and convenience of drivers over bikes/pedestrians, confusing road layouts, not separating cars from bikes/pedestrians |
| Road conditions | Road design that encourages speeding and lack of biking and walking infrastructure |
| Road conditions | I'd leave that to someone studying it instead of anecdotal guesses from me on sporadic data points. As a biker who bikes often, those weird curb things on the bike lane lines freak me out and have caused me to nearly crash a few times. They cause issues with trash/recycling bins and not being able to exit the lane quickly. Or if you need to pass another biker. |
| Road conditions | Inconsistent traffic patterns |
| Road conditions | Gridlock, overpopulation, drivers in a hurry |
| Road conditions | I don't know. I worry about the accessibility of sidewalks with barriers, snow, and debris. I think the installation of the concrete bike barriers on beaver and butler have made travel more dangerous for bikes and vehicles. |
| Road conditions | Streets are poorly engineered for pedestrians and cyclists. Highways through town are now residential streets. |
| Road conditions | Vehicle to vehicle is rear end crashes (stop/go traffic) too many commercial driveways- vehicle/ped crash is crossing at unmarked locations and behavioral (drunk pedestrians) |
| Road conditions | Blind intersections. . |
| Road conditions | Bad infrastructure that exposes pedestrians and cyclists to vehicle traffic and encourages dangerous speeds |
| Road conditions | Bike lanes that aren't connected. When there's not a well-maintained, dedicated bike lane it is very unsafe for cyclists. |
| Road conditions | Blind turns, too many spots to access larger roads (lack of frontage roads), driver irritability with traffic light backups. |


| Road conditions | Car-focused infrastructure. Certainly, drivers could be safer, but our streets could <br> be designed better at the get go. |
| :--- | :--- |
| Road conditions | City infrastructure can't support the amount of traffic. Students reckless driving <br> especially in inclement weather |
| Road conditions | Confusing intersections. |
| Road conditions | Pedestrians and Bicyclists = lack of high-quality separation of vulnerable road <br> users from faster-moving traffic. |
| Road conditions | Poor design, lack of enforcement | \left\lvert\, | Road conditions | Poor infrastructure. Overly congested roads and distracted driving. |
| :--- | :--- |
| Road conditions | Poor planning road and transportation design. Overly high volume of traffic in a <br> system not designed for that level of use. All combined with added element of <br> phone distractions of drivers and pedestrians alike. |
| Road conditions | Poor road design, terrible traffic planning, lack of dedicated bike and pedestrian <br> paths |
| Road conditions | Poor road designs that prioritize vehicle movement and not the safety of cyclists <br> or pedestrians. |
| Roor street design |  | | Poorly planned intersections, with poor corner visibility, confusing stop signs, and |
| :--- |
| poor pedestrian crosswalk planning. |\right.


| Speeding | Going fast at unlikely places such as parking lots, stores, and restaurants. Cutting between buildings. Being timid at turns when they shouldn't be. |
| :---: | :---: |
| Speeding | Speed |
| Speeding | Speed |
| Speeding | Speed |
| Speeding | Speed |
| Speeding | Speed |
| Speeding | Speed |
| Speeding | Speed and attitude |
| Speeding | Speed and failure to yield |
| Speeding | Speed and inattention |
| Speeding | Speed limits too high |
| Speeding | Speed, distractions, impairment, drivers unfamiliar with area |
| Speeding | Speed, hurried drivers |
| Speeding | Speed, impairment, distractions, texting and driving by college kids, bicyclists don't use their lanes, and make swift changes that affect drivers |
| Speeding | Speed, not paying attention |
| Speeding | Speed, snow, and ice conditions |
| Speeding | Speed, stupid new bike concrete bumper things, ill-timed streetlights on Milton, MILTON! |
| Speeding | Speed. Speed kills man! Cellphones as well. |
| Speeding | Speeding |
| Speeding | Speeding |
| Speeding | Speeding |
| Speeding | Speeding \& feeling entitled (their time is more important than other peoples) |
| Speeding | Speeding and aggressive driving |
| Speeding | Speeding and all people just being inattentive to their surroundings |
| Speeding | Speeding and disregarding traffic laws |
| Speeding | Speeding and distracted driving; drivers also get frustrated with the traffic and make poor decisions. It is hard to get across town with kids in a reasonable timeframe due to all the traffic. |
| Speeding | Speeding and inattentiveness. |
| Speeding | Speeding and inattentiveness. |
| Speeding | Speeding drivers and poorly positioned signals for pedestrians especially near to the University. |
| Speeding | Speeding for the drivers. The City needs to do a better job during winter with snow/ice removal. |
| Speeding | Speeding, cars not paying attention to or running traffic lights or turning right or left into pedestrian crosswalks. |
| Speeding | Speeding, distracted, and inattentive driving. |
| Speeding | Speeding, distracted drivers |
| Speeding | Speeding, icy roads, inattentive |


| Speeding | Speeding, inattentiveness |
| :---: | :---: |
| Speeding | Speeding, not following traffic rules. I see SO MANY people ignore stop signs and often blow red lights. I don't see a lot of enforcement out. |
| Speeding | Speeding, people not paying attention, not coming to full stops |
| Speeding | Speeding, tailgating, and running red lights. Police do not seem to not care about the latter two. |
| Speeding | Unsafe, too fast roads |
| Speeding | Everyone is in a rush. |
| Speeding | Feeling rushed |
| Speeding | Going through amber to red lights |
| Speeding | High speeds and driver distraction |
| Speeding | People are in a rush and are often distracted. |
| Speeding | People are in too much of a hurry to get where they're going. They are often distracted by life influences as well. |
| Speeding | People being in a hurry and being distracted |
| Speeding | People being too rushed. Cutting in/out of traffic. There's often too much traffic to pull out when there is t a 4 way stop |
| Speeding | People driving cars and trucks are in too much of a hurry. |
| Speeding | people driving recklessly, too fast and on their phones |
| Speeding | People going too fast in their vehicle |
| Speeding | People in a hurry and not paying attention to driving and their surroundings |
| Speeding | People in a hurry who think rules don't apply to them. |
| Speeding | People running red lights |
| Speeding | People speeding and not yielding to others, including pedestrians and bicyclists. |
| Speeding | People who don't think traffic laws apply to them. |
| Speeding | I'm really surprised at how fast motorists drive in and around Flagstaff! Especially on Milton, RT 66, Ft. Valley Road, and through school zones. I seldom see motorists being stopped for speeding. Tailgating is another major problem in my opinion. This said, I believe the biggest contributor to safety on our roads is distracted drivers!! |
| Speeding | Being hurried, self-absorbed |
| Speeding | Being impatient |
| Speeding | Being in a hurry; not present |
| Speeding | being in a rush, driving too fast, following too close, inattention to bikes |
| Speeding | Drivers from Phoenix driving fast and with anger |
| Speeding | Drivers in a hurry. |
| Speeding | Drivers in two big hurry. |
| Speeding | In a rush |
| Speeding | Speed |
| Tourist | Out of towners |
| Tourist | Tourists |
| Tourist | Tourists |


| Tourist | Tourists and students unfamiliar with the area and conditions would be my guess |
| :---: | :---: |
| Tourist | Tourists not knowing where they are going and people (drivers, less and bikers) not paying attention |
| Tourist | Tourists, distracted drivers, layout of roads/sidewalks/bike lanes |
| Tourist | Tourist, distracted drivers |
| Tourist | Traffic congestion is leading people to take unnecessary risks. People are bringing city driving habits to a town with insufficient roadways. |
| Tourist | Visitors |
| Tourist | Visitors and students unfamiliar with where they are going and local road conditions |
| Tourist | Visitors from out of town driving the wrong way on one-way streets, parking in the road and not designated areas downtown, not using turn lanes properly. |
| Tourist | Out of town, angry drivers |
| Tourist | People from out of town |
| Tourist | Varied: lots of tourists, college town, inattentive drivers, drivers in a hurry, people driving in snowstorms when they should stay home |
| Traffic | Excessive traffic leading to hurried, frustrated drivers. |
| Traffic | Congested roadways. |
| Traffic | Congestion, lack of attention |
| Traffic | Crowded roads. It's hard to answer these questions because some roads are fine, some are chaotic and scary (such as Milton, Butler) |
| Traffic | The unfettered growth of Flagstaff has caused the traffic to increase with no thought to the traffic patterns. It was an ignorant, short-sighted move on the part of the city council to approve so much housing when there was no room for the necessary increase in traffic that went along with it. Short sighted. I will say stupid - or criminally negligent. |
| Traffic | Too many cars |
| Traffic | Too many cars and not enough distance between cars when driving |
| Traffic | Too many cars because other forms of transportation are not prioritized (why are we adding more roads instead of safer bike lanes and more bussing?) |
| Traffic | too many cars on the road due to the boom in student housing and tourism |
| Traffic | Too many cars, overpopulation, entitled drivers |
| Traffic | Too many drivers in too big of a hurry and distracted college students and tourists |
| Traffic | Too many people |
| Traffic | Too many people from out of town not paying attention or getting lost. I've noticed if they miss their turn they stop suddenly or make illegal U-turns... Maybe we need more traffic signs or bigger street signs. |
| Traffic | Too many people in a hurry to get where they are going. The city keeps putting up more housing and buildings and the road infrastructure can't handle this traffic anymore. Younger drivers feel that they are privileged and should have it their own way. The road conditions themselves, are horrendous! |
| Traffic | Too many people in too much of a hurry in too small an area |


| Traffic | Too many tourists that are unaware of surroundings, distracted drivers, people just NOT paying attention, sense of entitlement |
| :---: | :---: |
| Traffic | Too many vehicles, lack of roadways to deal with drivers. |
| Traffic | Too much traffic and too many distracted and hurry drivers |
| Traffic | Too much traffic for the available roadway, which leads to impatience and poor decisions. |
| Traffic | Too much traffic, tight roads, lack of sidewalks in residential areas, such as the southside. Horrible blind spots due to parked cars on streets like S Beaver |
| Traffic signal | The yellow light is way too short. People speed through red lights |
| Traffic signal | Flashing Yellow Lights and Speeding and Illegal Turns and or going around vehicles Not looking in crosswalks for pedestrians and/or bicycles in lanes Too Dark At night in areas with Pedestrians/Bikes not wearing reflective or light clothingDistracted Drivers and Disregard for Pedestrians/Bicycles. Drivers speeding and angry driving |
| Traffic signal | Inadequate traffic control |
| Traffic signal | Increased congestion on roadways coupled with non-local drivers. |
| Traffic signal | Much of the traffic gets bottle necked onto a few main arteries (Milton, 180, etc.) and people get more aggressive when dealing with that or trying to sneak around the bottle necks. |
| Traffic signal | Red light violations |
| Traffic signal | Right on red, driving through yellow light |
| Traffic signal | Right turns while looking left, merging, turning, weather. |
| Traffic signal | Running yellow and red lights. |
| Traffic signal | Traffic signals- we have a blinking yellow turn, a right on red, and then the crosswalk turns on when other traffic lights are also on. Any crosswalk sign should turn ALL lights red. |
| Vehicle modifications | Tinted windshields that prevent eye contact |
| Weather | Weather. |
| Weather | Bad snow drivers, drunks, cell phone (in that order) |
| Weather | Combo of weather and speed |
| Weather | Drivers driving into the sun on Rte. 66 seems to be common. If they can't see, why are they still moving forward? Also, drivers not noticing pedestrians in intersections |
| Weather | Snow |
| Weather | Snow |
| Weather | Snow/ice |
| Weather | Weather |
| Weather | Weather |
| Weather | Weather / careless driving |
| Weather | Weather; lack of attention (being in a hurry) |
| Weather | Ice |
| Weather | If we negate snow/ice as an option probably distracted driving. However, on that note, inexperienced drivers in winter conditions are a serious issue. |


| Weather | In winter slipping on ice, otherwise inattention |
| :--- | :--- |
| Weather | In winter, it's poor tire tread. Otherwise, it's lack of watching out for other drivers, <br> peds, cyclists. |
| Weather | Inclement weather |
| Weather | Insufficiently plowed, slick roads combined with driving too fast. There is also a lot <br> of through traffic on W University and S Highland Mesa road and not enough <br> room for parked cars and driving cars to pass safely. Very congested with many <br> using those roads instead of Rt 66 to access western neighborhoods (such as <br> Presidio in the Pines) |
| Weather | People (not just drivers!) not adjusting to road conditions - weather, darkness, <br> traffic, etc. |
| Weather | Reckless driving and pour road conditions. As well as ineffective traffic control <br> devices. |
| Weather | Right now, it would be icy road conditions. |
| Weather | Road conditions |

Safe Streets Save Lives

## APPENDIX D: SURVEY QUESTION \#8

| Q8. What is one thing you think public agencies could do to make it safer to travel in our community? | MetroPlan Region |
| :---: | :---: |
| Topic | Open-ended Response |
| Advertisement | Social media tips on driving safety and courtesy in multiple languages that reach our community. There should not be a tax increase or special bond to accomplish agency involvement. |
| Advertisement | Post readable signs that say things like: "Pay attention while driving." "Don't text \& drive." "Don't tailgate." |
| Advertisement | More public outreach campaigns about safe driving in Flagstaff. |
| Advertisement | More public outreach/enforcement for stopping at stop signs and following traffic rules |
| Advertisement | Work to change the culture of driving so that speed and convenience are not the primary goals of our road system but rather safety. |
| Advertisement | Do workshops or infographics about safely driving in snow |
| Advertisement | Informing the public about laws and cyclists understanding road laws. Knowing where the FUTS trails are and how to access them. Know that cyclists should be wearing visible outerwear, lights, and helmets. |
| Advertisement | Messaging to prioritize safety and sanctity of life. Alternative routes (with tolls) to tourist sites |
| Advertisement | Promote better pedestrian options, e.g., sidewalks without numerous business driveways such as on Milton Road. |
| Advertisement | Public safety campaigns |
| Alternate travel | Prioritize non-motorized travel |
| Bike / Ped improvements | More pedestrian and bicyclist-centered safety education for drivers |
| Bike / Ped improvements | More pedestrian and bike paths along congested corridors like Milton and Country Club |
| Bike / Ped improvements | More pedestrian/bicycle crossings with flashing lights, more enforcement, speed humps, rumble strips to get drivers to pay attention near pedestrian crossings or stop signs. |
| Bike / Ped improvements | More well-established bike lanes, stronger traffic law enforcement, better planned roadways, restrictions on development. |
| Bike / Ped improvements | Narrow roads and better bicycle and pedestrian infrastructure |
| Bike / Ped improvements | Need to invest in separate travel lanes for cyclists (and more attention to safe pedestrian conditions also) |
| Bike / Ped improvements | Often bike paths just disappear. Bike paths need to be continuous and connected. On top of the hill on Lone Tree and by the hospital the bike lanes disappear for a short section leaving bikers in a car lane with no warning and nowhere to go. Additionally, cross walks running parallel to the train tracks do not change if a train is running. If a biker is not early |


|  | enough to a red light to press the crosswalk button, then we do not get a walking symbol. The worse intersection is ponderosa and 66 . |
| :---: | :---: |
| Bike / Ped improvements | Physical separation between auto and bicycle traffic |
| Bike / Ped improvements | Prioritize the safety of pedestrians and bikers over the eternal struggle to add more lanes, reduce traffic, etc. If you make it safe and a relaxing experience to walk and bike to work, then people won't feel the need to drive to be safe. |
| Bike / Ped improvements | Protected bike lanes, more safe crossings for pedestrians, increase bus use by making it free and more frequent |
| Bike / Ped improvements | Protected bike lanes, more traffic circles, ped/cycling overpasses at busy intersections |
| Bike / Ped improvements | Provide more lane space or protected lanes for those who are at the most risk (cyclists/pedestrians) |
| Bike / Ped improvements | Provide shared paths for cyclists and pedestrians physically separated from roads, expand the FUTS system, expand the bus system. |
| Bike / Ped improvements | Support cyclists more- more cycling safe lanes \& toads |
| Bike / Ped improvements | True, safe bike \& walkways to alleviate auto traffic |
| Bike / Ped improvements | We need more dedicated bike/pedestrian lanes |
| Bike / Ped improvements | 1) build more designated bike and ped crossings (at grade and above/below grade) ...fill in missing key corridor sidewalks (example: north 4th street- make it happen! use power of eminent domain if needed, turn backs on ADOT roads (Milton, W Route 66, Humphry's, part Hwy 180) will be only viable pathway to achieving community goals for bike ped crossing/improvements. |
| Bike / Ped improvements | A pedestrian overpass in the most pedestrian used districts (i.e., downtown and Butler at San Fran and Beaver) The only good pedestrian tunnels/overpass are at Buffalo Park and at the Butler 5 points interchange at Ponderosa Pkwy. the most highly trafficked pedestrian thoroughfares are downtown and anywhere close to campus and there is little infrastructure to bypass those areas as a pedestrian. |
| Bike / Ped improvements | Add more continuous greenways across the city, make bike lanes on every road, not just some, etc. |
| Bike / Ped improvements | Add more separate bike and pedestrian paths |
| Bike / Ped improvements | Be a lot more creative and progressive (looking at your engineers, ADOT, etc.) about utilizing known traffic calming and bike/ped safety features that have been tested and proven effective in other cities, but which aren't being employed (yet!) in Flagstaff. More crosswalks (e.g., by Fratelli's on 180, across Milton, etc.), more protected bike lanes, wider shoulders, better street clearing and cleaning of snow, cinders, etc., |
| Bike / Ped improvements | Better bicycle lanes, slower speed limit in town |
| Bike / Ped improvements | Better bike and pedestrian routes. |
| Bike / Ped improvements | Better bike lanes |
| Bike / Ped improvements | Better bike lanes |
| Bike / Ped improvements | Better bike/pedestrian paths |
| Bike / Ped improvements | Better delineated bike lanes. |
| Bike / Ped improvements | Better designed intersections: that provide ped/bike crossing |


| Bike / Ped improvements | Bicycle infrastructure |
| :--- | :--- |
| Bike / Ped improvements | Bicycle training about protocol and laws. Bikes should be walked in <br> crossing streets in crosswalks. <br> Bicycle/pedestrian centric focus |
| Bike / Ped improvements | Bike lane connectivity and protected bike lanes. I can't get to all the places <br> Ineed to via safe bike lanes. This is especially true right now with FUTS <br> being snowy/muddy. |
| Bike / Ped improvements |  |
| Bike / Ped improvements | Bike lanes and reduce motorized travel in downtown area |
| Bike / Ped improvements | Bike lanes pedestrian sidewalks |$|$| Bike / Ped improvements | Bike lanes separated by barriers |
| :--- | :--- |
| Bike / Ped improvements | Bike lanes that are well marked, more sidewalks- ex 4th Stalin down |
| Bike / Ped improvements | Bike only lanes |
| Bike / Ped improvements | Bike paths |
| Bike / Ped improvements | Bike paths separate from streets. I would love to ride my bike to the <br> grocery store, yoga class, downtown, but I don't because I'd have to ride <br> on the 66-business loop |
| Bike / Ped improvements | Bikes off the roadway and on a wider sidewalk <br> Bike / Ped improvements |
| Build complete networks of protected pedestrian \& cyclist infrastructure, <br> implement traffic-calming features, allow more housing close to town to <br> reduce the need to drive |  |
| Bike / Ped improvements | Build independent, separate bike lanes. |
| Bike / Ped improvements | Build more bike/walk roadways, police areas with potential for crashes <br> Build safer/walkable communities, allow for mixed zoning, limit short <br> term rentals |
| Bike / Ped improvements | Cycling and pedestrian routes that are not on roads more busses and limit <br> driving in high pedestrian areas |
| Bike / Ped improvements |  |


| Bike / Ped improvements | More bike lanes and sidewalks and better plowing of bikes lanes and sidewalks during snow events so pedestrians/bikers have appropriate transit areas and aren't forced into the road due to snow |
| :---: | :---: |
| Bike / Ped improvements | More bike/pedestrian friendly sidewalks and bike lanes, infrastructure |
| Bike / Ped improvements | More bike/pedestrian shoulders. More policing for aggressive drivers. |
| Bike / Ped improvements | More continuous sidewalks and bike lanes. It would also be helpful to clear cinders from sidewalks and bike lanes after ice melts, if possible. Thank you! |
| Bike / Ped improvements | More crossing paths where lights are too far apart, put in a crossing path with signals |
| Bike / Ped improvements | More crossing signals, slower speed limits (with enforcement), cross light interval dedicated to pedestrians only -not shared with traffic turning into crosswalks. Stop using the state highway excuse to do nothing to mitigate problems on Fort Valley Rd. |
| Bike / Ped improvements | More crosswalks for pedestrians |
| Bike / Ped improvements | More crosswalks, more sidewalks, wider sidewalks, clearly marked bike lanes, making it clear that bikes must also obey rules of the road |
| Bike / Ped improvements | More cycling lanes |
| Bike / Ped improvements | More dedicated lanes for bikes and buses. More pedestrian crossings |
| Bike / Ped improvements | More emphasis on bikers and pedestrians, better drivers ed |
| Bike / Ped improvements | More pedestrian/bike paths off the main roads. |
| Bike / Ped improvements | More Protected bike lanes |
| Bike / Ped improvements | More separate walking/biking trails |
| Bike / Ped improvements | More separated bike lanes from the road |
| Bike / Ped improvements | More separate biking and walking paths. The FUTS is great, but not always convenient, especially in the winter |
| Bike / Ped improvements | Pedestrian bridges |
| Bike / Ped improvements | Pedestrians' 1st |
| Bike / Ped improvements | Safer bicycling infrastructure |
| Bike / Ped improvements | Safer bike lanes |
| Bike / Ped improvements | Segregate bikes and vehicles |
| Bike / Ped improvements | Separate bicyclist from pedestrians and from motor vehicles |
| Bike / Ped improvements | Separate bike and pathways away from roadways |
| Bike / Ped improvements | Separate bike/pedestrian paths |
| Bike / Ped improvements | Separate roads from bike/pedestrian paths |
| Bike / Ped improvements | Separated and consistent bike infrastructure. |
| Bike / Ped improvements | Separated bike and pedestrian ways |
| Bike / Ped improvements | Separated bike and pedestrians' paths. More crossings. |
| Bike / Ped improvements | Separated Bike Lanes |
| Bike / Ped improvements | Separated bike/ped infrastructure |
| Bike / Ped improvements | Flashing ped crossing lights for crossing Milton from Butler (to Clay) |
| Bike / Ped improvements | Follow the NACTO and FHWA guidelines for determining what types of bike facilities should be used. |
| Bike / Ped improvements | For bikes, better bike lanes on Butler |
| Bike / Ped improvements | Get the bikes if the roads |

Sare Streets Sare Lives

| Bike / Ped improvements | Improve ped \& bike infrastructure, slow people down, make intersections safer |
| :---: | :---: |
| Bike / Ped improvements | Improve protected pedestrian/bicycle road crossings and routes along busy routes. |
| Bike / Ped improvements | Improve the bicycling infrastructure |
| Bike / Ped improvements | In areas where there are crosswalks with flashing lights, please don't make the pedestrian press another button at the median. Please stop traffic both ways automatically. Many pedestrians assume the light is blinking all the way across and step into traffic. |
| Bike / Ped improvements | Increase dedicated bike lanes (and keep them clear of snow/cinders so they can be used year-round). Re-set traffic lights for increased flows. |
| Bike / Ped improvements | Increase the number and safety of bike lanes and increase the volume of public transit to reduce the number of cars on the road. |
| Bike / Ped improvements | Make a crosswalk on fort valley from Fratellis to neighborhood |
| Bike / Ped improvements | Make bike/Ped areas |
| Bike / Ped improvements | Make Flagstaff a pedestrian and bicyclist friendly town. Provide infrastructure and public awareness campaigns for travelers, other than traveling by car. |
| Bike / Ped improvements | Make it easier not to drive! Increase transit service and ped and bike infrastructure. Make direct ped/bike connections where circuitous roads make it unreasonable to walk or bike. Stop allowing neighborhoods to be designed for cars: circuitous/cul-de-sac, wide lanes and rounded street corners that encourage speeding. Enough backward, limiting ADOT rules: take back Flagstaff's roads! |
| Bike / Ped improvements | Make more bike and walking paths. And clear them in the winter |
| Bike / Ped improvements | Make more bike/pedestrian lanes that are separate from the car lanes like Route 66 bike lane |
| Bike / Ped improvements | Make more cross walks to increase safety for pedestrians and the disabled. |
| Bike / Ped improvements | Make more designated (separate) paths for bikers and pedestrians (well away from roads), and expand roads for drivers to reduce traffic |
| Bike / Ped improvements | Make San Francisco street one way + bike lane |
| Bike / Ped improvements | Make tunnels for bike and pedestrian |
| Bike / Ped improvements | Pedestrian and bicycle infrastructure |
| Bike / Ped improvements | Pedestrian and bicyclist education |
| Bike / Ped improvements | Pedestrian and cyclist education regarding traffic laws. Start enforcing pedestrian laws instead of targeting drivers. I have had many near misses when turning at a light and a pedestrian or cyclist bolts into the road against the crosswalk signal |
| Bike / Ped improvements | Communicate to drivers that pedestrians are crossing by giving them a red arrow (must stop) when pedestrians have signaled, they want to cross. |
| Bike / Ped improvements | Construct lanes for bikes and pedestrians |
| Bike / Ped improvements | Create $m$ be courteous ore dedicated bike lanes |
| Bike / Ped improvements | create dedicated bike paths removing cyclists from vehicular traffic |
| Bike / Ped improvements | Create fully separated bike lanes (not just lines or cones on the road). Maintains sidewalks and ensuring new developments have fully speedster walking and biking paths from roads. |

Sare Streets Sare Lives

| Bike / Ped improvements | Establish bike and pedestrian corridors in high traffic areas |
| :---: | :---: |
| Bike / Ped improvements | Have dedicated bike lanes and put out a map of bike, safe routes, and streets. |
| Bike / Ped improvements | Have more clearly marked crosswalks. Make crosswalks more visible and maintain the striping well. Use alternative, more in your face striping and symbols for cross walks. Make "every corner a crosswalk" the rule for Flagstaff. (Check out Corvallis, OR for more on that. It is like heaven for cyclists and pedestrians there. |
| Bike / Ped improvements | I have been impressed by Phoenix and Tucson bikeways, where half of or the entire street is made available to bikes. This would be a great use of the new overpass at Lonetree. Half of it could be a well-designed bikeway/pedway. And do something about Milton Ave.; every time I survive a drive up that road, I think it's a miracle. Keep Snowbowl at its 2005 approved capacity and require people to register in advance to decrease number of drivers on road (and number of intoxicated drivers leaving). |
| Bike / Ped improvements | Implement SAFER pedestrian and bike infrastructure (separate from main roads). If you add it, people will use it. Flagstaff is not setup well for cars, but it has a lot of potential to be set up for bikes and pedestrians especially with the university nearby. |
| Bike / Ped improvements | Increase visibility for pedestrians and cyclists. Utilize messaging and ad campaigns about courteous and respectful driving. |
| Bike / Ped improvements | Invest in better bike and pedestrian lanes, more traffic signals, and more enforcement |
| Bike / Ped improvements | More completely separated bike/walking trails. Funnel traffic away from town. Increase safety of biking/walking, so more people feel comfortable doing it. |
| Bike / Ped improvements | Obviously better bike lanes look at Milton around NAU also, note that bikes are considered as vehicles and yet the pressure plates controlling stop lights at intersections are not sensitive to bike weights so that forces bikers to become pedestrians |
| Bike / Ped improvements | Require bicyclists to have warning bells for pedestrians |
| Bike / Ped improvements | Sheltered bike lanes, frequent bus schedule |
| Bike / Ped improvements | More separate and dedicated bike and pedestrian travel ways, especially through downtown, including underpasses and overpasses. Another thing is designing roadways with boulevard strips, unlike Milton which is a pedestrian nightmare with sidewalks next to 40 mph drivers. Plus, there is only one pedestrian crossing for a half mile stretch. |
| Cellphone regulations | Find ways to limit phone usage |
| Cellphone regulations | High priced tickets for cell phone use while operating a vehicle and impaired drivers. |
| Cellphone regulations | Stop people from using their phones; it is getting harder and harder to get onto 180 from my neighborhood, need to stop 180 traffic at Meade Louise Beale. |
| Cellphone regulations | Stricter rules on texting/driving |
| Cellphone regulations | have a cell phone task force |
| Cellphone regulations | Phones or speeding |


| Cellphone regulations | Ban phones while driving. Oh, wait! It's already banned. |
| :---: | :---: |
| Cellphone regulations | Eliminate cell phone use |
| Cellphone regulations | Enact hands free driving. |
| Cellphone regulations | Enforce hands free law |
| Cellphone regulations | Enforce hands free phone law |
| Cellphone regulations | Enforce laws against texting while driving |
| Cellphone regulations | Enforce laws like no texting while driving, obeying speed limits, etc. |
| Cellphone regulations | Enforce laws on the books . . . hire police just for traffic violations. |
| Cellphone regulations | Enforce not using phones while driving |
| Decrease population | Decrease population, stop development |
| Decrease population | Less development |
| Decrease population | Listen to your customers, make timely solutions. Growth is slowly killing the limited travel options in this town. |
| Decrease population | Slow down the growth and attracting valley idiots |
| Decrease population | Terminate cancerous, endless, growth. |
| Driver education | Education and enforcement of traffic laws. |
| Driver education | Educate cyclists on how to ride in traffic |
| Driver education | Educate drivers, cyclists \& pedestrians to be more aware of their surroundings. I frequently must drive at night \& am often surprised by a pedestrian who is almost invisible due to dark clothing, non-reflective gear, etc. |
| Driver education | Educate NAU students on purpose of the pedestrian light on Butler |
| Driver education | Educate the public on basic traffic rules. Turn into closest lane available, use a turn signal, don't obstruct traffic. |
| Driver education | Education |
| Driver education | Mandate drivers school again, please. |
| Driver education | Reduce police and educate drivers at all stages of life. |
| Driver education | Continuous education |
| Driver education | Public information and classes. Community patrol and outreach |
| Driver education | Teach children how drivers of cars and bicycles cannot stop quickly |
| Driver education | Teach young people the proper way to be a pedestrian/cyclist in the roads |
| Driver education | Training cyclists so that they know their responsibilities, especially in traffic. |
| Driver education | Unfamiliar drivers, rez and tourists |
| Housing regulation | Cut down on student housing and Airbnb |
| Housing regulation | Stop building high density housing off Milton and route 66 |
| Housing regulation | Stop building housing until you get the road infrastructure in a better place. |
| Housing regulation | STOP BUILDING NEW APARTMENT BUILDINGS UNTIL YOU GET THIS FIGURED OUT! How did you not think about this before? Now you're asking US to figure out the mess for you. You can't remove the extra housing, but consider, at least temporarily, decreasing the student population, or requiring more of them to live on campus. |
| Law enforcement | Start ticketing distracted drivers more frequently. Create separate facilities for bicyclists and pedestrians; increase crosswalks and add delayed crossings so turning cars don't try to run you over. Decrease |


|  | speed limits in pedestrian and cyclist heavy areas so any accidents that do occur are less likely to be fatal. There's a lot that could be done and I don't see much of it happening, to be honest. |
| :---: | :---: |
| Law enforcement | Stepped up enforcement of distracted driver rules. |
| Law enforcement | Strict distracted driver enforcement |
| Law enforcement | Stricter enforcement of traffic laws. |
| Law enforcement | Ticket distracted drivers |
| Law enforcement | Traffic law enforcement |
| Law enforcement | Unmarked police cars to ticket tailgaters. More pedestrian crossing lights |
| Law enforcement | Vigorous enforcement of existing laws |
| Law enforcement | Don't be predictable or have a pattern. Show up when they are expected. Pay attention to troublemakers, certain people hanging around by stop lights wanting money |
| Law enforcement | Fine bikers for not following rules (like stopping at signs, not riding on sidewalks), fine homeowners/renters for not shoveling sidewalks |
| Law enforcement | Get some officers out there to give some tickets for illegal stuff like turning through the crosswalk when the turn arrow is clearly red! Obviously, we can't have police at every intersection all the time. but I never see any officers at any intersections at any time. |
| Law enforcement | Have a flashing sign that can warn drivers when the light is about to go red. |
| Law enforcement | Have better signs, WAY better infrastructure that can hold locals and all the tourists, better protected lanes for cyclists, clearer sidewalks that are maintained for pedestrians. |
| Law enforcement | Have more police present, especially in school zones and at busy intersections. We live off Fort Valley and see a lot of tailgating and even some illegal passing. With that said, we also experience quite a few drivers going under the speed limit by ten or more miles. |
| Law enforcement | Have officers sit at intersections more often and watch people being distracted |
| Law enforcement | Have police give expensive tickets for phone use in cars |
| Law enforcement | Hold everyone to the same standard. I must be licensed and insured to drive. Other groups that use the roads do not. |
| Law enforcement | I know that the police department is understaffed, but I think the community would be safer if there were more officers out there ticketing people who violate traffic laws. I'm not one to recommend something like this, but in recent years, I've noticed too many occasions where people are driving dangerously and there are no police around to site them. |
| Law enforcement | I think if you just post marked patrol vehicles, it would make people pay more attention to the road. You don't need to give everyone tickets to get the job done. |
| Law enforcement | Increase accountability |
| Law enforcement | Increase traffic citations |
| Law enforcement | Increased enforcement and higher penalties for failure to obey the law. |
| Law enforcement | I've lived here long enough to see the difference from when we used to have police on patrol all over town, all the time, which made a huge |

Safe Streets Save Lives

|  | difference in safety and comfort level for driving. Today and for about the last 20 yrs. there are hardly any cops. |
| :---: | :---: |
| Law enforcement | More enforcement in congested areas |
| Law enforcement | More enforcement of distracted driving, stopping the war against the car, people are going to drive, we are a tourist town, people from Phoenix aren't going to bike to Flagstaff for the weekend, people are not going to walk/bike everywhere. Stop the BS we can't make the roads better or people will drive more, the city council considered a crazy's idea that the lone tree overpass "this is going to encourage people to drive" so let's not build it. That thinking doesn't improve traffic/safety! |
| Law enforcement | More enforcement of laws pertaining to vehicles, and drivers. I know in my neighborhood people park cars on the sidewalk, I call police, I am told room to walk around! There are numerous parking infractions all around neighborhoods, and police do not enforce laws, unless it is metered! Always gridlock at Beaver, Rt. 66 intersection? Never anyone ticketed. No accountability out on the roads, not enough police, and police visible? |
| Law enforcement | More enforcement of speed, red light running, and cell phone use while driving. |
| Law enforcement | More enforcement!!! Cameras on traffic lights. |
| Law enforcement | Patrol the neighborhoods and route 66 |
| Law enforcement | Please, for goodness' sake, enforce speeding and aggressive driving. I know that cyclists are at risk, but separate bike lanes only do so much. The main problem in our town now is that everyone drives like Californians ( $10-15 \mathrm{mph}$ over the speed limit) and it's incredibly dangerous. |
| Law enforcement | Pull people over more for driving recklessly, using their phones with their hands and give them tickets and ticket bicyclists for riding on the wrong side of the road. |
| Law enforcement | More traffic stops |
| Law enforcement | More enforcement |
| Law enforcement | More random police presence in high traffic areas to deter certain behaviors |
| Law enforcement | More traffic cops |
| Law enforcement | Ticket more |
| Law enforcement | Ticket non-signalers |
| Law enforcement | Ticket people for texting while driving |
| Law enforcement | Ticket people who are breaking the law! |
| Law enforcement | Ticket red light runners. Install cameras at controlled intersections. |
| Law enforcement | Ticket texters |
| Law enforcement | Ticket unsafe or speeding drivers. |
| Law enforcement | Ticket visitors |
| Law enforcement | Ticket those that violate the laws already on the books |
| Law enforcement | Have a bigger presence and enforce current laws instead of kowtowing to the local liberal some. |
| Law enforcement | Enforce vehicular laws in place and ticket all drivers using cell phones illegally, including police officers. |
| Law enforcement | Better enforcement |


| Law enforcement | Employ more police to enforce traffic laws, especially using phones while driving. I see it every single day and have witnessed many close calls or been delayed due to this. |
| :---: | :---: |
| Law enforcement | Enforce and cite for bicycle violations like not stopping at stop signs |
| Law enforcement | Enforce clearing of sidewalks to allow people to walk on the sidewalk and not on the street. |
| Law enforcement | Enforce current laws and rules |
| Law enforcement | Enforce driving laws |
| Law enforcement | Enforce driving rules such as stopping for pedestrians, giving bicycles space, slowing down, using indicators |
| Law enforcement | Enforce existing laws |
| Law enforcement | Enforce existing laws for minor driving violations. I think people have become accustomed to not completely stopping at intersections, racing to get through yellow lights, not paying attention to pedestrians or bicycles, tailgating, not obeying speed limits, etc., because law enforcement prioritizes call response and minor violations go unenforced. |
| Law enforcement | Enforce laws already on the books regarding distracted driving. |
| Law enforcement | Enforce red lights |
| Law enforcement | Enforce rules |
| Law enforcement | Enforce rules against blocking intersections (e.g., 66 and Humphreys) and blocking through traffic (e.g., when making a right turn from 66 to beaver when there is a train) |
| Law enforcement | enforce speed limits |
| Law enforcement | Enforce speed limits |
| Law enforcement | Enforce speed limits and curb "demonstrations of speed" |
| Law enforcement | enforce speed limits and other violations w/ speed radar signs and police |
| Law enforcement | Enforce speed limits and stop sign stops and ticket those who violate these laws. |
| Law enforcement | Enforce speed limits! |
| Law enforcement | Enforce speeding |
| Law enforcement | Enforce stop lines |
| Law enforcement | Enforce the law of no phone use and more severe charges |
| Law enforcement | Enforce the law. How many citations has FPD issued since law changed to hands free driving? |
| Law enforcement | Enforce the laws |
| Law enforcement | Enforce the laws |
| Law enforcement | Enforce the laws for all |
| Law enforcement | Enforce the laws more often |
| Law enforcement | Enforce the speed limit. |
| Law enforcement | Enforce the traffic laws |
| Law enforcement | Enforce traffic laws, a police officer once ran a stop sign and almost hit me on my bike, he thought it was funny. |
| Law enforcement | Enforcement |
| Law enforcement | Enforcement |


| Law enforcement | Enforcement |
| :---: | :---: |
| Law enforcement | Enforcement as in aggressive enforcement. |
| Law enforcement | Enforcement of traffic laws on everyone pedestrian traffic and bicycles as well as e-scooter riders. A lot of bike accidents happen because the bicycle takes for granted a loose interpretation of the law claiming to be a pedestrian if something happens. Rather than they are considered a vehicle in motion by law so auto traffic rules apply. |
| Law enforcement | More police |
| Law enforcement | More police / ticketing |
| Law enforcement | More police writing tickets |
| Law enforcement | More policing |
| Law enforcement | More policing and ticketing |
| Law enforcement | More tickets for traffic violations. More awareness to sharing the road. Proper driver education prior to issuing driver's licenses. |
| Law enforcement | Educate the Police on proper and safe driving and enforce that in the community. Improve the roads. Flagstaff continues to develop without planning. Butler between 4th and Little America is developing massively yet no road planning. Put in pull-outs for the buses. Streamline the traffic light timing. Lower speed limits in neighborhoods. Use more roundabouts. |
| Law enforcement | For starters, FPD officers could model appropriate driving and use their blinkers and make safe turns and passes. I almost got hit by one coming out of their driveway on my bike because he was looking at his phone. |
| Law enforcement | FPD could follow up on a hit-and-run we experienced |
| Law enforcement | Give more moving violations and charge large fines for them. |
| Law enforcement | Give out a few more tickets to violators |
| Law enforcement | Give out far more tickets for speeding, tailgating and distracted driving. |
| Law enforcement | Give tickets so unskilled drivers are forced to go to traffic school. |
| Law enforcement | Give tickets to people on their phones. More police on the road. |
| Law enforcement | Improve traffic enforcement |
| Law enforcement | Increase patrol and enforcement of traffic laws throughout the city, in combination with lowering speeds in the city to 18 mph in residential streets and 25 mph inside the city limit elsewhere to protect everyone using streets and sidewalks, plus physically isolate autos from pedestrians/bikes. |
| Law enforcement | Make more of an appearance |
| Law enforcement | Police aren't doing anything to curb distracted drivers and running of red lights. |
| Law enforcement | police presence at high accident intersections and reduced speed zones |
| Multiuse path | Add sidewalks where not existing (Butler), bike lanes, traffic light timing improvements |
| Multiuse path | Build a separate transportation system for non-vehicular travel ... just like you would find in northern Europe |
| Multiuse path | Build more routes on the urban trail for bicycles that will take you anywhere into town safely. Make people aware of how pedestrian crosswalks work. I've seen drivers not understanding when to stop. Also, |

Safe Strects Save Lives

|  | pedestrians do not push the button to cross. Hire more police officers to help with traffic enforcement. |
| :---: | :---: |
| Multiuse path | More separate paths with as few street intersections as possible. |
| Multiuse path | More sidewalks and crossings for pedestrians |
| Multiuse path | More sidewalks, better signage (signs are not always in logical, useful places so driver's change lanes at the last minute), widen roads. |
| Multiuse path | More signs and lights in dark areas because it's scary to walk down a very dark street |
| Multiuse path | Continue to improve the sidewalk, trail, and bike lane network |
| Multiuse path | Create separate sidewalks for both pedestrians \& bikers. Get people to use their signals! |
| Multiuse path | Create very large sidewalks through town that are both pedestrian and bike traffic only, elevated off the street. And heavy, heavy fines and patrols for speeding in residential zones |
| Multiuse path | Develop more separated travel lanes/sidewalks that encourage alternate transportation like walking and biking |
| Multiuse path | Ensure there are adequate crosswalks where needed, stop lights instead of stop signs where needed to prevent accidents. And officers doing their jobs and pulling people over for the things in this survey and not joining them by briefly turning their lights on to speed and then turn them off right away. |
| Multiuse path | Offer sidewalks in areas that don't have them for disabled, elderly and families who want to walk and be safe. Try to increase patrol in highly affected zones of speed and accidents/school zones |
| Multiuse path | Open more multi-use paths to get bicycles and pedestrian traffic off the roads. |
| Multiuse path | Plan walking routes and cycling routes separated from major car routes (not just the Butler/Beaver experiment) |
| Multiuse path | Provide alternate transportation infrastructure like trails, pathways, and efficient and available public transportation. Flagstaff needs a safe, comprehensive, interconnected, easy to access network of trails so that walkers and bikers can get from anywhere to anywhere in Flagstaff without conflict from vehicular traffic. |
| Multiuse path | Provide separate walking and biking paths on roads where the speed limit is over 35 mph . Also, reassess road speed limits in residential areas where posted speed is 35 or greater and reduce the limit where walking paths are not available |
| Multiuse path | Sidewalks and sidewalks that exist are usable, proper bike lanes on all roads to include Milton, discourage driving including tourists |
| Multiuse path | Sidewalks in areas that do not have them and cleaned after cinder gets on them. division between bicycle lanes and traffic |
| Multiuse path | Sidewalks in every neighborhood and traffic calming measures in neighborhoods |


| Multiuse path | Since I am answering as a cyclist, I would like more YEAR-ROUND access to urban trails. Motorists are simply not paying attention. Rather than putting in those barricades which I have seen so many people just run over (seems to be a sporting event) I think the city should use funds to build paved urban trails where bikes and cars are not necessarily in contact. I personally enjoy riding the urban trail that is along Rt 66 as an example. |
| :---: | :---: |
| N/A | Not sure. Making things safer depends mostly on individual actions. |
| N/A | Depends on what part of the town. Westside you are doing OK |
| N/A | Nothing will make a difference. Need a comprehensive suite of actions |
| N/A | Not sure |
| N/A | Quit responding to accident calls. |
| N/A | STOP impair humans with lethal injections for pharm, doc, hospital profits |
| Plan | Better and more progressive planning for our community (not just tourists and students) |
| Plan | Follow the policy put in place (ATMP), and design projects that prioritize the safety of the most vulnerable users |
| Plan | Better enforcement of speed limit |
| Plan | Better engineering |
| Plan | Not sure it's entirely the job of public agencies (and in the current climate, urging by "The Government" might backfire). |
| Public transit | Better bus access |
| Public transit | better transportation options and less reliance on personal vehicle travel |
| Public transit | Bus Stops: Make bus stops safer. |
| Public transit | Encourage using busses, having transportation to specific places from parking lots, enforce traffic rules for bicyclists |
| Public transit | Work on getting cars out of the city (especially with tourism). This will involve creating amazing public transportation \& making alternative modes of transportation the preferable way to get around. |
| Public transit | Focus greater attention on improving safety, reliability, and access to alternative modes of transportation |
| Public transit | Increase accessibility of public transit and pedestrian traffic, including better snow removal on city sidewalks and by bus stops. |
| Public transit | Increase alternative transportation options and make the streets safer for bikes/peds, leading to decreased congestion. |
| Public transit | Increase car independent infrastructure |
| Public transit | Increase infrastructure for alternatives (bussing, biking, walking) and decrease need for cars |
| Public transit | Increase public transit, reduce road speeds, adopt road infrastructure like Denmark and use "strong towns" methods |
| Public transit | I'm not sure. Flagstaff has a good public transit system as it goes. Perhaps more carpooling, better transit to places outside of city center. A public awareness campaign about the dangers of large vehicles for peds and bikes. |
| Public transit | Invest in alternative options to cars. |
| Public transit | Invest more in non-car transportation routes |


| Public transit | Prioritize transit, pedestrians, and bikes at least a fraction as much as you do cars. |
| :---: | :---: |
| Public transit | We need to focus on alternative forms of travel. Expanding the number of vehicle lanes has been empirically shown to marginally improve congestion. Adding infrastructure that supports buses, bikes, and other forms of transport (walkers/scooters) will drastically improve our transportation infrastructure capacity. SPECIFICALLY, ADD A BIKE LANE/ SEPARATED PATH ON BUTLER AVE.. |
| Regulations | Prioritize vulnerable road users in every local transport policy decision (i.e., adopt/implement Vision Zero policy, view urban mobility strategies with hierarchy placing most vulnerable users atop). |
| Regulations | Make it illegal for homeless to stand on the medians at lights. I have had to avoid them multiple times because they step down into the road. They are a distraction for drivers. Start ticketing for speeding more frequently so people hear about it and stop. There is too much traffic to not have more enforcement of laws. My daughter is learning to drive, and her \#1 complaint is that other drivers do not follow the laws. And how does that make it safe for her if she is? She is scared every time she drives |
| Remove bike | Improve bike lanes, get rid of the installed concrete barriers on bike lanes, incentivize not driving, better public transit(trains?) |
| Remove bike | Get rid of those temporary bicycle lane curbs: watch for idiot student drivers; CREATE ALTERNATIVE ROADS (J W Powell) TO ALLEVIATE HEAVY TRAFFIC ON MILTON, BUTLER, AND ROUTE 66! |
| Remove bike | Get rid of the stupid bike lane barriers you installed on Beaver and Butler. They make it MUCH worse for everyone due to the inability to clear snow and ice from the roadway. |
| Remove bike | Get rid of bike lanes and require bicyclists to use and follow traffic laws. I've never seen a bicyclist getting a traffic ticket. |
| Remove bike | Get rid of those bike lane barricades on Butler - and-Improve the road situation to accommodate the amount of traffic |
| Remove bike | GET RID OF THOSE CONCETE PARKING BLOCKS ON BUTLER!! |
| Remove bike | Remove the barriers along the road separating the bike lane near the university on Beaver. The bike lane barriers are useless. The snow falls, the plows push the snow into the bike lane, and now the bicyclists are now riding in the already super narrow car lanes. This bike lane barrier is a total failure, and the need to be removed immediately. |
| Remove bike | Remove the bike lane dividers. Educate cyclists on defensive driving skills and make sure they understand their responsibilities. |
| Remove bike | Remove the lane curbs on Milton and go up by the hospital. They restrict the necessary flow of traffic. |
| Remove bike | Remove the stupid bike lane barriers on Butler and Humphries |
| Remove bike | Removing the separated bike lanes on Butler and instead extending the sidewalk four or five feet to allow for a dedicated bike lane that can be easily maintained year-round. |
| Remove bike | Stop putting in bike cement lanes. That is dangerous for cars. Bad design. |
| Remove bike | Take out the bicycle railing on the roads, they cause more damage than benefits |

SAFETYPLAN

| Remove bike | The bike lanes should not be alongside the main roads! Plan roads better to accommodate the current traffic and future traffic. |
| :---: | :---: |
| Road improvements | Research ways to catch up road systems to support the size of community. Cap enrollment at NAU |
| Road improvements | Resolve the overcrowded roadways with more east-west roadways. |
| Road improvements | Safer road design that does not facilitate fast vehicular speeds |
| Road improvements | Separating VRUs from motor vehicles |
| Road improvements | Significant redesign and planning. Separate Foot/Bike traffic from motor vehicles. Provide more options for foot/bike traffic to get around town without interacting directly with motor vehicles. Get progressive! |
| Road improvements | The crosswalk for the kids at the bottom of Forest and Hwy 180 is DEADLY. Needs a light |
| Road improvements | Updated infrastructure for alternatives to cars, and more enforcement of traffic laws for all users. |
| Road improvements | Visual indicators (cones or signs) when traffic is down to one lane downtown due to snow and limited street parking. |
| Road improvements | Put a light in for 180 to Cedar is \#1. I have called regarding this and apparently this intersection is not local, but it makes it very scary to cross to go up that hill and cross 180 . If I ride my bike to work or home, I worry I will get hit and taken out on my bike. |
| Road improvements | Put in pull-outs for buses, clear sidewalks in winter, put in more bike lanes, enforce bad driving behavior, put in more roundabouts, encourage safe driving, fix potholes, address traffic light timing, |
| Road improvements | Redesign the intersections to help traffic flow with more consistency, be consistent with crosswalk types to avoid confusion, and be consistent with road markings and signs for the same reason. Then do appropriate enforcement. |
| Road improvements | Public agencies could increase safety for bicyclists and pedestrians by clearing the snow from the sidewalks and bike lanes along with making sure that most roads have a bike lane and or a sidewalk. |
| Road improvements | Refresh paint for lane lines much more often. Today, $2 / 18 / 23$, most of the traffic lines in Flagstaff are completely gone. |
| Road improvements | Complete JW Powell. increase sight distance at corners by removing or trimming vegetation |
| Road improvements | Complete sidewalks, use traffic control devices (like roundabouts, speed bumps and lights) to "wakeup" drivers. |
| Road improvements | Complete the roadways that have been approved by voters and plan on creating the roads that are on the city's master plan |
| Road improvements | Consider widening streets that can be widened. Shutting down others. |
| Road improvements | Create a bypass downtown. Enact and enforce proximity to the curb parking. Route Snowbowl/ Grand Canyon traffic around town so it is not congesting our roads. Move railroad tracks to follow I-40 vs through downtown |
| Road improvements | Cross walk lights that the pedestrian can see to confirm it is operating and the car should stop. |


| Road improvements | Design better roads. University alignment at Milton - how hard is it to <br> figure out that is a terrible idea and yet it takes the city 50 years to fix it. <br> Why? |
| :--- | :--- |
| Road improvements | Develop and construct new roads, especially to/from downtown area. <br> Road improvements <br> Easy to navigate corridors for tourists. Separate local traffic routes for the <br> communities. Very direct FUTS routes that are separated from the roads |
| Road improvements | Explore additional FUTS opportunities for pedestrians and bicyclists. More <br> one way in/One Way exits along RTE 66 and Milton. Also provide <br> extended routes to the outskirts of the City limits on NAIPTA. JWP/4th <br> Street, Lonetree overpass, and University Drive can't come soon enough. <br> However, I think it's time to start exploring alternative routes to <br> Snowbowl from I-40 (A-1 Mountain). |
| Road improvements | Have proper signs in the proper areas suggest stop signs, yield signs, <br> crosswalks, etc. |
| Road improvements | Improve and widen road systems |
| Road improvements | Improve intersection of Milton and University (people making left turn <br> onto University on NB Milton often hit head-on by drivers coming SB in <br> the center lane) |
| Road improvements | Increase the size of Sgt James traffic division |
| Road improvements | Install roundabouts at key locations in town and create more pedestrian <br> walkways. Better snow removal for pedestrian walkways. Maybe a way to <br> get to Fort Valley Rd. without going through downtown |
| It seems like the intersection at Route 66 and Switzer Canyon is where I |  |
| see most of the crashes. The intersection doesn't seem designed to |  |
| handle the traffic, but with the Dog Haus there isn't much option for a |  |
| redesign, but something to keep in mind with new intersection layouts. |  |
| Also, keeping consistent with design would likely cause less confusion for |  |
| tourists (when every street/intersection has a different layout it can be |  |
| hard to understand). |  |


| Road improvements | Better infrastructure, areas like Milton and 4th should have barriers to inhibit left turns. |
| :---: | :---: |
| Road improvements | Better infrastructure. More walkways for pedestrians and bicyclists that are separate from cars |
| Road improvements | Better lighting, improved roads for braking, bus street alcoholic to sanctuary cities |
| Road improvements | Better roads |
| Road improvements | Better traffic flow and more lanes |
| Road improvements | Build more roadways and widen the current roadways |
| Road improvements | Design for users other than cars and commercial trucks |
| Road improvements | Design roads and traffic signals so drivers are not so frustrated. |
| Road improvements | Design roads to have lower speeds (e.g., narrowing road lines, adding chicanes, adding bollards to protect bike lanes, etc.) |
| Road improvements | Design roads to slow cars down; complete streets and bike/ped safety priorities |
| Road improvements | Design roadways for traffic calming and multimodal use |
| Road improvements | Design streets to accommodate traffic flow (urban planning) |
| Road improvements | more roundabouts |
| Road improvements | More roundabouts |
| Road improvements | More streetlights and railroad crossings |
| Road improvements | More traffic calming features. More safe bike routes that go somewhere |
| Road improvements | Well-lit streets, within dark sky parameters. Create bike paths. |
| Road improvements | widen roads |
| Road improvements | Widen sidewalks and separate bike lanes by narrowing lanes for cars |
| Road improvements | Wider roads |
| Road improvements | Wider roads |
| Road improvements | Work to improve infrastructure. |
| Road improvements | Add and dedicate more main artery options to navigate across town. |
| Road improvements | Add more roundabouts and pedestrian-focused infrastructure. Ex. bike lanes but not just painted line or a shoulder blocked off by a concrete slab. An actual pedway built for just people. |
| Road improvements | Road diet and traffic-calming to slow down vehicles, decrease the need for driving, better walking, and biking infrastructure |
| Road maintenance | Snow removal from sidewalks |
| Road maintenance | Take back the responsibility to clear all sidewalks and maintain them free of snow, debris, etc. to ensure better accessibility for pedestrians and wheelchairs. |
| Road maintenance | The city does not plow bike lanes in winter, worse they plow into bike lanes. This forces bikes into traffic with cars on icy roads. There is a complete disregard for biker safety by the city in winter. |
| Road maintenance | Use deicer during the winter months |
| Road maintenance | Don't fill the bike lanes full of snow \& gravel but give us our own bike lanes and plow them. I recently rode on the bike path along the train tracks, and it was treacherous with all the ice |
| Road maintenance | Have paved, maintained, and plowed in a timely manner bike and pedestrian paths that are removed from the road |


| Road maintenance | Increased funding for snow and ice removal |
| :---: | :---: |
| Road maintenance | KEEP road signals and lanes clearly visible and working rain, snow, or shine. |
| Road maintenance | Keep roads clear. Make the city walkable. Invest in public transport. Abolish parking minimums. |
| Road maintenance | Keep roads repaired, put in more roads, enlarge busy roads |
| Road maintenance | Keep snow and ice off the sidewalks and edges of the roads. Pedestrians and cyclists end up walking on the roads because there is nowhere else to walk. The ridiculous posts on Butler that are supposed to protect cyclists only make it impossible to clear the snow properly. At 7000 ft ice and snow are a factor for about $1 / 2$ the year |
| Road maintenance | On snow days, plow sidewalks. |
| Road maintenance | Paint lines more regularly |
| Road maintenance | Priorities maintenance and design based on most vulnerable. |
| Road maintenance | Prioritize clearing snow from sidewalks and bike lanes as much as car lanes. I take the bus to work and have a harrowing walk across downtown when the sidewalks are a snowy, icy mess. Biking isn't even an option. |
| Road maintenance | Clear and maintain sidewalks and bike lanes (including removing cinders!!!) |
| Road maintenance | Clear lanes of travel for pedestrians and cyclists |
| Road maintenance | Clear sidewalks in winter, also look at particularly dangerous pedestrian areas such as Linda Vista to Safeway on east side. No pedestrian options and lots of pedestrians going to the Safeway. No sidewalk at all north of Safeway, there is no option except to walk in the street. Same with walking from Linda Vista to the (nice!) walking path to Buffalo Park on Cedar. You must either climb in the forest or walk on the busy street. |
| Road maintenance | Clear snow and ice more efficiently from roads and bike lanes |
| Road maintenance | Clear the streets of snow. Tow cars out of the areas that are illegally parked, then clear the snow. |
| Road maintenance | Fix gaps in the sidewalk network. |
| Road maintenance | Fix markings and signs on streets indicating shared use with bicycles/pedestrians. More police enforcement of red-light runners, speeders, and reckless drivers |
| Road maintenance | Fix the roads!!! Repaint crosswalks and eliminate blinking yellow left turn lights. |
| Road maintenance | Fix the timing of the traffic lights. |
| Road maintenance | Flagstaff's roadways are a mess. Band-aid approaches like bike lane parking stops make things worse for everyone. Look at the WHOLE picture when making decisions \& take into consideration IT SNOWS here. Stuff that might work in Phoenix probably won't work in Flagstaff. Get the trains out of town more + longer trains have exacerbated Flagstaff's transportation problems and congestion. |
| Road maintenance | Plowing in such a way that large snow piles aren't created in turning lanes. |
| Road maintenance | Salt the roads |
| Road maintenance | Better plowing and shoveling |


| Road maintenance | Better removal of snow/ice in roadways, more law enforcement. More community education about safe driving in winter. |
| :---: | :---: |
| Road maintenance | Better snow clearance and sidewalk cleanup of the cinders |
| Road maintenance | Better and quicker snow removal |
| Road maintenance | Repair damaged roadways. Better enforce against traffic violations. Install tattletale devices in all government vehicles as I see cops commit violations as frequently or more than other motorists. |
| Speed cameras | We need speed cameras and red-light runner cameras. |
| Speed cameras | Attach cameras on corners |
| Speed cameras | Cameras at intersections that create automatic citations |
| Speed limit signs | More speed limit signs closer together especially in University heights drive north. |
| Speed reduction | Slow traffic down and make it much more expensive for violations |
| Speed reduction | Reduce road speeds |
| Speed reduction | Decreased in speed limits |
| Speed reduction | Lower and monitor speed limits in areas that have more pedestrians and bicycles |
| Speed reduction | Lower speed limits |
| Speed reduction | Lower speed limits |
| Speed reduction | Lower speed limits (e.g., along Fort Valley and Butler), incentivize travel by public transport/bike/foot vs by car (esp. use buses vs parent drop-offs to get kids to school, reduce car traffic to Snowbowl), clean bike lanes after snowfall/cinders |
| Speed reduction | Lower speed limits in certain areas make turning lanes more visible. Make all downtown streets one way |
| Speed reduction | Lower the speed limits. Limit to 2 lanes each direction. Creating intersections that place the Pedestrian/Cyclist first. Maybe no turn on red. |
| Speed reduction | Special enforcement |
| Speed reduction | Speed |
| Speed reduction | Speed and traffic signal enforcement, continue to invest/partner for transit |
| Speed reduction | Speed bumps in residential and around schools, bike lane barriers or better plowing of bike lanes and FUTS |
| Speed reduction | Speed bumps in residential areas, particularly around schools and parks. |
| Speed reduction | Spend more for a good traffic control team and system |
| Speed reduction | Start citing speeders and reckless drivers. Cedar by buffalo park and Chs is like a freeway as well as Milton and 66E |
| Speed reduction | Slow cars down |
| Speed reduction | SLOW SPEED LIMITS AND ENFORCE THEM. |
| Traffic cameras | Monitor closely and enforce red-light running - education campaigns about how to use situational awareness for all kinds of users of roadways and crosswalks - educate about traffic controls in the area |
| Traffic cameras | More cameras in case of accident or injury |
| Traffic cameras | Red light cameras |
| Traffic cameras | Use cameras and technology to identify and cite problem driving |


| Traffic changes | Change traffic flow downtown |
| :---: | :---: |
| Traffic changes | Change traffic flow to add more room for pedestrians and cyclists |
| Traffic changes | Change traffic lights so pedestrians are not signaled to walk at the same time as cars. Also, we desperately need safe bike lanes on Ft. Valley Rd. |
| Traffic changes | Close many roads to vehicles. We need to make drastic changes for safety in the areas where people can and will walk downtown and around the university. If these areas were free of motor vehicles, they would be very pleasant, and businesses would thrive |
| Traffic changes | Get traffic away from the center of town |
| Traffic changes | Figure out a way to get traffic to the west side from downtown without using Milton. |
| Traffic changes | It doesn't seem that the roads in Flagstaff are designed to safely move the increasing traffic loading. |
| Traffic changes | Smaller roads/less lanes, lower speed limits, better signage/road paint/markers, education, have bus and carpool only lanes, increase pedestrian infrastructure, better and safer pedestrian infrastructure, encourage/incentive less driving |
| Traffic changes | Traffic calming measures (lower speed limits, updated road design) |
| Traffic changes | Traffic Calming, lower vehicle speeds (with enforcement too), provide safe and convenient crossings for bikes and peds |
| Traffic changes | Traffic calming on major arteries, which lowers speeds but increases smooth traffic flow. It really works, as I have seen in other cities. |
| Traffic signal | Survey traffic volume regarding timing of stop lights, flashing stop lights and lights at crosswalks would help |
| Traffic signal | Reduce the time a stop light stays red. |
| Traffic signal | Maybe change the timing of the lights |
| Traffic signal | Better timed stoplights, enforce existing laws |
| Traffic signal | Eliminate left yield turns, invest heavily into protected bike infrastructure, eliminate parking minimums and building setback ordinances, do everything in their power to make walking/biking more convenient than driving. People will gravitate towards what is easier. Flagstaff city proper is a relatively small and flat area, it should be more than reasonable for people to not drive for sub mile trips. The only thing that's stopping them is hostile car infrastructure. |
| Traffic signal | As stoplights need to be repaired/ changed, and ones that flash red at the beginning of the red signal. |
| Traffic signal | In MY community- Coconino Estates- the single thing to improve safety would be signaled turns during busy times. For the community as a wholeparents putting their kids on busses vs the pile up's that happen around schools |
| Traffic signal | have walk signals when all traffic is stopped; red for all cars, green for all peds |
| Traffic signal | More user operated traffic lights at marked crossings |
| Traffic signal | Put in a traffic light at the north end of Snowflake Dr. and Highway 89. |

safe Streets saelines

| Traffic signal | Time the lights better! So many times, I see a green light at Beaver leading <br> to a red light at Humphreys on Route 66. Overall, the light timing in this <br> town seems designed to make people stop as often as possible, leading to <br> frustrated driving and speeding. Additionally, I would love to see a few <br> more traffic circles. A great place I think, would be at East Forest Ave and <br> N Gemini Road. |
| :--- | :--- |
| Traffic signal | time the streetlights and add bike lanes |

Safe Streets Save Lives

## APPENDIX E: SURVEY QUESTION \#9

| Q9. What is one <br> thing you think <br> people should do to <br> make it safer to <br> travel in our <br> community? | MetroPlan Region |
| :--- | :--- |
| Topic | Open-ended Responses |
| Advocate | Modify streets so that lives are valued over speed <br> More people can continue to advocate for bike/ped safety measures on our <br> streets. But as a mother, I'm not too keen to ride around the streets with my <br> baby until greater precautions are in place. |
| Advocate | Improve the road situation to accommodate the amount of traffic |
| Improve urban paths for biking and create more |  |$|$| Increase awareness of their surroundings (pedestrians, cyclists, hazards, other |
| :--- | :--- |
| vehicles, etc.) |


| Alternate modes | The FUTS system is great and has limited conflicts with traffic. I use the trails when I cycle around town and am a little puzzled when I see cyclists along the major roads choose to use the relatively small bike lane compared to the wide FUTS path. Also, it's not unusual to see cars going $60+\mathrm{mph}$ on 66 , not sure what that is about. |
| :---: | :---: |
| Alternate modes | Be open to alternative transport and force the city to encourage and accommodate this |
| Alternate modes | Bike when possible |
| Alternate modes | Bike/walk more. |
| Alternate modes | Drive themselves solo less. Less overall autos on road at any one time. |
| Alternate modes | Walk or ride a bike as much as possible (not realistic, but a goal) |
| Alternate modes | Walk, bike, and take transit |
| Alternate modes | Walk, bike, carpool |
| Avoid area | Stay in Phoenix (sarcasm). Between the students lack awareness and the out of town distracted, rushed traveler. |
| Be aware | Less distracted driving |
| Be aware | Prioritize pedestrian/cyclist safety. Wait for safe times to pass and give extra room. |
| Be aware | Quit being idiots. |
| Be aware | Stay alert |
| Be aware | Stay alert; don't drive when tired; and be overly cautious. |
| Be aware | Watch out for bicycles. Put down cell phones |
| Be aware | Watch out for the other guy!!! |
| Be aware | Look 3 ways before turning |
| Be aware | Look around them safely |
| Be aware | Be attentive |
| Be aware | Be attentive |
| Be aware | Be attentive and follow traffic laws |
| Be aware | be attentive, aware of drivers, bicyclists, and pedestrians |
| Be aware | Be aware and courteous of each other. Not everyone can drive. The car is NOT our only option. |
| Be aware | Be aware of cyclists! |
| Be aware | Be aware of others, bicyclist, pedestrians, motorist. |
| Be aware | Be aware of pedestrians and cyclists. Slow down and avoid being hurried. |
| Be aware | Be aware of pedestrians and cyclists. Slow down. |
| Be aware | Be aware of the common mistakes people make driving, cycling, and walking to be on the lookout for it and be prepared to avert the danger. |
| Be aware | Be aware of your surroundings |
| Be aware | Be more aware |
| Be aware | Be more aware |
| Be aware | Be more aware of surroundings |
| Be aware | Not be distracted |
| Be aware | Not be distracted |


| Be aware | Pay attention |
| :--- | :--- |
| Be aware | pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay Attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention（to the speed，to surroundings，etc．） |
| Be aware | Pay attention and be far more courteous and patient． |
| Be aware | Pay attention and be more patient． |
| Be aware | Pay attention and drive the speed limit |
| Be aware | Pay attention and follow the existing rules of the road |
| Be aware | Pay attention and know your route before taking off |
| Be aware | Pay attention and obey the laws，penalize those that break them．Make them go |
| to driver education |  |
| Be aware | Payare |
| Pay attention and participate in being safe． |  |
| Be aware | Pay ation to others．Vehicles need to stay out of bike lanes． |
| Be aware | Pay attention and respect pedestrians and bicyclists．Bicyclists should also follow <br> rules，some do not． |
| Be aware | Pay attention and slow down |
| Be aware | Pay attention and stay calm |
| Be aware | Pay attention and turn off turn signals after a turn has been made． |
| Be aware | Pay attention and understand traffic rules and laws |
| Be aware | Pay attention and use signals，not communicating what you are doing can lead <br> to accidents on top of anger／frustration on the part of other drivers |
| Be aware | Pay attention be courteous but nor to impede traffic movement |
| Be aware | Pay attention to driving |
| Be aware | Be aware |


| Be aware | Pay attention to speed, stop/traffic signs, pedestrians, bicyclists, overall surroundings. |
| :---: | :---: |
| Be aware | Pay attention to the road and others using the road |
| Be aware | Pay attention to the road and the people on it |
| Be aware | Pay attention to the road. |
| Be aware | Pay attention to their driving rather than their drink, food, phone or applying makeup. |
| Be aware | Pay attention to their driving. |
| Be aware | Pay attention to their surroundings, e.g., "situational awareness". This applies to all parties involved, not just drivers. |
| Be aware | Pay attention to what's around you |
| Be aware | Pay attention while driving, stop speeding |
| Be aware | Pay attention while driving, watch for bikes and pedestrians. |
| Be aware | Pay attention! |
| Be aware | Pay attention, be weather wise, and follow driving regulations. |
| Be aware | Pay attention. |
| Be aware | Pay attention; don't tailgate; allow enough time to travel through Flagstaff. Bicyclists use lights at night. |
| Be aware | Pay better attention. Take others into consideration. |
| Be aware | Pay more attention |
| Be aware | Pay more attention to the road. Just follow the laws |
| Be aware | Pay more attention when driving and don't get angry |
| Be aware | Paying attention to your surroundings regardless of your mode of transportation |
| Be aware | Actively look for other motorists, pedestrians, cyclists, and motorcycles wherever you are. |
| Be aware | Avoid distractions while driving |
| Be aware | Be especially careful, slow in big store parking lots (no sudden darting) |
| Be aware | Be extra careful around bikes and pedestrians. |
| Be aware | Be more attentive towards pedestrians and bikers/others. |
| Be aware | Be more considerate of others |
| Be aware | Become more aware |
| Be aware | Better awareness when driving |
| Be aware | Bicyclists should decide whether they are a vehicle or a pedestrian. I see too many bikers jumping back and forth between the sidewalk and the street as it pleases them, to feel like they can blow through stop signs or red lights, and it's often dangerous and alarming to be around them when they are doing that. It's unpredictable. |
| Be aware | Bring awareness to cyclists, repaint crosswalks and bike lanes frequently |
| Be aware | Decrease distractions |
| Be aware | Drive attentively. Watch out for pedestrians and cyclists. |
| Be aware | Drive, and only focus on driving |
| Be aware | Drivers must be on the lookout and notice bicyclists and pedestrians and give them the right of way. |


| Be aware | Drivers need to pay attention to cyclists and pedestrians; protect them. |
| :---: | :---: |
| Be aware | focus on driving |
| Be aware | Focus on driving rather than phone use |
| Be aware | Focus on the road when they are driving. |
| Be aware | Never travel distracted or impaired. |
| Be aware | Not drive distracted |
| Be aware | Not run/cycle along roadways during bad weather/snow. It is difficult enough for motorists to navigate low visibility and cinders/ice that make things slick without having to also navigate those using the roadways for exercise when paths or sidewalks are covered. This does not include those using bicycles for transportation. |
| Be aware | People could be more aware of bicyclists and pedestrians while they are driving so that bicyclists and pedestrians feel safer. |
| Be aware | People should be aware that not all road users are driving motor vehicles. |
| Be courteous | Move over for peds and bikes |
| Be courteous | Move the bikes off the roads |
| Be courteous | Not think of themselves as the most important person and realize that laws do apply to them too. RESPECT. |
| Be courteous | Relax, don't buy cars with extreme acceleration, designate an abandoned area/pseudo track where people can take their vehicles and get their aggression out before they get to town |
| Be courteous | Remember that there are cars behind you. The decisions you make to help yourself may impact 10-20 other people |
| Be courteous | Respect cyclists and pedestrians and share the road, and don't own a massive truck if you have no real need for one. |
| Be courteous | Share the road with bikes (as drivers), but also for pedestrians to cross the road wisely on NAU campus and downtown especially (use the crosswalks, look up from your phone, wait for cars that are already in the crosswalk to pass before crossing). |
| Be courteous | Respect everyone else on the road. |
| Be courteous | Respect!!! |
| Be courteous | Teach courtesy |
| Be courteous | Courteous driving. Most folks are courteous towards alternative travelers, but the bottom $5 \%$ tend to add the $95 \%$ of risk. |
| Be courteous | Drive like pedestrians \& cyclists were members of their own families. |
| Be courteous | Drive more carefully |
| Be courteous | Be better |
| Be courteous | Be considerate of others |
| Be courteous | Be courteous |
| Be courteous | Be courteous and contentious drivers. Bikes belong on roadways. Stop for pedestrians. Be less in a hurry |
| Be courteous | Be courteous to others on the road including drivers, pedestrians, and bicyclists |
| Be courteous | Be courteous to pedestrians. |


| Be courteous | Be kind and respectful of others |
| :---: | :---: |
| Be courteous | Be kind to one another. Slow down. Look around. |
| Be courteous | Be kind. Be patient when they're driving. I'm not sure how to help people understand that. Leave extra time to get to your destination so you don't feel hurried or frustrated when you're driving. Pedestrians could help by not dawdling in crosswalks - maybe even consider speeding up a bit if there are vehicles waiting, if only to make it clear they're aware of it. |
| Be courteous | Be kind. Expect multiple methods of transportation. Pay attention. Don't hit cyclists. |
| Be courteous | Be more courteous |
| Be courteous | Be more courteous and obey traffic laws. |
| Be courteous | Be more courteous and think of others |
| Be courteous | Calm down and expect to take a little more time driving through town! |
| Be courteous | Yield to peds/bikes |
| Be courteous | Yield A453:B484to faster drivers, use a turn signal, learn basic traffic rules, don't randomly drag your brakes. |
| Be courteous | Be considerate to others. We know it takes only 20 minutes to get across Flagstaff. That's not bad compared to the commute in PHX, Tucson, and Prescott. Plan early, plan. We're trying to get somewhere but some people get so urgent in congestion that it makes matters dangerous. |
| Bike | Dedicated wide bike paths |
| Bike | Ride bikes in safe bike pathways |
| Bike | Ride bikes. I think if more people rode their bikes even for part of the year, they would be more aware and attentive to cyclists. We MUST make bike riding the easier option. |
| Bike | Ride their bike |
| Bike | Talk to bicycle organizations about pedestrian safety. |
| Bike | More dedicated bike/pedestrian pathways - not just curbs on the side of the road. Real paths separated from the roadway by a significant barrier and trees, etc. |
| Bike | I appreciate the green coloring on the bike path on San Francisco just north of Butler; that felt like a safety improvement |
| Bike | Invest in sidewalks and separated (paved) bike facilities. |
| Defensive driving | I think people need to take driving more seriously! It is the most dangerous thing we do every day and most everyone takes it for granted. Yet anyone can get a driver's license. We need to educate potential drivers properly and make obtaining a driver's license a serious proposition. |
| Defensive driving | not feel entitled to drive everywhere in free flow conditions |
| Defensive driving | Drive defensively |
| Defensive driving | Drive like it's the most dangerous thing they are doing that day |
| Defensive driving | Drive with intention |
| Defensive driving | Drive defensively and with complete attention to the task |
| Defensive driving | Adjust driving habits based on road conditions, especially during winter and monsoons |


| Defensive driving | Allow for more space between cars, pedestrians, cyclists |
| :---: | :---: |
| Defensive driving | Be more patient |
| Defensive driving | Be taught that legal right of way is secondary if someone else does something unexpected! |
| Defensive driving | Breathe. People get so angry and rushed when they are driving |
| Don't DUI | Get a DD, wear your seatbelt, don't speed, and obey traffic lights. |
| Educate | Learn traffic laws regarding ped walks, traffic circles, 4 -way stops (honestly, AZ drivers don't even know how to navigate 4-way stops!); bicycle laws. |
| Educate | Maybe more safe driving awareness, especially around the university regarding impaired driving. |
| Educate | Teach children to stop at stop signs. Small children on bicycles often do not stop. |
| Educate | Educate |
| Example citizens | Turn off fog lights and brights when on city streets. |
| Example citizens | If you live here respect the rules of the road. |
| Example citizens | Increase distance between cars |
| Example citizens | indicate your intention before doing so, turning, crossing |
| Example citizens | Know and follow the rules of the road. |
| Example citizens | Know the laws and follow them. |
| Example citizens | Learn and follow all traffic commands like stoplights, crosswalk lights, signs, and lane markings |
| Example citizens | Learn how to drive in slippery conditions |
| Example citizens | Learn the rules of the road |
| Example citizens | Make driving their priority when behind the wheel. |
| Example citizens | No not park on the street November - April i.e., don't break the law. |
| Example citizens | Obey all traffic laws to make health and safety a priority over "getting there first" and "me only" attitudes; once a driver kills another person, then it's too late to feel bad and say "Gee, I'm sorry, I never saw you..." Drivers who seriously injure or kill pedestrians and cyclists and are found at fault need to be prosecuted and serve time behind bars. The "Vision Zero" model for traffic safety developed in the EU should be fully adopted here in Flagstaff, AZ. |
| Example citizens | Use their turn signals. Slow down at yellow lights. Yield for pedestrians AND bicyclists at a crosswalk. Not be on their phone at a red light. |
| Example citizens | Use turn signals |
| Example citizens | Use turn signals, Don't speed, Don't tailgate. If someone is going the speed limit riding on top of them does not make them go faster. Again, the lack of agencies that can enforce these things leads to them feeling like they can do whatever they want. I literally have never seen someone pull over on East route 66 or where it turns into 89 . From downtown to 89 it is a free for all for speeding. |
| Example citizens | Abide by the traffic laws that protect bikers and walkers. |
| Example citizens | Come to complete stops, stop far enough back at pull outs/road crossings to not overlap with where pedestrians and cyclists cross |
| Example citizens | Follow the traffic laws like you should be. |
| Example citizens | Follow basic traffic laws |


| Example citizens | Follow bike/driving rules |
| :--- | :--- |
| Example citizens | Follow driving rules and regulations |
| Example citizens | Follow established rules |
| Example citizens | Follow existing laws |
| Example citizens | Develop a respect for non-vehicular transportation - just as they have respect for <br> vehicular transport |
| Example citizens | Set good example (cross at walks) |
| Example citizens | Stop acting as if they're the only person who needs to get to their destination. |
| Example citizens | Obey the rules of the road |
| Example citizens | Obey the speed limit. |
| Example citizens | Obey the speed limits, don't text while driving |
| Example citizens | Obey traffic laws, and don't drive in a hurry or when angry. |
| Example citizens | Obey traffic rules |
| Example citizens | Obey traffic signals |
| Example citizens | Observe speed limits, pay attention |
| Example citizens | One thing people should do to make it safer to travel in this community is use <br> their turn signal! |
| Example citizens | Obey traffic laws |
| Example citizens | Follow laws |
| Example citizens | Follow rules of the road, traffic signs, stopping at stop signs, stop lights. |
| Example citizens | Follow the law. |
| Example citizens | Follow the laws |
| Example citizens | Follow the rules and laws! |
| Example citizens | Follow the rules when driving, especially the cyclists. |
| Example citizens | Follow the traffic laws |
| Example citizens | Follow the traffic laws |
| Example citizens | Follow traffic laws |
| Example citizens | Follow traffic laws, be courteous. |
| Example citizens | Follow traffic rules. There is some aggressive, dangerous driving going on in |
| Flagstaff |  |
| Example citizens | Follow traffic signs and laws. |
| Leave | Leave |
| Less cellphone | Not use phones while driving |
| Less cellphone | not use their cell phone when driving |
| Less cellphone | Not use their cell phones while driving, give those not in vehicle extra space <br> when overtaking. |
| Less cellphone | Not use your phone while driving |
| Less cellphone | Pedestrians and motorists need to put away their phones |
| Less cellphone | People need to put down their phones, and drive. |
| Less cellphone | Personally, I have decided to not use my cell phone when driving. |
| Less cellphone | Put their phones away |
| Less cellphone | Turn off phone |


| Less cellphone | Turn off their cell phones |
| :--- | :--- |
| Less cellphone | Turn your phone off when driving. |
| Less cellphone | Less texting while driving, slow down |
| Less cellphone | Be off their phone |
| Less cellphone | Disable cell phones while driving |
| Less cellphone | Drive conscientiously and put the phone away |
| Less cellphone | Drive without their phones |
| Less cellphone | Less phone use while driving |
| Less cellphone | Make phone illegal with driving and ticket for this when in a moving vehicle <br> unless using hands free option. Also, making drivers more aware of bicyclists. <br> We are very unsafe in Flagstaff on our bikes and thus people commute less. |
| Less cellphone | No cell phone use in car |
| Less cellphone | No phones while driving |
| Less cellphone | No phones while driving!! Walk or bike instead |
| Less cellphone | No texting |
| Less cellphone | Not be allowed to use phones while driving. |
| Less cellphone | Not text while driving |
| Less cellphone | Stay off phones while operating motor vehicles, limit distractions. |
| Less cellphone | PUT DOWN THEIR PHONES WHILE THEY ARE DRIVING and remember that <br> pedestrians and cyclists do have the right of way in certain situations, that <br> people who are not in cars are more vulnerable, and that it is a driver's <br> responsibility to ALWAYS be alert and on the lookout. Every driver is a potential <br> murderer, is honestly how I feel about it. |
| Less cellphone | Hang up the phone! |
| Less cellphone | Stop texting, slow down |
| Less cellphone | Not be on phones |
| Less cellphone | Stop texting while driving and stop turning right on red w/o stopping. |
| Less cellphone | Stay off their phones |
| Less cellphone | Stay off their phones |
| Less cellphone | Stay off their phones, don't drive intoxicated, always pay attention. |
| Less cellphone | Get off cell phone while driving. |
| Less cellphone | Get off cell phones |
| Less cellphone | Get off cell phones when on or near roadways |
| Less cellphone | Get off phone |
| Less cellphone | Get off phone and put marijuana vapes and cigs down |
| Less cellphone | Get off the phone. Public agencies should prioritize ticketing distracted drivers. |
| Less cellphone | Get off your cell phone |
| Less cellphone | Go to traffic school, plan for traffic, allow merging, drive defensively, stay home |
| Less cellphone | Hang up |
| Hess cellphone | Hang up and drive |
| Hang up and drive |  |


| Less cellphone | Put away their phones |
| :--- | :--- |
| Less cellphone | Put cell phone down |
| Less cellphone | Put down cell phones |
| Less cellphone | Put down cell phones. |
| Less cellphone | Put down cellphones |
| Less cellphone | Put down phones |
| Less cellphone | Put down phones and pay attention |
| Less cellphone | Put down phones, don't drive if you don't have to in winter conditions |
| Less cellphone | Put down telephone while driving / pull over and park before using phone |
| Less cellphone | Put down the phone |
| Less cellphone | Put down the phone |
| Less cellphone | Put down the phone |
| Less cellphone | Put down their phone |
| Less cellphone | Put down their phones |
| Less cellphone | Put down their phones |
| Less cellphone | Put down their phones. |
| Less cellphone | Put others first instead of themselves not sure how to make that happen. |
| Less cellphone | Put phones completely away while driving |
| Less cellphone | Put phones down |
| Less cellphone | Put the cell phone down |
| Less cellphone | Put the cell phone down. |
| Less cellphone | Put the phone down. Learn the ropes of driving in extreme weather conditions, <br> show some compassion for your common man. <br> Less cellphone |
| Put the phone down |  |
| Less cellphone | Put the phone down for drivers and follow pedestrian crosswalks for pedestrians |
| Less cellphone | Put the phone out of reach while driving. Stay off it while walking especially in <br> crosswalks. |
| Less cellphone | Put their cell phone down. |
| Less cellphone | Put their cell phones away |
| Maintain area | Clear obstructions from corners, so oncoming traffic is visible |
| Maintain area | Clear sidewalks of snow for area they are responsible for |
| Maintain area | Remove the snow and gravel from their sidewalk so pedestrians don't have to <br> walk in the street. |
| N/A | Nothing, we are fine. Leave it and stop causing issues. |
| N/A | People cannot do much because the roads are overcrowded |
| Obey signal | No rights on red. Stop before crossing sidewalks. |
| Obey signal | Do not run red lights. |
| Obey signal | Stop at red lights |
| Obey signal | Stop at yellow lights driving |
| Obey signal | Stop before lights turn red |
|  | Stop looking at cell phones (distracted driving) and slow down |


| Obey signal | Stop excepting college students. There's so much traffic. For such a small town. |
| :---: | :---: |
| Obey signal | Stop for pedestrians at crosswalks and corners. |
| Obey signal | Stop for red lights. |
| Obey signal | Stop racing to beat yellow lights. |
| Obey signal | Stop running red lights and pedestrians not being on phones when in crosswalks |
| Obey signal | Stop running yellow and red lights. I see this multiple times a day. |
| Obey signal | Stop rushing and pay attention. |
| Obey signal | Stop supporting the false idea that faster roadways will get people to their destinations significantly faster |
| Obey signal | Use traffic lights more than they currently do. Be more patient. |
| Patience | Take your time and be courteous |
| Patience | Take your time, don't take unnecessary chances |
| Patience | Patience. a few seconds of delay don't really matter. |
| Pedestrian safety | Use designated crosswalks |
| Pedestrian safety | Make crosswalks more visible to motorists. |
| Pedestrian safety | Cross at crosswalks |
| Pedestrian safety | Crosswalk on fort valley |
| Plan travel | Not drive as much |
| Plan travel | Reevaluation of transit plans |
| Plan travel | People are frustrated by traffic because the roadways were designed for a much smaller population \& fewer shorter train interruption. People can just figure that they need 60 minutes to get anywhere in and around Flagstaff. If they expected and scheduled that amount of time, they would be happier when it only took 45 minutes to get from east to west. |
| Plan travel | Accepting traffic as the norm, leave early for destination. |
| Plan travel | Adjust travel time expectations so we aren't driving hurriedly. |
| Plan travel | Avoid Fort Valley Rd. An alternative route to Snowbowl, the Peaks, and the Grand Canyon is 20 years overdue. |
| Plan travel | Plan for traffic, delays |
| Plan travel | plan for longer drive times than in the past due to lights, trains, and more traffic |
| Plan travel | Plan routes ahead of time |
| Plan travel | Allow for extra time to get to their destination. It is interesting to witness drivers dropping off kids in school areas who drop off their children then race to get to their next destination. |
| Public transit | Use more public transit, reduce car infrastructure, increase biking and walking infrastructure that is independent of roads. |
| Public transit | Utilize bus services and alternate transportation such as biking to reduce the number of vehicles on the roads |
| Public transit | Ride the school bus rather than car lines |
| Public transit | Take bus more |
| Public transit | Take public transportation |
| Public transit | Take the bus as often as possible. |
| Reduce drive | Drive less |


| Reduce drive | Drive less |
| :---: | :---: |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less |
| Reduce drive | Drive less and pay attention to the road when driving |
| Reduce drive | Drive less, take the bus more. Employers should support employees bussing |
| Reduce drive | Drive less, vote democratic, |
| Reduce drive | Drive less. eliminate distractions. be cognizant that a vehicle is a lethal machine. |
| Reduce drive | Drive less. Stop right turns on red lights in highly non-motorized trafficked areas |
| Reduce drive | Drive less. Too much driving makes desensitizes people and makes them more reckless |
| Reduce drive | Only drive when needed |
| Reduce drive | only travel by foot and bicycle |
| Regulations | Honestly, I'd say some type of fee for out of towners because they don't care. My daughter got t-boned by a lady from mesa and the police officer showed more concern for her, than my daughter and falsified the report. |
| Report | Report dangerous situations and have law response in support. |
| Report | Community policing, traffic enforcement, and paying the police more so that they can live here for the long haul. Right now, we just train young cops for a few years then they leave. Incentivize them staying, don't disincentivize them leaving. |
| Request less bikes | Remove the bike lane safety barriers along Butler. They are very confusing and result in quick breaking and lane changes from drivers. |
| Request maintenance | Repaint road striping |
| Request police | More cops |
| Request police | Police presence ensuring things are going smoothly- everyone including bikers follow traffic laws |
| Request police | Stop adding to the congestion for one - we have too much expansion too fast, and no way to fix the road systems. Additionally, we need robust enforcement of pedestrian and cyclist laws - they too often disregard traffic and crosswalk signals. |
| Request signs | Need better signage for tourists, |
| Drive speed limit | Learn to be patient |
| Drive speed limit | Maintain speed limit |
| Drive speed limit | Most of the problems are bad design, not people. But would be nice if drivers choose to slow down. |
| Drive speed limit | Not speed, cops to be more visible on the road, see more cops out |
| Drive speed limit | Slow down |


| Drive speed limit | Slow down |
| :--- | :--- |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
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| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down－slower at intersections too |
| Drive speed limit | Slow down（you move to fast．．．） |
| Drive speed limit | Slow down and be kind |
| Drive speed limit | Slow down and be kind to others as if they were their child． |
| Drive speed limit | Slow down and be nicer |
| Drive speed limit | Slow down and don＇t run red lights |
| Drive speed limit | Slow down and don＇t tailgate． |
| Drive speed limit | Slow down and drive less |
| Drive speed limit | Slow down and follow traffic laws |
| Drive speed limit | Slow down and note the speed limits |
| Drive speed limit | Slow down and obey traffic laws and pay attention |
| Drive speed limit | Slow down and pay attention |
| Drive speed limit | Slow down and pay attention！ |
| Drive speed limit | Slow down and pay attention． |
| Drive speed limit | Slow down and pay attention．Pedestrians and bikers need to pay attention，too． |
| Drive speed limit | Slow down and quit texting while driving |
| Drive speed limit | Slow down and realize that bike and pedestrian crossings are inadequate |
| Drive speed limit | Slow down，in their cars |
| Drive speed limit | Slow down no cell phone use |
| Drive speed limit | Slow down their driving |
| Drive speed limit | Slow down when driving mixed mode traffic． |
|  |  |


| Drive speed limit | Slow down when in cars and be aware of your larger environment, including the <br> presence of bikes and pedestrians. |
| :--- | :--- |
| Drive speed limit | Slow down! |
| Srive speed limit | Slow down, be courteous |
| Drive speed limit | Slow down, be courteous and attentive |, | Srive speed limit | Slow down, be more attentive, and give pedestrians and cyclists the right of way. |
| :--- | :--- |
| Drive speed limit | Slow down, don't use phone while driving, take the bus when you can (especially <br> if drinking/bad weather), wear bright clothes and night light if you <br> walking/biking |
| Drive speed limit | Slow down, especially in areas with a lot of pedestrians. |
| Drive speed limit | Slow down, obey traffic laws, respect other drivers, do not drive in the left lanes <br> except to pass on the freeways, prohibit ATV traffic in residential areas, strictly <br> enforce no snow play along major roads and freeways. Unfortunately, there is |
| no one thing. |  |


| Drive speed limit | Drive more slowly, be aware that your giant truck/vehicle is going to win in a <br> collision between you and a pedestrian or a bicyclist, your giant vehicle will win. <br> Not sure what to do about this. This is a choice, and many people feel they need <br> their big vehicles. |
| :--- | :--- |
| Drive speed limit | Drive within the speed limit |
| Drive speed limit | Drive within the speed limit |
| Drive speed limit | Drivers slow down, bikes on proper side of road, pedestrians use crosswalks |
| Drive speed limit | For cars, slow down, for pedestrians look at traffic and not cellphone when <br> crossing streets. |
| Drive speed limit | For drivers: slow down! And don't run red lights. |
| Drive speed limit | No speeding and pay attention |
| Drive speed limit | Relax |
| Drive speed limit | Relax and slow down |
| Drive speed limit | Drive slower |
| Drive speed limit | Drive slower |
| Drive speed limit | Drive slower and be more careful at intersections. |
| Drive speed limit | Drive slower and watch for pedestrians and bike at every turn. |
| Drive speed limit | Drive slower in winter driving conditions |
| Drive speed limit | Drive slower!!!!!! People would walk more if sidewalks clearing after snow was <br> enforced. Sidewalks are absent in many places in Flagstaff. There are few |
| protected crossings of major arteries, like Milton. Sidewalks without boulevard |  |
| strips separating the walk from the traffic lane will never be attractive nor safe |  |
| for pedestrians. |  |

## APPENDIX F: SURVEY QUESTION \#10

| Q10. What is one thing you could do to make it safer to travel in our community? | MetroPlan Region |
| :---: | :---: |
| Topic | Open-ended Responses |
| Advocate | Promote the idea of separated walk signals (as stated above) |
| Advocate | Fill out these surveys |
| Advocate | FUTS and sidewalk gaps w/in City limits are filled-in and interconnected. |
| Advocate | Get involved educating people on bike use and safety |
| Advocate | Get involved with traffic planning |
| Advocate | Get more involved |
| Advocate | I could be more involved in the efforts to change these behaviors. |
| Advocate | Encourage city police to stand at a street corner and watch how many people run red lights |
| Advocate | Help advocate for bus and bike use. |
| Advocate | Help identify areas that need better pedestrian accessibility |
| Advocate | Help raise awareness |
| Advocate | Advocate |
| Advocate | Advocate for bicycling infrastructure |
| Advocate | Advocate for changes to traffic law to ensure the safety of pedestrians and cyclists, as well as the necessary physical infrastructure to protect them. |
| Advocate | Advocate for maintenance of pathways, bikeways, and safety awareness |
| Advocate | Advocate for more bike lanes |
| Advocate | Advocate to the council for safer roads |
| Advocate | Answer this survey |
| Advocate | As a biker, please kill the bike curbs AND only IF they would generate income, I would not mind red light cameras, IF monetarily practical and not a boondoggle for the camera company |
| Advocate | Attend bicycle and pedestrian safety meetings |
| Advocate | Lobby City officials to crack down on bad driving. |
| Advocate | Already do-walk/bike but it is such a safety concern when bulk of drivers never walk/bike, so they disregard those who do |
| Advocate | Eliminate blinking left yellow turn lights. |
| Advocate | Eliminate the bike lane barriers on Butler, and lower the speed limit |
| Advocate | Communicate concerns |
| Advocate | Continue advocating for more efficient public transportation and bike paths |
| Advocate | Convince our archaic city planners that what they are doing is not working and that it's not all about cars. |
| Advocate | Improve the road situation to accommodate the amount of traffic |


| Advocate | Petition city council to remove the bike barriers on butler |
| :---: | :---: |
| Advocate | Petition Council for more enforcement |
| Advocate | Provide feedback to officials |
| Advocate | Pay taxes for infrastructure improvements. |
| Advocate | Redesign the streets and pedestrian ways with the Vision Zero strategies, where infrastructure is intended to reduce auto speeds and isolate cars from pedestrians to the greatest degree possible. I feel that I live in a society here in Flagstaff where human health and safety when I leave my downtown home walking or riding my bike is a lower priority than that of others choosing to drive automobiles and believe that is completely opposite of what it should be-Safety of pedestrians should be 1st. |
| Advocate | Speak out in the bike community, vote |
| Advocate | Support efforts to build better pedestrian \& cyclist infrastructure \& trafficcalming features |
| Advocate | Take away NAU student driver licenses. |
| Advocate | Try and get someone to acknowledge that the college students are the main influence of bad driving here. |
| Advocate | I share my near misses on my bike with friends to bring awareness |
| Advocate | Keep advocating for better bike facilities |
| Advocate | Lead the move to ask city for a crosswalk - every day we see kids, disabled folks, moms with strollers trying to cross |
| Advocate | Motivate more people to ride their bikes. Group rides are usually fun. |
| Advocate | Participate in interest groups and community on topics of ped and bike safety |
| Advocate | Work with community leaders to encourage safer streets |
| Alternate mode | Walk, bike more. The less vehicles on the road the better for all in terms of health, etc. |
| Alternate mode | Walk, bike, and take transit more. |
| Alternate mode | Walk/bike more rather than relying on my car as much. |
| Alternate mode | Take public transportation. Or walk. |
| Alternate mode | I would like to cycle, walk, and take public transit much more, and I believe that an increase in all those things reduces the number of cars on the road, thereby automatically making the roads safer. However, without good bike lanes, frequent public transit, or priority given to clearing snow and ice from sidewalks, oftentimes driving a car seems like the only reasonable choice not to mention the safest. |
| Alternate mode | More bike lanes, larger bike lanes. don't have pedestrians walk when driver gets green light, and you are turning right (downtown) |
| Alternate mode | More continuous sidewalks and bike lanes. It would also be helpful to clear cinders from sidewalks and bike lanes after ice melts, if possible. Thank you! |
| Alternate mode | Only travel by foot and bicycle |
| Be aware | Use more caution |
| Be aware | Watch out for peds and bikes when I'm driving. |
| Be aware | When I drive, I try to stay attentive especially to bikes (checking mirrors on turns, etc.). |


| Be aware | It won't be without infrastructure upgrades, so I guess just be a courteous driver and understand that visitors have no idea what they're doing. |
| :---: | :---: |
| Be aware | Don't drive distracted. |
| Be aware | Look to my right blind spot before turning right |
| Be aware | Be as attentive and courteous as possible |
| Be aware | Be vigilant - watch out for others |
| Be aware | I could make sure that I stay aware of cars and other people whenever I am walking or riding my bike. |
| Be aware | Continue to be attentive. |
| Be aware | Be extra vigilant at cross walks and 4-way stops |
| Be aware | Drive attentively. Watch out for pedestrians and cyclists. |
| Be aware | Drive more attentively |
| Be aware | Less distracted driving |
| Be aware | Drive more defensively |
| Be aware | Adhere to signs and people |
| Be aware | Always be aware and be a defensive driver |
| Be aware | Always look out for bikers speeding the wrong way on sidewalks and plowing into intersections without looking for cars |
| Be aware | Be a careful driver. |
| Be aware | Be aware of cyclists and pedestrians |
| Be aware | be aware of others |
| Be aware | Be less distracted |
| Be aware | I drive cautiously and with courtesy. |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | pay attention |
| Be aware | Pay Attention |
| Be aware | pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention |
| Be aware | Pay attention always |
| Be aware | Pay attention and be more patient. |
| Be aware | Pay attention and use signals |
| Be aware | Pay attention more |
| Be aware | Pay attention more diligently |
| Be aware | Pay attention the whole time while driving and riding bikes. |
| Be aware | Pay attention to cyclists and pedestrians; protect them. |
| Be aware | Pay attention to surroundings |


| Be aware | Pay attention to what you are doing |
| :--- | :--- |
| Be aware | watch my own driving |
| Be aware | Always pay attention |
| Be aware | Avoid distractions |
| Be aware | Avoid distractions while driving |
| Be aware | Avoid distractions while driving. |
| Be aware | Be a more cautious courteous driver |
| Be aware | Be attentive |
| Be aware | Be attentive |
| Be aware | Be more attentive |
| Be aware | Be more attentive. |
| Be aware | Be more aware |
| Be aware | Be more aware of my surroundings and the other people and modes using the <br> roadway. <br> Be aware |
| Be aware | Drive undistracted |
| Be aware | Not look at my dashboard screen while driving |
| Be aware | Be alert, follow the rules/laws |
| Be aware | Ensure full attention and engage defensive driving techniques |
| Be aware | Have eyes in the back of my head |
| Be aware | Not drive distracted |
| Be aware | I plan to always be aware of the surroundings as a driver and cyclist. I may see <br> them, but that doesn't mean they see me. <br> Be aware |
| Remove distractions, adhere to traffic signals \& pay attention to road conditions. |  |
| Be aware | Stay alert |
| Be aware | Stay alert and maintain a safe distance from the car in front of me. |
| Be aware | Stay focused |
| Be aware | Stay focused on surroundings. |
| Be aware | Stop distracted driving and take the bus |
| Be aware | Take my own advice and pay attention more |
| Be aware | More attentive |
| Be aware | Make sure to always make eye contact w a driver before crossing the street |
| Be aware | Keep walking defensively, which is why I'm not in a wheelchair or in the morgue. |
| Be aware | Pay attention while driving, stop speeding |
| Be courteous | Make sure I am courteous, following all the rules, not in a hurry. Stay intentional. |
| Be courteous | More courtesy |
| Be courteous | Not get angry with unsafe drivers |
| Be courteous | Not get frustrated with tourists doing dumb things I |
| Be courteous | Be a courteous driver |
| Be courteous | Be courteous |
| Be courteous | Be courteous driving a car or riding a bike |


| Be courteous | Be more mindful when driving |
| :--- | :--- |
| Be courteous | I don't challenge other drivers and let them cut in or go around me. |
| Be patient | Be patient |
| Be patient | Be patient during traffic |
| Be patient | Be patient with those unfamiliar with Flagstaff streets and roads |
| Be patient | Be patient with traffic and leave early so I'm not in a rush. |
| Be patient | Be less impatient |
| Be patient | Be more patient |
| Be patient | Be more patient |
| Be patient | Be more patient with out of towners |
| Bike safety | Use bicycle lights |
| Bike more | Stay on designated bike lanes and be aware of cell phone drivers. |
| Bike more | Support pro bicycle legislation |
| Bike more | I mainly ride my bike. Because I spend most of my commuting time biking, I've |
|  | learned which routes are safer than others. I've also spent so much time on my |
| bike worried about whether drivers see me, when I do drive, I am very safe, do |  |
| not use my phone, and pay attention on all sides. |  |
| Bike more | I ride a bike and walk so I present little risk to anyone else. |
| Bike more | I ride my bike most of the time, so I am doing my part |
| Bike more | I'd prefer to bike more if it were safer |
| Bike more | Me? give some kind of tax or refund to those who bike .... right? |
| Bike more | More safe ways to travel via bike. |
| Bike more | Always be predictable on a bike. |
| Bike more | Always wear a helmet when riding a bike. |
| Bike more | Ride a bicycle rather than drive as often as possible |
| Bike more | Ride even more so more drivers expect to see cyclists |
| Bike more | Ride mt bike more |
| Bike more | Ride my bike and take the bus rather than use my car |
| Bike more | Ride my bike more |
| Bike more | Ride my bike more, I only drive about three times a week |
| Bike more | Ride my bike more. |
| Bike more | Ride my bike on urban paths and less on roads |
| Bike more | Ride the bus to stay off streets |
| Bike more | Role model biking to work, biking to and from errands in town. Role model <br> courteous interactions w/ bikes/peds. <br> Bike more |
| Bike more | Sell more e-Bikes. Advocate for more refined and safer cycling routes. |
| Bike more | Bike commute more to reduce the amount of overall vehicle traffic |
| Bike more | Bike more and drive less, but little infrastructure exists in my area |
| Bike more | Bike more often. |
| Bike more | Bike more, slow down |
| Bike more | Bike |


| Bike more | Cycle more |
| :--- | :--- |
| Bike more | Work for better bicycle infrastructure |
| Bike safety | Wear a safety vest. |
| Bike safety | Wear bright reflective clothing while walking or bicycling |
| Bike safety | Wear bright yellow |
| Bike safety | Wear brighter clothing |
| Bike safety | Wear brighter clothing and do other things to call attention to myself (but I <br> shouldn't have to do that as a pedestrian). |
| Bike safety | Wear sunglasses |
| Bike safety | Yeah, wear Christmas lights |
| Defensive | Practice defensive driving. |
| Defensive | Practice more defensive driving |
| Defensive | Drive Defensively |
| Defensive | Always drive defensively |
| Defensive | Be more defensive |
| Defensive | Be more diligent of pedestrians and cyclists |
| Defensive | Drive defensively and cautiously |
| Defensive | Drive defensively and with awareness of all traffic: pedestrian, bike, and <br> vehicular <br> Defensive |
| Defensive | Commute defensively. |
| Continue to be a defensive and courteous driver |  |
| Drive less | I choose to drive defensively |
| Drive less | Walk more and drive less, but I would prefer not to. |
| Drive less | Travel less frequently |
| Drive less | Avoid driving unnecessarily when roads are icy |
| Drive less | Avoid driving, especially down Milton Road. |
| Drive less | Avoid roads during rush hours and on weekends |
| Drive less | Drive as little as possible and use bike/walking or public transit |
| Drive less | Drive my car less, one less car out there |
| Drive less | Not drive a car |
| Drive less | Not drive as much. Too much anxiety to drive anymore with the crazies on the <br> road. |
| Drive less | Not drive. |
| Drive less | Not drive. Advocate for better systems of moving people. |
| Drive less | Continue not driving when not necessary |
| Drive less | Continue to drive as little as possible |
| Crive less | Continue to walk and eventually ride my bicycle everywhere. Rideshare with |
| Drive less | Elimate unnecessary driving |


| Drive less | I could drive less (which would be easier with more pedestrian routes) also, could clear my sidewalk for pedestrians when it snows, but I don't because the plows just cover it with giant ice chunks that are impossible to move... |
| :---: | :---: |
| Drive less | Make eye contact with motorists before walking or biking across any road or driveway. Stop driving. |
| Drive less | Never drive unless it is out of town-- must figure out the bus schedule for the very bad weather days |
| Drive less | Not drive |
| Drive less | Park my car. |
| Drive less | We walk and bike as much as possible to not add to the congestion. But it's not as safe as it should be. |
| Drive less | Work from home |
| Educate | Educate |
| Educate | Print visitor maps that indicate when certain streets like Locket turn into Cedar |
| Educate | Remind people about common safety and if there is a safer route |
| Example citizens | Watch out and follow the laws. |
| Example citizens | I think I'm safe already . . . |
| Example citizens | I try to be safe always |
| Example citizens | I'm already a safe driver |
| Example citizens | I've never been at fault in an accident. |
| Example citizens | keep a safety cushion around my vehicle |
| Example citizens | Keep distant to have better reaction time |
| Example citizens | Keep following traffic laws |
| Example citizens | Keep ignoring road rage |
| Example citizens | Keep shoulders and paths free of obstacles/debris |
| Example citizens | Model driving with phone away, practice defensive driving- |
| Example citizens | Not make "free right turns." |
| Example citizens | Not tailgate. utilize insurance that alerts drivers to hard stops and other unsafe practices in real time. |
| Example citizens | Nothing, I drive the speed limit stop at signals and signs, don't tailgate, or pass illegally. |
| Example citizens | Nothing, I seldom drive |
| Example citizens | Obey all traffic rules and allow for time to get to destinations. |
| Example citizens | Practice safe driving and biking |
| Example citizens | Pull over to let tailgaters go by and reduce my chances of being rear ended. |
| Example citizens | Set a good positive example |
| Example citizens | Share the love |
| Example citizens | Stop at stop signs |
| Example citizens | The same I am asking of everyone else. I was unable to select the other behavior words. I see many drivers who are hurried and inattentive, and quite a few who seem to be impaired, particularly at night. I also have noticed that Flagstaff area drivers tend to be more courteous than other places. |


| Example citizens | Follow my own recommendations |
| :---: | :---: |
| Example citizens | Follow the rules |
| Example citizens | Follow the rules of the road, but that only goes so far. Again, the problem isn't the individual, it's the engineering design. Vehicles are traveling at speeds of 40+ mph at which fatality is almost guaranteed if a crash with a pedestrian occurs. We need a better design that provides safe corridors for all users. Maintenance of these corridors is also important to better prioritize. Our sidewalks are filled with cinders and never cleared. |
| Example citizens | Follow the traffic laws |
| Example citizens | Like everyone in the United States follow the law. |
| Example citizens | Be an example of safe driving, regardless of how annoyed the other drivers are. |
| Example citizens | Be the first to yield to pedestrians and make room for cyclists. |
| Example citizens | Change lanes less and accept the traffic. |
| Example citizens | Continue to give others space and time and grace! |
| Example citizens | Count to three at every stop sign and use your signals. |
| Example citizens | Don't give in to peer pressure |
| Example citizens | Follow traffic laws |
| Example citizens | I already bike, walk and take the bus as much as I can even though I can easily drive my own vehicle. Since I am a bicyclist and pedestrian, I am courteous to all other users when I drive as I know how awful it can be on their side. |
| Example citizens | I already do my part. |
| Example citizens | I am a very safe driver. |
| Example citizens | I am as safe as I can be every day when commuting and or traveling the roadways. |
| Example citizens | I can also make sure to limit distractions and stay focused |
| Example citizens | I can't do anything but mind my own |
| Example citizens | I do what I can every day |
| Example citizens | I don't speed, use my signals, follow traffic rules, and drive defensively. I stop on yellow lights!!! |
| Example citizens | I follow the laws and teach my daughter to do so. But when it does not become about my driving and is all about others or bikes doing illegal stuff, Or homeless crossing where they shouldn't. Then that is all it will be. I follow the laws and watch others like a hawk hoping they do not cause an accident. |
| Hide | Hide |
| Law | Patrol and fine the people who constantly park in the bike lane at the credit union on s. San Francisco |
| Law | Better enforcement and reminders of laws |
| Law | Enforce current laws |
| Leave | Leave |
| Leave | Leave |
| Less cellphone | Leave phone untouched |
| Less cellphone | less texting while driving |
| Less cellphone | Hang up |


| Less cellphone | Hang up and focus on driving |
| :--- | :--- |
| Less cellphone | Not be on my phone．．．Ever． |
| Less cellphone | Not pick up my phone at stoplights． |
| Less cellphone | Only check my phone at stop lights． |
| Less cellphone | Put down my phone |
| Less cellphone | Put down telephone while driving／pull over and park before using phone |
| Less cellphone | Put down the phone |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less |
| Limit travel | Drive less ：） |
| Limit travel | Drive less |
| Limit travel | Drive less distracted |
| Limit travel | Drive less often，leave plenty of time to arrive at any destination |
| Limit travel | Drive less walk more |
| Limit travel | Drive less，bike more |
| Limit travel | Drive less，engage with others about the topic |
| Limit travel | Drive less，slow down |
| Limit travel | Drive less，walk and bike more． |
| Limit travel | Drive less，walk more and be always paying a 110\％attention |
| Limit travel | Drive less． |
| Limit travel | Drive less． |
| Limit travel | Drive less． |
| Limit travel | Drive less． |
| Limit travel | Drive less．Remain attentive when driving． |
| Limit travel | Drive less unfortunately our community caters to automobiles |
| Limit travel | Stay at home |
| Limit travel | Stay at home，continue walk and ride in the areas I have identified as low traffic |
| areas． |  |
| Limit travel | Stay home until the planners create safer routes around town for non－motorized |
| travel． |  |
| Limit travel | Stay home． |
|  | Stay home． |


| Limit travel | Stay off the roads during rush hour |
| :---: | :---: |
| Limit travel | Stay off the roads when the crush of visitors and/or tourists are in town. This is especially true when we have snow events. |
| Limit travel | Stay off the streets when NAU is having graduations or homecoming. |
| Limit travel | Stop driving |
| Limit travel | Stop driving |
| Maintain area | Unsure |
| Maintain area | Shovel the sidewalk so pedestrians and bikers can commute when it is snowy |
| Maintain area | Clear debris from sidewalk/bike lanes |
| Maintain area | Continue to shovel sidewalks to make way for pedestrians |
| Mood | Be patient obey the rules |
| Mood | Be prepared for the behavior of other road users. |
| Mood | Being less triggered by aggression drivers |
| Mood | Continue being a calm, courteous driver |
| Mood | Relax. |
| N/A | N/A |
| N/A | Not sure |
| N/A | Unsure |
| No DUI | Never travel distracted or impaired. |
| No drugs | Stop driving high |
| Plan travel | Two things: 1) Since I am retired, I can go out when I want, so I can choose to drive places at less-congested times. 2) Take the time to walk more places, such as grocery store, dentist, or doctor |
| Plan travel | What I wish could be done: Downtown bypass route, Milton frontage roads, separated bike lanes (NOT a pained line on the road. Use NAU as an example). |
| Plan travel | Start early and give yourself enough time to get to your destination and pay full attention to driving. |
| Plan travel | Take my time, careful visual spanning in both directions (I have completely lost vision in right eye |
| Plan travel | Take side roads, not main roads |
| Plan travel | Travel on off peak hours |
| Plan travel | Travel outside of rush hours. |
| Plan travel | Try to use roadways at "off" hours. |
| Plan travel | Anticipate issues, think ahead, avoid conflict |
| Plan travel | Avoid dangerous routes when possible. |
| Plan travel | Avoid peak traffic time |
| Plan travel | Be timelier at shoveling the sidewalk after snowstorms in front of my home. |
| Plan travel | Don't drive at night |
| Plan travel | Drive during non-congestion times |
| Plan travel | Leave a few minutes earlier so I don't feel rushed and have more patience with others. |
| Plan travel | Leave earlier |


| Plan travel | Leave earlier so I am not rushing. |
| :--- | :--- |
| Plan travel | Leave more time to make trips |
| Plan travel | Leave sooner |
| Plan travel | Not drive in snow! |
| Plan travel | Plan my route before I leave |
| Plan travel | Plan my route/Plan my day better. |
| Plan travel | Plan my trips ahead of time. Ride the bus as much as possible. |
| Plan travel | Plan trips better and drive less |
| Plan travel | As stated above - allow more time to get where I'm going and be patient. |
| Plan travel | Avoid Milton Road if possible. |
| Plan travel | Avoid congested times/areas |
| Plan travel | Allow more time to get to destinations |
| Plan travel | Allow more time to get to my destination. |
| Plan travel | Allow plenty of drive time so I am not rushed |
| Plan travel | Clean my windshield more try not to drive during our heavy traffic hours |
| Plan travel | Don't drive at night |
| Plan travel | Don't walk in the roads and cross only at crosswalks |
| Plan travel | Give more time for driving around town, it is taking longer than years past |
| Plan travel | Give myself more time to get to my destination so I am not in a hurry. |
| Plan travel | Insure I am not rushed when traveling to make a meeting on time. |
| Plan travel | I've chosen to drive in weather that is probably unsafe and could do better at |
| planning trips around storms. I could also wear more reflective gear and lights |  |
| when I ride my bike. |  |
| Plan travel | Minimize driving in high traffic times |
| Plan travel | Not travel as often to reduce my time on unsafe roads |
| Practice patience | Practice patience and vigilance when traveling regardless of mode of transport |
| Practice patience | Practice patience, especially on Fridays and weekends when there are more <br> visitors than normal. |
| Practice patience | Drive with patience within the City |
| Practice patience | Patience |
| Practice patience | Patience |
| Practice patience | Patience. a few seconds of delay don't really matter. |
| Prepare vehicle | Make sure my windows are clean and clear of dirt |
| Public transit | Use bus vice drive. |
| Public transit | Take the bus more |
| Public transit | Take the bus more often. |
| Public transit | Take the bus or ride my bike more frequently so there are less cars on the road. |
| Public transit | Take the bus. I also think that I could learn to be more careful when making <br> turns while driving. Left turns are hard to make in Flagstaff. |
| Talk to the bicyclists when they nearly run me and other pedestrians down. |  |


| Public transit | If the bus had a route to my work and my work had a deal to get yearly passes so I didn't have to drive, I totally would! Less people on the road and commuting to work would save gas and less traffic. |
| :---: | :---: |
| Reduce congestion | be willing to park and walk a bit further (to reduce congestion and demand for on-street parking in congested areas) |
| Report drivers | Call a hotline to report license plates of red-light runners. |
| Report drivers | Citizen arrest all doctors, nurses, pharm biz, local criminal puppet of pharm politicians |
| Report drivers | I already attempt to aid stranded or injured motorists when they are obstructing the roads, especially in icy conditions. I regularly call paramedics for drunk and unconscious pedestrians. |
| Report drivers | Inform people of their wrongdoings |
| Report drivers | Maybe report reckless driving. |
| Report drivers | Photo of license plates of people that have violated safe driving practices, so they get a fine. |
| Request maintenance | More plows and cinder trucks |
| Request signs | Have proper signs in the proper areas suggest stop signs, yield signs, crosswalks, etc. |
| Request signs | Put up signs on my neighborhood street encouraging people to slow down. Even at 25 MPH it's too fast for narrow streets with kids on it. |
| Drive speed limit | When I do drive, I tend to speed. |
| Drive speed limit | Drive within speed limits |
| Drive speed limit | Avoid being rushed and while on bicycle avoid riding against traffic even if it makes transitions easier at times. |
| Drive speed limit | Drive safely and calmly |
| Drive speed limit | Drive slower |
| Drive speed limit | Drive slower and be patient |
| Drive speed limit | Drive slower. |
| Drive speed limit | Drive the speed limit |
| Drive speed limit | Drive the speed limit. |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down |
| Drive speed limit | Slow down at a yellow light. Not check my phone at a red light. |
| Drive speed limit | Slow down, in my car |

\(\left.\left.$$
\begin{array}{|l|l|}\hline \text { Drive speed limit } & \text { Slow down my driving. } \\
\hline \text { Drive speed limit } & \text { Slow down, drive the speed limit and use directionals. } \\
\hline \text { Drive speed limit } & \text { slow down. } \\
\hline \text { Drive speed limit } & \text { Slow down. } \\
\hline \text { Drive speed limit } & \text { Slow down. } \\
\hline \text { Drive speed limit } & \text { Slow down. Leave the house even earlier to plan for traffic. } \\
\hline \text { Drive speed limit } & \text { Slow down. Pay attention. } \\
\hline \text { Drive speed limit } & \text { Watch my speed } \\
\hline \text { Drive speed limit } & \text { I can always slow down and focus more as a driver } \\
\hline \text { Drive speed limit } & \text { I can keep reminding myself not to rush. } \\
\hline \text { Drive speed limit } & \text { I could stop speeding }\end{array}
$$ \right\rvert\, \begin{array}{ll}I'm generally a slow and courteous driver and I support financial investments in <br>
bike/ped infrastructure. Perhaps advocate more for funding alternate modes of <br>

travel.\end{array}\right]\)| Drive speed limit |
| :--- | :--- |

NACOG
Northern Arizona

## Appendix C: Safety Performance

 and Equity Analysis Technical MemorandumTo: Jenn O'Connor
NACOG Planning Director
119 East Aspen Avenue
Flagstaff, AZ 86001

From: Kittelson \& Associates, Inc.

RE: $\quad$ Northern Arizona Regional Transportation Safety Plan - Roadway Crash Network Screening and Equity Analysis

## INTRODUCTION

Kittelson \& Associates ("Kittelson") is assisting Northern Arizona Council of Governments (NACOG), MetroPlan Flagstaff (MetroPlan), and Central Yavapai Metropolitan Planning Organization (CYMPO) in preparing their Regional Transportation Safety Plan to develop a holistic approach to addressing local road safety in their regions. This memorandum documents the spatial analysis which evaluates roadway and crash data to identify specific locations and roadway characteristics associated with increased crash risk for potential safety improvements. The findings from this analysis will inform the countermeasure identification, project development, and the goals for the plans.

This memorandum is organized into the following sections:

- Data Summary
- Spatial Analysis Methodology
- Priority Locations
- Emphasis Area Screening
- Equity Analysis
- Next Steps


## DATA SUMMARY

Kittelson developed a database of the most recent five years of reported crashes, covering January 1, 2017 through December 31, 2021. Original crash data is sourced from the Arizona Crash Information System (ACIS) which provides motor vehicle crash information compiled from traffic reports submitted to Arizona Department of Transportation (ADOT) by various law enforcement agencies at the state, county, city, and tribal levels. ADOT's Traffic Safety and Information Technology teams maintain the latest data, thus establishing ACIS as the primary resource for crash information in Arizona.

According to ACIS, there were 44,202 reported crashes in total between January 1, 2017 and December 31, 2021. 2,704 crashes were removed from the spatial analysis database due to the inability to accurately locate the crashes on the roadway network, occurring on roads/trails outside the network, or other geolocation errors. The resulting number of crashes included in the final database and used for spatial analysis was 41,498 crashes.

## SPATIAL ANALYSIS METHODOLOGY

This section describes the network screening methodology of the roadway network within three the regional jurisdictions in Northern Arizona - NACOG, MetroPlan, and CYMPO. These geographies of these three regional governments include roadways within the following counties of Northern Arizona:

- Navajo County
- Yavapai County
- Apache County
- Coconino County


## Crash Weighing System

Kittelson identified the intersections and segments with the highest crash severity using the Equivalent Property Damage Only (EPDO) network screening performance measure from the AASHTO Highway Safety Manual, $1^{\text {st }}$ Edition (HSM). We performed the EPDO screening calculation for all public at-grade locations (intersections and roadway segments) within the region. Private roads and many unimproved roadways were excluded from the analysis. The EPDO performance measure is described below and moving forward throughout this document is referred to as a crash severity score.

Table 1 shows the crash severity score weights assigned to individual crashes based on the crash severity. The crash weights are calculated from the crash costs provided in ADOT's 2021 Motor Vehicle Crash Facts for the State of Arizona assigning each crash with a score based on the relative crash cost as compared to a Property Damage Only (PDO) crash.

Table 1. Crash Weights by Severity

| Crash Severity | Crash Cost | Crash Weights |
| :--- | :---: | :---: |
| Fatal | $\$ 9,515,371$ | 890.95 |
| Suspected Serious Injury | $\$ 550,499$ | 51.54 |
| Suspected Minor Injury | $\$ 149,132$ | 13.96 |
| Possible Injury | $\$ 103,145$ | 9.66 |
| Property Damage Only | $\$ 10,680$ | 1.00 |

Source: Arizona Department of Transportation, 2021 Motor Vehicle Crash Facts for the State of Arizona. September 2022.
The provided weights prioritize crashes based on their relative severity with fatal and serious injury crashes receiving the highest priority and PDO crashes receiving the least priority in the scoring.

## INTERSECTION METHODOLOGY

Kittelson defined crashes as intersection or segment crashes in Northern Arizona. An intersection crash is defined as a crash that occurs within 250 feet of the intersection as recommended by the Highway Safety Manual (HSM). These crashes were spatially joined and summarized in ArcGIS to show the total number of crashes by severity at each intersection. Where intersections were less than 500 feet from each other, crashes were assigned to the nearest of the two intersections. Crashes occurring more than 250 feet from any intersection were separated to be used in the segment analysis discussed below.

Kittelson calculated the crash severity score for the intersections by multiplying each crash severity total by the associated weight (by intersection type) and summing the results, using the following formula:

Crash Severity Score = Fatal weight * \# of fatal crashes + serious injury weight * \# of serious injury crashes + other visible injury weight * \# of other visible injury crashes + complaint of pain injury weight * \# of complaint of pain injury weight crashes + PDO crashes

Kittelson annualized the crash severity score by dividing the score by the number of years of crash data (5) used in the analysis.

## ROADWAY SEGMENT METHODOLOGY

After completing the intersection analysis, Kittelson used the crashes that occurred more than 250 feet from the nearest intersection to conduct a separate segment analysis. We used a Python script in ArcGIS to split the Northern Arizona road network into overlapping one-mile segments and incrementing these segments by half-mile. This methodology helps to identify portions of roadway with the highest crash severity scores and greatest potential for safety improvements.

After splitting the network, the Python script spatially joined non-intersection crashes to each segment. Like the intersection methodology above, roadway segment crashes were summarized by severity, and the totals were multiplied by the crash severity weights. The weighted crash severity scores of the crashes were totaled and annualized by the number of years of crash data (5) to generate an annualized crash severity score. These scores were then normalized by dividing the annualized crash severity score by the total roadway segment length.

## PRIORITY LOCATIONS

This section describes the priority intersections and segments using the annualized crash severity score methodology. The crash severity score method considers the weighting factors related to the societal costs of fatal, injury, and property damage-only crashes to develop an equivalent severity score that considers both the frequency and severity of crashes. This method highlights the sites that have high frequencies of more severe crash outcomes which typically warrant further investigation and countermeasure application. These locations are often the most competitive for Highway Safety Improvement Program (HSIP) grant applications, as the benefit-to-cost ratio used by HSIP relies on the crash severity scoring methodology.

Additional priority locations or alternative ways of developing priority location lists may be identified for implementation of projects. For example, the emphasis area analysis conducted as part of this study helps determine the association between roadway, intersection, or crash characteristics and the risk of crash occurrence. Crash risk analyses are helpful to proactively identify the roadways or intersection features, or crash characteristics that are associated with crash risk before the crashes happen to systemic treatments at locations with certain risk factors. Hence, the crash severity scoring is often used to determine priority locations based on historical crash patterns for quantitative safety performance while crash risk analyses are helpful in determining and recommending systemic countermeasures/treatments.

## PRIORITY LOCATION SCORE RESULTS

Kittelson identified priority intersections and segments by reviewing the annualized/normalized crash severity scores from the network screening results for each regional jurisdiction. Network screening results can be visualized in the web map located at https://arcg.is/09qaSC. The web map also overlays U.S. Department of Transportation's (USDOT's) definition of areas of persistent poverty as well as transportation and historically disadvantaged communities. These layers are explained further in the Equity Analysis section of this memorandum.

The priority locations were developed from the highest scoring locations in each region. The resulting list of priority intersections for NACOG, MetroPlan, and CYMPO are provided in Table 2, Table 4, and Table 6, respectively. The resulting list of priority roadway segments for NACOG, MetroPlan, and CYMPO are provided in Table 3, Table 5, and Table 7, respectively. As a note, locations were also developed for each county, local jurisdiction, and tribal nation within the three regional jurisdictions. The resulting list of priority locations for these jurisdictions can be viewed in Appendix A.

## HIGH INJURY NETWORKS

High injury networks (HINs) were constructed for NACOG, MetroPlan, and CYMPO by identifying a subset of the intersection and roadway segment outputs. A minimum crash severity score threshold for the $90^{\text {th }}$ percentile of all crash severity scores.

HINs are a blend of analysis and judgment to provide a large enough share of the roadway network to be meaningful but not so large as to lack utility in prioritizing and communicating roadway safety needs to the public. This balance is even more pronounced for larger HINs that cover vastly different land use patterns and community sizes. To strike this balance, each regional HIN was produced using the $90^{\text {th }}$ percentile minimum threshold for the crash severity scores to be considered for the HIN, followed by review of the distribution of segments and intersections meeting this threshold along the roadway network. Nearby segments or corridors of intersections meeting the minimum threshold were then combined and dissolved to create the HIN through an iterative process.

HINs can make for a useful communication tool because the data are reduced to a simple binary: roads and intersections are on or off the HIN. At the same time, this data reduction masks variation, so the underlying granular sliding windows or intersection-level data may be more useful for internal prioritization procedures. Unlike intersection hot spot analysis, sliding windows analysis and HINs can identify entire corridors that have experienced patterns of crashes, leading to the possibility of systemic treatments.

The HINs developed for NACOG, MetroPlan, and CYMPO can be viewed in the web map located at: https://kai.maps.arcgis.com/apps/instant/basic/index.html?appid=388eef13040a4fb7b86aac2a827b42a8.

## EMPHASIS AREA SCREENING

Using the same methodologies mentioned prior, each regional jurisdiction was screened focusing on the following roadway safety emphasis areas for both intersections and roadway segments:

- Aggressive Driving
- Lane Departures
- Older (64+) Road Users
- Younger (Under 25) Road Users
- No or Unknown Restraints
- Inclement Weather Conditions
- Distracted Driving
- Pedestrian- or Bicyclist- Involved
- Motorcycle-Involved
- Animal-Involved
- Night or Dark Conditions

The emphasis area screening results for intersections and roadway segments can be visualized via web maps at https://arcg.is/9rGaf0 and https://arcg.is/lTyLGi, respectively.

Table 2. Priority Intersections by Crash Severity Score - NACOG

| ID | Intersection Name | Annualized Crash Severity Score |
| :---: | :---: | :---: |
| 1 | 1-17 NB EXIT 287 \& STATE ROUTE 260 | 575.22 |
| 2 | STATE ROUTE 260 \& WESTERN DR | 405.08 |
| 3 | PAGE SPRING RD \& STATE ROUTE 69 | 384.05 |
| 4 | SPRING LN \& SR-69 | 375.01 |
| 5 | COUNTY RD 3172 \& COUNTY RD 3173 | 356.38 |
| 6 | STATE ROUTE 89 \& STATE ROUTE 89A | 356.38 |
| 7 | STATE ROUTE 260 (WHITE MOUNTAIN RD) \& WOOLFORD RD | 282.41 |
| 8 | STATE ROUTE 71 \& STATE ROUTE 89 | 226.29 |
| 9 | STATE ROUTE 89A \& MAIN \& SKYLINE DR | 216.24 |
| 10 | STATE ROUTE 89A \& WILLARD ST | 215.32 |
| 11 | COUNTY 5020 \& STATE ROUTE 180A | 210.58 |
| 12 | AULTMAN PKWY \& STATE ROUTE 260 | 209.66 |
| 13 | STATE ROUTE 89 \& LOY BUTTE RD/ANGEL VALLEY RD | 202.80 |
| 14 | STATE ROUTE 89 \& LAKE POWELL/TUNNEL RD | 201.62 |
| 15 | STATE ROUTE 89 \& LAKE POWELL BLVD/SCENIC VIEW | 201.15 |
| 16 | OLD RIM RD/RIM RD \& STATE ROUTE 260 | 192.49 |
| 17 | STATE ROUTE 260 \& YOUNG RD | 192.29 |
| 18 | STATE ROUTE 89A \& RED ROCK LOOP RD | 192.09 |
| 19 | BOURDON RANCH RD \& ROUNDUP DR | 191.29 |
| 20 | BLOODY BASIN RD \& TONELEA TRL | 190.83 |

Source: Kittelson \& Associates, Inc. (2023)

Table 3. Priority Roadway Segments by Crash Severity Score - NACOG

| ID | Roadway Segment | Segment <br> Length (mi) | Annualized Crash Severity Score | Normalized Crash Severity Score |
| :---: | :---: | :---: | :---: | :---: |
| 1 | SR-89 <br> Between 0.8 mi north of Purtymun Ln and Purtymun Ln | 0.8 | 548.61 | 699.38 |
| 2 | E Maren Ave Between S Maggie Mine Rd and E Lisa Dr | 0.3 | 178.19 | 610.75 |
| 3 | SR-87 <br> Between 4.5 mi south of General Crook Trl and 2 mi north of Loutihan Ln | 1.1 | 629.30 | 581.26 |
| 4 | W Denny Ln <br> Between Iron Springs Rd and 0.3 mi west of Iron Springs Rd | 0.3 | 178.19 | 567.55 |
| 5 | I-40 EB/I-40 BL Connector Between I-40 BL and I-40 EB | 0.3 | 180.98 | 532.54 |
| 6 | Middle Verde Rd <br> Between Castle Ln and Montazuma Casde Rd | 0.3 | 178.19 | 527.39 |
| 7 | I-17 NB <br> Between 0.5 mi south of Mud Springs Rd and 0.5 mi south of Rock Springs Rd | 0.8 | 374.36 | 464.53 |
| 8 | US-89 <br> Between 5.5 mi north of Navahopi Rd and 7 mi north of Navahopi Rd | 1.5 | 541.16 | 360.77 |
| 9 | Rim Rd <br> Between Willow Run and Larson Rd | 0.5 | 178.19 | 326.89 |
| 10 | SR-89 NB <br> Between 0.7 mi south of Mina Rd and 2.1 mi north of Date Creek Rd | 3.7 | 1,177.50 | 319.51 |

Source: Kittelson \& Associates, Inc. (2023)

Table 4. Priority Intersections by Crash Severity Score - MetroPlan

| ID | Intersection Name | Annualized Crash Severity Score |
| :---: | :---: | :---: |
| 1 | MARKETPLACE DR \& STATE ROUTE 89 | 486.34 |
| 2 | STATE ROUTE 89 \& SNOWFLAKE DR/TRAILS END DR | 376.67 |
| 3 | COUNTRY CLUB DR \& STATE ROUTE 89 | 280.83 |
| 4 | ROUTE 66 \& STATE ROUTE 89 (MILTON RD) | 263.51 |
| 5 | CUMMINGS ST \& STATE ROUTE 89 | 263.50 |
| 6 | COUNTRY CLUB DR \& EB I-40 EXIT 201 | 213.81 |
| 7 | CORTLAND BLVD/SOLIERE AVE \& COUNTRY CLUB DR | 211.60 |
| 8 | DORTHA AVE \& FOURTH ST | 199.69 |
| 9 | BEAVER ST \& BUTLER AVE | 192.51 |
| 10 | BURRIS LN \& STATE ROUTE 89 | 186.25 |
| 11 | FOX LAIR DR \& SOLIERE AVE | 184.38 |
| 12 | ROUTE 66 \& TEST DR | 180.72 |
| 13 | NORTHGATE LOOP \& STATE ROUTE 89 | 179.19 |
| 14 | LITZLER DR \& UNIVERSITY HEIGHTS DR | 178.59 |
| 15 | ARROWHEAD AVE \& CENTER ST | 178.39 |
| 16 | PEAKS PKWY \& SUNSET BLVD | 178.39 |
| 17 | CANYON LOOP \& KACHINA TRL | 178.19 |
| 18 | BRAMLEY LN \& STATE ROUTE 89 | 178.19 |
| 19 | FANNING DR \& ROUTE 66 | 116.33 |

Note: One priority intersection in MetroPlan jurisdiction was dropped due to further site investigation.
Source: Kittelson \& Associates, Inc. (2023)

Table 5. Priority Roadway Segments by Crash Severity Score - MetroPlan

| ID | Roadway Segment | Segment Length (mi) | Annualized Crash Severity Score | Normalized Crash Severity Score |
| :---: | :---: | :---: | :---: | :---: |
| 1 | I-40 WB/I-17 NB Connector Between I-40 WB and I-17 NB | 0.5 | 200.41 | 430.79 |
| 2 | I-40 EB <br> Between 0.6 mi east of Country Club Dr and East of $4^{\text {th }} \mathrm{St}$ | 2.0 | 546.97 | 273.48 |
| 3 | I-40 WB <br> Between 1.5 mi East of Beulah Blvd and 2.2 mi East of Beulah Blvd | 0.7 | 182.38 | 268.93 |
| 4 | Milton Rd <br> Between Route 66 and Forest Meadows St | 1.0 | 210.74 | 210.74 |
| 5 | I-17 NB <br> Between North of Old Munds Hwy and 0.8 mi South of Mountainaire Rd | 3.1 | 612.58 | 199.71 |
| 6 | US-180 <br> Between Rain Valley Rd and El Paso Flagstaff Rd | 0.9 | 178.59 | 198.39 |
| 7 | SR-89 <br> Between Pine del Dr and 1 mi south of Pine del Dr | 1.0 | 180.99 | 184.15 |
| 8 | Cedar Ave <br> Between $4^{\text {th }}$ St and Gemini Rd | 1.2 | 206.73 | 167.95 |
| 9 | Soleire Ave <br> Between Country Club Dr and Elk Run St | 1.2 | 196.62 | 167.84 |
| 10 | US-89 <br> 3.5 mi north of Kaitlin Way and Kaitlin Way | 3.5 | 573.29 | 161.49 |

Source: Kittelson \& Associates, Inc. (2023)

Table 6. Priority Intersections by Crash Severity Score - CYMPO

| ID | Intersection Name | Annualized Crash Severity Score |
| :---: | :---: | :---: |
| 1 | BUNKER PL \& PRESCOTT LAKES PKWY | 360.37 |
| 2 | GATEWAY BLVD/PRESCOTT LAKES PKWY \& STATE ROUTE 69 | 243.55 |
| 3 | RUTH ST \& WHIPPLE ST | 240.53 |
| 4 | FLORENTINE RD \& GLASSFORD HILL RD | 240.29 |
| 5 | DIAMOND DR \& STATE ROUTE 69 | 223.59 |
| 6 | NICHOLET TRL/SMOKE TREE LN \& WILLOW CREEK RD | 212.92 |
| 7 | KACHINA PL \& STATE ROUTE 69 | 207.93 |
| 8 | MENDECINO DR \& STATE ROUTE 69 | 204.93 |
| 9 | PERKINSVILLE RD \& ROAD 1 EAST | 201.74 |
| 10 | GLASSFORD HILL RD \& GRANVILLE WAY | 201.09 |
| 11 | RAMADA DR \& STATE ROUTE 69 | 200.96 |
| 12 | OVERLAND RD \& STATE ROUTE 89 | 197.08 |
| 13 | ROBERT RD \& SPOUSE DR | 195.16 |
| 14 | KLOSS AVE \& STATE ROUTE 69 | 193.22 |
| 15 | LITTLE RANCH RD \& STATE ROUTE 89 | 192.29 |
| 16 | FRONTAGE RD \& MEADOWLARK DR | 192.10 |
| 17 | CAMPBELL ST \& MERRITT ST | 188.50 |
| 18 | FAIR ST/DOUGHERTY ST \& GAIL GARDNER WAY | 185.45 |
| 19 | OLD CHISHOLM TRL \& STIRRUP HIGH DR | 183.98 |
| 20 | LEGEND HILLS RD \& STATE ROUTE 89A | 183.78 |

Source: Kittelson \& Associates, Inc. (2023)

Table 7. Priority Roadway Segments by Crash Severity Score - CYMPO

| ID | Roadway Segment | Segment Length (mi) | Annualized Crash Severity Score | Normalized Crash Severity Score |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Prescott St <br> Between Jones St and Holiday Dr | 0.3 | 178.19 | 578.72 |
| 2 | SR-89 NB <br> Between 0.6 mi north of Willow Creek Rd and north of Willow Creek Rd | 0.3 | 180.32 | 552.88 |
| 3 | Powers Ave <br> Between Robert Rd and Castle Track Dr | 0.4 | 178.19 | 408.43 |
| 4 | Smoke Tree Ln <br> Between Cabaret St and Golden Bear Dr | 0.5 | 178.19 | 364.21 |
| 5 | Road 1 E <br> Between Road 3 S and Road 4 S | 0.5 | 178.19 | 359.57 |
| 6 | SR-89 NB <br> Between east of Granite Dells Pkwy and 0.6 mi west of Larry Caldwell Dr | 1.9 | 622.05 | 325.75 |
| 7 | SR-69 <br> Between west of Prescott Canyon Dr and 1.1 mi west of Larry Caldwell Dr | 1.0 | 291.69 | 284.98 |
| 8 | SR-69 <br> Between 0.5 mi east of Old Black Canyon Hwy and Prescott Lakes Pkwy | 3.1 | 476.86 | 152.78 |
| 9 | SR-89 NB <br> Between 1 mi south of Outer Loop Rd and north of Willow Creek Rd | 3.1 | 424.24 | 136.66 |
| 10 | N Williamson Valley Rd <br> Between Southview Dr and Longview Dr | 1.5 | 186.71 | 127.88 |

Source: Kittelson \& Associates, Inc. (2023)

## EQUITY ANALYSIS

This section presents the equity analysis for NACOG, MetroPlan, and CYMPO. Equity is a fundamental consideration of the U.S. Federal Highway Administration's (FHWA) Safe System Approach, particularly given that pedestrian and bicyclist fatality rates on a per-capita basis vary by race, income, age, and gender to varying degrees in varying places. ${ }^{2}$ These outcomes better prioritize project development and underscore the need to explicitly examine correlations between sociodemographic and risk factors related to roadway infrastructure and operations. Furthermore, an equity analysis ideally encompasses more than just safety analysis, given known limitations of crash data (e.g., underreporting or near misses) and the lack of systemic exposure estimates to contextualize risk.

Kittelson used USDOT's Equitable Transportation Community (ETC) Explorer ${ }^{3}$ and RAISE Persistent Poverty ${ }^{4}$ tools to identify priority equity areas in the study regions. Table 8 provides the total number and the percentage of fatal or suspected serious injury crashes in disadvantaged areas in each region. As the table demonstrates, the majority of all reported fatal or suspected serious injury crashes occur in disadvantaged areas in Northern Arizona (58.9\%). Within MetroPlan's and CYMPO's jurisdiction, nearly $40 \%$ of reported fatal or suspected serious injury crashes occurred in disadvantaged areas. In the NACGO region, approximately 70\% of fatal or suspected serious injury crashes occurred in disadvantaged areas.

Table 8. Proportion of Fatal or Suspected Serious Injury Crashes in Disadvantaged Areas in Each Region

| Regional | Number of Fatal or <br> Suspected Serious Injury <br> Crashes in Region | Number of Fatal or <br> Suspected Serious Injury <br> Crashes in Disadvantaged <br> Areas in Region | \% of Fatal or Suspected <br> Serious Injury Crashes in <br> Disadvantaged Areas in <br> Region |
| :---: | :---: | :---: | :---: |
| NACOG | 1,593 | 1,057 | $66.4 \%$ |
| MetroPlan | 258 | 97 | $37.6 \%$ |
| CYMPO | 311 | 119 | $38.3 \%$ |
| Total | $\mathbf{2 , 1 6 2}$ | $\mathbf{1 , 2 7 3}$ | $\mathbf{5 8 . 9 \%}$ |

Source: Kittelson \& Associates, Inc. (2023)
Figure 1, Figure 2, and Figure 3 illustrate the disadvantaged areas in relation to the priority locations identified prior at the census tract level for NACOG, MetroPlan, and CYMPO, respectively. Out of the 90 priority projects identified across the three regions, 41 of priority projects are within a disadvantaged area (45.6\%). The projects are almost evenly split amongst the three regions with 16 projects in NACOG, 11 projects in MetroPlan, and 14 projects in CYMPO. Table 9 summarizes the total number of priority projects within a disadvantaged area for each region.

[^3]Table 9: Summary of Overlap Between Regional Priority Projects and Disadvantaged Areas

| Regional <br> Juriscliction | Number of Priority <br> Intersection Projects in a <br> Disadvantaged Area | Number of Priority Segment <br> Projects in a Disadvantaged <br> Area | Total Number of Priority <br> Projects in a Disadvantaged <br> Area |
| :---: | :---: | :---: | :---: |
| NACOG | 9 | 7 | 16 |
| MetroPlan | 6 | 5 | 11 |
| CYMPO | 9 | 5 | 14 |
| Total | $\mathbf{2 4}$ | $\mathbf{1 7}$ | $\mathbf{4 1}$ |

Source: Kittelson \& Associates, Inc. (2023)

Figure 1. Equity Analysis - NACOG


Figure 2. Equity Analysis - MetroPlan


Figure 3. Equity Analysis - CYMPO


## NEXT STEPS

The findings presented above will be discussed, reviewed, and confirmed with NACOG, MetroPlan, and CYMPO staff and stakeholders, as desired. This information will be used to develop systemic packages and stand-alone projects for selected priority locations that will most likely provide the greatest potential crash reduction. These project scopes will help inform the projects that will be most competitive for funding and most likely to improve roadway safety across each region. This information can also be used to understand general risk factors on regional roadways that should be considered in future projects when looking at systemic treatments or modifications to locations that have historically not had high crash frequencies or severities. Subsequently, the NACOG, CYMPO, and MetroPlan Regional Transportation Safety Plans will be drafted and finalized for each region's future planning efforts.


APPENDIX A Priority Intersections and Segments for Northern Arizona Counties, Local Jurisdictions, and Tribal Nations

| ID | Fatal Crashes | Suspected <br> Serious Injury Crashes | Suspected Minor Injury Crashes | Possible Injury Crashes | PDO Crashes | Total Crashes | Annual Crash Frequency |  | Jurisdiction | County | Tribal Nation | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25166 COUNTY 3172 \& COUNTY 3172 | 2 | 0 | 0 | 0 | 0 | 2 | 0.40 | 356.38 |  | Apache |  | NACOG |
| 31060 COUNTY 5020 \& US-180A | 1 | 2 | 4 | 0 | 3 | 10 | 2.00 | 210.58 |  | Apache |  | NACOG |
| 37981 I-40 EB EXIT 325 A \& NAVAJO ROAD | 1 | 0 | 1 | 0 | 1 | 3 | 0.60 | 181.18 |  | Apache | Navajo Reservation | NACOG |
| 24898 US-191/US-180 \& COUNTY 2014/COUNTY 2269 | 1 | 0 | 1 | 0 | 0 | 2 | 0.40 | 180.98 |  | Apache |  | NACOG |
| 38994 US-160 \& SR-191/TSE' NKANI-FLAT ROCK SCENIC BYWY | 1 | 0 | 0 | 1 | 3 | 5 | 1.00 | 180.72 |  | Apache | Navajo Reservation | NACOG |
| 38811 US-191 \& US-191/BIA 012 | 1 | 0 | 0 | 1 | 1 | 3 | 0.60 | 180.32 |  | Apache | Navajo Reservation | NACOG |
| 24478 COUNTY NII 58 \& STATE ROUTE 373 | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 |  | Apache |  | NACOG |
| 18239 COUNTY ROAD 1325 \& COUNTY ROAD NI334 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache |  | NACOG |
| 24466 COUNTY NIO27 \& STATE ROUTE 373 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache |  | NACOG |
| 24742 STATE ROUTE 260 \& STATE ROUTE 373 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache |  | NACOG |
| 37915 1-40 EB EXIT 354 \& HAWTHORNE ROAD | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 38064 BIA 064 \& BIA 007 | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 38810 STATE ROUTE 191 \& BIA 102 | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 38824 STATE ROUTE 191 \& STATE ROUTE 264 \& BIA 015 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 38830 STATE ROUTE 264 \& BIA 027 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 38840 STATE ROUTE 160 \& BIA 035 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Apache | Navajo Reservation | NACOG |
| 25998 COUNTY 8235 \& COUNTY N8150 | 0 | 1 | 1 | 0 | 0 | 2 | 0.40 | 13.10 |  | Apache |  | NACOG |
| 25234 COUNTY 5020 \& COUNTY N8595 | 0 | 1 | 0 | 0 | 0 | 1 | 0.20 | 10.31 |  | Apache |  | NACOG |
| 38842 STATE ROUTE 160 \& ACCESS (W/O US-191) | 0 | 1 | 0 | 0 | 0 | 1 | 0.20 | 10.31 |  | Apache | Navajo Reservation | NACOG |
| 37987 I-40 EB EXIT 3 I \& PETRIFIED FOREST LOOP ROAD | 0 | 1 | 0 | 0 | 0 | 1 | 0.20 | 10.31 |  | Apache |  | NACOG |
| 25076 COUNTY 3087 \& COUNTY 3116 | 0 | 0 | 2 | 0 | 3 | 5 | 1.00 | 6.19 |  | Apache |  | NACOG |
| 37573 I-40 WB ON-RAMP EXIT 341 \& CEDAR POINT RDOAD | 0 | 0 | 2 | 0 | 3 | 5 | 1.00 | 6.19 |  | Apache | Navajo Reservation | NACOG |
| 31054 STATE ROUTE 61 \& COUNTY N8670 | 0 | 0 | 2 | 0 | 1 | 3 | 0.60 | 5.79 |  | Apache |  | NACOG |
| 37670 COUNTY 7230 \& US-191 | 0 | 0 | 2 | 0 | 0 | 2 | 0.40 | 5.59 |  | Apache |  | NACOG |
| 38052 I-40 WB EXIT 333 \& US-191 | 0 | 0 | 1 | 1 | 1 | 3 | 0.60 | 4.92 |  | Apache |  | NACOG |
| 38922 STATE ROUTE 64 \& STATE ROUTE 160 | 0 | 0 | 1 | 1 | 0 | 2 | 0.40 | 4.72 |  | Apache | Navajo Reservation | NACOG |
| 31101 COUNTY 3167 \& US-60 | 0 | 0 | 1 | 0 | 2 | 3 | 0.60 | 3.19 |  | Apache |  | NACOG |
| 31173 COUNTY N3031/COUNTY N3330 \& US-60 | 0 | 0 | 1 | 0 | 2 | 3 | 0.60 | 3.19 |  | Apache |  | NACOG |
| 31214 STATE ROUTE 61 \& US-60 | 0 | 0 | 1 | 0 | 2 | 3 | 0.60 | 3.19 |  | Apache |  | NACOG |
| 38995 STATE ROUTE 160 \& STATE ROUTE 191 | 0 | 0 | 1 | 0 | 2 | 3 | 0.60 | 3.19 |  | Apache | Navajo Reservation | NACOG |
| 24291 POLE KNOLL TR \& STATE ROUTE 260 | 0 | 0 | 1 | 0 | 1 | 2 | 0.40 | 2.99 |  | Apache |  | NACOG |
| 24867 STATE ROUTE 191/US-180 \& COUNTY 2220 | 0 | 0 | 1 | 0 | 1 | 2 | 0.40 | 2.99 |  | Apache |  | NACOG |


| ID | Fatal Crashes | Suspected Serious Injury Crashes | Suspected Minor Injury Crashes | Possible Injury Crashes |  | Total Crashes | nnual Crash <br> Frequency |  | Jurisdiction | County | Tribal Nation | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38027 STATE ROUTE 89 \& STATE ROUTE 89A | 2 | 0 | 0 | 0 | 0 | 2 | 0.40 | 356.38 |  | Coconino | Navajo Reservation | NACOG |
| 24668 OLD RIM RD/RIM RD \& STATE ROUTE 260 | 1 | 1 | 1 | 0 | 6 | 9 | 1.80 | 192.49 |  | Coconino |  | NACOG |
| 24400 STATE ROUTE 260 \& YOUNG RD/OLD RIM RD | 1 | 1 | 1 | 0 | 5 | 8 | 1.60 | 192.29 |  | Coconino |  | NACOG |
| 24531 BURRIS LN \& STATE ROUTE 89 | 1 | 0 | 1 | 2 | 7 | 11 | 2.20 | 186.25 |  | Coconino |  | MetroPlan |
| 23428 PINON HARVEST BLVD \& TALL TREE ST | 1 | 0 | 1 | 0 | 1 | 3 | 0.60 | 181.18 |  | Coconino |  | NACOG |
| 24536 DENALI DR \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 5 | 6 | 1.20 | 179.19 |  | Coconino |  | MetroPlan |
| 24245 SPRING VALLEY RD \& STATE ROUTE 64 | 1 | 0 | 0 | 0 | 3 | 4 | 0.80 | 178.79 |  | Coconino |  | NACOG |
| 17570 OLD ROUTE 66 \& SHERWOOD FOREST RD | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 |  | Coconino |  | NACOG |
| 23885 PEAKS PKWY \& SUNSET BLVD | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 |  | Coconino |  | MetroPlan |
| 24284 SHEEP SPRING ROAD \& STATE ROUTE 260 | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 |  | Coconino |  | NACOG |
| 38990 INDIAN ROUTE 2I/INDIAN ROUTE 6784 \& US-160 | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 |  | Coconino | Navajo Reservation | NACOG |
| 16344 CANYON LOOP \& KACHINA TRL | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino |  | MetroPlan |
| 24529 BRAMLEY LN \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino |  | MetroPlan |
| 31691 ARIZONA BLVD \& YELLOWMANS TRAILER CT | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino | Navajo Reservation | NACOG |
| 37390 CENTER RD \& LAPP LOOP | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino |  | NACOG |
| 37790 EDGEWATER DR \& MAIN ST | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino | Navajo Reservation | NACOG |
| 37688 RANCH LAND RD \& STATE ROUTE 99 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino |  | NACOG |
| 38950 INDIAN ROUTE 67801 \& US-160 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 |  | Coconino | Navajo Reservation | NACOG |
| 24522 SILVER SADDLE RD \& STATE ROUTE 89 | 0 | 2 | 4 | 5 | 10 | 21 | 4.20 | 43.45 |  | Coconino |  | MetroPlan |
| 37907 UPPER ANTELOPE POINT RD/COUNTY ROAD 222 \& STATE ROUTE 98 | 0 | 2 | 1 | 2 | 11 | 16 | 3.20 | 29.47 |  | Coconino | Navajo Reservation | NACOG |
| 38025 US-160 \& STATE ROUTE 89 | 0 | 2 | 1 | 2 | 4 | 9 | 1.80 | 28.07 |  | Coconino | Navajo Reservation | NACOG |
| 13800 CRESTLINERD \& MIDWAY LN | 0 | 2 | 0 | 1 | 1 | 4 | 0.80 | 22.75 |  | Coconino |  | NACOG |
| 37238 STATE ROUTE 89 \& STATE ROUTE 64 | 0 | 0 | 3 | 3 | 32 | 38 | 7.60 | 20.57 |  | Coconino | Navajo Reservation | NACOG |
| 24528 TOWNSEND WINONA RD \& STATE ROUTE 89 | 0 | 0 | 2 | 4 | 30 | 36 | 7.20 | 19.31 |  | Coconino |  | MetroPlan |
| 8733 STATE ROUTE 260 \& STATE ROUTE 87 | 0 | 1 | 1 | 1 | 6 | 9 | 1.80 | 16.23 |  | Coconino |  | NACOG |
| 23087 RAIN VALLEY RD \& TOWNSEND WINONA RD | 0 | 1 | 1 | 0 | 4 | 6 | 1.20 | 13.90 |  | Coconino |  | MetroPlan |
| 37879 STATE ROUTE 89 \& WAHWEAP DR | 0 | 1 | 1 | 0 | 0 | 2 | 0.40 | 13.10 |  | Coconino |  | NACOG |
| 16876 -17 NB EXIT 333 \& MOUNTAINAIRE RD/KACHINA BLVD | 0 | 1 | 0 | 1 | 4 | 6 | 1.20 | 13.04 |  | Coconino |  | MetroPlan |


| ID Intersection Name | Fatal Crashes | Suspected <br> Serious Injury <br> Crashes | Suspected <br> Minor Injury <br> Crashes | Possible Injury Crashes | PDO Crashes | Total Crashes | Annual Crash Frequency | $\begin{aligned} & \text { Crash S } \\ & \text { Scoore } \end{aligned}$ |  | Jurisdiction | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23335 MARKETPLACE \& STATE ROUTE 89 | 2 |  | $7 \quad 6$ | 6 14 | 40 | 99 | 19.80 |  | 486.34 | Flagstaff | MetroPlan |
| 24690 STATE ROUTE 89 \& SNOWFLAKE DRTTRALLS END DR | 2 |  | 1 3 | 30 | 0 8 | 14 | 2.80 |  | 376.67 | Flagstaff | MerroPlan |
| 24913 COUNTRY CLUB DR \& STATE ROUTE 89 | I |  | 11 | 16 | $16 \quad 102$ | 132 | 26.40 |  | 280.83 | Flagstaff | MetroPlan |
| 16915 US-66 \& SR-89 (MILTON AVE) | 1 |  | $4 \quad 5$ | 510 | 1054 | 74 | 14.80 |  | 263.51 | Flagstaff | MetroPlan |
| 24691 CUMMINGS ST \& HIGHWAY 89 | 1 |  | 13 | $3 \quad 9$ | 955 | 80 | 16.00 |  | 263.50 | Flagstaff | MetroPlan |
| $249061-40$ EB EXIT 201 \& COUNTRY CLUB DR | I |  | $0 \quad 5$ | 5 8 | $8 \quad 31$ | 45 | 9.00 |  | 213.81 | Flagstaff | MerroPlan |
| 24696 CORTLAND BLVD/SOLIERE AVE \& COUNTRY CLUB DR | I |  | $1 \quad 4$ | $4{ }^{4}$ | $4 \quad 21$ | 31 | 6.20 |  | 211.60 | Flagstaff | MetroPlan |
| 17557 DORTHA AVE \& THIRD ST | I |  | 1 1 | 13 | $3 \quad 13$ | 19 | 3.80 |  | 199.69 | Flagstaff | MetroPlan |
| 24171 beaver ave \& butLer st | । |  | 0 | 21 | 134 | 38 | 7.60 |  | 192.51 | Flagstaff | MetroPlan |
| 16023 FOX LAIR DR \& SOLIERE AVE | I |  | 2 | 20 | $0 \quad 3$ | 6 | 1.20 |  | 184.38 | Flagstaff | MetroPlan |
| 24488 US-180 (ROUTE 66) \& TEST DR | 1 |  | 0 | 0 । | 13 | 5 | 1.00 |  | 180.72 | Flagstaff | MetroPlan |
| 14327 LITZLER DR \& UNIVERSITY HEIGHTS DR | I |  | $0 \quad 0$ | $0 \quad 0$ | $0 \quad 2$ | 3 | 0.60 |  | 178.59 | Flagstaff | MetroPlan |
| 17052 ARROWHEAD AVE \& CENTER ST | 1 |  | 0 | $0 \quad 0$ | 0 1 | 2 | 0.40 |  | 178.39 | Flagstaff | MetroPlan |
| 24733 US-180 (ROUTE 66) \& FANNING DR | 0 |  | 11 | 15 | $5 \quad 77$ | 107 | 21.40 |  | 116.33 | Flagstaff | MetroPlan |
| 24892 STATE ROUTE 89A (MLTON RD) \& BUTLER AVE | 0 |  | 14 | $4 \quad 24$ | 4 - 84 | 123 | 24.60 |  | 112.56 | Flagstaff | MetroPlan |
| 16795 STATE ROUTE 89 (MILTON RD) \& FOREST MEADOWS ST | 0 |  | 12 | $2 \quad 14$ | $4 \quad 64$ | 93 | 18.60 |  | 104.28 | Flagstaff | MetroPlan |
| 16897 US-180 (ROUTE 66) \& PONDEROSA PKWY | 0 |  | 29 | $9 \quad 19$ | 98 | 128 | 25.60 |  | 102.05 | Flagstaff | MetroPlan |
| 16555 STATE ROUTE 89 (MILTON RD) \& RIORDAN RD | 0 |  | 12 | 27 | $7 \quad 66$ | 87 | 17.40 |  |  | Flagstaff | MetroPlan |
| 16567 STATE ROUTE 89 (MILTON RD) \& UNIVERSITY AVE | 0 |  | 210 | 0 8 | $8 \quad 73$ | 93 | 18.60 |  | 78.60 | Flagstaff | MetroPlan |


| 10 | Roadway Name | From Segment | To Segment | Length of Segment (miles) | Direction | Fatal Crashes | Suspected Serious Inuur Crashes | Suspected Minor Iniury Crashes | $\begin{aligned} & \text { Possible } \\ & \begin{array}{l} \text { Injury } \\ \text { Crashes } \end{array} \end{aligned}$ |  | ${ }_{\text {stal }}$ Total Crashes ${ }^{\text {A }}$ | Annual Crash <br> Frequency | Crash Severity <br> Score | Normalized <br> Crash Severity City Score | County | Tribal Nation | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1.17 NB | North of Old Munds Hwy | 0.8 mi South of Mountainaire Rd | ${ }^{3.1}$ | ns | ${ }^{3}$ | 1 | ${ }^{13}$ | 6 | 99 | 122 | 24.40 | 61.58 | 199.71 | Coconino |  | Metroplan |
| 3 | ${ }^{1-177 ~} \mathrm{NB}$ | 0.8 mi South of Mountainaire Rd | 9.7 mi North of Stoneman Lake Rd | 17.0 | Ns | 7 | 12 | ${ }^{96}$ | ${ }^{33}$ | ${ }^{438}$ | ${ }^{586}$ | 117.20 | 1790.48 | 105.54 | Cocornino |  | nacog |
| 10 | ${ }_{1-175}$ SB | 7.9 mi North of Stoneman Lake Rd | 4.6 mi North of Stonema Lake Rd | ${ }^{3.1}$ | ns | 1 |  | 10 |  | ${ }^{28}$ | 45 | 9.00 | 256.82 | 83.64 | Coconino |  | nacog |
| 21 | $1-40$ ев | 1.6 mi West of flipke Dr | East of f-40 EB Winsiow Job Corp Center Rd Offramp | 4.8 | ew | 0 | 8 | 15 | 6 | 34 | ${ }^{63}$ | 12.60 | 142.75 | 29.95 | Coconino |  | nacog |
| 23 | ${ }^{1-40 ~ E B}$ | 2.6 mi east of Twin Arrows Rd | 8 mi West of Twin Arrows Rd | 10.7 | ew | 4 | 8 | 28 | 19 | 123 | 182 | 36.40 | 934.73 | 87.66 | Coconino |  | nacog |
| 24 | ${ }^{-40}$ ев | East of Devil Dog Rd | 1.7 mi West of Pine Springs Rd | 4.0 | ew | 2 | 1 | 3 | 3 | 60 | 69 | 13.80 | 392.86 | 98.22 | Coconino |  | nacog |
| 27 | ${ }^{1-40 \text { eb }}$ | East of Townsend Winona Rd | 0.6 mi East of Wallut Canyon Rd | 6.1 | ew | 3 | 2 | 36 | 10 | 95 | 146 | 29.20 | 694.04 | 114.07 | Coconino |  | Metroplan |
| 30 | $1-40$ we | 9.8 mi west of US. 66 | 0.9 mi west of Garland Prarie Rd | 13.2 | ew | 2 | 10 | 50 | 19 | 251 | ${ }_{3} 3$ | 66.40 | 686.01 | 51.80 | Coconino |  | nacog |
| 34 | $1-40$ wb | 1.9 mi west of Meteor city Rd | 0.8 mi west of fuffal o Rd | 13.5 | ew | 4 | 14 | 24 | 12 | 90 | 144 | 28.80 | 965.29 | 71.50 | Coconino |  | nacog |
| 35 | ${ }^{1-40 ~ W e ~}$ | 1.6 mi west of Pine Springs Rd | 0.7 mi east of Monte Carlo Rd | 5.6 | ew | 2 | 13 | 17 | 10 | 109 | 151 | 30.20 | 578.99 | 103.75 | Coconino |  | nacog |
| 36 | 1.40 wb | 0.5 mi east of flagstaff Ranch Rd | 5.6 mie east of Garland Prairie Rd | ${ }_{9} 9$ | ew | 3 | 7 | 35 | 15 | 174 | 234 | 46.80 | 768.25 | 82.75 | Coconino |  | Metroplan |
| 38 | ${ }^{-40}$ WB | 2.1 east of Meteor $C$ lity Rd | Meteor City Rd | 2.1 | ew | 0 | 3 | 4 | 2 | 9 | 18 | 3.60 | 47.76 | 22.94 | Coconino |  | nacog |
| 46 | Old Highway 66 | 0.7 mi west of Sherwod forest Rd | Cool Pines Rd | 0.4 | ew | 0 | 1 | 0 | 0 | 0 | 1 | 0.20 | 10.31 | 24.40 | Coconino |  | nacog |
| 52 | SR-64 | 6.9 mis suth of Corsair Dr | 4.7 min north of Wilaw Rd | 1.5 | ns | 1 | 0 | 1 | 0 | 16 | 18 | 3.60 | 184.18 | 122.79 | Coconino |  | nacog |
| 53 | SR.64 | San Marcos Rd | Sunset Strip Rd | 1.6 | ns | 1 | 0 | 2 | 1 | ${ }^{13}$ | 17 | 3.40 | 188.31 | 115.49 | Coconino |  | nacog |
| 54 | SR.64 | 0.9 mi north of Hawkins Ranch Rd | South of Cinder Pit Rd | 3.0 | ns | 2 | 2 | 3 | 0 | 5 | 122 | 240 | 386.38 | 128.79 | Coconino |  | nacog |
| 78 | SR.87 | 4.5 mis suth of General Crook Tr | 2 mies north of Loutihan Ln | 1.1 | ns | 3 | 6 | 6 | 7 | ${ }^{13}$ | ${ }^{35}$ | 7.00 | 629.30 | 581.26 | Coconino |  | nacog |
| 79 | SR.87 | 1.4 mi south of McGe Rd | 1.1 min orth of Well Field Rd | 1.5 | ns | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | 118.79 | Coconino |  | nacog |
| 80 | SR.87 | south of Lake Mary Rd | 1.9 mis suth of Lake Mary Rd | 1.5 | Ns | 2 | 0 | 0 | 0 | 9 | 11 | 220 | 358.18 | 238.89 | Coconino |  | nacog |
| 82 | SR.87 | south of Staright dr | 1.7 mis south of Sariight Dr | 1.5 | ns | 1 | 0 | 1 | 0 | 8 | 1020 | 200 | 182.58 | 121.72 | Coconino |  | nacog |
| 83 | SR-87 | West of flue Ridge Dr | Eastof flear Creek Pines Acess Rd | 1.5 | ew | 1 | 0 | 0 | 0 | ${ }^{5}$ | 6 | ${ }^{1.20}$ | 179.19 | ${ }_{1}^{19.46}$ | Cocornino |  | ${ }^{\text {Nacog }}$ |
| ${ }^{84}$ | SR-87 | 15 mis outh of Rock Station Rd | 7.6 m i north of Staright or | 1.5 | ns | 1 | 0 | 1 | 0 | 3 | 5 | 1.00 | 181.58 | 121.06 | Coconino |  | nacog |
| 86 | SR.87 | 2.4 mi east of General Crook Tr | 0.9 mie east of General Crook Til | 1.5 | ew | 1 | 0 | 1 | 0 | 12 | $14 \quad 20$ | 280 | 183.38 | 122.28 | Coconino |  | nacog |
| 87 | SR.87 | 1.5 mi west of General crook Til | 3 mi west of General Crook Tr | 1.5 | ns | 1 | 0 | 3 | 1 | 7 | 12 | 240 | 189.90 | 126.60 | Coconino |  | nacog |
| 106 | SR-98 | 23.9 mi West of US-160 | 29.4 m West of US-160 | 5.5 | ew | ${ }^{3}$ | 0 | 1 | 0 | 2 | 6 | 1.20 | 537.76 | 97.78 | Cocosino | Navajo Reseration | nacog |
| 107 | SR.98 | 42 miNorth of US-160 | $43.5 \mathrm{~min} \mathrm{North} \mathrm{of} \mathrm{US-160}$ | 1.5 | ns | 1 | 0 | 0 | 0 | 4 | 5 | 1.00 | 178.99 | 119.33 | Coconino | Navajo Reseration | nacog |
| 108 | SR.98 | 33 mi West of US-160 | 34.5 mi West of US-160 | 1.5 | ew | 1 | 0 | 0 | 0 | 0 |  | 0.20 | 178.19 | 118.79 | Cocornino | Navjo Reservation | nacog |
| 109 | SR.98 | 1.6 mi West of Navjo. Mountain Rd | 3.1 mi West of Navaio Mountain Rd | 1.5 | ${ }_{\text {ew }}$ | 1 | 0 | 0 | 0 | ${ }_{2}$ | ${ }_{4}$ | 0.40 | 178.39 <br> 1892 | 118.93 12035 | Cocorino | Navajo Reservation | Nacog Nacog |
| 110 | SR.98 | 38 mi West of US-160 | 39.5 mi West of US-160 | 1.5 | ew | 1 | 0 | 0 | 1 | 2 | 4 | 0.80 | 180.52 | 120.35 | Coconino | Navajo Reseration | nacog |
| 114 | SR-179 NB | 2.3 min orth of Bell Rock Evd | 1.1 mi North of Bell Rock Elvd | 1.2 | ns | 0 | 4 | 3 | 3 | 22 | 32 | 6.40 | 59.81 | 49.19 | Coconino |  | nacog |
| 116 | SR-179 Sb | 1.12 mi Backo Beyond Rd | 1.1 .1 m north of Bell Rock Blvd | 0.8 | ns | 0 | 0 | 1 | 1 | 2 | 4 | 0.80 | 5.12 | 6.55 | Coconino |  | nacog |
| 118 | SR-260 | East of Mogollon Rim Rd | 0.6 mi westof old Rim Rd | 9.9 | ew | 5 | 11 | 31 | 18 | 186 | ${ }^{251}$ | 50.20 | 1162.89 | 117.55 | Coconino |  | nacog |
| 145 | SR-264 | 14.2 mi East of US-160 | 10.7 mi East of US-160 | ${ }^{3.5}$ | ew | 2 | 0 | 0 | 0 | 1 | ${ }^{3}$ | 0.60 | 356.58 | 101.88 | Coconino | Navajo Reseration | nacog |
| 146 | SR-264 | 10.8 mi Easto f f Coalmine Rd | 9.3 mi East of Coalmine Rd | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | 10 | 0.20 | 178.19 | 118.79 | Cocornino | Hopi Reseration | ${ }^{\text {nacog }}$ |
| 161 | SR.89 | ${ }^{6} .8$ m i s suth of Landon Springs Rd | 0.6 min north of Fresest House Rd | 5.5 | Ns | 0 | 5 | ${ }^{20}$ | ${ }^{12}$ | 78 <br> 38 | 115 | 23.00 920 | 146.18 | ${ }_{26.58}^{2634}$ | Cocorino |  | Nacog |
| 176 | us-89 | South of Elden Sorings Rd | Townsend Winona Rd | 2.4 | ns | 2 |  | 4 | 2 | 38 | 46 | 9.20 | 379.01 | 160.34 | Coconino |  | Metroplan |
| 177 | us.89 | Townsend Winone Rd | 0.5 south of Townsend Winone Rd | 0.5 | ns | 0 | 0 | 7 | 2 | 16 | 25 | 5.00 | 26.61 | 53.89 | Coconino |  | Metroplan |
| 188 | us-89 | 5 mi North of Moenave Rd | 3 mi North of Moenave Rd | 2.0 | ns | 2 | 1 | 1 | 0 | 5 | 9 | 1.80 | 370.48 | 185.24 | Coconino | Navjo Reseration | nacog |
| 189 | U5-89 | North of Black Mesa Pump Station Rd | 1.4 min orth of Spider Wee Ranch Rd | 5.0 | Ns | 3 | 1 | 2 | 1 | 9 | 16 | 3.20 | 554.20 | 110.84 | Coconino |  | nacog |
| 190 | U5.89 | 5.5 mi North of Navahoi i d d | 7 miNorth of Navahopi Rd | 1.5 | Ns | ${ }^{3}$ | 0 | 2 | 0 | 5 | 10 | 200 | 541.16 | 360.77 | Coconino | Navij Reservation | nacog |
| 191 | Us-89 v | 1.2 mi south of Tuu Ranch R R | 6.7 mis suuth of Sunset Crater Wupatki Loop | 8.5 | Ns | 6 | 4 | 10 | 3 | ${ }^{30}$ | ${ }^{53}$ | 10.60 | 1150.10 | 135.31 | Cocornino |  | ${ }^{\text {nacog }}$ |
| 192 | U5.89 | 19 misouth of Haul Rd | 20.5 mi South of Haul Rd | 1.5 | Ns | 0 | ${ }^{3}$ | 4 | 0 | ${ }^{11}$ | ${ }^{18}$ | 3.60 | 44.30 19548 | ${ }^{29.53}$ | Cocorino | Navajo Reservation | Nacog |
| 193 | us.89 | Navahopi i d | 1.4 south of Navahopi i d | 1.4 | Ns | 1 | 1 | 2 | 0 | 7 | 11 35 | 220 | 195.48 57329 | 139.18 16149 | Cocorino | Navaj Reseration | ${ }_{\text {Nacog }}$ |
| 194 | U5.89 | 3.5 north of Kaitin Way | Kaitio way | ${ }^{3.5}$ | Ns | 3 | 2 | ${ }_{9}^{4}$ | 1 | $\begin{array}{r}25 \\ \hline 29\end{array}$ | 35 49 | 7.00 <br> 980 <br> 80 | $\begin{array}{r}573.29 \\ \hline 2384\end{array}$ | 161.49 69.77 | Cocorino Coconino |  | Metropan Metroplan a |
| 195 196 | U5-89 NB | North of tenox Park 6 , ${ }^{\text {a }}$ | 3.3 mi North of Lenox Park | ${ }^{3.3}$ | Ns | 1 | 0 | 9 | ${ }^{10}$ | ${ }^{29}$ | 49 | 9.80 120 | 228.44 36729 | ${ }_{9}^{69.77}$ | Coconino | Navaio Reseration | MetroPlan |
| 196 | U5.89 | 6.2 mi South of Marble Canyon Damste Rd 3.8 mi North of Marble Canyon Damsite Rd | 10.2 mi South of Marble Canyon Damsite Rd 2.3 mi North of Marble Canyon Damsite Rd | 4.0 1.5 | NS Ns | ${ }_{1}^{2}$ | 1 | $\bigcirc$ | $\bigcirc$ | 3 2 | ${ }_{3}^{6}$ | 1.20 0.60 | 367.29 178.59 | 91.82 119.06 |  | Navajo Reservation Navio Reservation | ${ }^{\text {NaCOG }}$ |
| 198 | U5.89 |  |  | 1.5 1.5 | Ns | 1 | 0 | 1 | ${ }^{\circ}$ | 2 | ${ }_{4}$ | 0.80 0.80 | 178.59 181.38 | 119.06 120.90 | Cococonino | Navajo Reseration | ${ }_{\text {Nacog }}$ |
| 199 | U589 | East of dam Access Rd | West of Gien Canyon Dam Access Rd | 1.0 | ew | 0 | 2 | 2 | - | 5 | 9 | 1.80 | 27.20 | 27.20 | Coconino |  | nacog |
| 209 | US-160 | West of Goldtooth Circle Rd | 1.7 mi West of Goldtooth Circte Rd | 1.5 | ew | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | 118.93 | Coconino | Navjo Reseration | nacog |
| 211 | US-160 | 9.9 mi asat of fairground sd | 6.9 mi asat of fairgrounds Rd | 3.0 | ew | 3 | 0 | 0 | 0 | 1 | 4 | 0.80 | 534.77 | 178.26 | Coconino | Navaj Reseration | nacog |
| 212 | US-160 | 15.9 mi East of fairgrounds Rd | 14.4 mi East of fairgrounds Rd | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 | 118.79 | Coconino | Navajo Reseration | nacog |
| 213 | Us-160 | 3.7 min West of SR . 98 | 5.2 mi West of SR -98 | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 | 118.79 | Coconino | Navjo Reservation | nacog |
| 223 | Us-180 | 3 min orth of tart Prairie Rd | 2.5 min orth of Hart Prairie Rd | 1.5 | ns | 1 | 1 | 2 | 0 | 5 | , | 1.80 | 195.08 | 130.06 | Coconino |  | Metroplan |
| 224 | Us-180 | 0.5 min orth of Fort Valley Ranch Rd | 0.8 mi north of Hidden Hollow Rd | 1.5 | ns | 1 | 1 | 1 | 0 | 12 | 15 | 3.00 | 193.69 | 129.13 | Coconino |  | Metroplan |
| 225 | US-180 | south of Hart Prairie Rd | North of Roundtree Rd | 1.5 | ns | 1 | 0 | 0 | 2 | 9 | 12 | 240 | 183.85 | 122.52 | Coconino |  | Metroplan |
| 244 | U589 | West of House Rock Rd | 2 mies East of Burma Rd | 3.5 | ew | 1 | 2 | 2 | 0 | 8 | ${ }^{13}$ | 2.60 | 205.99 | 58.86 | Coconino |  | nacog |
| 245 | us.89 | 1 m westof furma Rd | 2.5 mi west of Burma Rd | 1.5 | ew | 1 | 1 | 0 | 2 | ${ }^{3}$ | 7 | 1.40 | 192.96 | 128.64 | Coconino |  | nacog |
| 246 | U5.89 | 7.5 mis suth of Winter Rd | 8.5 mis South of Winter Rd | 1.0 | ns | 0 | 2 | 0 | 0 | 1 | ${ }^{3}$ | 0.60 | 20.82 | 20.82 | Coconino |  | nacog |
| 247 | us.89 | 10 mis outh of Winter Rd | 12.5 misouth of Winter Rd | 2.5 | ns | 0 | 6 | 6 | 2 | 10 | 24 | 480 | 84.47 | 33.78 | Coconino |  | nacog |
| 248 | Us-89 | north of Marian's way | 2 misouth of Maria's Way | 2.5 | ns | 2 | 0 | 4 | 2 | 1 | 9 | 1.80 | 371.61 | 148.64 | Coconino |  | nacog |
| 269 | Antelope Point Rd | 0.5 mi North of Lake Pump Rd | 1 mi South of Lake Pump Rd | 1.5 | ns | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | 118.79 | Coconino | Navajo Reseration | nacog |
| 270 | NF-82E | 1.5 east of Lake Mary Rd | Lake Mary ¢d | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | 118.79 | Coconino |  | nacog |
| 271 | N-84 | 1.5 north of Rim Rd | Rim Rd | 1.5 | ns | 0 | 1 | 0 | 0 | 1 | 2 | 0.40 | 10.51 | 7.01 | Coconino |  | nacog |
| 272 | Black Mesa Pump Station Rd | 1.3 mi West of US 89 | 2.8 mi West of US. 89 | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | ' | 0.20 | 178.19 | 118.79 | Coconino | Navjo Reseration | nacog |
| 273 | Crimson Rd | 0.6 mis south of Setters Tr | 0.6 min orth of hapey Trails Dr | 0.9 | Ns | 0 | 1 | 0 | 0 | 0 | ' | 0.20 | 10.31 17819 | 10.99 | Cocorono |  | Metroplan |
| 275 | Leup--oraibi Rd | 11.3 mi North of Sand Springs Rd | 9.8 mi North of Sand Springs Rd | 1.5 | ns | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 | 118.79 | Coconino | Hopi Reseration | nacog |
| 276 | Us.89T | 0.6 m S South of Windmill Corral | 2.1 mi South of Windmill Corral | 1.5 | ns | 1 | 0 | 0 | 0 | 0 | ' | 0.20 | 178.19 | 118.77 | Coconino | Navajo Reseration | nacog |
| 277 | U5.89T | 8 mi South of Windmill Coral | 9.5 mi South of Windmill Corral | 1.5 | Ns | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | 118.96 | Coconino | Navajo Reservation | nacog |
| 278 | Us.89T | 5 mi South of Copper Mine Rd | 6.5 mis Suth of copper Mine Rd | 1.5 | ns | 1 |  | 1 | 0 | 1 | ${ }^{3}$ | 0.60 | 181.18 | 120.81 | Coconino | Navejo Reseration | nacog |
| 279 | 18-2121 | 3.1 mi North of US-160 | 1.6 mi North of US-160 | 1.5 | Ns | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 | 118.79 | Coconino | Navajo Reservation | nacog |
| 280 | 18.6330 | 6.9 mi East of Powerine Rd | 5.4 mi East of Powerine Rd | 1.5 | ew | 1 | 0 | 0 | 0 | 0 | , | 0.20 | 178.19 | 118.79 | Coconino | Navajo Reseration | nacog |
| 282 | Lake Mary Rd | 2.2 minorth of 5 toneman Lake Rd | 0.8 mis suth of Stoneman Lake Rd | 3.0 | Ns | 0 | 2 | 2 | 2 | 7 | ${ }^{13}$ | 260 | ${ }^{31.47}$ | 10.49 | Cocorono |  | ${ }^{\text {Nacog }}$ |
| 283 | Lake Mary Rd | 1 north of SR-87 | SR.87 | 1.0 | ns | 0 | 1 | 0 | 0 | 0 | , | 0.20 | 10.31 | 10.31 | Coconino |  | ${ }^{\text {nacog }}$ |
| 284 | Lake Mary Rd | 0.5 miles North of Mormon Lake Rd | 1 mis suth of Mormon Lake Rd | 1.5 | ns | 1 | 0 | 2 | 1 | 5 | , | 1.80 | 186.71 | 124.47 | Coconino |  | nacog |
| 285 | Lake Mary Rd | 2.5 mi south of Mormon Lake Rd | 3.7 m n orth of Stoneman Lake Rd | 1.5 | Ns | 0 | 1 | 0 | 2 | ${ }^{3}$ | 6 | 1.20 | 14.77 | 9.85 | Coconino |  | nacog |
| 286 | Lake Mary Rd | 3 mi south Lake Mary Lodge Rd | 0.4 min orth of Lake Mary Baar Lndg | 1.1 | ns | 0 | 1 | 0 | 0 | 1 | 2 | 0.40 | 10.51 | 9.64 | Coconino |  | Metroplan |
| 287 | Lake Mary Rd | 0.4 mi north of lake Mary Boar Lndg | South of Lake Mary Boat Lndg | 0.4 | Ns | 0 | 0 | 1 | 0 | 1 | 2 | 0.40 | 2.99 | 7.31 | Coconino |  | nacos |



| Leupp Rd Leupp Rd |
| :---: |
| Leupp R d |
| Leup pd |
| Leupp Rd |
| n-5.54 |
| Mountainaire Rd |
| Old Rim Rd |
| S Cossino Rd |
| NF-153 |
| NF-153 |
| N Slayton Ranch Rd |
| NSlayton Ranch Rd |
| NF-179 |
| Stoneman Lake Rd |
| ECrestline Rd |
| EPriarie Edge Rd |
| N Snow Bowl Rd |
| N-516 |
| SGarand Priarie Rd |
| s Perkinswille Rd |
| W Branigan Park Rd |
| W Mt Elden Lookuut Rd |
| $1-17 \mathrm{NB}$ |
| ${ }^{1-40}$ wb |
| SR-64 |
| SR.87 |
| SR-98 |
| SR-260 |
| sR.89 |
| SR.89 |
| U5-89 м |
| SR.64 |
|  |
| SR-98 |


| 1.5 mi east of Roosevelt Rd | 1.3 mieast of Roseselt Rd |
| :---: | :---: |
| 2.8 m inorth of Roseselt Rd | 1.5 mi north of Roosevelt Rd |
| 1.5 mi eastof frandifls Rd | eastof frandfals Rd |
| 2.7 mi East of Grandfalls Rd | 1.7 mi Eastof ofrandalls Rd |
| Marcou Way/Navjo Rd | 2 mi west of Hopi Rd |
| 0.4 min orth of NF-169 | 1.11 m south of fF-169 |
| 0.5 north of Old Munds Hwy | Old Munds Hwy |
| West of Mill ld | 1 miles west of Mill Rd |
| 1.1 m mest of Rabbit Ridge Rd | 2.1 mi west of Rabit Ridge Rd |
| 5.9 min north of quail Ridge Ln | 4.4 mi north of Quail Ridge Ln |
| 2.3 mi south of 1.17 | 3.8 mi south of $1-17$ |
| Sunbeam 5 t | 1 south of Sunbeam 5 t |
| South of Homewood $\llcorner$ n | North of Car Rd |
| 6.6 mi south of Nelson Fire Rd | 8.1 mi south of Nelson Fire Rd |
| 0.9 mi west of L Lake Mary Rd | East of KT Ranch Rd |
| Turkee Tril | Pinewood Blvd |
| 5.5 mi east of Parkinssille Rd | 4.5 mieast of Parkinswill ed |
| 2.9 mi south of Alpenglow Rd | 0.5 min orth of US-180 |
| south of Alpenglow Rd | 1.8 mi south of Alpenglow Rd |
| 2.8 mi north of Trinity Ranch Rd | 1.3 min orth of T Trity Ranch Rd |
| 3.9 n n oorth of Prake Rd | 2.4 mis south of Prake Rd |
| 1 north of Hughes Ave | Hughes ave |
| 0.5 mie ast of N Yarrow Tri | Esast f Schultr Pass Rd |
| 0.7 m i north of Shult P Pass Lockett Meadow Rd | South of Camino De Los Vientos |
| South of Rocky Park Rd | 5.2 mi North of Stoneman Lake Rd |
| 1.6 mi East of devil Dog Rd | 0.6 mi West of Pine Springs Rd |
| $2.7 \mathrm{~m} \mathrm{~m} \mathrm{north} \mathrm{of} \mathrm{US-180}$ | $1.2 \mathrm{~min} \mathrm{orth} \mathrm{of} \mathrm{US-180}$ |
| 8.4 min orth of General Crook Tr | 7.4 mi north of General Crook Tri |
| 11.2 mi South of Upper Antelope Rd | 12.7 m S Suth of Upere Antelope Rd |
| 6.2 mi west of Rim Rd | 7.7 mi west of Rim Rd |
| Pine del Dr | 1 south of Pine del Dr |
| South of Leo Schnur $\llcorner$ n | 0.8 mi north of Purlymun Ln |
| 1.7 min orth of Sunset Crater Wupatk Loop | 1 minorth of Sunset Crater Wupatk Loop |
| 9.2 mi north of Wiawa Rd | 8.2 min orth of Wilawa Rd |
| 1 east of Quail Ridge Ln | Quail Ridge Ln |
| South of Border 5 t | 1 mis south of Border 5 St |
| West of Uper A Antlope Rd | 1.1 mil East of E Copperhead Rd |
| 18-6251 | 18.7 |









| ID | Roadway Name | From Segment | To Segment | Length of Segment (miles) | Direction | Fatal Crashes | Suspected Serious Injury Crashes | Suspected Minor Injury Crashes | Possible Injury <br> Crashes | pDO Crashes | Total Crashes | Annual Crash Frequency | Crash <br> Severity <br> Score | Normalized <br> Crash Severity <br> Score | City | County | $\begin{aligned} & \text { Tribal } \\ & \text { Nation } \end{aligned}$ | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | ${ }^{\text {-17 }}$ NB | $1-40$ | North of old Munds Hwy | 3.9 | ns | 1 | 3 | 18 | 7 | 87 | 116 | 23.20 | 290.31 | 74.91 | Flagstaff | Coconino |  | Metroplan |
| 28 | 1-40 EB | East of Butler Ave | West of Beulah Blvd | 4.0 | ew | 0 | 4 | 16 | 7 | 138 | 165 | 33.00 | 127.04 | 31.76 | Flagstaff | Coconino |  | Metroplan |
| 37 | $1-40$ wb | East of Butler Ave | West of Beulah Blvd | 4.0 | ew | 2 | 2 | 8 | 6 | 75 | 93 | 18.60 | 425.93 | 106.48 | Flagstaff | Coconino |  | Metroplan |
| 47 | $1-40$ Wb l-17 NB Connector | $1-40$ WB | ${ }^{1-17}$ NB | 0.5 | ew | 1 | 1 | 3 | 1 | 8 | 14 | 2.80 | 200.41 | 430.79 | Flagstaff | Coconino |  | MetroPlan |
| 178 | us-89 | 1.6 north of Country Club Dr | Country Club Dr | 1.6 | ns | 1 | 3 | 4 | 4 | 43 | 55 | 11.00 | 236.61 | 144.07 | Flagstaff | Coconino |  | Metroplan |
| 179 | Rte 66 | Country Club Dr | San Francisco St | 4.1 | ew | 2 | 5 | 18 | 25 | 108 | 158 | 31.60 | 528.08 | 128.00 | Flagstaff | Coconino |  | Metroplan |
| 180 | Rte 66 | 1.2 east of Railroad Springs Blvd | Railroad Springs Blvd | 1.2 | ew | 0 | 1 | 3 | 6 | 17 | 27 | 5.40 | 33.68 | 28.59 | Flagstaff | Coconino |  | Metroplan |
| 181 | Us-180 | Rain Valley Rd | El Paso Flagtaff Rd | 0.9 | ew | 1 | 0 | 0 | 0 | 2 | 3 | 0.60 | 178.59 | 198.39 | Flagstaff | Coconino |  | Metroplan |
| 303 | Butter Ave | Foxglenn St | $1-40$ | 1.4 | ew | 0 | 2 | 5 | 5 | 29 | 41 | 8.20 | 50.04 | 36.76 | Flagstaff | Coconino |  | Metroplan |
| 304 | Butter Ave | Ponderosa Pkwy | Lone Tree Rd | 1.0 | Ew | 0 | 1 | 4 | 4 | 22 | ${ }^{11}$ | 6.20 | 33.61 | 34.54 | Flagstaff | Coconino |  | Metroplan |
| 305 | Cedar Ave | 4 th St | Gemini Rd | 1.2 | ew | 1 | 2 | 1 | 1 | 16 | 21 | 4.20 | 206.73 | 167.95 | Flagstaff | Coconino |  | Metroplan |
| 307 | Huntington Dr | 4 th St | 1.2 west of 4th St | 1.2 | ew | 0 | 1 | 2 | 2 | 21 | 26 | 5.20 | 23.96 | 19.30 | Flagstaff | Coconino |  | Metroplan |
| 308 | Huntington Dr | Industrial Dr | Fanning Dr | 0.8 | ew | 0 | 1 | 0 | 0 | 4 | 5 | 1.00 | 11.11 | 13.86 | Flagstaff | Coconino |  | Metroplan |
| 309 | Industrial Dr | Nestle Purina Ave | Steves Blvd | 1.6 | ew | 0 | 1 | 2 | 0 | 1 | 4 | 0.80 | 16.09 | 10.31 | Flagstaff | Coconino |  | Metroplan |
| 310 | Pine Knoll Dr | Maricopa St | Huffer Ln | 1.1 | ew | 0 | 1 | 2 | 1 | 7 | 11 | 2.20 | 19.23 | 17.93 | Flagstaff | Coconino |  | Metroplan |
| 312 | Soleire Ave | Country Club Dr | Elk Run St | 1.2 | ew | 1 | 1 | 2 | 1 | 3 | 8 | 1.60 | 196.62 | 167.84 | Flagstaff | Coconino |  | MetroPlan |
| 313 | 4th St | Lockett Rd | $1-40$ | 1.2 | ns | 0 | 1 | 2 | 3 | 14 | 20 | 4.00 | 24.49 | 20.93 | Flagstaff | Coconino |  | Metroplan |
| 314 | Mountain Meadow Dr | El Paso Dr | Lynch Ave | 0.3 | ns | 0 | 1 | 0 | 0 | 1 | 2 | 0.40 | 10.51 | 33.27 | Flagstaff | Coconino |  | Metroplan |
| 318 | Lake Mary Rd | Widlife Dr | Frontier Ave | 1.7 | Ew | 0 | 0 | 0 | 1 | 4 | 5 | 1.00 | 2.73 | 1.57 | Flagstaff | Coconino |  | Metroplan |
| 323 | University Ave | Milton Rd | Forest Meadows St | 0.6 | Ew | 0 | 1 | 0 | 3 | 3 | 7 | 1.40 | 16.70 | 28.75 | Flagstaff | Coconino |  | Metroplan |
| 476 | Milton Rd | Rte 66 | Forest Meadows St | 1.0 | ns | 1 | 0 | 5 | 6 | 35 | 47 | 9.40 | 210.74 | 210.74 | Flagstaff | Coconino |  | MetroPlan |
| 483 | $1-40$ wb | 2.7 mi East of Country Club Dr | 0.7 mi East of Country Club Dr | 2.0 | ew | 1 | 0 | 6 | 2 | 32 | 41 | 8.20 | 205.21 | 102.60 | Flagstaff | Coconino |  | Metroplan |
| 484 | ${ }^{1-40}$ eb | 0.6 mi East of Country Club Dr | East of 4th 5 t | 2.0 | ew | 3 | 0 | 0 | 3 | 33 | 39 | 7.80 | 546.97 | 273.48 | Flagstaff | Coconino |  | Metroplan |
| 485 | $1-40$ Wb | 1.5 mi East of Beulah Blvd | 2.2 mi East of Beulah Blvd | 0.7 | ew | 1 | 0 | 1 | 0 | 7 | 9 | 1.80 | 182.38 | 268.93 | Flagstaff | Coconino |  | MetroPlan |

## Network Screening

Equivalent Property Damage Only (EPDO) Method

- Crash severity score weights each crash by severity using ADOT crash costs
- Property damage only crash weight is 1
- Fatal crash weight is 891:
- \$9,515,371/\$10,680
- EPDO values are annualized for the five-year analysis period (2017-2021)
- Score of 178.2 would be equivalent to a fatal crash occurring at the location every 5 years

| Fatality | $\$ 9,515,371$ |
| :--- | ---: |
| Suspected Serious Injury | $\$ 550,499$ |
| Suspected Minor Injury | $\$ 149,132$ |
| Possible Injury | $\$ 103,145$ |
| Property Damage Only | $\$ 10,680$ |

NACOG
Northern Arizona
Appendix E: Top 20 Priority
Locations by Agency

| ID | Intersection | Fatal Crashes | Suspected Serious Injury Crashes | Suspected Minor Injury Crashes | Possible <br> Injury <br> Crashes | PDO <br> Crashes | Total Crashes | Annual Crash Frequency | Crash <br> Severity Score | Jurisdiction Location | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23335 | MARKETPLACE DR \& STATE ROUTE 89 | 2 | 7 | 6 | 14 | 70 | 99 | 19.80 | 486.34 | Flagstaff | MetroPlan |
| 24690 | STATE ROUTE 89 \& SNOWFLAKE DR/TRAILS END DR | 2 | 1 | 3 | 0 | 8 | 14 | 2.80 | 376.67 | Flagstaff | MetroPlan |
| 24913 | COUNTRY CLUB DR \& STATE ROUTE 89 | , | 2 | 11 | 16 | 102 | 132 | 26.40 | 280.83 | Flagstaff | MetroPlan |
| 24691 | CUMMINGS ST \& STATE ROUTE 89 | 1 | 2 | 13 | 9 | 55 | 80 | 16.00 | 263.50 | Flagstaff | MetroPlan |
| 17557 | DORTHA AVE \& FOURTH ST | 1 | 1 | 1 | 3 | 13 | 19 | 3.80 | 199.69 | Flagstaff | MetroPlan |
| 16915 | ROUTE 66 \& STATE ROUTE 89A (MILTON RD) | 1 | 4 | 5 | 10 | 54 | 74 | 14.80 | 263.51 | Flagstaff | MetroPlan |
| 24906 | COUNTRY CLUB DR \& EB I-40 EXIT 201 | 1 | 0 | 5 | 8 | 31 | 45 | 9.00 | 213.81 | Flagstaff | MetroPlan |
| 16023 | FOX LAIR DR \& SOLIERE AVE | 1 | 0 | 2 | 0 | 3 | 6 | 1.20 | 184.38 | Flagstaff | MetroPlan |
| 24696 | CORTLAND BLVD/SOLIERE AVE \& COUNTRY CLUB DR | 1 | 1 | 4 | 4 | 21 | 31 | 6.20 | 211.60 | Flagstaff | MetroPlan |
| 14327 | LITZLER DR \& UNIVERSITY HEIGHTS DR | 1 | 0 | 0 | 0 | 2 | 3 | 0.60 | 178.59 | Flagstaff | MetroPlan |
| 23885 | PEAKS PKWY \& SUNSET BLVD | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | Coconino | MetroPlan |
| 24171 | BEAVER ST \& BUTLER AVE | 1 | 0 | 2 | 1 | 34 | 38 | 7.60 | 192.51 | Flagstaff | MetroPlan |
| 24531 | BURRIS LN \& STATE ROUTE 89 | 1 | 0 | 1 | 2 | 7 | 11 | 2.20 | 186.25 | Coconino | MetroPlan |
| 24488 | ROUTE 66 \& TEST DR | 1 | 0 | 0 | 1 | 3 | 5 | 1.00 | 180.72 | Flagstaff | MetroPlan |
| 17052 | ARROWHEAD AVE \& CENTER ST | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | Flagstaff | MetroPlan |
| 24536 | NORTHGATE LOOP \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 5 | 6 | 1.20 | 179.19 | Coconino | MetroPlan |
| 16344 | CANYON LOOP \& KACHINA TRL | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | Coconino | MetroPlan |
| 24733 | FANNING DR \& ROUTE 66 | 0 | 4 | 11 | 15 | 77 | 107 | 21.40 | 116.33 | Flagstaff | MetroPlan |
| 24529 | BRAMLEY LN \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | Coconino | MetroPlan |
| 24531 | BURRIS LN \& STATE ROUTE 89 | 1 | 0 | 1 | 2 | 7 | 11 | 2.20 | 186.25 | Coconino | MetroPlan |
| 24536 | DENALI DR \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 5 | 6 | 1.20 | 179.19 | Coconino | MetroPlan |
| 23885 | PEAKS PKWY \& SUNSET BLVD | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | Coconino | MetroPlan |
| 16344 | CANYON LOOP \& KACHINA TRL | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | Coconino | MetroPlan |
| 24529 | BRAMLEY LN \& STATE ROUTE 89 | 1 | 0 | 0 | 0 | 0 | 1 | 0.20 | 178.19 | Coconino | MetroPlan |
| 24522 | SILVER SADDLE RD \& STATE ROUTE 89 | 0 | 2 | 4 | 5 | 10 | 21 | 4.20 | 43.45 | Coconino | MetroPlan |
| 24528 | TOWNSEND WINONA RD \& STATE ROUTE 89 | 0 | 0 | 2 | 4 | 30 | 36 | 7.20 | 19.31 | Coconino | MetroPlan |
| 23087 | RAIN VALLEY RD \& TOWNSEND WINONA RD | 0 | 1 | 1 | 0 | 4 | 6 | 1.20 | 13.90 | Coconino | MetroPlan |
| 16876 | I-17 NB EXIT 333 \& MOUNTAINAIRE RD/KACHINA BLVD | 0 | 1 | 0 | 1 | 4 | 6 | 1.20 | 13.04 | Coconino | MetroPlan |
| 23335 | MARKETPLACE \& STATE ROUTE 89 | 2 | 7 | 6 | 14 | 70 | 99 | 19.80 | 486.34 | Flagstaff | MetroPlan |
| 24690 | STATE ROUTE 89 \& SNOWFLAKE DR/TRAILS END DR | 2 | 1 | 3 | 0 | 8 | 14 | 2.80 | 376.67 | Flagstaff | MetroPlan |
| 24913 | COUNTRY CLUB DR \& STATE ROUTE 89 | 1 | 2 | 11 | 16 | 102 | 132 | 26.40 | 280.83 | Flagstaff | MetroPlan |
| 16915 | US-66 \& SR-89 (MILTON AVE) | 1 | 4 | 5 | 10 | 54 | 74 | 14.80 | 263.51 | Flagstaff | MetroPlan |
| 24691 | CUMMINGS ST \& HIGHWAY 89 | 1 | 2 | 13 | 9 | 55 | 80 | 16.00 | 263.50 | Flagstaff | MetroPlan |
| 24906 | I-40 EB EXIT 201 \& COUNTRY CLUB DR | 1 | 0 | 5 | 8 | 31 | 45 | 9.00 | 213.81 | Flagstaff | MetroPlan |
| 24696 | CORTLAND BLVD/SOLIERE AVE \& COUNTRY CLUB DR | 1 | 1 | 4 | 4 | 21 | 31 | 6.20 | 211.60 | Flagstaff | MetroPlan |
| 17557 | DORTHA AVE \& THIRD ST | 1 | 1 | 1 | 3 | 13 | 19 | 3.80 | 199.69 | Flagstaff | MetroPlan |
| 24171 | BEAVER AVE \& BUTLER ST | 1 | 0 | 2 | 1 | 34 | 38 | 7.60 | 192.51 | Flagstaff | MetroPlan |
| 16023 | FOX LAIR DR \& SOLIERE AVE | 1 | 0 | 2 | 0 | 3 | 6 | 1.20 | 184.38 | Flagstaff | MetroPlan |
| 24488 | US-180 (ROUTE 66) \& TEST DR | 1 | 0 | 0 | 1 | 3 | 5 | 1.00 | 180.72 | Flagstaff | MetroPlan |
| 14327 | LITZLER DR \& UNIVERSITY HEIGHTS DR | 1 | 0 | 0 | 0 | 2 | 3 | 0.60 | 178.59 | Flagstaff | MetroPlan |
| 17052 | ARROWHEAD AVE \& CENTER ST | 1 | 0 | 0 | 0 | 1 | 2 | 0.40 | 178.39 | Flagstaff | MetroPlan |
| 24733 | US-180 (ROUTE 66) \& FANNING DR | 0 | 4 | 11 | 15 | 77 | 107 | 21.40 | 116.33 | Flagstaff | MetroPlan |
| 24892 | STATE ROUTE 89A (MILTON RD) \& BUTLER AVE | 0 | 1 | 14 | 24 | 84 | 123 | 24.60 | 112.56 | Flagstaff | MetroPlan |


| 16795 | STATE ROUTE 89 (MILTON RD) \& FOREST MEADOWS ST | 0 | 3 | 12 | 14 | 64 | 93 | 18.60 | 104.28 | Flagstaff | MetroPlan |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16897 | US-I 80 (ROUTE 66) \& PONDEROSA PKWY | 0 | 2 | 9 | 19 | 98 | 128 | 25.60 | 102.05 | Flagstaff | MetroPlan |
| 16555 | STATE ROUTE 89 (MILTON RD) \& RIORDAN RD | 0 | 2 | 12 | 7 | 66 | 87 | 17.40 | 80.85 | Flagstaff | MetroPlan |
| 16567 | STATE ROUTE 89 (MILTON RD) \& UNIVERSITY AVE | 0 | 2 | 10 | 8 | 73 | 93 | 18.60 | 78.60 | Flagstaff | MetroPlan |


| $1{ }^{1}$ | Roadway Name | From Segment | To Segment | Length of Segment（miles） | Direction | Fatal Crashes | $\begin{gathered} \text { Suspected } \\ \text { Serious Injury } \\ \text { Crashes } \end{gathered}$ | $\begin{gathered} \text { suspected } \\ \text { Minor Iniury } \\ \text { Crashes } \end{gathered}$ | Posisil Ifiury Crases | PDO Crashes | Total Crashes | Annual Crash Frequency | Crash Severeity | $\begin{aligned} & \text { Normalized } \\ & \text { Crash Severity } \\ & \text { Score } \end{aligned}$ | city | County | Tribal Nation | Region |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{2}$ | ${ }^{1-177 ~ N B}$ | Noth of old Munds hwy | 0.8 mis Suth of Mountainaire Rd | ${ }^{3.067379931}$ | Ns | ${ }^{3}$ | 1 | ${ }^{13}$ | ${ }^{6}$ | 99 | 122 | 24.40 | ${ }^{612.5752334}$ | 19997063479 |  | Cocorino |  | Metropan |
| 5 | ${ }_{1 / 17}$ NB | 1.40 | North of old Munds hwy | 3.875517695 | ns | 1 | 3 | 18 | 7 | 87 | 116 | ${ }^{23,20}$ | 290．3074719 | 74.90809965 | Fagstaff | Cocorino |  | Metroplan |
| 27 | ${ }^{1-40 E B}$ | East of Townsend Winona Rd | 0.6 mi East of Walaut Canyon Rd | ${ }^{6.084518795}$ | ${ }^{\text {ew }}$ | 3 | 2 | ${ }^{36}$ | ${ }^{10}$ | 95 | 146 | 29.20 | 694．0433146 | ${ }^{114.0678837}$ |  | Coconino |  | Metroplan |
| ${ }^{28}$ | ${ }^{1-40 E B}$ | Eastof futer ave | West of Bellah Bud | 4．000000089 | ${ }^{\text {ew }}$ | 0 | 4 | ${ }^{16}$ | 7 | ${ }^{138}$ | 165 | 33.00 | 127.0405056 | ${ }^{31.7601257}$ | Fagstaf | Cocorino |  | Metropan |
| ${ }^{36}$ | 1.40 wb | 0.5 mie east of flagstaff Ranch Rd | 5.6 mieastof farand Prarire Rd | 9．288034496 | ew | 3 | 7 | 35 | 15 | 174 | 234 | 44.80 | 768.2533022 | ${ }^{82749992974}$ |  | Coconino |  | Metroplan |
| 37 | ${ }_{1}^{1.40 \mathrm{WB}^{\text {a }}}$ | Eastof future ave | West of feulah Blvd | ${ }^{\text {4．000000013 }}$ | ${ }_{\text {ew }}$ | ${ }_{1}$ | ${ }_{1}$ | 8 | ${ }_{1}$ | 75 | $\begin{array}{r}93 \\ \hline 14 \\ \hline\end{array}$ | 18.60 280 | 425．930779 200001948 | 106.4852184 430793214 | $\underset{\substack{\text { Figastaff } \\ \text { Flegataf }}}{ }$ | ${ }_{\substack{\text { coconio } \\ \text { coconino }}}$ |  | Metroplan |
| ${ }^{47}$ | 1.40 Wb 1.17 Nav C Connector | ${ }_{\substack{1.40 ~ W B \\ \text { sout oflden } \\ \text { Sprin }}}$ |  |  | ${ }_{\text {ew }}$ | 1 | 1 | ${ }^{3}$ | 1 | 8 | 14 | 280 920 9 | 200．40919948 37．0199813 | 430.7934214 160.300289 | Fagstaff | coconino Coconino |  | Metrofan Metroplan |
| 176 177 | U5．89 | South of Elden Spring ¢ ¢ | To．${ }_{\text {Townsend Whinana Rd }}$ | ${ }_{0}^{2.3638372089}$ | ${ }_{\text {Ns }}$ | ${ }_{0}$ | 。 | 7 | 2 | ${ }_{16}$ | 25 | ${ }_{5.00}$ | ${ }_{26.6124719}$ | ${ }_{51}^{18.89000661}$ |  | Coconino |  | Metrofan Metroplan a |
| 178 | US．89 | 1．6 north of Country cub or | Country club dr | 1.64 | ns | 1 | 3 | 4 |  | ${ }^{4}$ | 55 | 11.00 | 236.6145318 | 144．0671045 | Fagstaf | Coconino |  | Metropan |
| 179 | Rte 66 | Country Club ${ }^{\text {r }}$ | San franciscost | 4．125770505 | ${ }_{\text {ew }}$ | 2 | 5 | 18 | 25 | 108 | ${ }^{158}$ | 31.60 | 588.0888577 | 127．9964208 | Fagstaff | Coconino |  | Metroplan |
| 180 | Rte 66 | 1．2 east of Raliroad Springs Blv | Railioad Springs $\begin{aligned} & \text { livd } \\ & \text { den }\end{aligned}$ | 1．177851854 | ew | 0 | 1 | 3 | 6 | 17 | ${ }^{27}$ | 5.40 | 33．76998813 | 28.59145888 | Fagssaff | Coconino |  | Metroplan |
| ${ }_{181}$ | US．180 | Rain valey Pd | El Paso Fligstaff Rd | ${ }^{0.9002024533}$ | ${ }^{\text {ew }}$ | 1 | 0 | － | 0 | 2 | 3 | ${ }^{0.60}$ | ${ }^{178.5904682}$ | ${ }^{198.3887679}$ | Flagstaff | Coconino |  | Metroplan |
| 194 | U5． 89 | 3.5 north of Katitin Way | Katitin Way | 3.55 | ns | 3 | 2 | 4 | 1 | 25 | ${ }^{35}$ | 7.00 | 573．298352 | 161.492013 |  | Coconino |  | Metropan |
| 195 223 | US．88 M US．180 Us | North of fenox Park 3 m oorth of tart Prarie Rd |  | 3.772854588 1.5000004 1 | Ns Ns | 1 | ${ }_{1}$ | ${ }_{2}$ | 10 <br> 0 | 29 5 | $\stackrel{49}{9}$ | 9.80 1.80 1.80 | 228.490618 195．089064 | 69．7888825 130．056008 |  | coconino coconino |  | Metrofan Metroplan and |
| 223 224 | US5180 | 0.5 mmin north of fortver valaley Reanch Rd |  | ${ }_{1.500000092}$ | ${ }_{\text {ns }}$ | 1 | 1 | ${ }_{1}^{2}$ | 0 | 5 12 | ${ }_{15}$ | 1.80 3.00 | 195.0849064 193.6921723 | ${ }^{130.0565008} 129.1281099$ |  | Cocosino coconino |  | Metropan Metroplan and |
| 225 | US－180 | south of tart Prairie Rd | North of Roundtree Rd | ${ }_{1}^{1.500592858}$ | ns | 1 | 0 | 0 | 2 | 9 | 12 | 240 | 183．8353768 | 122.520263 |  | coconino |  | Metropan |
| 273 | Crimson Rd | 0.6 mis suth of Setters Tr | 0.6 min orth of thapy Trilis or | ${ }^{1.9378806388}$ | ns | － | 1 | 0 | 0 | 0 | 1 | 0.20 | 10.38897004 | 10.926831 |  | Coconino |  | Metroplan |
| 286 | Lake Mary Rd | 3 mi south Lake Mary Lodge Rd | 0.4 min orth of Lake Mar Baar Lndg | 1.09921383 | ns | 0 | 1 | 0 | 0 | 1 | 2 | 0.40 | 10.50897004 | ${ }^{9.639365918}$ |  | Coconino |  | Metroplan |
| 288 | Leup Rd | 1.5 mi east of Rooseselt Rd | 1.3 m i east of Rooseselt Rd | 0.213219109 | ${ }^{\text {ew }}$ | $\bigcirc$ | 0 | 0 | 1 | 0 | 1 | 0.20 | 1.931554307 | ${ }^{9.059011232}$ |  | Coconino |  | Metropan |
| 294 296 | Mountainiere Rd S Cosnio dd |  |  | $\stackrel{.050}{1.00000046}$ | ${ }_{\text {Ns }}^{\text {Ns }}$ | $\bigcirc$ | 1 | 1 | 0 | $\bigcirc$ | ${ }_{2}$ | 0.40 0.40 0.0 | 13.10170412 <br> 12.2052384 | 26.2847697 12.2452378 |  | coconino coconino |  |  |
| 296 298 |  |  |  | ${ }_{0}^{1.0000000066}$ | ${ }_{\text {en }}^{\text {en }}$ | 0 | 1 | $\bigcirc$ | ${ }_{0}^{1}$ | 1 | ${ }_{2}^{2}$ | 0．40 | 12.24092234 10．50897004 | ${ }^{12.22023278} 10.5126193$ |  | Coconino coconino |  | Meterofan |
| 300 | N Slayton Ranch Rd | South of $H$ meweood $\downarrow$ n | North of Cari Rd | 0.500000033 | ns | 0 | 0 | 0 | 1 | 2 | 3 | 0.60 | 2.331554307 | 4.66318831 |  | Cocorino |  | Metroplan |
| ${ }^{303}$ | Buter Ave | Foxglenn st | 1.40 | 1.36118574 | ${ }^{\text {ew }}$ | 0 | 2 | 5 | 5 | 29 | 41 | 8.20 | 50．03938202 | 36.76161197 | Fagstaf | Cocorino |  | Metroplan |
| 304 | Buter Ave | Ponderosa Pkw | Lone Tree Rd | 0．972866041 | ${ }^{\text {ew }}$ |  | 1 | 4 |  | 22 | ${ }^{31}$ | 6.20 | ${ }^{33.6061236}$ | ${ }^{3.543423344}$ | Fagstaff | Coconino |  | Metroplan |
| 305 | Cedar Ave | 4 th St | Gemini Rd | ${ }^{1.23095167}$ | ${ }^{\text {ew }}$ | 1 | 2 | 1 |  | ${ }^{16}$ | ${ }^{21}$ | 4.20 | ${ }^{206.7326966}$ |  | Fagstaff | Cocorino |  | Metroplan |
| 307 308 | Huntington Or Huntigato Or |  |  |  | $\mathrm{cow}_{\text {ew }}^{\text {ew }}$ | $\bigcirc$ | 1 | $\stackrel{2}{0}$ | $\stackrel{1}{0}$ | ${ }_{4}^{21}$ | 26 5 | 5.20 1.00 | 23.95754682 11.10897004 | 19.2971989 13.865959 | $\underset{\substack{\text { Fagastaff } \\ \text { Flagsaff }}}{\text { ata }}$ | Coconino coconino |  | Metrofan Metropan |
| 309 | Industrial $\mathrm{rar}^{\text {r }}$ | Neste Purina Ave | Steves ivvd | ${ }_{1.566671858}$ | ew | 。 | 1 | 2 | 0 | 1 | 4 | 0.80 | ${ }_{\text {16，}}^{11.09943882}$ | ${ }^{13.844591} 10.3150619$ | ${ }_{\text {flagastaf }}$ | coconno coconino |  | Metropan |
| 310 | Pine Knoll Or | Maricoa St | Huffer Ln | 1.072453265 | ew | 0 | 1 | 2 | 1 | 7 | 11 | 220 | 19.22599251 | 17.92711453 | Fagssaff | Coconino |  | Metroplan |
| 312 | Soleire Ave | Country Club Dr | Ekk Runst | 1．1714143367 |  | O | 1 | 2 | 1 | 3 | 8 | 1.60 400 |  |  | Figstaff | ${ }_{\text {cocorino }}$ |  | Metropan |
| 313 <br> 314 |  |  | ${ }_{\text {LTychave }}^{\text {L．40 }}$ | ${ }_{0}^{1.1703724412}$ | Ns Ns | $\bigcirc$ | 1 | $\stackrel{2}{0}$ | ${ }^{3}$ | ${ }_{1}^{14}$ | 20 2 | 4.00 0.40 | 24．48910112 10．5897004 | ${ }^{20.92505357} 3$ | $\underset{\substack{\text { Fagstaff } \\ \text { Flagstaft }}}{\text { a }}$ | Coconino coconino |  | Metroflan Metrolan |
| 315 | NSow Bow Rd | 2.9 m south of A penglow Rd | 0.5 m in orth of US． 180 | 1.199999928 | ns | 0 | 2 | 2 | 0 |  | 12 | 240 | 27.8030882 | 13.90170462 |  | Coconino |  | Metropan |
| 316 | N－516 | south ff Alpenglow Rd | 1.8 m s suth of A Alpenglow Rd | 2.00085884 | ns | 0 | 0 | 5 | 4 | 10 | 19 | 3.80 | 23.88888764 | ${ }^{11.83989595}$ |  | Cocorino |  | Metroplan |
| ${ }^{318}$ | Lake Mary Rd | Widilife or | Frontie Ave | 1.7346388986 | ${ }^{\text {ew }}$ | 0 | 0 | 0 | 1 | 4 | 5 | 1.00 | ${ }^{2.731554337}$ | 1.574710547 | Flagstaf | Coconino |  | Metropan |
| ${ }_{322}^{321}$ | ${ }_{\text {W Branigign Park Rd }}$ | 1 1 orth of Hughes Ave | Hughes Ave | 1.00 0.513713 | ${ }_{\text {Ns }}^{\text {Ns }}$ | $\bigcirc$ | 1 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | ＇ | 0．20 | 10.30897704 1038897004 | 10.30897002 20.08285151 |  | Cocorino Coconino |  | Mertofan |
| 323 | University Ave | 0.5 milton Rd | cent | ${ }_{0}^{0.58899292066}$ | ${ }_{\text {ew }}^{\text {ew }}$ | 0 | 1 |  | 3 | 3 | 7 | 1．40 | 10.30897004 16.7033296 | ${ }_{2}^{20.0835075196}$ | Fagstaf | coconio coconino |  | Meteropan |
| ${ }_{661}$ | Us．89 5B | 0.7 m inorth of Suitr Pass sockett Meadow Rd | South of Camino De Los lientos | 2.292923977 | ns |  | ${ }^{3}$ | 5 |  | ${ }^{30}$ | ${ }^{42}$ | 8.40 | 59．4797753 | 20.30641538 |  | Coconino |  | Metropan |
| ${ }^{476}$ | Miltor Md |  | Forest Meadows St | ${ }^{1.0 .000000016}$ | Ns | 1 | 0 | ${ }_{5}$ | 6 | ${ }^{35}$ | ${ }^{47}$ | 9.40 820 | ${ }^{210.77346649}$ | ${ }^{210,7734611}$ | $\underset{\substack{\text { Flagstaff } \\ \text { flagsaff }}}{ }$ | ${ }_{\text {cocorino }}$ |  | Merrofan |
| 483 484 |  |  |  | ${ }^{1.1999999993}$ | ${ }_{\text {ew }}^{\text {EW }}$ | ${ }_{3}^{1}$ | 0 | ${ }_{0}^{6}$ | ${ }_{3}$ | 32 <br> 33 | ${ }_{39}^{41}$ | 8.20 780 | 205．2099813 546.9660674 | ${ }_{\text {l }}^{102.604991}$ |  | Coconino coconino |  | Mertoplan |
| 485 | ${ }_{1-40}$ wB | 1.5 mi Easto f f euluan Bud | 2.2 mil Eastof f Bulah Bud | 0.678179619 | ${ }_{\text {ew }}$ | 1 | 。 | 1 | － | 7 | ， | ${ }_{1.80}$ | 182，3832022 | ${ }^{268.9305267}$ | Fagstaff | Coconino |  | Metroplan |
| 507 | SR．89 | Pine del Dr | 1 south of Pine del Pr | 0.98886302 | ns | 1 | 0 | 0 | 0 | 14 | 15 | 3.00 | 180.904682 | 188.146177 |  | Coconino |  | Metroplan |

Appendix F: Complete Streets and Vision Zero

## Complete Streets and Vision Zero Policies



GREATER \& FLAGSTAFF


Central Yavapai Metropolitan Planning Organization

Presented by:

8
Greenlight
Traffic Engineering

## Complete Streets in FHWA:

A Complete Street is safe, and feels safe, for all users.

What is a Complete Streets Implementation Strategy?

1. Understanding the community and network context
2. Identifying safety, connectivity, and equity concerns
3. Implementing improvements over time
4. Evaluating impacts by monitoring and measuring success

## Complete Streets Policy



## Complete Streets Policy

Policies
Practices
10 Elements of a Complete Streets Policy
2.
2. Prioritizes underinvested and underserved communities
3. Applies to all projects and phases
4. Allows only clear exceptions
5. Mandates coordination
6. Adopts excellent design guidance
7. Requires proactive land-use planning
8. Measures progress
9. Sets criteria for choosing projects
10. Creates a plan for implementation

## Complete Streets Policy

Greenlight
Traffic Engineering

## City of Phoenix <br> Complete Streets Policy *Only 5 pages

Vision: To help the City of Phoenix

- Become more walkable, bikeable and public transit friendly
- Foster social engagement
- Instill community pride
- Grow the local economy and property values
- Identify projects that will improve equitable transportation access for vulnerable and transit-dependent populations
- Improve the livability and long-term sustainability of the region.


## Complete Streets Policy

## GOALS: Ensure the rights-of-way:

- Are planned, designed, constructed, operated, and maintained with the ultimate goal of serving a variety of transportation modes
- Will contribute to active transportation and public health
- Accommodate transportation users of all ages and abilities
- Are economically and environmentally sustainable
- Are designed to be compatible with the surrounding contexts and connecting transportation networks
- Comply with state and federal law and City code and Ordinance S-41094
- Follow the Complete Streets Planning and Design Principles which will be integrated into the Street Transportation Design Guidelines
- Provide new or improved connectivity between all transportation modes and adjacent land uses.

Howard County, Maryland
Complete Streets Policy


- Howard County was awarded a perfect score for its policy from the National Complete Streets Coalition
- First community in the nation to receive a perfect scoreCalvin Ball
County Executive



## Complete Streets Policy

## Vision:

"To ensure that Howard County is a place for individuals of all backgrounds to live and travel freely, safely, and comfortably, public and private roadways in Howard County shall be safe and convenient for residents of all ages and abilities who travel by foot, bicycle, public transportation or automobile, ensuring sustainable communities Countywide."

## Complete Streets Policy

Greenlight
Traffic Engineering

## Above and beyond policy details:

- Developed a design manual for complete streets
- Integrated Pedestrian and Bicycle master plans
- Scoped projects for design and construction
- Developed 9-part Complete Streets training videos
- For developers, designers, and the general public
- Developed a sidewalk policy
- Developed a transportation project prioritization system



## Complete Streets Policy

Greenlight
Traffic Engineering

## Transportation Project Prioritization System

A project scoring mechanism for all potential capital transportation projects

## Project scoring system (50 possible points)

- Multimodal access and safety (20 possible)
- Equity (10 possible)
- Crash history (10 possible)
- System preservation/maintenance (10 possible)
- Bonus points for cost sharing (10 points)


## Complete Streets Policy

Traffic Engineering

## Questions/Discussion

 <br> \title{
## SAFE <br> \title{ \section*{SAFE SYSTEM} 

 SYSTEM}}

## APPROACH

Zero is our goal. A Safe System is how we get there.

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

## Vision Zero Policy



## HUMAN-CENTRIC APPROACH



1. Death/serious injury is unacceptable
2. Humans make mistakes
3. Humans are vulnerable
4. Responsibility is shared
5. Safety is proactive
6. Redundancy is crucial

## Vision Zero Policy



## Vision Zero Policy

Traffic Engineering

## City of Phoenix 2022 <br> Vision Zero Action Plan

|  | INTRODUCTION | 1 |  | THE FACTS | 11 |  | THE 5 E'S | 17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | An Urgent Need | 3 | ¢ | Quick Facts | 12 | \% | Evaluation | 19 |
| - | The Planning Process | 5 | 응 | Crash Factors | 13 | 븐 | Engineering | 20 |
| 를 | Vision Zero Commitment | 7 | 픈 | High Injury Network | 15 | 든 | Enforcement | 21 |
|  | The Safe Systems Approach | 9 |  |  |  |  | Education | 22 |
|  | Vision \& Goals | 10 |  |  |  |  | Equity | 23 |
| 를 | ENGAGING PHOENICIANS |  |  | TAKING ACTION | 31 |  | A PATH FORWARD | 49 |
|  | What Phoenix is Saying <br> Using Phoenician Input | 27 | \% | How to Read This Section | 33 | ¢ | Strategy Prioritization | 50 |
|  |  | 29 | 눌 | General Strategies | 35 | 둘 | Foundational Change | 51 |
|  |  |  | 는 | Behavior Related | 37 | 己 | Systemic Implementation | 57 |
|  |  |  |  | Pedestrians \& Bicyclists | 39 |  | Addressing the HIN | 63 |
|  |  |  |  | Intersections | 41 |  | Resources | 76 |
|  |  |  |  | Segments | 43 |  | Reporting \& Tracking | 77 |
|  |  |  |  | Toolboxes | 45 |  |  |  |

## Vision Zero Policy



## Vision Zero Policy

| HIN INTERSECTIONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Location | HIN <br> Segment <br> Tier (1-3) | RSAP <br> Equity <br> Analysis | USDOT <br> Underserved Community | Key Crash Characteristics | $\begin{gathered} \text { Status: RC, } \\ \text { PC, P, F } \end{gathered}$ |
| 35th Ave \& Glendale Ave | 1 | Yes | Yes | $-50 \%$ Left-Turn (LT) crashes <br> - $50 \%$ nighttime <br> -3 ped \& 1 bike crashes (40\%) <br> - Fatal crash ped south of crosswalk | P |
| 51st Ave \& McDowell Rd | 1 | Yes | Yes | $-56 \%$ nighttime or dawn/dusk <br> - $44 \%$ peds (3 on west leg) <br> $-75 \%$ peds at night or dawn/dusk | P |
| HIN SEGMENTS PROJECTS |  |  |  |  |  |
| Location | HIN <br> Segment Tier (1-3) | RSAP <br> Equity Analysis | USDOT <br> Underserved Community | Key Crash Characteristics | Status: RC, PC, P, F |
| 35th Ave: Moreland St to Van Buren St | 1 | Yes | Yes | -8 ped crashes ( $32 \%$ of all crashes) accounted for 4 fatalities ( $57 \%$ ). All but 1 ped crash were within $300^{\prime}$ of a signalized intersection <br> -1 bicyclist crash accounted for an additional fatality <br> - Near even mix of daytime and darkness crashes | P |
| 7th St: Hatcher Rd to Mountain View Rd | 1 | Yes | Yes | $-55 \%$ peds (2 fatal) <br> -1 bike crash (fatal) <br> -64\% nighttime <br> - 55\% in 2017 | P |

## Vision Zero Policy

City of Boulder, CO 2023 Vision Zero Action Plan
*Less emphasis on community engagement efforts than Phoenix
Contributors ..... 1
Introduction ..... 2
The Vision Zero Approach ..... 2
Planning Context. ..... 3
Snapshot of Key Findings ..... 4
Evaluating What Weve Done to Date ..... 6
Severe Crashes ..... 10
People Waiking. ..... 10
People Bicycling. ..... 12
People Traveling Under the Influenceof Alcohol ar Drugs.14
People Speeding ..... 16
People Making Left Turns ..... 18
Other Areasiof Concern ..... 20
Other Vision Zero Objectives ..... 22
Next Steps ..... 23
Vision Zero Action Plan ..... AP-1


## Vision Zero Policy

## Vision Zero is Boulder's goal to eliminate all severe traffic crashes involving

## There are five Vision Zero objectives:

1. Eliminate crashes resulting in serious injuries and fatalities.
2. Reduce other types of crashes.
3. Improve travel comfort and security.
4. Enhance awareness of and community engagement with Vision Zero.
5) Improve data and be transparent.

## Vision Zero Policy

| Action | 4 E's | Timeframe | Partners* | Performance Metric(s) |
| :---: | :---: | :---: | :---: | :---: |
| 1. Implement specific countermeasures at high crash locations (peds, bikes, vehicles) |  | Ongoing | Transportation, PD | \% of intersections addressed on an annual basis <br> Target: 45 intersections with specific mitigation identified for implementation |
| 2. Continue to pursue federal funding for and construct Highway Safety Improvement Program projects |  | Ongoing | Transportation | \# of projects funded and completed <br> Target: 3 projects per funding cycle |
| 3. Proactively implement new signal timing practices at identified intersections |  | Ongoing | Transportation | \% of intersections addressed on an annual basis <br> Tament. En intamantionn idnantifind |

*Less scoping to actions

## Vision Zero Policy

Traffic Engineering

## Questions/Discussion

NACOG
Northern Arizona
Appendix G: Recommended
Projects

MetroPlan High-Level Estimate of Probable Project Cost

| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection <br> Method | Scope | Estimated Cost | Lat. (X) | Long. (Y) | From X, Y | To X, Y |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | ADOT | Milton Rd \& Riordan Rd | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Improve traffic signal timing and coordination, left turn phasing evaluation/improvement, and high-visibility crosswalks | \$219,000 | 35.190434 | -111.661081 | $\begin{gathered} 35.190434,- \\ 111.661081 \end{gathered}$ |  |
| Flagstaff | ADOT | Rt 66 \& Ponderosa Pkwy | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install high-visibility crosswalks, speed feedback signs, and protected bicycle lanes | \$213,000 | 35.195164 | -111.628338 | $\begin{gathered} 35.195164,- \\ 111.628338 \end{gathered}$ |  |
| Flagstaff | ADOT | State Route 89A (Milton Rd) \& Butler Ave | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install green bicycle lane crossing markings, improve traffic signal timing and coordination, and reflective signal head tape | \$243,000 | 35.195255 | -111.655312 | $\begin{gathered} 35.195255,- \\ 111.655312 \end{gathered}$ |  |
| Flagstaff | Flagstaff | Country Club Dr \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape, speed feedback signs at approaches, green bicycle lane crossing markings, and improve traffic signal timing and coordination | \$284,000 | 35.221174 | -111.587864 | $\begin{gathered} 35.221174,- \\ 111.587864 \end{gathered}$ |  |
| Flagstaff | ADOT | Rt 66 from Country Club Dr to San Francisco St | Segment | Agency Comment/ Top Crash Hotspot | Install speed feedback signs, green bicycle lane crossing markings, and improve traffic signal timing and coordination | \$539,000 | 35.220265 | -111.586835 | $\begin{gathered} 35.220265,- \\ 111.586835 \end{gathered}$ | $\begin{gathered} 35.197199,- \\ 111.648098 \end{gathered}$ |
| Flagstaff | Flagstaff | Butler Ave from Mustang Wy to I40 | Segment | Agency Comment/ Top Crash Hotspot | Install green bicycle lane crossing markings, sidewalks, and bicycle lanes | \$4,051,000 | 35.196328 | -111.598141 | $\begin{gathered} 35.194789,- \\ 111.600353 \end{gathered}$ | $\begin{gathered} 35.191911,- \\ 111.620822 \end{gathered}$ |
| Flagstaff | Flagstaff | Cedar Ave from Gemini Rd to West St | Bicycle/ Pedestrian | Public Comment/ Top Crash Hotspot | Install protected bicycle lanes, green bicycle lane crossing markings, HAWK/PHB mid-block crossing at trailhead, and additional roadway lighting | \$4,194,000 | 35.213827 | -111.631271 | $\begin{aligned} & 35.213827,- \\ & 111.631271 \end{aligned}$ | $\begin{gathered} 35.218087,- \\ 111.622075 \end{gathered}$ |
| Flagstaff | ADOT | Rt 66 \& Milton Rd | Intersection | Public Comment/ Top Crash Hotspot | Maintain turning sight distance (vegetation/tree removal), install enhanced pedestrian crosswalks, bicycle lanes to intersection, and green bicycle lane crossing markings | \$231,000 | 35.192834 | -111.658531 | $\begin{gathered} 35.192834,- \\ 111.658531 \end{gathered}$ |  |
| Flagstaff | Flagstaff | Rt 66 \& Fanning Dr | Intersection | Public Comment/ Top Crash Hotspot | Install enhanced crosswalks, a leading pedestrian interval, and reflective signal head tape | \$255,000 | 35.215744 | -111.595563 | $\begin{gathered} 35.215744,- \\ 111.595563 \end{gathered}$ |  |


| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope | Estimated Cost | Lat. (X) | Long. (Y) | From X, Y | To X, Y |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff | US 89 \& Cummings <br> St (Mall Driveway) | Intersection | Public Comment/ Top Crash Hotspot | Install enhanced crosswalks, a leading pedestrian interval, and reflective signal head tape | \$255,000 | 35.223654 | -111.584158 | $\begin{gathered} 35.223654,- \\ 111.584158 \end{gathered}$ |  |
| Flagstaff | Flagstaff | US 89 \& Snowflake Dr/Trails End Dr | Intersection | Public Comments/ Top Crash Hotspot | Maintain intersection sight distance and install speed feedback signs at approaches | \$67,000 | 35.238996 | -111.571662 | $\begin{gathered} 35.238996,- \\ 111.571662 \end{gathered}$ |  |
| Flagstaff | Flagstaff | Butler Ave \& Huntington Dr | Intersection | Agency Comment/Public Comments | Install green bicycle lane crossing markings and reflective signal head tape | \$69,000 | 35.192274 | -111.627798 | $\begin{gathered} 35.192274,- \\ 111.627798 \end{gathered}$ |  |
| Flagstaff | ADOT | Rt 66 \& Railroad Spring Blvd | Intersection | Agency Comment/Public Comments | Maintain turning sight distance (vegetation/tree removal), install crosswalk, and consider installing traffic signal control | \$1,105,000 | 35.187827 | -111.68075 | $\begin{aligned} & 35.187827,- \\ & 111.680750 \end{aligned}$ |  |
| Flagstaff | Flagstaff | US-89 from Snowflake Dr to Country Club Dr | Segment | Top Crash Hotspot | Install speed feedback signs and conduct targeted speed enforcement | \$42,000 | 35.239005 | -111.571712 | $\begin{gathered} 35.239005,- \\ 111.571712 \end{gathered}$ | $\begin{gathered} 35.221180,- \\ 111.587785 \end{gathered}$ |
| Flagstaff | ADOT | Milton Rd from Rt 66 to Forest Meadows St | Segment | Top Crash Hotspot | Install speed feedback signs, improve traffic signal timing and coordination, and conduct targeted speed enforcement | \$216,000 | 35.192847 | -111.658488 | $\begin{gathered} 35.192847,- \\ 111.658488 \end{gathered}$ | $\begin{gathered} 35.179027,- \\ 111.661335 \end{gathered}$ |
| Flagstaff | ADOT | US-180 \& Forest Ave | Intersection | Public Comments | Refresh/enhance pavement markings, maintain turning sight distance (vegetation/tree removal), and intersection consider traffic signal control | \$1,060,000 | 35.210684 | -111.649209 | $\begin{gathered} 35.210684,- \\ 111.649209 \end{gathered}$ |  |
| Flagstaff | ADOT | US-180 \& Schultz Pass Rd | Intersection | Public Comments | Refresh/enhance pavement markings, install reflective signal head tape, install flashing yellow left turn phase | \$275,000 | 35.238621 | -111.669023 | $\begin{gathered} 35.238621,- \\ 111.669023 \end{gathered}$ |  |
| Flagstaff | Flagstaff | Lockett Rd \& Kaspar Dr | Intersection | Public Comments | Install stop bars, crosswalk, maintain intersection sight distance, and no U-Turn signage | \$154,000 | 35.217061 | -111.594217 | $\begin{gathered} 35.217061,- \\ 111.594217 \end{gathered}$ |  |
| Flagstaff | ADOT | Elm Ave \& Humphreys St (US180) | Intersection | Public Comments | Refresh/enhance pavement markings and install crosswalks | \$111,000 | 35.202892 | -111.649196 | $\begin{gathered} 35.202892,- \\ 111.649196 \end{gathered}$ |  |
| Coconino County | ADOT | Townsend Winona Rd \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape, traffic signal ahead warning signage, and reduce speed limit at approaches | \$62,000 | 35.245186 | -111.564763 | $\begin{gathered} 35.245186,- \\ 111.564763 \end{gathered}$ |  |


| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope | Estimated Cost | Lat. (X) | Long. (Y) | From X, Y | To X, Y |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Coconino County | ADOT | Silver Saddle Rd \& US 89 | Intersection | Top Crash Hotspot | Install reflective signal head tape and all protected left-turn phasing, | \$209,000 | 35.269846 | -111.545332 | $\begin{gathered} 35.269846,- \\ 111.545332 \end{gathered}$ |  |
| Coconino County | ADOT | US-89 from North of Lenox Park to 3.3 mi North of Lenox Park | Segment | Top Crash Hotspot | Install/maintain ROW fencing, animal warning signage, median barrier, and speed limit reduction during adverse weather with dynamic speed limit signs | \$2,733,000 | 35.340808 | -111.557856 | $\begin{gathered} 35.340808,- \\ 111.557856 \end{gathered}$ | $\begin{gathered} 35.382712,- \\ 111.580659 \end{gathered}$ |
| Coconino County | ADOT | US-89 from 3.5 north of Kaitlin Way to Kaitlin Way | Segment | Top Crash Hotspot | Install/Maintain ROW fencing, speed limit reduction during adverse weather with dynamic speed limit signs, and street lighting | \$13,674,000 | 35.296206 | -111.542623 | $\begin{gathered} 35.296206,- \\ 111.542623 \end{gathered}$ | $\begin{gathered} 35.342195,-- \\ 111.559458 \end{gathered}$ |
| Coconino County | ADOT | US-89 from South of Elden Springs Rd to Townsend Winona Rd | Segment | Top Crash Hotspot | Install/Maintain ROW fencing, speed limit reduction during adverse weather with dynamic speed limit signs, and street lighting | \$13,674,000 | 35.27771 | -111.542958 | $\begin{gathered} 35.277710,- \\ 111.542958 \end{gathered}$ | $\begin{gathered} 35.245171,- \\ 111.564788 \end{gathered}$ |

MetroPlan High-Level Estimate of Probable Systemic Project Cost

| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope | Estimated Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff/ADOT | - Milton Rd \& Riordan Rd <br> - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - US-180 \& Schultz Pass Rd | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Improve traffic signal timing and coordination, left turn phasing, and pedestrian interval evaluation/improvement | \$1,218,000 |
| Flagstaff | Flagstaff/ADOT | - Milton Rd \& Riordan Rd <br> - Rt 66 \& Ponderosa Pkwy <br> - Cedar Ave from Gemini Rd to West St <br> - Rt 66 \& Milton Rd <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - Lockett Rd \& Kasper Dr <br> - Elm Ave \& Humphreys St (US-180) | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install enhanced pedestrian crosswalk | \$2,624,000 |
| Flagstaff | Flagstaff | - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 \& Fanning Dr <br> - US 89 \& Cummings St (Mall Driveway) <br> - Butler Ave \& Huntington Dr <br> - US-180 \& Schultz Pass Rd | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Install reflective signal head tape | \$282,000 |
| Flagstaff | Flagstaff | - Rt 66 \& Ponderosa Pkwy <br> - Country Club Dr \& US 89 <br> - Rt 66 from Country Club Dr to San Francisco St <br> - US-89 from Snowflake Dr to Country Club Dr <br> - Milton Rd from Rt 66 to Forest Meadows St | Intersection/ Segment | Agency Comment/Public Comment/Top Crash Hotspot | Installing speed feedback signs | \$267,000 |
| Flagstaff | Flagstaff | - Rt 66 \& Ponderosa Pkwy <br> - State Route 89A (Milton Rd) \& Butler Ave <br> - Country Club Dr \& US 89 <br> - Rt 66 from Country Club Dr to San Francisco St <br> - Cedar Ave from Gemini Rd to West St <br> - Rt 66 \& Milton Rd <br> - Butler Ave \& Huntington Dr | Intersection/ Segment | Agency Comment/Public Comment/Top Crash Hotspot | Install improved bicycle lanes | \$851,000 |


| Location | Roadway Ownership | Intersection/ Segment | Project Type | Selection Method | Scope | Estimated Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Flagstaff | Flagstaff | - Rt 66 \& Milton Rd <br> - Rt 66 \& Fanning Dr <br> - US-180 \& Forest Ave <br> - US-180 \& Schultz Pass Rd | Segment/ Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Refresh pavement and markings | \$317,000 |
| Flagstaff | Flagstaff | - Rt 66 \& Milton Rd <br> - Rt 66 \& Railroad Spring Blvd <br> - US-180 \& Forest Ave <br> - US-180 \& Fratelli's Driveway (S of Meade Ln) <br> - Lockett Rd \& Kasper Dr | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Sight distance improvement/maintenance (vegetation/tree removal) | \$129,000 |
| Flagstaff | Flagstaff | - Rt 66 \& Railroad Spring Blvd <br> - US-180 \& Forest Ave | Intersection | Agency Comment/Public Comment/Top Crash Hotspot | Consider installing a traffic signal | \$2,068,000 |
| Coconino County | ADOT | - Townsend Winona Rd \& US 89 <br> - Silver Saddle Rd \& US 89 | Intersection | Agency Comment/ Top Crash Hotspot | Install reflective signal head tape | \$70,000 |
| Coconino County | ADOT | - Townsend Winona Rd \& US 89 <br> - US-89 from North of Lenox Park to 3.3 mi North of Lenox Park <br> - US-89 from 3.5 north of Kaitlin Way to Kaitlin Way <br> - US-89 from South of Elden Springs Rd to Townsend Winona Rd | Intersection/ Segment | Agency Comment/ Top Crash Hotspot | Speed management strategies; such as reducing speed limit at approaches or during adverse weather conditions | \$359,000 |
| Coconino County | ADOT | - US-89 from North of Lenox Park to 3.3 mi North of Lenox Park <br> - US-89 from 3.5 north of Kaitlin Way to Kaitlin Way <br> - US-89 from South of Elden Springs Rd to Townsend Winona Rd | Segment | Agency Comment/ Top Crash Hotspot | Install/maintain ROW fencing | \$2,083,000 |

## MetroPlan High-Level Estimate of Probable Project Cost

## Unit Costs

| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Speed Feedback Sign - Segment (1 Mile Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. REMOVALS |  |  |  |  |  |  |
| 1 | REMOVE TREE, DIAMETER > 12 IN. | EA | 1 | \$ 1,125 | \$ | 1,125 |
|  |  |  |  | Subtotal | \$ | 1,125 |
| 2. INSTALLATIONS |  |  |  |  |  |  |
| 2 | PERFORATED SQUARE TUBE SIGN POST | LF | 20 | \$ 68 | \$ | 1,350 |
| 3 | SPEED FEEDBACK SIGN | EA | 2 | \$ 6,552 | \$ | 13,104 |
|  |  |  |  | Subtotal | \$ | 14,454 |
|  |  |  | Construction Subtotal |  | \$ | 15,579 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 4 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 15,579 | \$ | 2,500 |
| 5 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 15,579 | \$ | 2,500 |
| 6 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 15,579 | \$ | 3,000 |
| 7 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 15,579 | \$ | 2,340 |
| 8 | CONTINGENCY | PERCENT | 20\% | \$ 15,579 | \$ | 3,120 |
| 9 | ESCALATION | PERCENT | 10\% | \$ 15,579 | \$ | 1,560 |
|  |  |  |  | Subtotal | \$ | 15,020 |
|  |  |  | Construction Total |  | \$ | 30,599 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 10 | DESIGN | PERCENT | 30\% | \$ 30,599 | \$ | 10,000 |
| 11 | POST DESIGN | PERCENT | 2\% | \$ 30,599 | \$ | 1,000 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{aligned} & 11,000 \\ & 41,599 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Speed Feedback Sign - Intersection (1 Intersection Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. REMOVALS |  |  |  |  |  |  |
| 1 | REMOVE TREE, DIAMETER > 12 IN. | EA | 1 | \$ 1,125 | \$ | 1,125 |
|  |  |  |  | Subtotal | \$ | 1,125 |
| 2. INSTALLATIONS |  |  |  |  |  |  |
| 2 | PERFORATED SQUARE TUBE SIGN POST | LF | 20 | \$ 68 | \$ | 1,350 |
| 3 | SPEED FEEDBACK SIGN | EA | 2 | \$ 6,552 | \$ | 13,104 |
|  |  |  |  | Subtotal | \$ | 14,454 |
|  |  |  | Construction Subtotal |  | \$ | 15,579 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 4 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 15,579 | \$ | 2,500 |
| 5 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 15,579 | \$ | 2,500 |
| 6 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 15,579 | \$ | 3,000 |
| 7 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 15,579 | \$ | 2,340 |
| 8 | CONTINGENCY | PERCENT | 20\% | \$ 15,579 | \$ | 3,120 |
| 9 | ESCALATION | PERCENT | 10\% | \$ 15,579 | \$ | 1,560 |
|  |  |  |  | Subtotal | \$ | 15,020 |
|  |  |  | Construction Total |  | \$ | 30,599 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 10 | DESIGN | PERCENT | 30\% | \$ 30,599 | \$ | 10,000 |
| 11 | POST DESIGN | PERCENT | 2\% | \$ 30,599 | \$ | 1,000 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{aligned} & 11,000 \\ & 41,599 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Warning and regulatory signage (1 Intersection Unit)(4 signs) |  |  |  |  |  |  |
| Item Number |  | Unit of <br> Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | PERFORATED SQUARE TUBE SIGN POST | LF | 40 | \$ 68 | \$ | 2,700 |
| 2 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | SF | 36 | \$ 10 | \$ | 2,835 |
|  |  |  |  | Subtotal | \$ | 5,535 |
|  |  |  | Construc | ion Subtotal | \$ | 5,535 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 3 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 5,535 | \$ | 2,500 |
| 4 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 5,535 | \$ | 2,500 |
| 5 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 5,535 | \$ | 3,000 |
| 6 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 5,535 | \$ | 830 |
| 7 | CONTINGENCY | PERCENT | 20\% | \$ 5,535 | \$ | 1,110 |
| 8 | ESCALATION | PERCENT | 10\% | \$ 5,535 | \$ | 550 |
| Subtotal \$ 10,490 |  |  |  |  |  |  |
| Construction Total \$ 16,025 |  |  |  |  |  |  |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 9 | DESIGN | PERCENT | 30\% | \$ 16,025 | \$ | 10,000 |
| 10 | POST DESIGN | PERCENT | 2\% | \$ 16,025 | \$ | 1,000 |
|  |  |  |  | Design Total | \$ | 11,000 |
|  |  |  |  | Grand Total | \$ | 27,025 |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Warning and regulatory signage (1 Mile Segment Unit) (2 signs in one direction) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | PERFORATED SQUARE TUBE SIGN POST | LF | 20 | \$ 68 | \$ | 1,350 |
| 2 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | SF | 18 | \$ 10 | \$ | 2,835 |
|  |  |  |  | Subtotal | \$ | 4,185 |
|  |  |  | Construc | ion Subtotal | \$ | 4,185 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 3 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 4,185 | \$ | 2,500 |
| 4 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 4,185 | \$ | 2,500 |
| 5 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 4,185 | \$ | 3,000 |
| 6 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 4,185 | \$ | 630 |
| 7 | CONTINGENCY | PERCENT | 20\% | \$ 4,185 | \$ | 840 |
| 8 | ESCALATION | PERCENT | 10\% | \$ 4,185 | \$ | 420 |
|  |  |  |  | Subtotal | \$ | 9,890 |
|  |  |  | Construction Total |  | \$ | 14,075 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 9 | DESIGN | PERCENT | 30\% | \$ 14,075 | \$ | 10,000 |
| 10 | POST DESIGN | PERCENT | 2\% | \$ 14,075 | \$ | 1,000 |
|  |  |  |  | Design Total Grand Total | \$ | $11,000$ |
|  |  |  |  |  | \$ | 25,075 |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Adding Bike lane with conflict zone green paint (by narrowing the lane) (1 Mile Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. REMOVALS |  |  |  |  |  |  |
| 1 | OBLITERATE PAVEMENT MARKING (STRIPES) | LF | 21,120 | \$ 1.15 | \$ | 24,288 |
|  |  | Subtotal |  |  | \$ | 24,288 |
| 2. INSTALLATIONS |  |  |  |  |  |  |
| 2 | PERFORATED SQUARE TUBE SIGN POST | LF | 40 | \$ 68 | \$ | 2,700 |
| 3 | 5' x 1.5' SOLID GREEN LINE AND 1.5' GAP (90 MIL ALKYD THERMOPLASTIC) | LF | 300 | \$ 23 | \$ | 6,750 |
| 4 | PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EA | 4 | \$ 300 | \$ | 1,200 |
| 5 | 8" SOLID WHITE LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 21,120 | \$ 0.88 | \$ | 18,480 |
| 6 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | SF | 36 | \$ 10 | \$ | 2,835 |
|  |  |  |  | Subtotal | \$ | 31,965 |
|  |  |  | Construction Subtotal |  | \$ | 56,253 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 7 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 56,253 | \$ | 5,630 |
| 8 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 56,253 | \$ | 5,630 |
| 9 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 56,253 | \$ | 3,000 |
| 10 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 56,253 | \$ | 8,440 |
| 11 | CONTINGENCY | PERCENT | 20\% | \$ 56,253 | \$ | 11,250 |
| 12 | ESCALATION | PERCENT | 10\% | \$ 56,253 | \$ | 5,630 |
|  |  |  |  | Subtotal | \$ | 39,580 |
|  |  |  | Construction Total |  | \$ | 95,833 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 13 | DESIGN | PERCENT | 30\% | \$ 95,833 | \$ | 28,750 |
| 14 | POST DESIGN | PERCENT | 2\% | \$ 95,833 | \$ | 1,920 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{array}{r} 30,670 \\ 126,503 \end{array}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Bicycle lane crossing markings (1 Mile Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | PERFORATED SQUARE TUBE SIGN POST | LF | 40 | \$ 68 | \$ | 2,700 |
| 2 | 5' x 1.5' SOLID GREEN LINE AND 1.5' GAP (90 MIL ALKYD THERMOPLASTIC) | LF | 300 | \$ 23 | \$ | 6,750 |
| 3 | PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EA | 4 | \$ 300 | \$ | 1,200 |
| 4 | 8" SOLID WHITE LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 21,120 | \$ 0.88 | \$ | 18,480 |
| 5 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | SF | 36 | \$ 10 | \$ | 2,835 |
|  |  |  |  | Subtotal | \$ | 31,965 |
|  |  |  | Constru | ion Subtotal | \$ | 31,965 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 6 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 31,965 | \$ | 3,200 |
| 7 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 31,965 | \$ | 3,200 |
| 8 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 31,965 | \$ | 3,000 |
| 9 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 31,965 | \$ | 4,790 |
| 10 | CONTINGENCY | PERCENT | 20\% | \$ 31,965 | \$ | 6,390 |
| 11 | ESCALATION | PERCENT | 10\% | \$ 31,965 | \$ | 3,200 |
|  |  |  |  | Subtotal | \$ | 23,780 |
|  |  |  | Construction Total |  | \$ | 55,745 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 12 | DESIGN | PERCENT | 30\% | \$ 55,745 | \$ | 16,720 |
| 13 | POST DESIGN | PERCENT | 2\% | \$ 55,745 | \$ | 1,110 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{aligned} & 17,830 \\ & 73,575 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Bicycle lane crossing markings (1 Intersection Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | PERFORATED SQUARE TUBE SIGN POST | LF | 20 | \$ 68 | \$ | 1,350 |
| 2 | 5' x 1.5' SOLID GREEN LINE AND 1.5' GAP (90 MIL ALKYD THERMOPLASTIC) | LF | 200 | \$ 23 | \$ | 4,500 |
| 3 | PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EA | 4 | \$ 300 | \$ | 1,200 |
| 4 | 8" SOLID WHITE LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 200 | \$ 0.88 | \$ | 175 |
| 5 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | SF | 18 | \$ 10 | \$ | 2,835 |
|  |  |  |  | Subtotal | \$ | 10,060 |
|  |  |  | Construc | tion Subtotal | \$ | 10,060 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 6 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 10,060 | \$ | 2,500 |
| 7 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 10,060 | \$ | 2,500 |
| 8 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 10,060 | \$ | 3,000 |
| 9 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 10,060 | \$ | 1,510 |
| 10 | CONTINGENCY | PERCENT | 20\% | \$ 10,060 | \$ | 2,010 |
| 11 | ESCALATION | PERCENT | 10\% | \$ 10,060 | \$ | 1,010 |
|  |  |  |  | Subtotal | \$ | 12,530 |
|  |  |  | Construction Total |  | \$ | 22,590 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 12 | DESIGN | PERCENT | 30\% | \$ 22,590 | \$ | 10,000 |
| 13 | POST DESIGN | PERCENT | 2\% | \$ 22,590 | \$ | 1,000 |
|  |  |  |  | Design Total | \$ | $\begin{aligned} & 11,000 \\ & 33590 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Traffic Signal with protected left-turn movements (1 Intersection Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost | Subtotal |  |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | ELECTRICAL CONDUIT (3") (PVC) | LF | 50 | \$ 146 | \$ | 7,313 |
| 2 | CONCRETE SIDEWALK RAMP | EA | 4 | \$ 10,125 | \$ | 40,500 |
| 3 | PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EA | 8 | \$ 300 | \$ | 2,400 |
| 4 | 8" SOLID WHITE LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 1360 | \$ 0.88 | \$ | 1,190 |
| 5 | ELECTRICAL CONDUIT (2-3") (PVC) (TRENCH) | LF | 140 | \$ 146 | \$ | 20,475 |
| 6 | PULL BOX | EA | 6 | \$ 2,250 | \$ | 13,500 |
| 7 | POLE FOUNDATION (TYPE R) | EA | 4 | \$ 11,700 | \$ | 46,800 |
| 8 | MAST ARM (60 FT.) (TAPERED) | EA | 4 | \$ 37,125 | \$ | 148,500 |
| 9 | EMERGENCY VEHICLE PREEMPTION UNIT | EA | 4 | \$ 5,625 | \$ | 22,500 |
| 10 | TRAFFIC SIGNAL FACE (TYPE F) | EA | 4 | \$ 1,350 | \$ | 5,400 |
| 11 | TRAFFIC SIGNAL FACE (TYPE G) | EA | 8 | \$ 1,688 | \$ | 13,500 |
| 12 | TRAFFIC SIGNAL MOUNTING ASSEMBLY | EA | 12 | \$ 450 | \$ | 5,400 |
| 13 | SIGNAL POLE | EA | 4 | \$ 15,000 | \$ | 60,000 |
| 14 | LUMINAIRE | EA | 4 | \$ 2,329 | \$ | 9,315 |
| 15 | LUMINAIRE MAST ARM (25 FT.) (TAPERED) | EA | 4 | \$ 10,125 | \$ | 40,500 |
| 16 | CONTROL CABINET | EA | 1 | \$ 12,000 | \$ | 12,000 |
| 17 | CONDUCTORS | LS | 1 | \$ 22,500 | \$ | 22,500 |
|  |  |  |  | Subtotal | \$ | 471,793 |
|  |  |  | Constru | ction Subtotal | \$ | 471,793 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 18 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 471,793 | \$ | 47,180 |
| 19 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 471,793 | \$ | 47,180 |
| 20 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 471,793 | \$ | 4,720 |
| 21 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 471,793 | \$ | 70,770 |
| 22 | CONTINGENCY | PERCENT | 20\% | \$ 471,793 | \$ | 94,360 |
| 23 | ESCALATION | PERCENT | 10\% | \$ 471,793 | \$ | 47,180 |
|  |  |  |  | Subtotal | \$ | 311,390 |
|  |  |  | Con | struction Total | \$ | 783,183 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 24 | DESIGN | PERCENT | 30\% | \$ 783,183 | \$ | 234,950 |
| 25 | POST DESIGN | PERCENT | 2\% | \$ 783,183 | \$ | 15,660 |
|  |  |  |  | Design Total | \$ | 250,610 |
|  |  |  |  | Grand Total | \$ | 1,033,793 |




| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement One Side Street Lighting (One Mile Unit, Spacing 270') |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost | Subtotal |
| 1. INSTALLATIONS |  |  |  |  |  |
| 1 | ELECTRICAL CONDUIT (2-3") (PVC) (TRENCH) | LF | 5680 | \$ 146 | \$ 830,700 |
| 2 | POLE FOUNDATION | EA | 20 | \$ 11,700 | \$ 234,000 |
| 3 | LUMINAIRE | EA | 20 | \$ 2,329 | \$ 46,575 |
| 4 | LUMINAIRE MAST ARM (25 FT.) (TAPERED) | EA | 20 | \$ 10,125 | \$ 202,500 |
| 5 | POLE | EA | 20 | \$ 15,000 | \$ 300,000 |
| 6 | CONDUCTORS | LS | 1 | \$ 40,625 | \$ 40,625 |
|  |  |  |  | Subtotal | \$ 1,654,400 |
|  |  |  | Constru | ction Subtotal | \$ 1,654,400 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |
| 7 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 1,654,400 | \$ 165,440 |
| 8 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 1,654,400 | \$ 165,440 |
| 9 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 1,654,400 | \$ 16,540 |
| 10 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 1,654,400 | \$ 248,160 |
| 11 | CONTINGENCY | PERCENT | 20\% | \$ 1,654,400 | \$ 330,880 |
| 12 | ESCALATION | PERCENT | 10\% | \$ 1,654,400 | \$ 165,440 |
|  |  |  |  | Subtotal | \$ 1,091,900 |
|  |  |  | Cons | struction Total | \$ 2,746,300 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |
| 13 | DESIGN | PERCENT | 30\% | \$ 2,746,300 | \$ 823,890 |
| 14 | POST DESIGN | PERCENT | 2\% | \$ 2,746,300 | \$ 54,930 |
|  |  |  |  | Design Total | \$ 878,820 |
|  |  |  |  | Grand Total | \$ 3,625,120 |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Traffic signal head reflective tape (Four leg intersection with $\mathbf{1 2}$ heads)(1 intersection unit) |  |  |  |  |  |  |
| Item Number |  | Unit of <br> Measure | Quantity | Unit Cost | Subtotal |  |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | TRAFFIC SIGNAL FACE BACKPLATE | EA | 12 | \$ 900 | \$ | 10,800 |
| 2 | REFLECTIVE SIGNAL HEAD BACK PLATE TAPE | LF | 72 | \$ 10 | \$ | 720 |
|  |  |  | Subtotal |  | \$ | 11,520 |
|  |  |  | Construction Subtotal |  | \$ | 11,520 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 3 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 11,520 | \$ | 2,500 |
| 4 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 11,520 | \$ | 2,500 |
| 5 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 11,520 | \$ | 2,500 |
| 6 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 11,520 | \$ | 1,730 |
| 7 | CONTINGENCY | PERCENT | 20\% | \$ 11,520 | \$ | 2,300 |
| 8 | ESCALATION | PERCENT | 10\% | \$ 11,520 | \$ | 1,150 |
| SubtotalConstruction Total |  |  |  |  | \$ | 12,680 |
|  |  |  |  |  | \$ | 24,200 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 9 | DESIGN | PERCENT | 30\% | \$ 24,200 | \$ | 10,000 |
| 10 | POST DESIGN | PERCENT | 2\% | \$ 24,200 | \$ | 1,000 |
|  |  |  |  | Design Total | \$ | 11,000 |
|  |  |  |  | Grand Total | \$ | 35,200 |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Traffic Signal Modification (New Protected Left Turn Movement) (1 Intersection Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost | Subtotal |  |
| 1. REMOVALS |  |  |  |  |  |  |
| 1 | REMOVE SIGNAL FACE | EA | 8 | \$ 688 | \$ | 5,500 |
|  |  |  |  | Subtotal | \$ | 5,500 |
| 2. INSTALLATIONS |  |  |  |  |  |  |
| 2 | ELECTRICAL CONDUIT (3") (PVC) | LF | 400 | \$ 146 | \$ | 58,500 |
| 3 | TRAFFIC SIGNAL FACE (TYPE G) | EA | 8 | \$ 1,350 | \$ | 10,800 |
| 4 | TRAFFIC SIGNAL MOUNTING ASSEMBLY | EA | 8 | \$ 450 | \$ | 3,600 |
|  |  |  | Construction Subtotal | Subtotal | \$ | 72,900 |
|  |  |  | Construction Subtotal |  | \$ | 78,400 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 5 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 78,400 | \$ | 7,840 |
| 6 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 78,400 | \$ | 7,840 |
| 7 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 78,400 | \$ | 2,500 |
| 8 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 78,400 | \$ | 11,760 |
| 9 | CONTINGENCY | PERCENT | 20\% | \$ 78,400 | \$ | 15,680 |
| 10 | ESCALATION | PERCENT | 10\% | \$ 78,400 | \$ | 7,840 |
| SubtotalConstruction Total |  |  |  |  | \$ | 53,460 |
|  |  |  |  |  | \$ | 131,860 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 11 | DESIGN | PERCENT | 30\% | \$ 131,860 | \$ | 39,560 |
| 12 | POST DESIGN | PERCENT | 2\% | \$ 131,860 | \$ | 2,640 |
|  |  |  |  | Design Total | \$ | 42,200 |
|  |  |  |  | Grand Total | \$ | 174,060 |



| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project No. MetroPlan RTSP <br> Improvement  High-visibility crosswalk (ladder type) (Four 36' crossing) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | 12" SOLID YELLOW LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 768 | \$ 5 | \$ | 3,456 |
| 2 | PERFORATED SQUARE TUBE SIGN POST | LF | 160 | \$ 68 | \$ | 10,880 |
| 3 | INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL | EA | 16 | \$ 10 | \$ | 160 |
|  |  |  |  | Subtotal | \$ | 14,496 |
|  |  |  | Construc | ion Subtotal | \$ | 17,952 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 4 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 17,952 | \$ | 2,500 |
| 5 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 17,952 | \$ | 2,500 |
| 6 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 17,952 | \$ | 3,000 |
| 7 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 17,952 | \$ | 2,690 |
| 8 | CONTINGENCY | PERCENT | 20\% | \$ 17,952 | \$ | 3,590 |
| 9 | ESCALATION | PERCENT | 10\% | \$ 17,952 | \$ | 1,800 |
|  |  |  |  | Subtotal | \$ | 16,080 |
|  |  |  | Construction Total |  | \$ | 34,032 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 10 | DESIGN | PERCENT | 30\% | \$ 34,032 | \$ | 10,210 |
| 11 | POST DESIGN | PERCENT | 2\% | \$ 34,032 | \$ | 1,000 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{aligned} & 11,210 \\ & 45,242 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project No. MetroPlan RTSP <br> Improvement Sidewalk (100' unit) (100'x6' ) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost | Subtotal |  |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | VERTICAL CURB AND GUTTER, STANDARD DETAIL 220-1, TYPE "A" | LF | 100 | \$ 63 | \$ | 6,300 |
| 2 | CONCRETE SIDEWALK | SF | 600 | \$ 20 | \$ | 12,000 |
|  | CONCRETESIDEWALK |  | Subtotal Construction Subtotal | Subtotal | \$ | 18,300 |
|  |  |  | Construction Subtotal |  | \$ | 18,300 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 3 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 18,300 | \$ | 2,500 |
| 4 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 18,300 | \$ | 2,500 |
| 5 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 18,300 | \$ | 2,500 |
| 6 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 18,300 | \$ | 2,750 |
| 7 | CONTINGENCY | PERCENT | 20\% | \$ 18,300 | \$ | 3,660 |
| 8 | ESCALATION | PERCENT | 10\% | \$ 18,300 | \$ | 1,830 |
|  |  |  |  | Subtotal | \$ | 15,740 |
|  |  |  | Construction Total |  | \$ | 34,040 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 9 | DESIGN | PERCENT | 30\% | \$ 34,040 | \$ | 10,210 |
| 10 | POST DESIGN | PERCENT | 2\% | \$ 34,040 | \$ | 1,000 |
|  |  |  |  | Design Total | \$ | 11,210 |
|  |  |  |  | Grand Total | \$ | 45,250 |



| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Sight distance maintenance (1 Intersection Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost | Subtotal |  |
| 1. REMOVALS |  |  |  |  |  |  |
| 1 | REMOVE TREE, DIAMETER > 12 IN. | EA | 2 | \$ 1,125 | \$ | 2,250 |
| 2 | CLEARING AND GRUBBING | ACRE | 0.5 | \$ 5,000 | \$ | 2,500 |
|  |  |  | Subtotal |  | \$ | 4,750 |
|  |  |  | Construction Subtotal |  | \$ | 4,750 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 3 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 4,750 | \$ | 2,500 |
| 4 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 4,750 | \$ | 2,500 |
| 5 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 4,750 | \$ | 3,000 |
| 6 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 4,750 | \$ | 710 |
| 7 | CONTINGENCY | PERCENT | 20\% | \$ 4,750 | \$ | 950 |
| 8 | ESCALATION | PERCENT | 10\% | \$ 4,750 | \$ | 480 |
|  |  |  |  | Subtotal | \$ | 10,140 |
|  |  |  | Construction Total |  | \$ | 14,890 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 9 | DESIGN | PERCENT | 30\% | \$ 14,890 | \$ | 10,000 |
| 10 | POST DESIGN | PERCENT | 2\% | \$ 14,890 | \$ | 1,000 |
|  |  |  |  | Design Total Grand Total | \$ | $\begin{aligned} & 11,000 \\ & 25,890 \end{aligned}$ |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project No. MetroPlan RTSP <br> Improvement Stop bar (1 two-way stop intersection) |  |  |  |  |  |  |
| Item Number |  | Unit of Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | 12" SOLID WHITE LINE (90 MIL ALKYD THERMOPLASTIC) | LF | 24 | \$ 1.65 |  | 39.6 |
|  |  |  |  | Subtotal | \$ | 40 |
|  |  |  | Construc | ion Subtotal | \$ | 40 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 2 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 40 | \$ | 2,500 |
| 3 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 40 | \$ | 2,500 |
| 4 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 40 | \$ | 3,000 |
| 5 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 40 | \$ | 3,000 |
| 6 | CONTINGENCY | PERCENT | 20\% | \$ 40 | \$ | 3,000 |
| 7 | ESCALATION | PERCENT | 10\% | \$ 40 | \$ | 3,000 |
|  |  |  |  | Subtotal | \$ | 17,000 |
|  |  |  | Construction Total |  | \$ | 17,040 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 8 | DESIGN | PERCENT | 30\% | \$ 17,040 | \$ | 10,000 |
| 9 | POST DESIGN | PERCENT | 2\% | \$ 17,040 | \$ | 1,000 |
|  |  |  |  | Design Total | \$ | 11,000 |
|  |  |  |  | Grand Total | \$ | 28,040 |



| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Name MetroPlan RTSP <br> Improvement Right of way fencing (1 mile Unit) |  |  |  |  |  |  |
| Item Number |  | Unit of <br> Measure | Quantity | Unit Cost |  | total |
| 1. INSTALLATIONS |  |  |  |  |  |  |
| 1 | CHAIN LINK FENCE, TYPE 1 (72") | LF | 5280 | \$ 20 | \$ | 105,600 |
|  |  |  |  | Subtotal | \$ | 105,600 |
|  |  |  | Constru | ion Subtotal | \$ | 105,600 |
| 2. CONSTRUCTION SOFT COSTS |  |  |  |  |  |  |
| 2 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 105,600 | \$ | 10,560 |
| 3 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 105,600 | \$ | 10,560 |
| 4 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 105,600 | \$ | 3,000 |
| 5 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 105,600 | \$ | 15,840 |
| 6 | CONTINGENCY | PERCENT | 20\% | \$ 105,600 | \$ | 21,120 |
| 7 | ESCALATION | PERCENT | 10\% | \$ 105,600 | \$ | 10,560 |
|  |  | Subtotal <br> Construction Total |  |  | \$ | 71,640 |
|  |  |  |  |  | \$ | 177,240 |
| 3. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |  |
| 8 | DESIGN | PERCENT | 30\% | \$ 177,240 | \$ | 53,170 |
| 9 | POST DESIGN | PERCENT | 2\% | \$ 177,240 | \$ | 3,540 |
|  |  |  |  | Design Total | \$ | 56,710 |
|  |  |  |  | Grand Total | \$ | 233,950 |


| ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Project No. MetroPlan RTSP <br> Improvement  <br> Sidewalk on both sides of road (1 mile unit) (5280'x6' x2)  |  |  |  |  |  |
|  |  | Unit of Measure | Quantity | Unit Cost | Subtotal |
| 1. INSTALLATIONS |  |  |  |  |  |
| 1 | VERTICAL CURB AND GUTTER, STANDARD DETAIL 220-1, TYPE "A" | LF | 10,560 | \$ 63 | \$ 665,280 |
| 2 | CONCRETE SIDEWALK RAMP | EA | 5 | \$ 10,125 | \$ 50,625 |
| 3 | CONCRETE SIDEWALK | SF | 41184 | \$ 20 | \$ 823,680 |
|  |  |  |  | Subtotal | \$ 1,539,585 |
|  |  |  | Construction Subtotal |  | \$ 1,539,585 |
| 3. CONSTRUCTION SOFT COSTS |  |  |  |  |  |
| 4 | MOBILIZATION/DEMOBILIZATION | PERCENT | 10\% | \$ 1,539,585 | \$ 153,960 |
| 5 | TRAFFIC CONTROL | PERCENT | 10\% | \$ 1,539,585 | \$ 153,960 |
| 6 | CONSTRUCTION SURVEY AND LAYOUT | PERCENT | 1\% | \$ 1,539,585 | \$ 15,400 |
| 7 | CONSTRUCTION ADMINISTRATION | PERCENT | 15\% | \$ 1,539,585 | \$ 230,940 |
| 8 | CONTINGENCY | PERCENT | 20\% | \$ 1,539,585 | \$ 307,920 |
| 9 | ESCALATION | PERCENT | 10\% | \$ 1,539,585 | \$ 153,960 |
|  |  |  |  | Subtotal | \$ 1,016,140 |
|  |  |  | Construction Total |  | \$ 2,555,725 |
| 4. DESIGN AND POST DESIGN COSTS |  |  |  |  |  |
| 10 | DESIGN | PERCENT | 30\% | \$ 2,555,725 | \$ 766,720 |
| 11 | POST DESIGN | PERCENT | 2\% | \$ 2,555,725 | \$ 51,110 |
|  |  |  |  | Design Total | \$ 817,830 |
|  |  |  |  | Grand Total | \$ 3,373,555 |


Appendix H: Story Maps

## Northern Arizona Regional Transportation Safety Plan - 90

## Background

The Northern Arizona Regional
Transportation Safety Plan (RTSP) is a planning effort of MetroPlan Flagstaff, seeking to reduce the risk of death and serious injury on roadways. This plan


GREATER \& FLAGSTAFF utilizes vehicle crash data between 2017-2021, stakeholder and public input, and other roadway condition data to ensure all required elements of a Safety Action Plan are met as defined in the Safe Streets and Roads for All (SS4A) Federal grant program.


Safe streets and roads are the foundation of a livable region. When people step out their front door, they expect and deserve a safe way to get where they're going, whether it's walking or bicycling in the neighborhood, getting to transit, or

Figure 1. A damaged vehicle on the shoulder of a wet roadway, showing the aftermath of a weather-related crash.
driving down a highway.

Why is roadway safety important?
By analyzing and addressing potential roadway hazards, implementing effective traffic management strategies, and improving infrastructure, safety planning efforts like the Northern Arizona Regional Transportation Safety Plan reduce the number of crashes, injuries, and fatalities.

In the last 5 years (2017-2021), the Flagstaff region had over 10,000 crashes that led to $\mathbf{3 , 4 5 0}$ serious injuries and 62 deaths. The Regional Transportation Safety Plan provides a regionally-focused, data-driven framework for increasing traffic safety on roadways in the greater Flagstaff region. The Plan focuses on strategies and actions drawn from best practices proven to reduce traffic-related deaths and serious injuries. Our vision is zero deaths.


## Crash Data

Crash data was drawn from Arizona Department of Transportation (ADOT) for a five-year period beginning in January 2017. Severe or fatal crashes as well as clusters of crashes were investigated to identify causes and solutions.

Crashes were attributed to an intersection or to a $0.5-\mathrm{mile}$ section of the roadway to ensure solutions were prescribed for the correct locations and roadway features.

To interact with the map, start by clicking the button with two opposite-facing diagonal arrows in the upper right corner. Navigate around the map and use the zoom feature (+/- buttons on the right-hand side of the screen) to view points of interest in greater detail.


## Network Screening

The Regional Transportation Safety Plan effort employed a network screening, or a detailed analysis of all crashes and
their contributing factors, to break down safety issues into a variety of causes and trends in roadway conditions and human behaviors that may contribute to future crashes. This helps MetroPlan identify and prioritize locations in greatest need of improvement.

The network screening process considers crash history (as shown above), roadway factors, and traffic characteristics to score the safety performance of every roadway segment and intersection. The network screening serves to objectively provide a list of locations where safety improvements are likely to save the most lives and reduce injuries.

To interact with the map, start by clicking the button with two opposite-facing diagonal arrows in the upper right corner. Navigate around the map and use the zoom feature (+/- buttons on the right-hand side of the screen) to view points of interest in greater detail.

## Trends

Greater Flagstaff's crash data trends were analyzed as part of the Regional Transportation Safety Plan effort, helping to locate persistent problem areas, identify problematic crash behaviors and roadway conditions that contribute toward crashes, and gauge success of locations where safety improvements have already been installed. A full analysis of crash data is included in the full Regional Transportation Safety Plan. The charts below show a summary of relevant safety-related trends for the Greater Flagstaff area.

Figure 2 (right) shows the total number of crashes for each year between 2017 and 2021. While the table displays a statistical downward trend in the total annual number of
crashes, note that 2020 is an outlier year that experienced a significantly lower number of crashes due to the effects of the COVID-19 pandemic.

Figure 3 (below) breaks down observed crashes by the severity of injury reported. This attribute is exceedingly important in identifying locations in greatest need of safety improvement.


Figure 3. Total number of vehicle crashes, 2017-2021, categorized by severity for the City of Flagstaff, Coconino County where it coincides with MetroPlan Flagstaff's planning area, and Greater Flagstaff overall (the sum of the aforementioned). Data retrieved from Arizona Department of Transportation.

Crashes during the 2017-2021 period were also categorized by their crash manner, a metric which captures the angles at which the incident occurs - results are displayed in the table below. Crash manner analysis helps further characterize dangerous situations on Greater Flagstaff roadways and serves as another step toward mitigating those conditions. The crash type and manner is often linked to the severity of the incident; for example, head on crashes tend to be the most dangerous while sideswipe accidents see less severe injuries.


Figure 4. Crashes within the MetroPlan Flagstaff planning area, 2017-2021, categorized by crash manner. Data retrieved from Arizona Department of Transportation.


## Public Involvement

Public involvement for the RTSP planning process was multifaceted, leveraging the existing working relationships among a variety of local, county, regional, and state government representatives, as well as community organizations to reach vital stakeholders and the public to provide valuable input for the plan.

To interact with the map, start by clicking the button with two opposite-facing diagonal arrows in the upper right corner.
Navigate around the map and use the zoom feature (+/- buttons on the right-hand side of the screen) to view points of interest in greater detail.


MetroPlan Flagstaff utilized in-person events in and around Flagstaff, an online survey and mapping tool, regular meetings open to local stakeholders and the public, and an online planning webpage as channels for communicating project information and requesting input from the public. A full summary of public involvement efforts and analysis of responses is included in the full Regional Transportation Safety Plan.

## Strategies \& Policy

The RTSP data analysis, public involvement efforts, and ongoing planning have resulted in the identification of a set of fourteen different safety emphasis areas. After careful review, MetroPlan has adopted eight of the identified safety emphasis
areas where particular attention should be paid by
jurisdictions when identifying and implementing safety improvements:


Figure 5. MetroPlan Flagstaff's eight roadway safety emphasis areas.

These safety emphasis areas guided the identification of priority projects, and will continue to influence policy guidance going forward. Crashes were analyzed and categorized within these emphasis areas (a single crash may be identified as contributing to more than one emphasis area, as a crash may have had multiple factors associated, e.g. a lane departure crash where speeding and not wearing a seat belt were observed).

The Regional Transportation Safety Plan effort has also resulted in a robust set of broader, network-wide safety strategies and policy recommendations, including the following examples:

## Lane Departure

- Install centerline and edge-line rumble strips, especially on two-lane, regional roads.
- Relocate objects within the recovery area along the side of the road in high-risk locations.
- Apply paving technologies to negate vertical drop-offs and facilitate driver ability to maintain vehicle control under instances of lane departure, such as Safety Edge.


Figure 6. Sample of the safety strategies recommended for the MetroPlan Flagstaff area as a result of the Northern Arizona Regional Transportation Safety Plan effort.

The full extent of the safety strategies and policy improvements is accessible in the full Regional Transportation Safety Plan document, available on the MetroPlan Flagstaff website. Below, you'll find an interactive map of recommended safety priority projects, developed using a weighted combination of the safety emphasis areas, Arizona Department of Transportation 2017-2021 crash data, and comments from stakeholders and the public.


## Priority Projects

Surface transportation improvement projects were selected based on a combination of the crash data, network screenings specific to each identified safety emphasis area, public involvement, and agency comments.

To interact with the map, start by clicking the button with two opposite-facing diagonal arrows in the upper right corner. Navigate around the map and use the zoom feature (+/- buttons on the right-hand side of the screen) to view points of interest in greater detail. Click or tap on each point or line to understand more about the location, safety concerns, and recommended improvements.

Below, the three highest priority safety improvements for the MetroPlan region are shown in greater detail. These are not the only recommended projects, but are intended to illustrate the depth of the recommendations and their strong ties to MetroPlan Flagstaff's identified safety emphasis areas.
MetroPlan will inform the respective jurisdictional authorities of these opportunities, encourage their response, and assist in the pursuit of funding.

1 Intersection of S Milton Road \& W Riordan Road


View Location (Google Maps)

This location was identified through the quantitative crash data analysis, as well as comments provided by MetroPlan, the City of Flagstaff, and the public.

This project applies the identified safety strategies through recommended improvements, which include improvement of traffic signal timing and coordination, left turn phasing evaluation and/or improvement, high-visibility crosswalks, and potentially restricting U-Turns.

2 Intersection of Butler Avenue and Lone Tree Road


View Location (Google Maps)

This location was identified through the quantitative crash data analysis, as well as comments provided by MetroPlan, the City of Flagstaff, and the public.

This project applies the identified safety strategies through recommended improvements, which include installation of refreshed left turn guide markings and reflective signal head tape.


View Location (Google Maps)

This location was identified through the quantitative crash data analysis, as well as comments provided by MetroPlan, the City of Flagstaff, and the public.

This project applies the identified safety strategies through recommended improvements, which include installation of high-visibility crosswalks, speed feedback signs, and protected bicycle lanes.

## Resources \& Contacts

The City of Flagstaff has additional resources and planning documents regarding roadway safety, which can be accessed using the links below.

Flagstaff Regional Plan 2030 (Ratified May 20, 2014)

Flagstaff Regional Plan 2045 (In Progress)

Flagstaff Active Transportation Master Plan (Adopted November 1, 2022)

Please direct any questions, concerns, or other comments to David Wessel (david.wessel@metroplanflg.org).

Additional information, including the full RTSP document, can be accessed on the MetroPlan Flagstaff website.



[^0]:    ${ }^{1}$ FHWA, Office of Safety, Safe System Approach flyer, SA-20-015, https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA SafeSystem Brochure_V9 508 200717.pdf

[^1]:    ${ }^{2}$ https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/15100 Countermeasures10th 080621 v5 tag.pdf
    ${ }^{3}$ http://www.cmfclearinghouse.org/ ${ }^{3}$ FHWA, Office of Safety, Proven Safety Countermeasures, https://safety.fhwa.dot.gov/provencountermeasures/
    ${ }^{3}$ https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/15100 Countermeasures10th 080621 v5 tag.pdf
    ${ }^{3}$ http://www.cmfclearinghouse.org/

[^2]:    ${ }^{4}$ Federal Highway Administration. "Integrating Equity into the Safe System Approach" Presentation. Accessed Apr. 17, 2023: https://highways.dot.gov/safety/zero-deaths/integrating-equity-safe-system-approach-presentation.
    5 Vision Zero Network. N.d. Equity Strategies for Practitioners. Accessed April 17, 2023: https://visionzeronetwork.org/wpcontent/uploads/2017/05/VisionZero Equity.pdf
    ${ }^{6}$ https://www.transportation.gov/priorities/equity/justice40/etc-explorer
    7 https://datahub.transportation.gov/stories/s/RAISE-Persistent-Poverty-Tool/tsyd-k6ij/

[^3]:    ${ }^{1}$ Federal Highway Administration. "Integrating Equity into the Safe System Approach" Presentation. Accessed Apr. 17, 2023: https://highways.dot.gov/safety/zero-deaths/integrating-equity-safe-system-approach-presentation.
    2 Vision Zero Network. N.d. Equity Strategies for Practitioners. Accessed April 17, 2023: https://visionzeronetwork.org/wpcontent/uploads/2017/05/VisionZero Equity.pdf
    ${ }^{3}$ https://www.transportation.gov/priorities/equity/justice40/etc-explorer
    ${ }^{4}$ https://datahub.transportation.gov/stories/s/RAISE-Persistent-Poverty-Tool/tsyd-k6ii/

