

City of Mesa Crashes

An Overview of Mesa's Approach to Crash Analysis

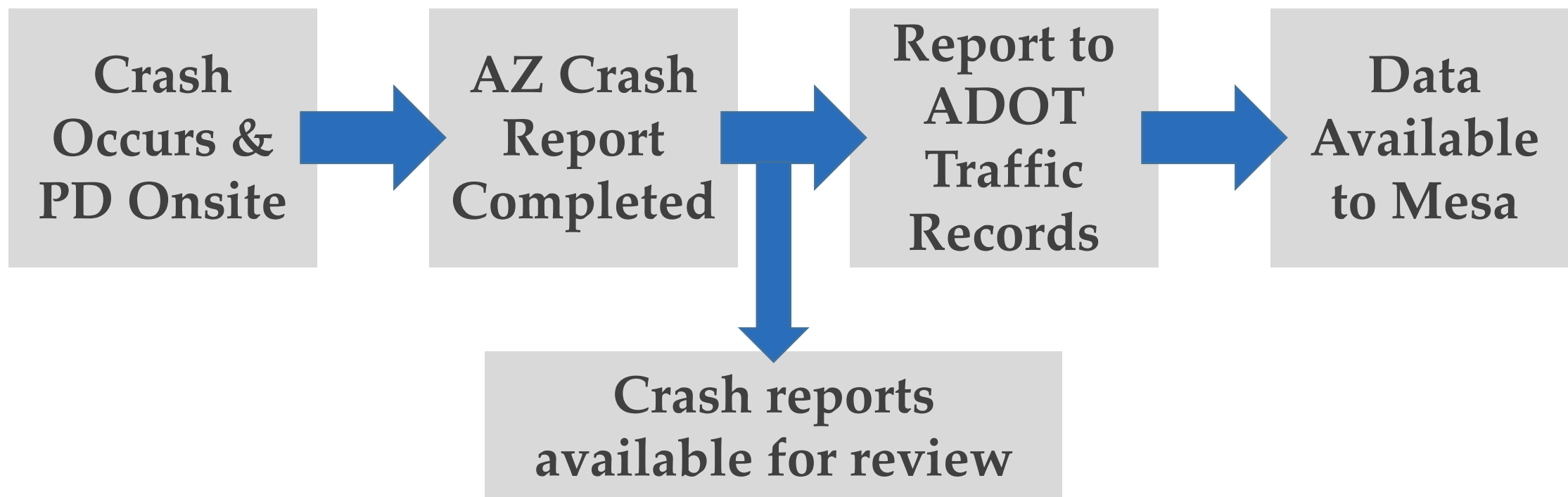
Agenda

- Background on Crash Data
- Basis for Crash Analysis
- Statistics & Trends
 - National, State and Local
- How the Crash Analysis is Used



Mesa's Crash Data

Background on Crash Data



Crash Analysis

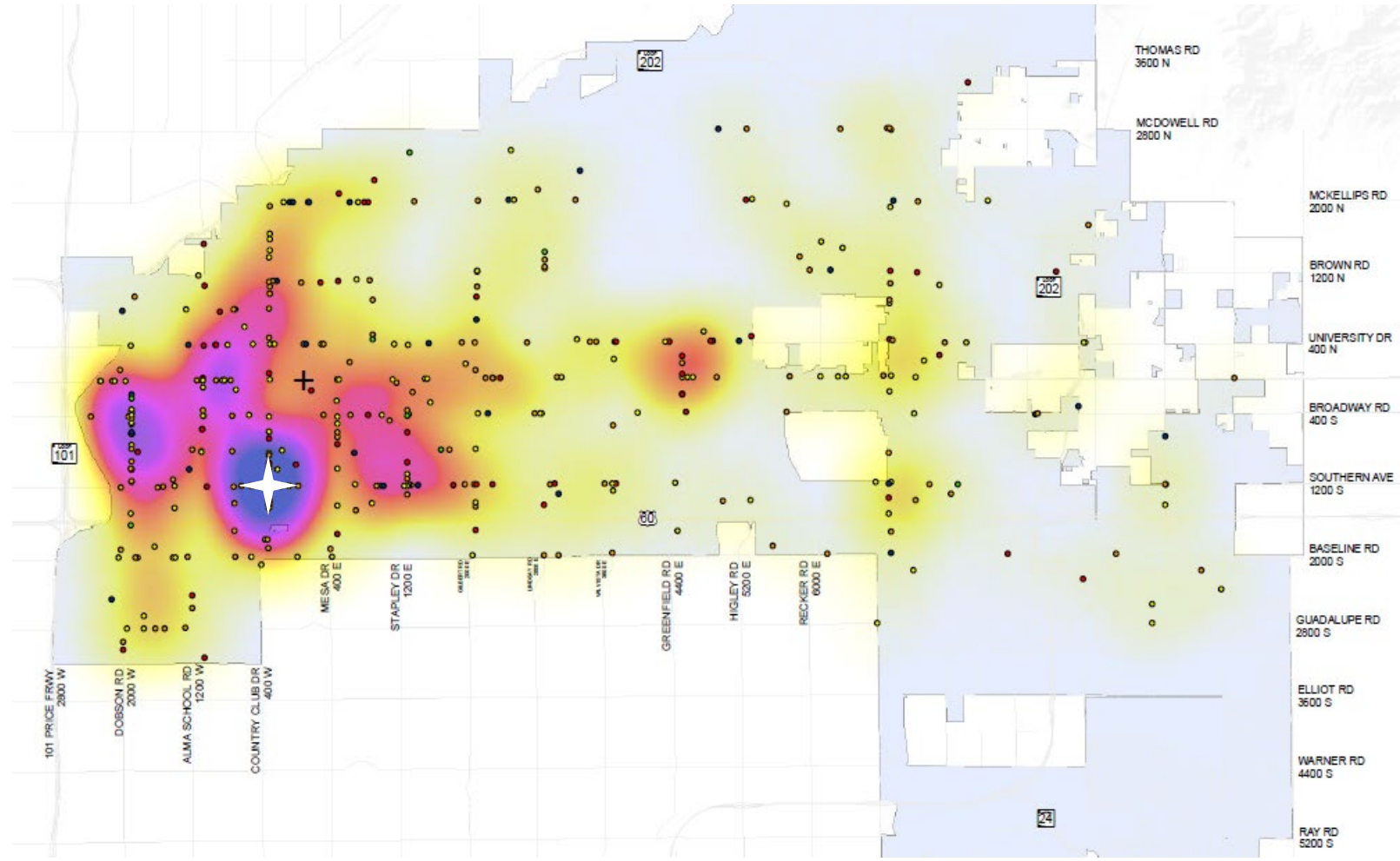
Crash Analysis Types

Locational:

- Study requests
- Safety reviews
- Part of design

Historical Trends:

- Compiled data from annual reports
- Networking screening tools & visualizations



Mesa's Crash Data

Mesa Comprehensive Safety Action Plan (CSAP)

Strategies & Actions

H.) Optimize Data Analytics

Mesa would continue to publish an annual crash report with more data to better understand crash types and how to prevent them.



Table 13: Optimize Data Analytics - Strategies and Actions

ID	Action	Department to Implement	Status of Action
H01	Explore comprehensive injury prevention program by integrating diverse datasets, such as traffic crash reports, safety performance functions, hospital records and public health databases.	Transportation Dept. - Lead Police Dept. - Support	Continue & Expand
H02	Continue to review the crash history of locations before implementing new work orders. This would help identify potential safety improvements that can be integrated into the project.	Transportation Dept. - Lead	Continue
H03	Develop a biennial public-facing CSAP report that includes crash analysis, performance metrics, implementation progress, intervention outcomes and public feedback. An updated High Injury and High Risk Network evaluation would be conducted and maps would also be published as part of each report.	Transportation Dept. - Lead	New

Annual Crash Statistics - National

USDOT's National Highway Traffic Safety Administration (NHTSA)

2024 Fatal Crash Takeaways – Early Estimates (NHTSA, 2025):

- Early estimates show **39,345 people died** in motor vehicle crashes.
 - 3.8% decrease from 2023; general decline since 2021
 - Increase in motorcyclist fatalities 2021 - 2023
- National vehicle miles travelled (VMT) in 2023 **increased** by 1.6% (2024 increases expected)
- National Roadway Safety Strategy



State Level

Arizona Department of Transportation (ADOT)

2023 Crash Facts:

Arizona Crash Facts Summary and Comparison

Category	2022	2023	Percent Change
Total Crashes	120,356	122,247	1.57%
Total Fatalities	1,320	1,307	-0.98%
Total Injuries	52,575	54,198	3.09%
Alcohol Related Fatalities	312	332	6.41%
Alcohol Related Injuries	3,592	3,864	7.57%
Urban Fatalities	843	853	1.19%
Urban Injuries	44,733	46,074	3.00%
Rural Fatalities	477	454	-4.82%
Rural Injuries	7,842	8,124	3.60%
MC Operator and Passenger Fatalities	232	258	11.21%
MC Operator and Passenger Injuries	2,422	2,571	6.15%
Pedestrian Fatalities	309	271	-12.30%
Pedestrian Injuries	1,673	1,710	2.21%
Bicyclist Fatalities	49	44	-10.20%
Bicyclist Injuries	1,133	1,128	-0.44%
Millions of vehicle miles traveled (VMT)	76,165	75,438	-0.95%
Fatalities per 100 million VMT	1.73	1.73	-0.03%
Injuries per 100 million VMT	69.03	71.84	4.08%

Annual Crash Reports - Mesa

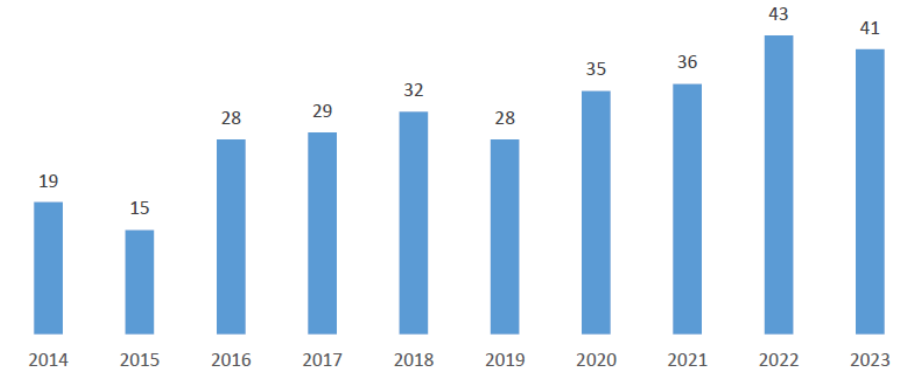
Detailed statistics for **fatal, serious injury, bike, pedestrian and motorcycle crashes**

- All data is verified against the actual crash report and other key metrics are generated

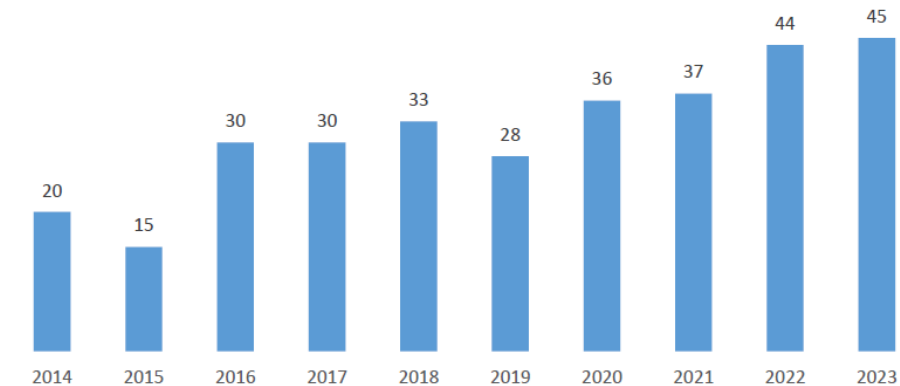
2023 Annual Report Takeaways:

- Vulnerable road users (pedestrians and bicyclists) – **36%** of all crash fatalities **(16)**
- Motorcyclists – **33%** of all crash fatalities **(15)**
- Predominant cited violations – **speed too fast & exceeded lawful speed, failure to yield and did not use crosswalk**
- Total number of **crashes increased (+3.3%)**, **fatal crashes decreased (-4.7%)**, and **fatalities increased (+2.3%)**
- Impairment in fatal crashes – **38%** drug/alcohol involved

Mesa Fatal Crashes by Year



Mesa Total Fatalities by Year



9 Annual Crash Reports – Mesa (Cont.)

2024 Snapshot:

- **34** fatal crashes in 2024 – decrease from 2023 (41) and 2022 (43)
 - **34** fatalities – decrease from 2023 (45) and 2022 (44)
 - **7** pedestrian, & **2** bicyclist fatalities (**26%**) – decrease from previous year
 - **16** motorcyclist fatalities (**46%**) – increase from 2023 (15) and 2022 (13)
 - **29%** citing **impairment** as a factor
- **175** serious injury crashes in 2024 – increase from 2023 (167) and decrease from 2022 (180)
 - Over **90%** occurring on **arterial** streets
 - Predominant crash manners – **angle** and **left turn**
 - Predominant cited violations – **failure to yield** and **speed too fast**

2025 Fatal Crashes Snapshot:

- **19** fatal crashes so far in 6 months with **21** fatalities
 - **9** motorcyclist fatalities & **2** pedestrian fatalities
 - **5** citing impairment as a factor

Statistics & Trends

Fatal Crashes

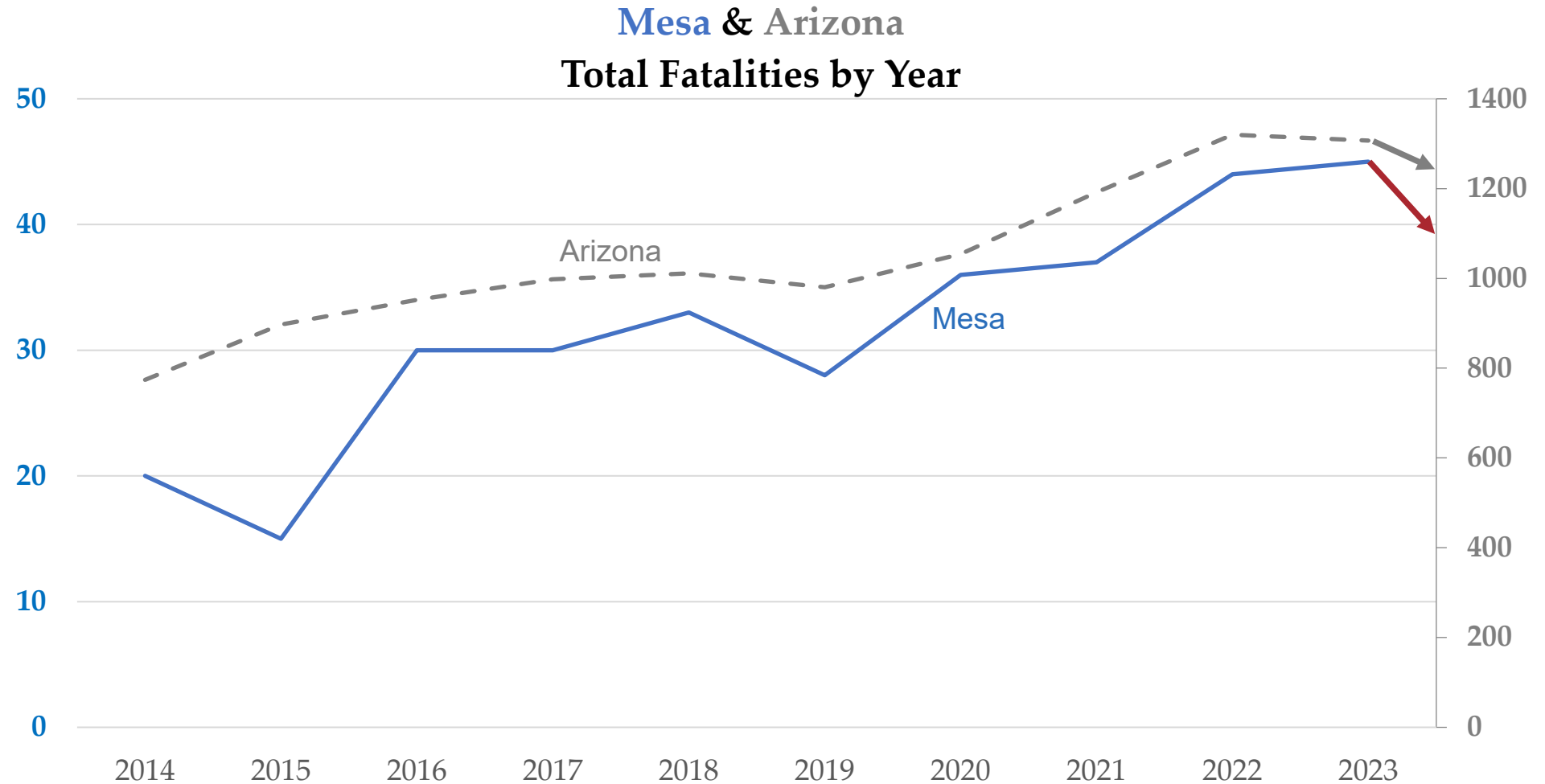
- 10-Year Mesa & National



Statistics & Trends

Fatal Crashes

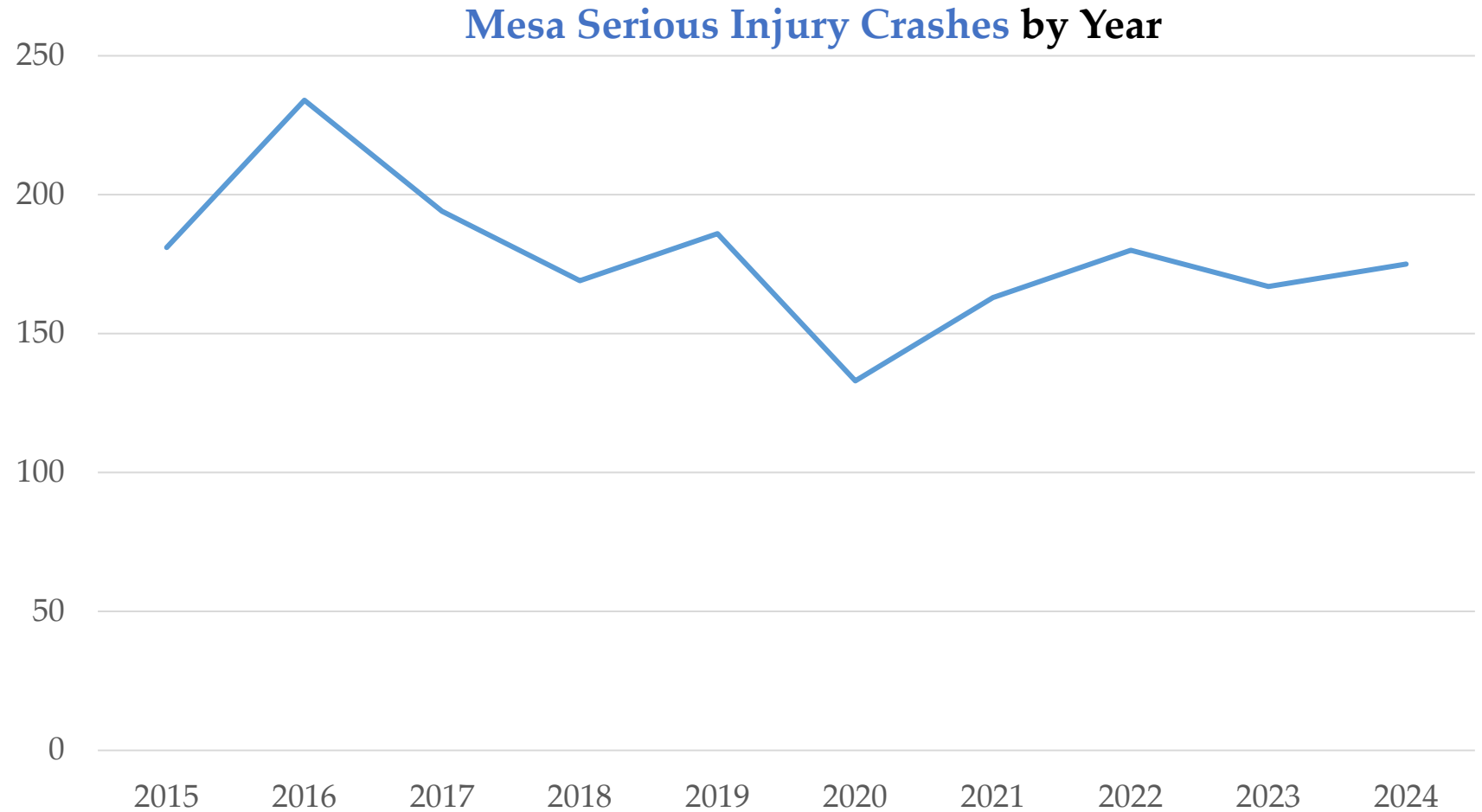
- 10-Year Mesa & State



Statistics & Trends

Serious Injury Crashes

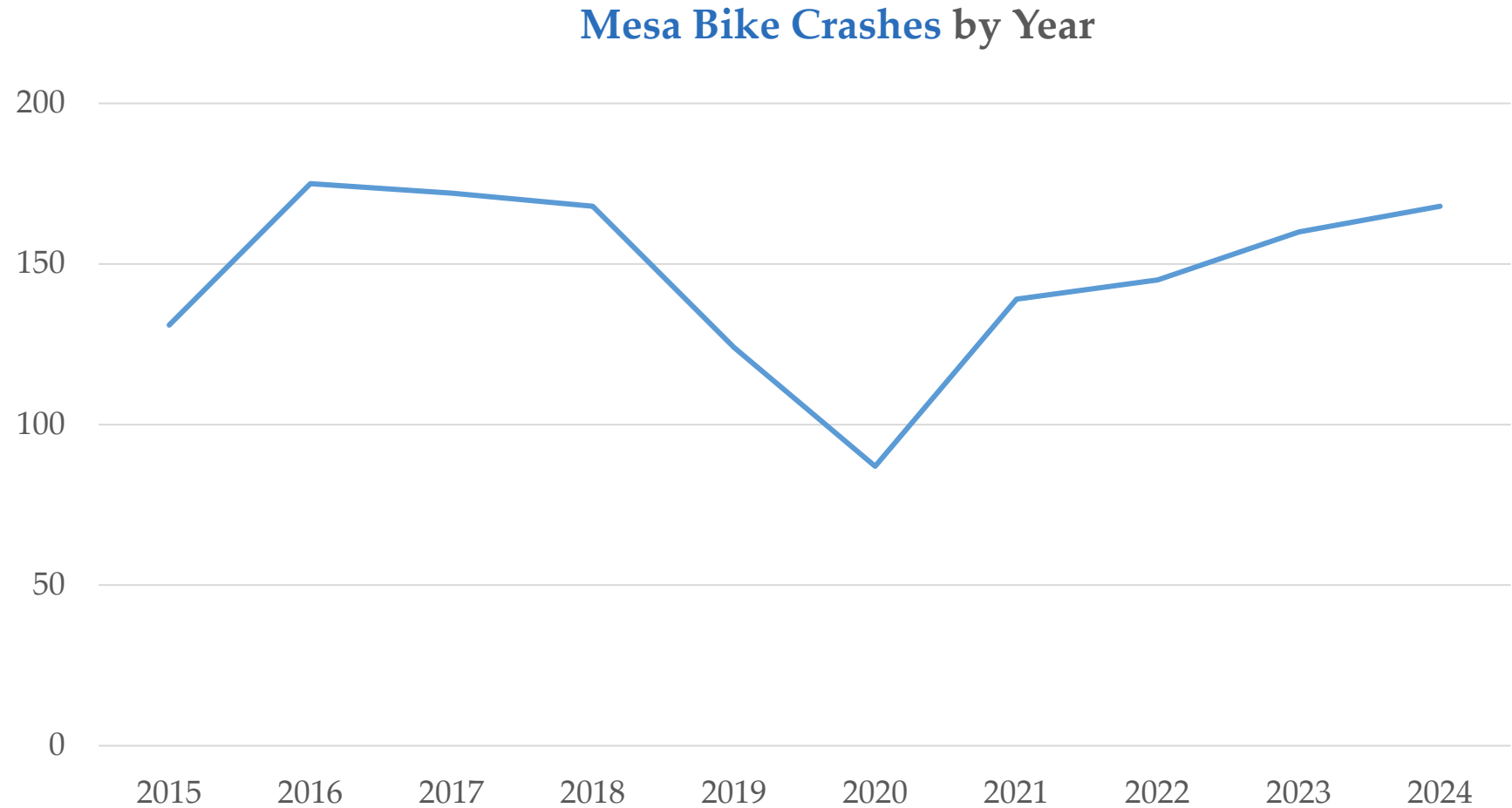
- Mesa 10-Year



Statistics & Trends

Bike Crashes

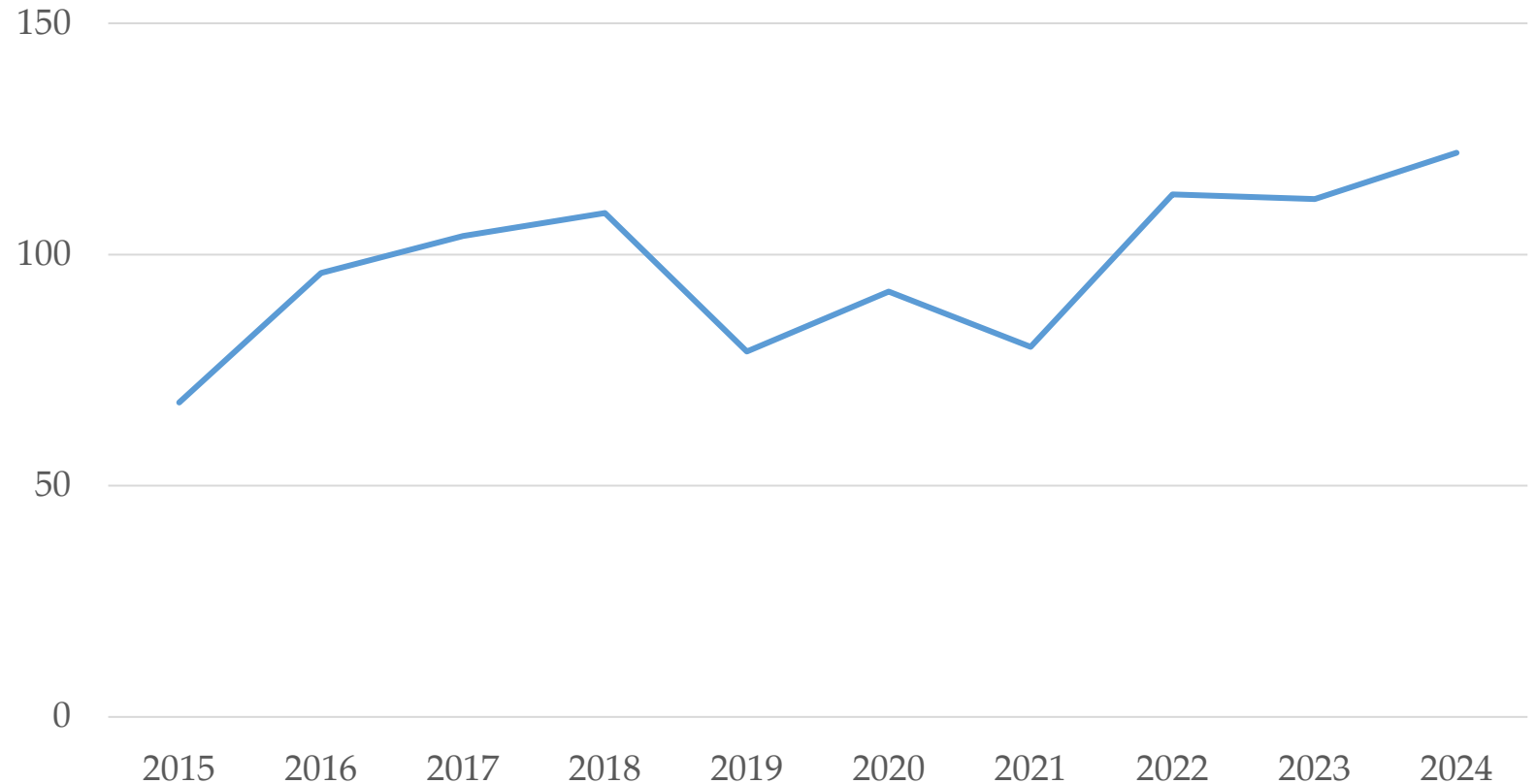
- Mesa 10-Year



Pedestrian Crashes

- Mesa 10-Year

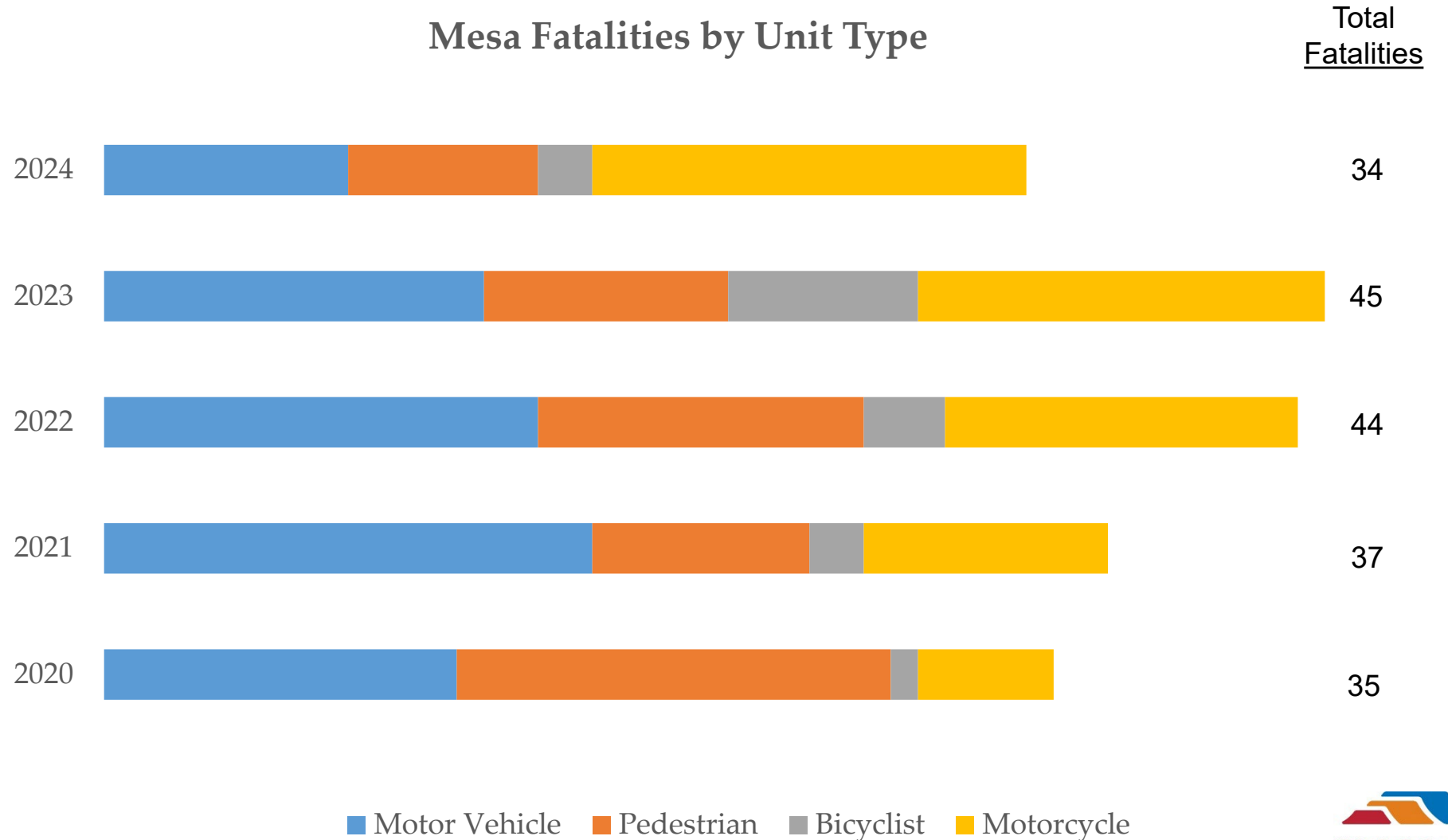
Mesa Pedestrian Crashes by Year



Statistics & Trends

Fatalities

- Unit Type



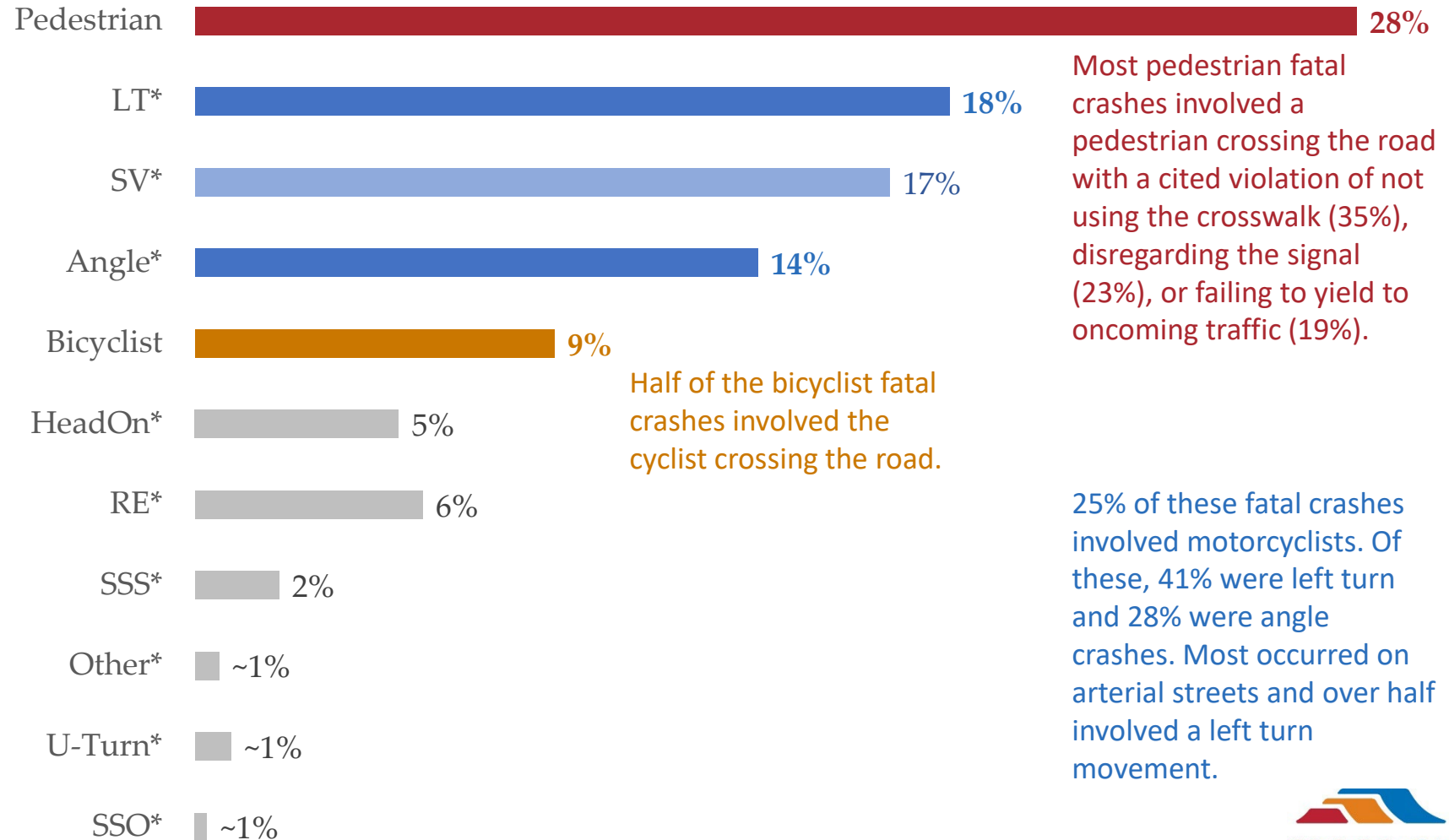
Statistics & Trends

Fatal Crashes

- Manners

Nearly one-third of all fatal crashes in 2014 – 2024 involved a **pedestrian**. Nearly two-thirds involved a **pedestrian**, **bicyclist** or **motorcyclist**.

Crash Manners - 2014 to 2024 Fatal Crashes in Mesa



*Motor vehicle crashes not involving bike or pedestrian

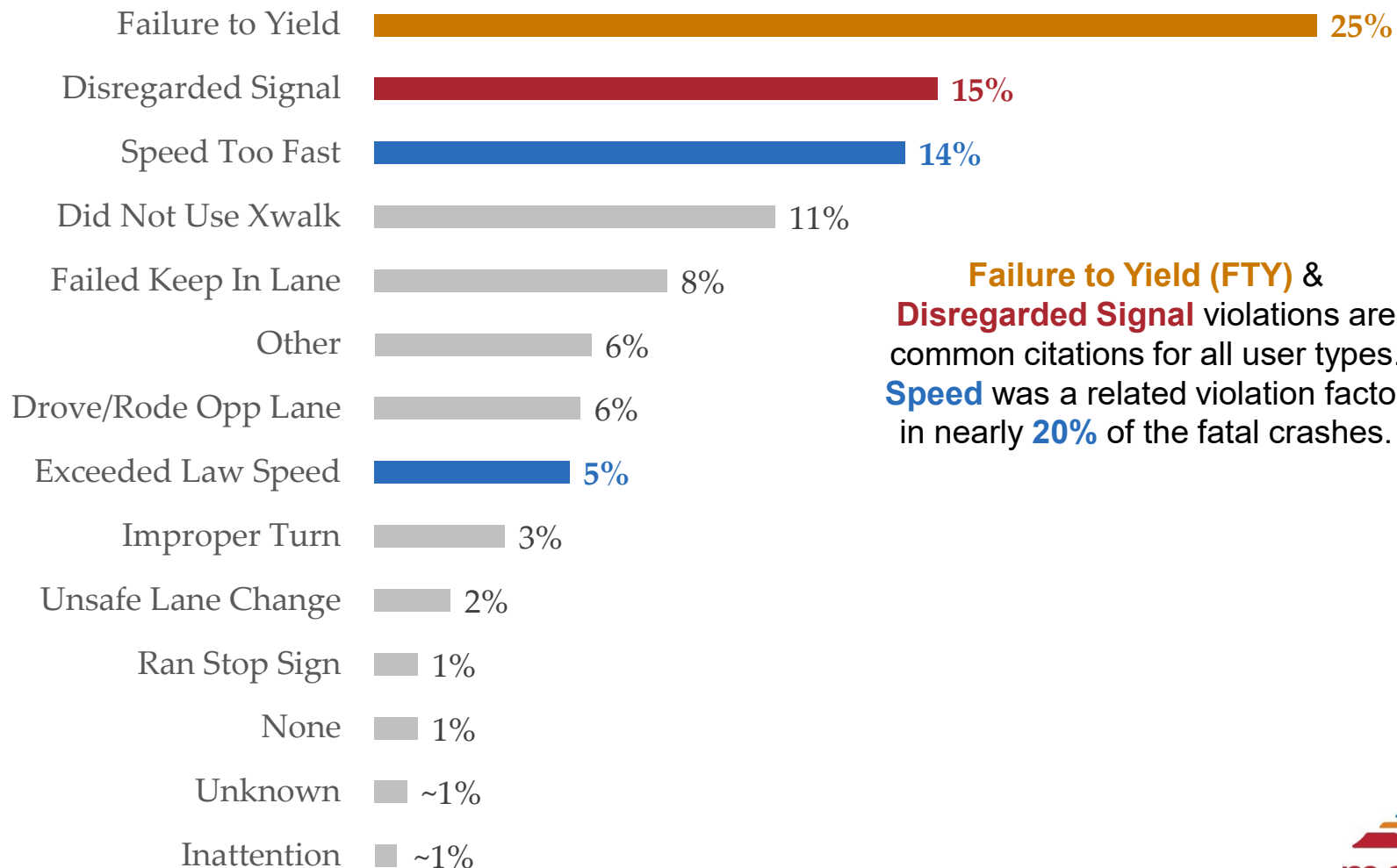
Statistics & Trends

Fatal Crashes

- Unit 1 Violations

A quarter of all fatal crashes from 2014 – 2024 in Mesa involved a cited violation of **failing to yield**.

Unit 1 Violations - 2014 to 2024 Fatal Crashes in Mesa



Failure to Yield (FTY) & Disregarded Signal violations are common citations for all user types. **Speed** was a related violation factor in nearly **20%** of the fatal crashes.

Statistics & Trends

Fatal & SI Crashes

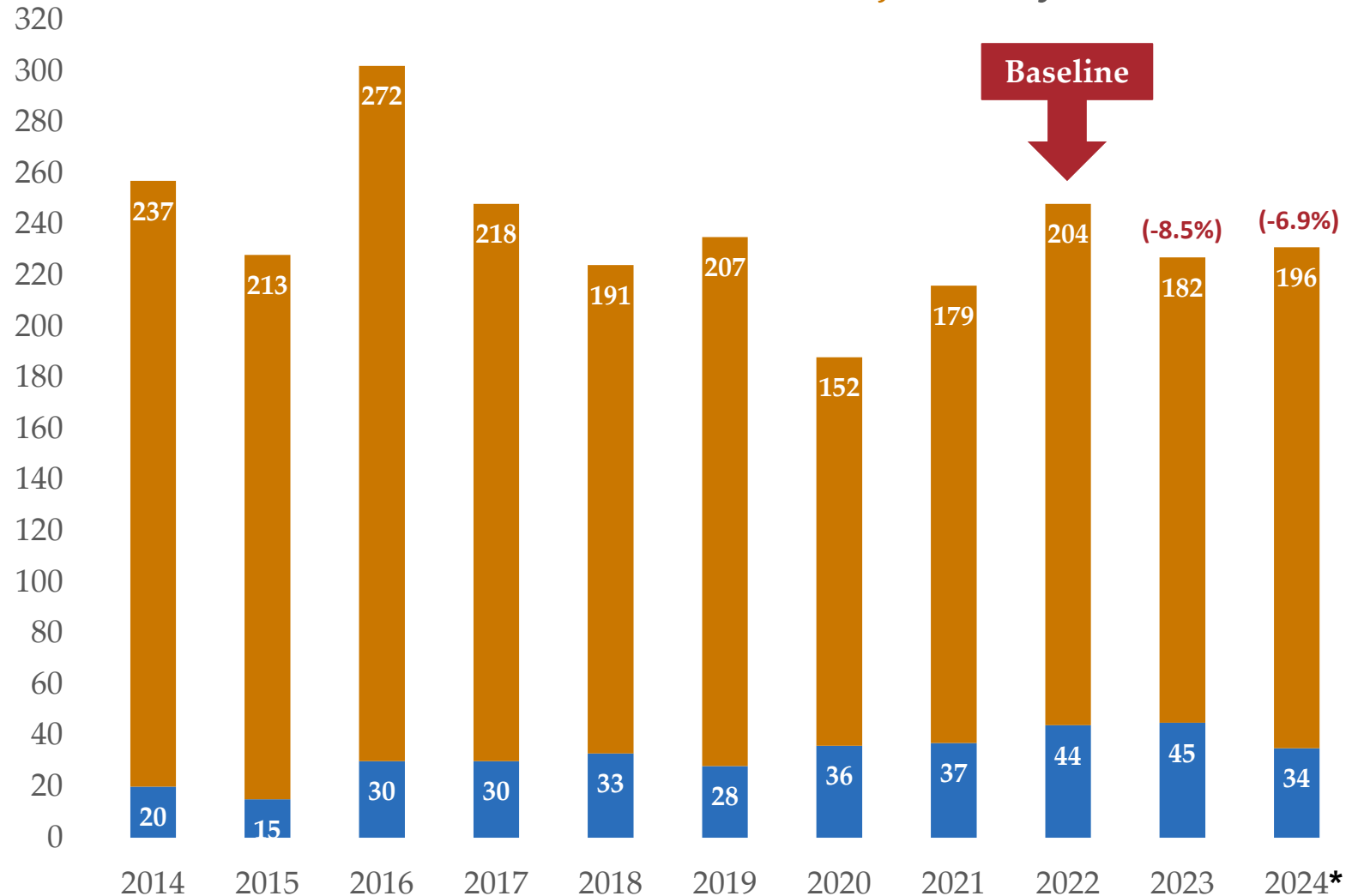
- Trends & Goals

Mesa's goal is to **reduce annual fatalities and serious injuries by 30% by 2030**, representing a reduction of approximately 76 incidents. Achieving this ambitious target requires a balanced approach integrating infrastructure improvements, behavior change campaigns and vehicle and user safety enhancements (*Mesa CSAP*).

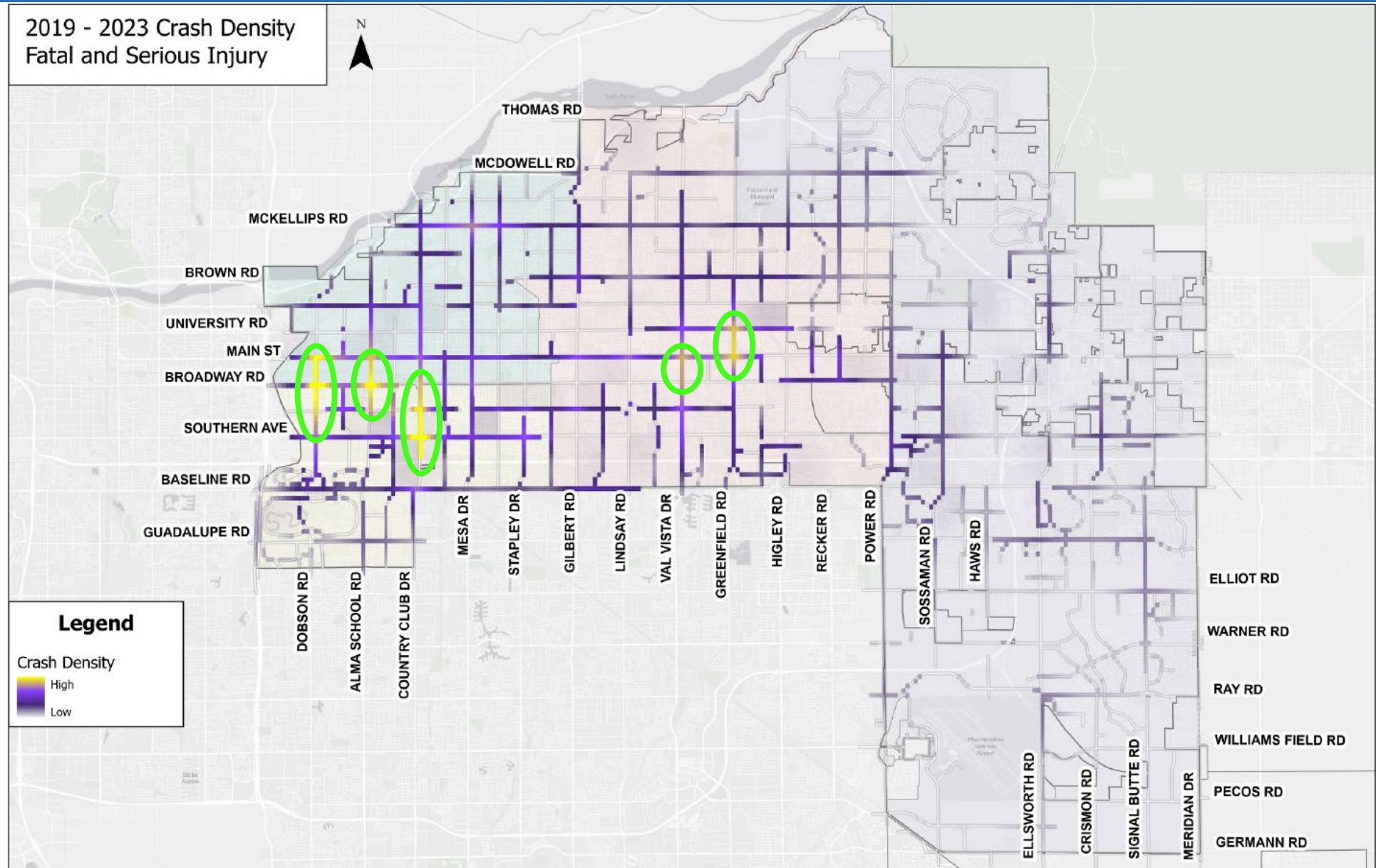


*Preliminary serious injury numbers for 2024

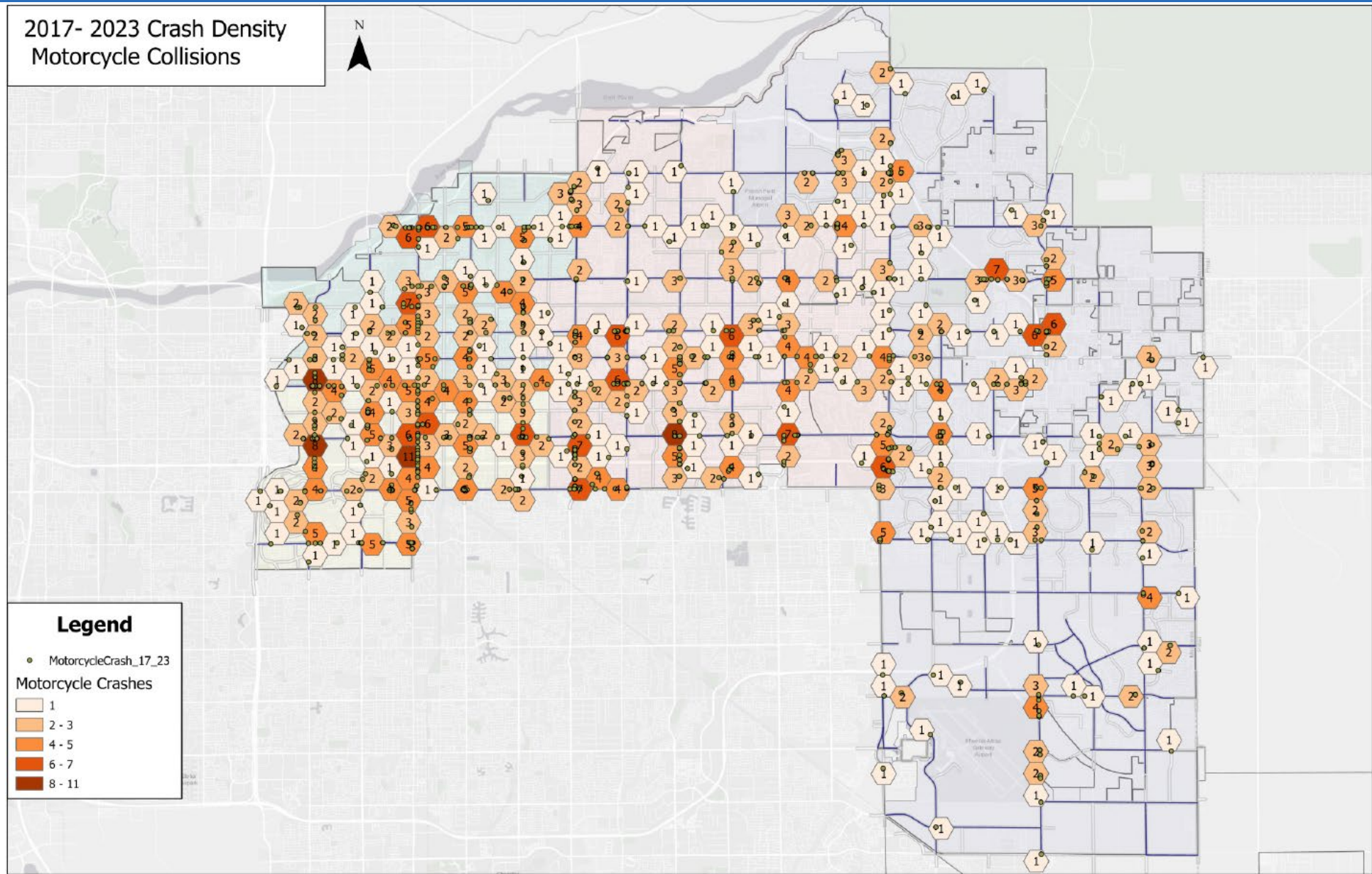
Mesa Fatalities & Serious Injuries by Year



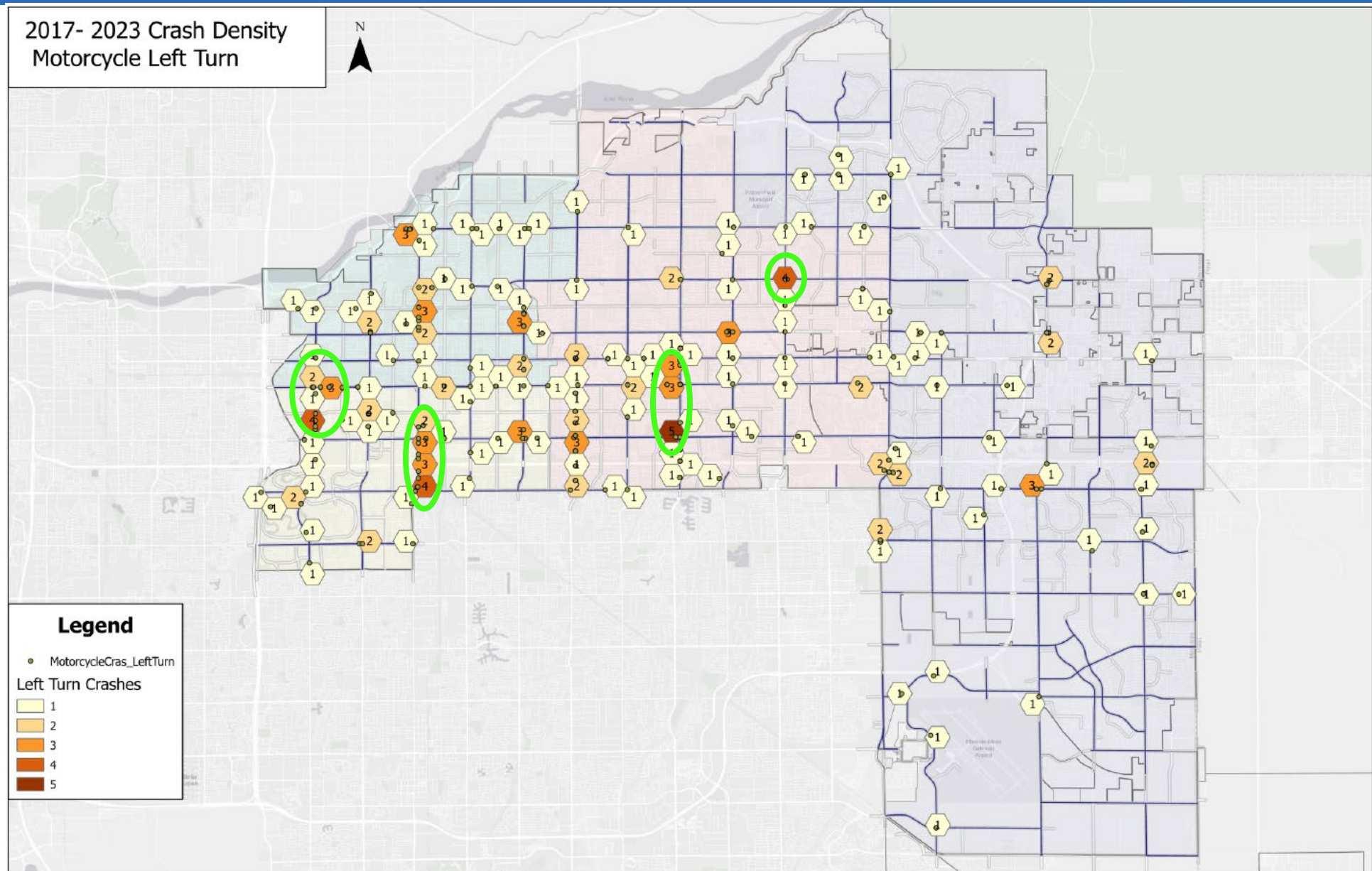
Statistics & Trends - Mapping



Statistics & Trends - Mapping



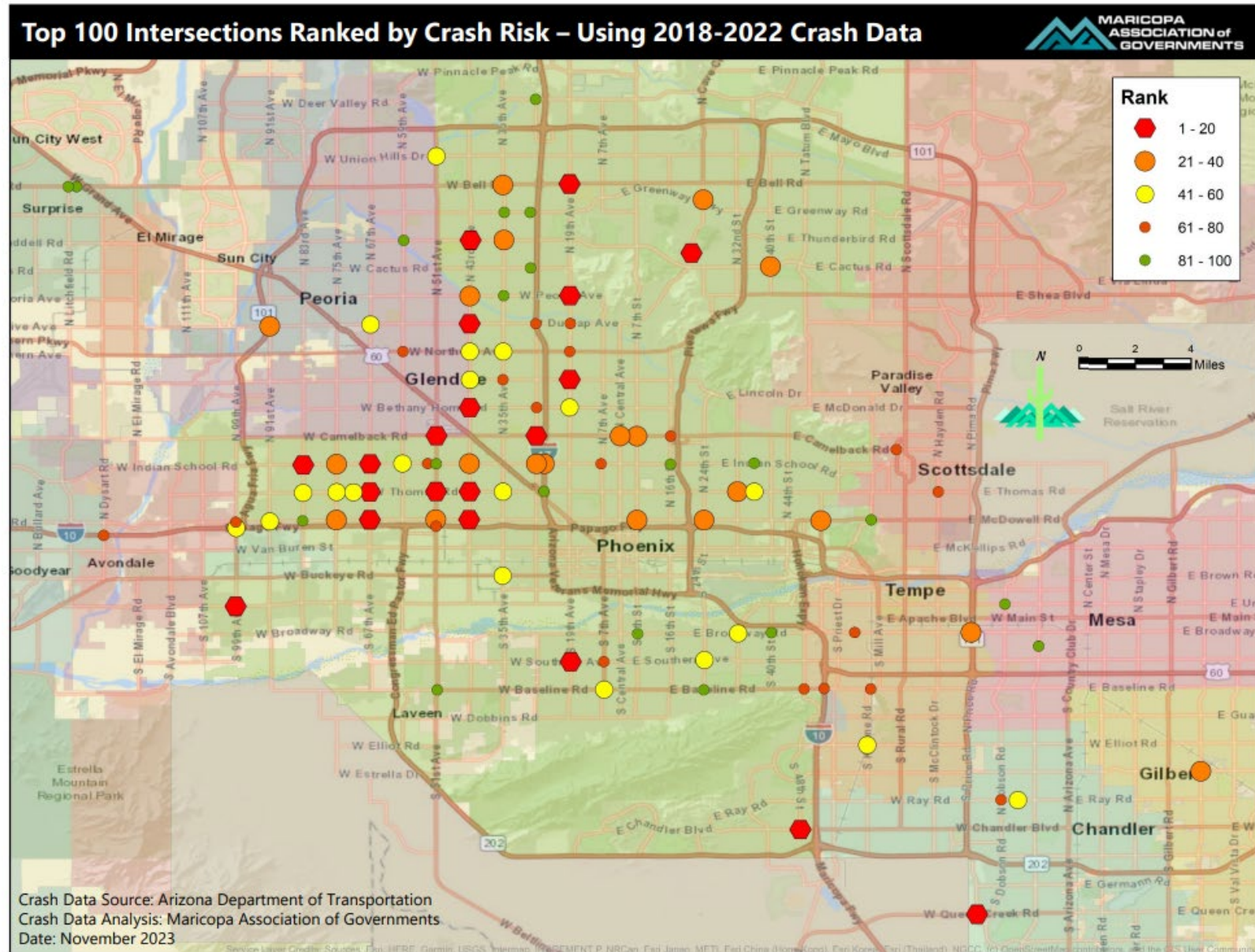
Statistics & Trends - Mapping



Using Trends to Identify Needs

Regional

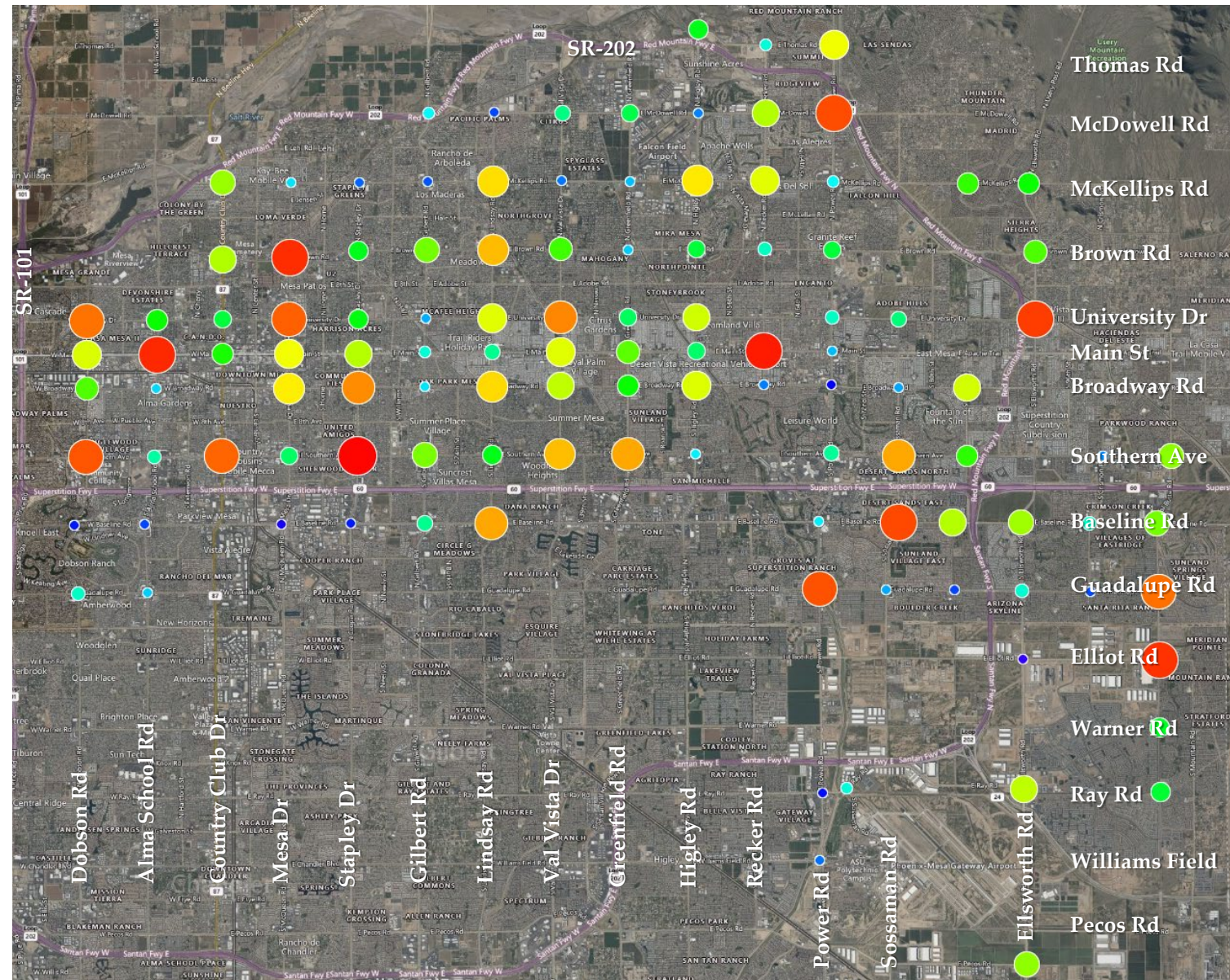
- MAG Top 100 Intersections Ranked by Crash Risk



Using Trends to Identify Needs

Mesa

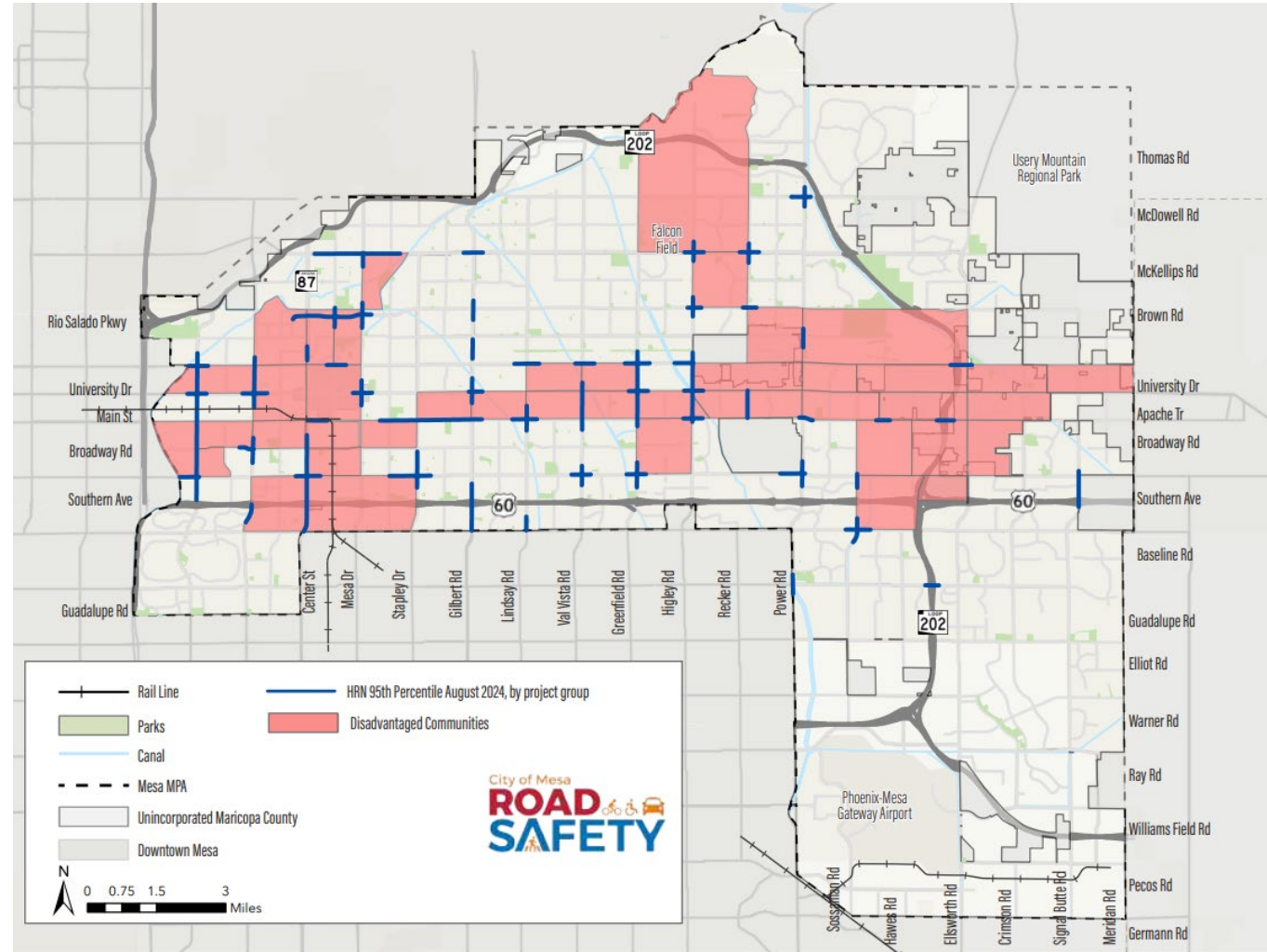
- Mesa Maintains a **networking screening database** focused on arterial-to-arterial intersections
- Identifies intersections with **highest potential for safety improvements** on a normalized level
- Provides a basis for **prioritization**, accounting for static biases



Using Trends to Identify Needs

Specific Trends

- Working to create more useful platforms that can assist in identifying trends and where to focus specific improvements, whether at **intersections**, **roadway segments**, or **systemically**
- The intersection of multiple data sets



Coordination Meetings - Mesa

Safety Task Force meetings between **Mesa PD & Transportation**.

Meeting Priorities:

- Data-driven methods for reducing serious injury and fatal crashes
- Safety campaigns for vulnerable road users
- Targeted enforcement using historical trends
- Increase in communication
- Timely action

2025 Improvements/Investments:

- CSAP Implementation
- Data informed decision-making for infrastructure improvements
- Locations with highest potential for safety improvements
- Improved range of safety devices and techniques

Using Trends to Identify Needs

Outcomes

Examples of
safety
projects
underway or
completed



Questions & Discussion

