Strategic Highway Safety Plan

Prepared for:

SouthEastern Arizona Governments Organization

and

Sierra Vista Metropolitan Planning Organization

Approved by the SEAGO Executive Board on August 17, 2018

Photo Credit: Southern Arizona Guide

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Table of Contents

List of Figures

List of Tables

List of Appendices

Executive Summary

The 2018 Strategic Highway Safety Plan (SHSP) was developed for the SouthEastern Association of Governments (SEAGO) and Sierra Vista Metropolitan Planning Organization (SVMPO) to address fatal and serious injury traffic crashes occurring in the region. This safety plan was developed based on:

- Crash data analysis
- Stakeholder and public input

Vision and Goal: The SHSP vision is **"Stay Alive, Focus on the Drive"** with a goal to **"Improve the Safety of Our Roads…Let's Reduce Fatalities and Severe Injuries in the Next 5 Years"**.

Crashes: 13,919 crashes occurred in the region from 2011-2016, with 173 fatal and 459 serious injury crashes. Single vehicle crashes accounted for 39% of all crashes, 57% of fatal crashes, and 47% of serious injury crashes.

Emphasis Areas: SEAGO selected six emphasis areas to concentrate their safety efforts on; SVMPO added a seventh emphasis area targeted for the Sierra Vista region (pedestrians):

- Lane Departure
- Occupant Protection
- Speeding
- Impaired Driving
- Young Driver Under 25
- Distracted Driving
- Pedestrian (SVMPO)

Safety Strategies were developed for the emphasis areas using the Four E's of traffic safety: engineering, enforcement, education, and emergency services.

Priority Intersections were identified based on crash data; the top 10 locations are below (note that the Campus Dr/Colombo Ave intersection was recently signalized):

Signalized Intersections	Owner
Fry Blvd & Carmichael Ave	Sierra Vista
Martin Luther King Jr Pkwy & Coronado Dr	Sierra Vista
Fry Blvd & 7th St	Sierra Vista
Coronado Dr & Fry Blvd	Sierra Vista
Charleston Rd & Colombo Ave	Sierra Vista
Lenzner Ave & Fry Blvd	Sierra Vista
Calle Portal & Fry Blvd	Sierra Vista
Avenida Cochise & Coronado Dr	Sierra Vista
Buffalo Soldier Trail & Fry Blvd	Sierra Vista
Fry Blvd & Avenida Escuela	Sierra Vista

Unsignalized Intersections	Owner
Avenida Del Sol & Desert Shadows Dr	Sierra Vista
Campus Dr & Colombo Ave	Sierra Vista
Coronado Dr & Tacoma St	Sierra Vista
Lenzner Ave & Busby Dr	Sierra Vista
9th St & A Ave	Douglas
Maley St & Arizona Ave	Willcox
Tacoma St & 7th St	Cochise County
Wilcox Dr & Carmichael Ave	Sierra Vista
8th St & 10th Ave	Safford
8th Ave & Airport Rd	Graham County

Safety Projects: SHSP findings resulted in the following project applications for ADOT's Highway Safety Improvement Program (HSIP) funds:

Agency	Road	Location	Countermeasures
Cochise County	Charleston Rd	Sierra Vista to Tombstone	Rumble strips
	Double Adobe Rd	SR 80 to US 191	Rumble strips
	Barataria Blvd	Moson Rd to Ranch Rd	Rumble strips
Santa Cruz County	Pendleton Dr	0.35 miles west of Kent Ave	Box culverts
Graham County	Cottonwood Wash Rd	1200 South to Cottonwood Wash Loop	Rumble strips, paved shoulders
	Golf Course Rd	Hoopes Ave to 20th St	Rumble strips, paved shoulders
Greenlee County/ Duncan/ADOT	SR 75 in Duncan	Old Virden/Fairgrounds Rd to Family Dollar Store	Sidewalk both sides, high visibility crosswalk at Old Virden, lighting

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23 USC § 409 - Discovery and admission as evidence of certain reports and surveys

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Introduction

A Strategic Highway Safety Plan (SHSP) is a data-driven regional safety plan that establishes transportation safety goals and provides a guide for improving highway safety. This report represents the first SHSP for the SEAGO and SVMPO regions. This plan establishes a vision, goal, emphasis areas, strategies, network screening methodology, and potential safety projects for the region, consistent with those set forth by the Arizona SHSP. The purpose of this safety plan is to reduce the risk of death and serious injury for all transportation users in the SEAGO and SVMPO region.

This safety plan was developed based on:

- State crash data analysis
- Stakeholder input
- Public input
- Coordination with the Arizona Strategic Highway Safety Plan

The SEAGO/SVMPO SHSP will serve as a tool for recommending projects for inclusion in the regional agency's Transportation Improvement Program (TIP).

SEAGO's planning area includes Cochise, Graham, Greenlee and Santa Cruz Counties and the cities and towns in those Counties, including the San Carlos Apache Tribe. SVMPO covers the City of Sierra Vista and surrounding unincorporated Cochise County. SEAGO and SVMPO have collaborated on this SHSP effort to address vehicular, bicycle and pedestrian safety issues that can be resolved at a regional or systemic level.

Public Involvement

This safety plan was created with support from local stakeholders, community members and the SEAGO and SVMPO Technical Advisory Committees (TACs), all of which provided important information regarding the current safety conditions in the region.

Public involvement was key in getting stakeholder and community feedback to address safety issues and concerns. Several opportunities were provided to facilitate participation in the safety plan development, including study sessions, public meetings, and TAC meetings. These meetings provided opportunities to obtain input for the plan development, to educate on traffic safety issues, and to solicit cooperation in implementing the safety plan, both on an agency and an individual basis.

Study sessions were held May 24-25, 2016 in:

- Thatcher, May 24, 2016 (11 participants)
- Sierra Vista, May 24, 2016 (12 participants, 2 sessions)
- Nogales, May 25, 2016 (6 participants)
- Benson, May 25, 2016 (9 participants)

Public meetings were held in:

- Sierra Vista, July 13, 2016 (11 participants)
- Safford, October 27, 2016 (8 participants)

In addition to meetings, the public had an opportunity to provide comments online using a Social Pinpoint mapping tool. The online public engagement platform was launched April 25, 2016 to supplement the public meeting outreach events listed above. The Social Pinpoint tool provided users with an easy to use platform to identify specific locations on a map to comment on safety concerns from a driver, a pedestrian, and a bicyclist perspective. 327 comments were received through the online mapping tool.

Appendix A provides more details on the public outreach effort, including comments from the Social Pinpoint mapping tool. SEAGO and SVMPO member agencies are encouraged to use these comments to help identify potential safety issues that may need to be addressed.

System Performance Trends

Crash data from the ADOT Accident Location Identification and Surveillance System (ALISS) was obtained and used for this study. The most recent five years of crash data (2011-2015) at the time of the study was analyzed to determine existing crash performance, comparison to state data, and identify crash hot spots in the region.

Key findings from the crash data analysis include:

- 61% of fatal crashes involved lane departure
- 53% of fatal crashes involved unrestrained occupants
- 39% of fatal crashes involved speeding
- 36% of fatal crashes involved impaired driving
- 25% of fatal crashes involved drivers under the age of 25

Table 1 shows the crashes in the region by agency and injury severity for the study period; Table 2 shows the crashes by agency and collision manner.

Table 1: Crash Severity by Agency 2011-2015

Agency	Fatal	Incapacitating Injury	Non-Incapacitating Injury	Possible Injury	No Injury	Total
Benson	**4**	**12**	**43**	**47**	**265**	**371**
Bisbee	**1**	**7**	**15**	**7**	**74**	**104**
Clifton	**2**	**2**	**25**	**17**	**121**	**167**
Cochise County	**64**	**152**	**488**	**272**	**2,252**	**3,228**
Douglas	**1**	**8**	**54**	**73**	**587**	**723**
Duncan	**2**	**0**	**0**	**0**	**2**	**4**
Graham County	**10**	**40**	**102**	**83**	**435**	**670**
Greenlee County	**6**	**19**	**48**	**32**	**196**	**301**
Huachuca City	**0**	**2**	**4**	**4**	**18**	**28**
Nogales	**11**	**17**	**78**	**150**	**1,001**	**1,257**
Patagonia	**0**	**1**	**2**	**0**	**1**	**4**
Pima	**0**	**0**	**0**	**0**	**0**	**0**
Safford	**3**	**10**	**48**	**96**	**380**	**537**
San Carlos Apache Tribe	**8**	**0**	**0**	**2**	**6**	**16**
Santa Cruz County	**19**	**37**	**165**	**137**	**939**	**1,297**
Sierra Vista	**7**	**53**	**294**	**328**	**1,893**	**2,575**
Thatcher	**2**	**8**	**30**	**23**	**136**	**199**
Tombstone	**0**	**0**	**0**	**0**	**4**	**4**
Willcox	**2**	**2**	**19**	**14**	**102**	**139**
Total	**142**	**370**	**1,415**	**1,285**	**8,412**	**11,624**

Table 2: Collision Manner by Agency 2011-2015

Agency	Angle	Head On	Left Turn	Other	Bicyclist	Pedestrian	Rear End	Rear to Rear	Rear to Side	Sideswipe Opposite Direction	Sideswipe Same Direction	Single Vehicle	Unknown	Total
Benson	50	11	23	16	1	3	70	1	5	5	34	152		371
Bisbee	8	1	8	3	0	3	21	2		8	2	45	3	104
Clifton	9	5	7	7			39	2	3	4	8	77	6	167
Cochise County	120	33	147	111	14	24	493	7	25	37	193	2,012	12	3,228
Douglas	133	17	27	29	5	14	141	24	85	13	125	85	29	727
Duncan				1		1	1					1		4
Graham County	46	17	36	20	5	7	87		4	21	32	394	1	670
Greenlee County	8	4	8	3			27			6	12	229		297
Huachuca City	5	3	4	2			6			1	2	5		28
Nogales	159	18	97	50	4	13	463	6	30	27	157	225	8	1,257
Patagonia							1					3		4
Pima														0
Safford	131	9	73	17	4	5	142	2	21	18	49	60	6	537
San Carlos Apache		2		1	1	2	2					7	1	16
Santa Cruz County	54	14	40	62	4	7	200	1	10	25	81	796	3	1,297
Sierra Vista	411	29	343	69	42	41	970	11	52	26	255	299	27	2,575
Thatcher	35	1	36	6	1	1	54	5	17	5	13	23	2	199
Tombstone				1								3		4
Willcox	28	3	18	13	2	1	27	2	6	1	14	23	1	139
Total	1,197	167	867	411	83	122	2,744	63	258	197	977	4,439	99	11,624

Figure 1: Crash Severity by Year

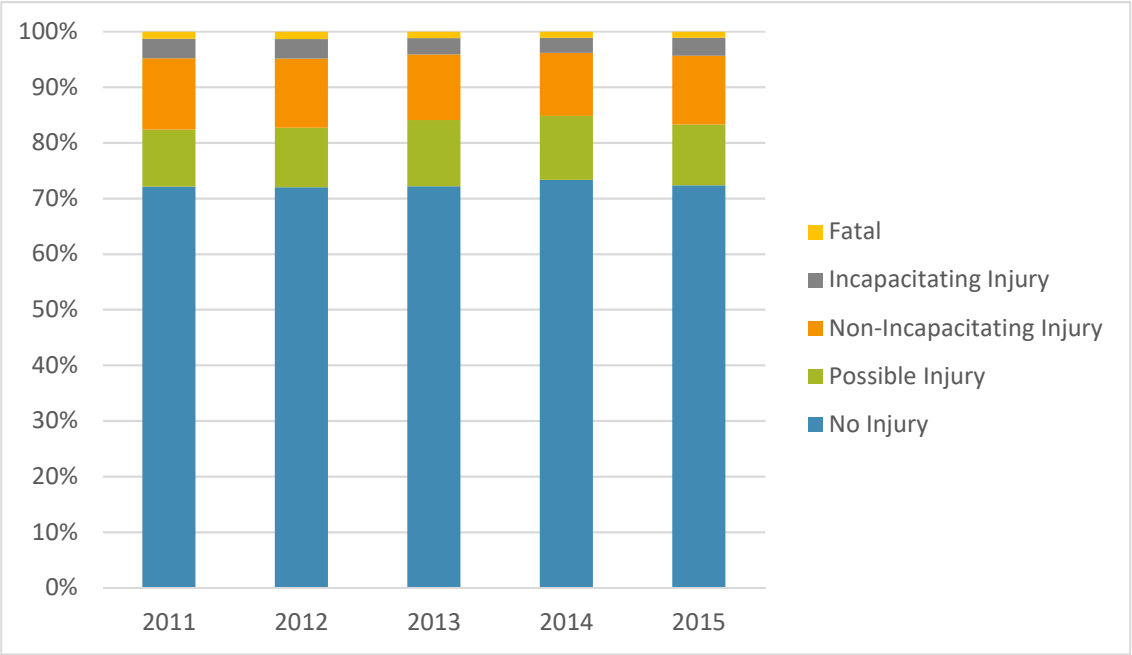


Figure 2: Crash Count by Month and Severity

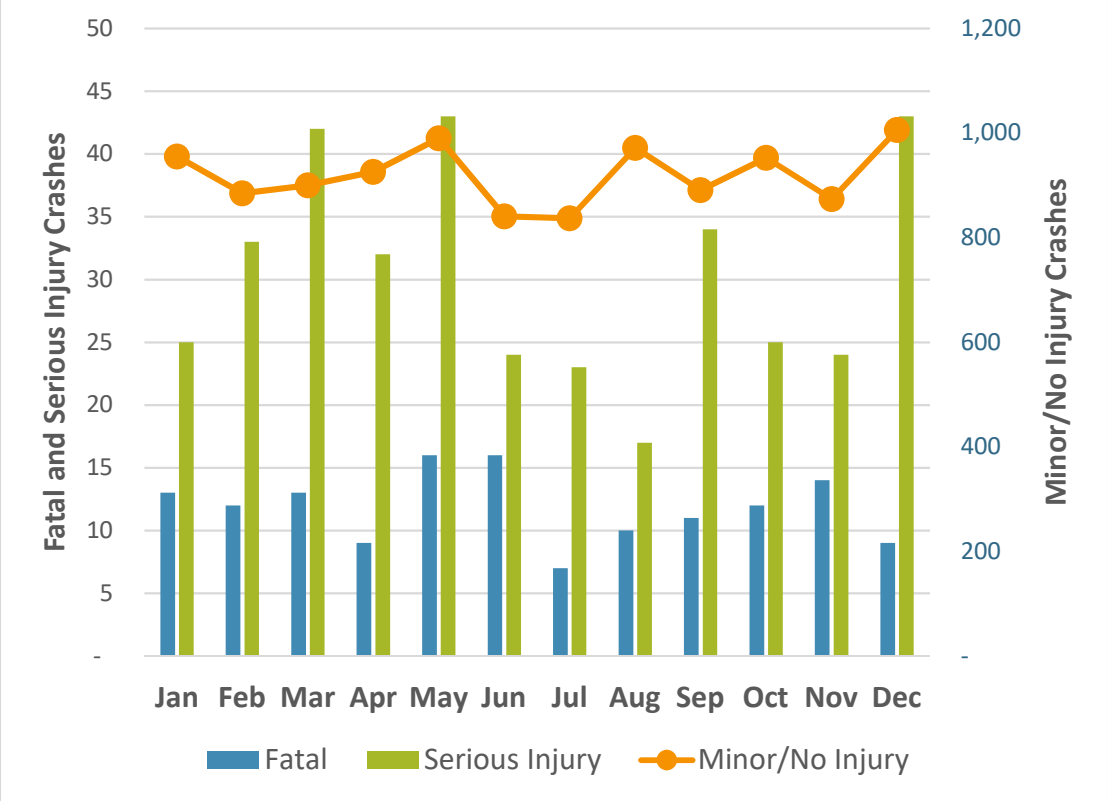


Figure 3: Crash Count by Day of Week and Severity

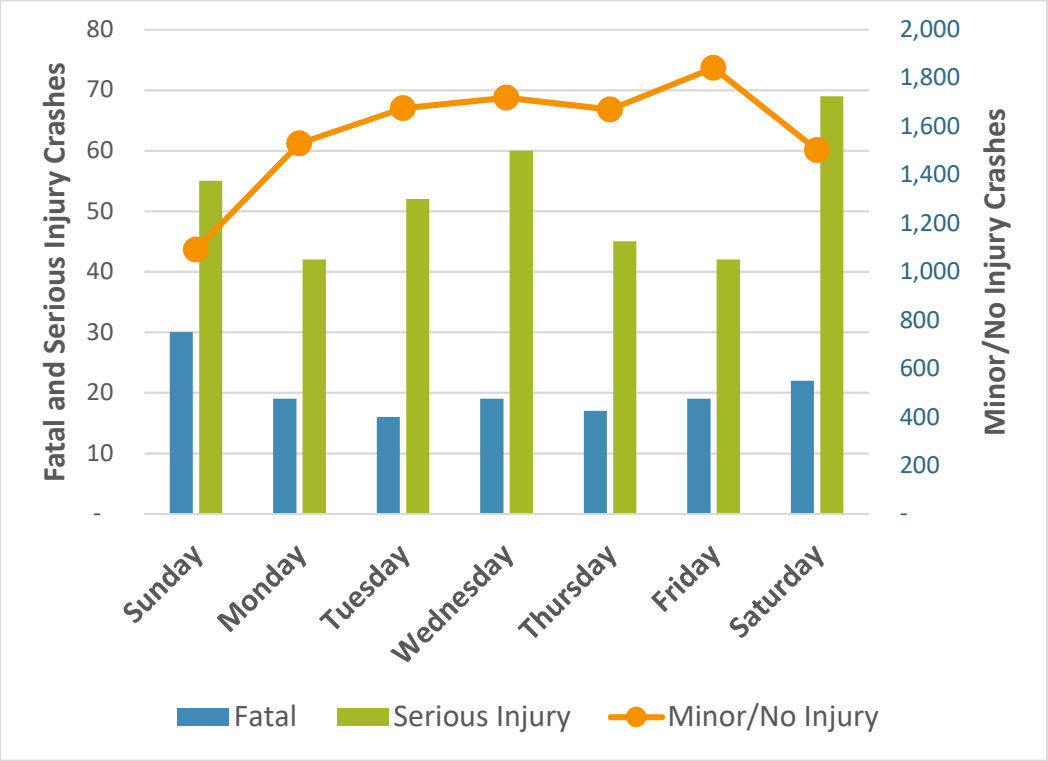


Figure 4: Crash Count by Hour and Severity

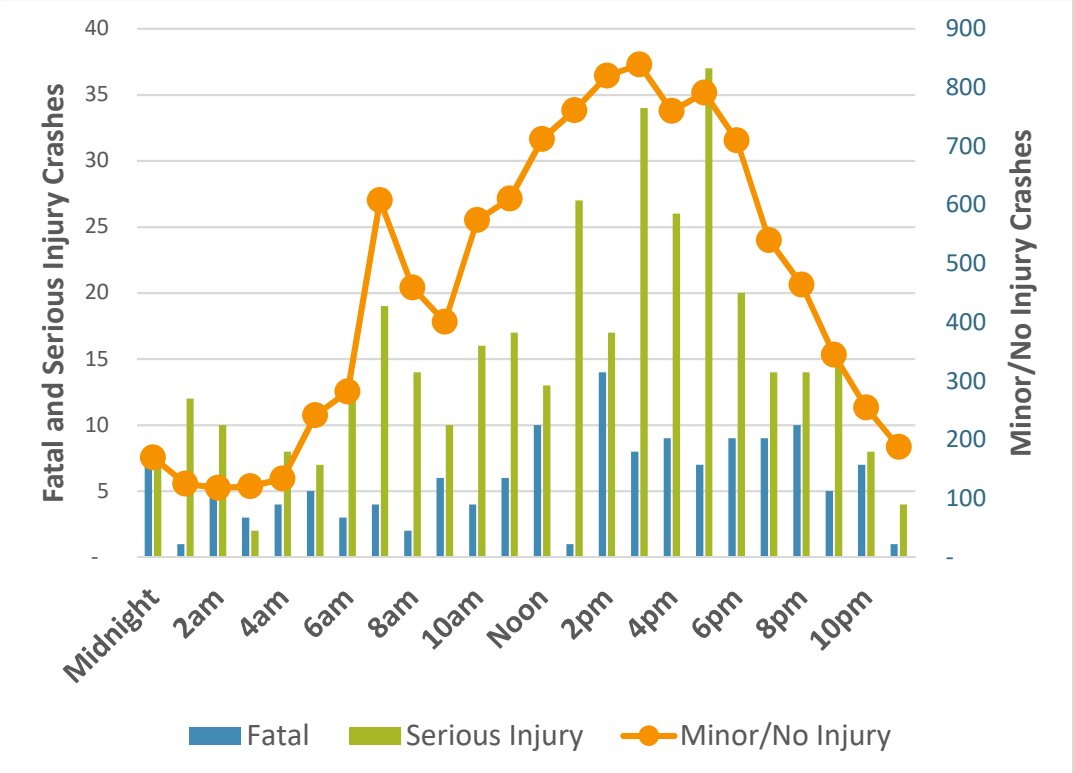


Figure 5: Violations Involved in Crashes

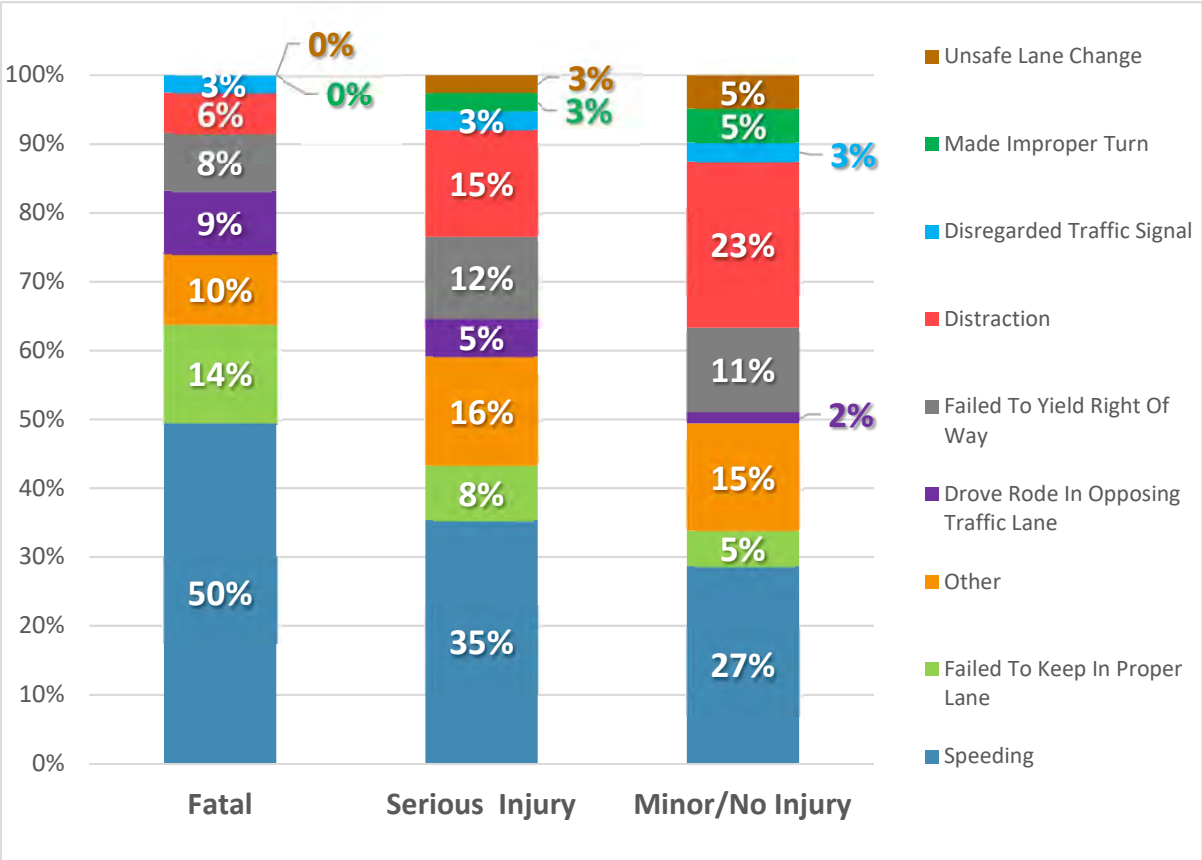


Figure 6: Impaired Driver Crashes

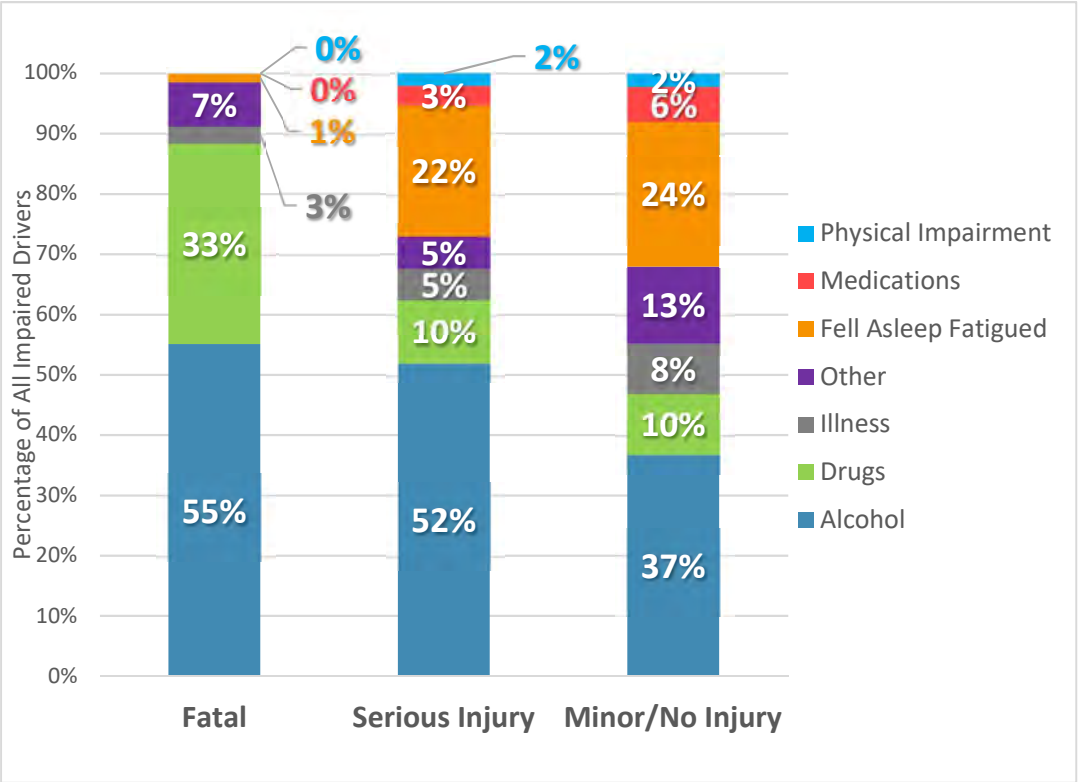


Figure 7: Crashes Involving Speeding or Distraction

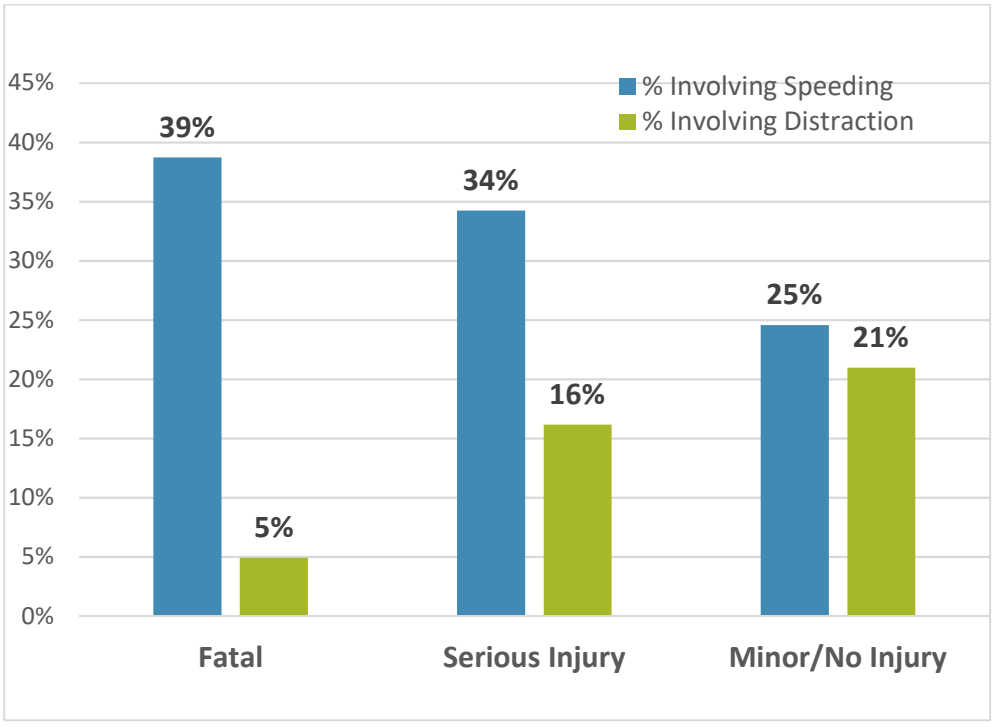


Figure 8: Crashes with at Least One Driver Impairment

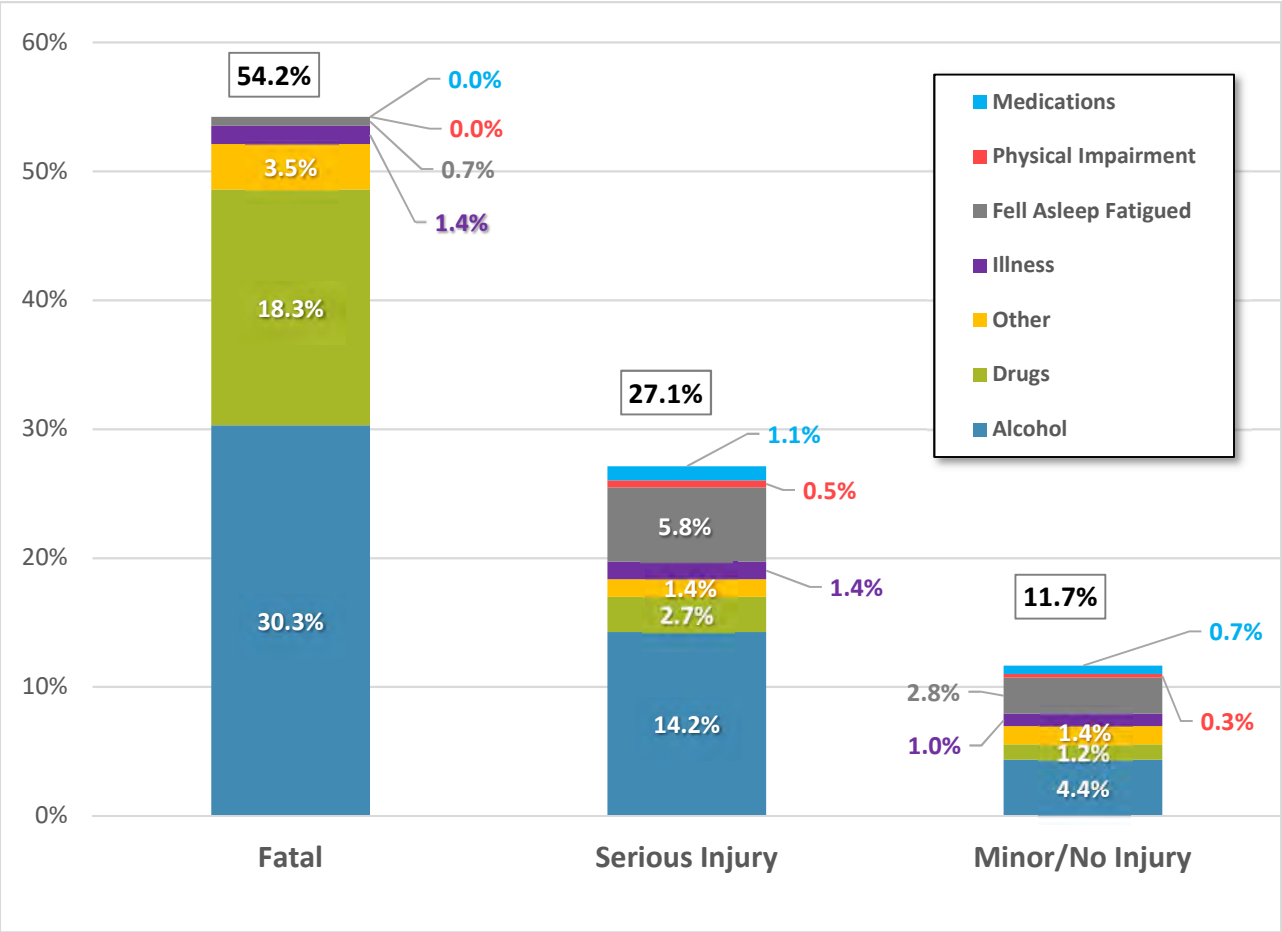


Figure 9: Unrestrained Occupants

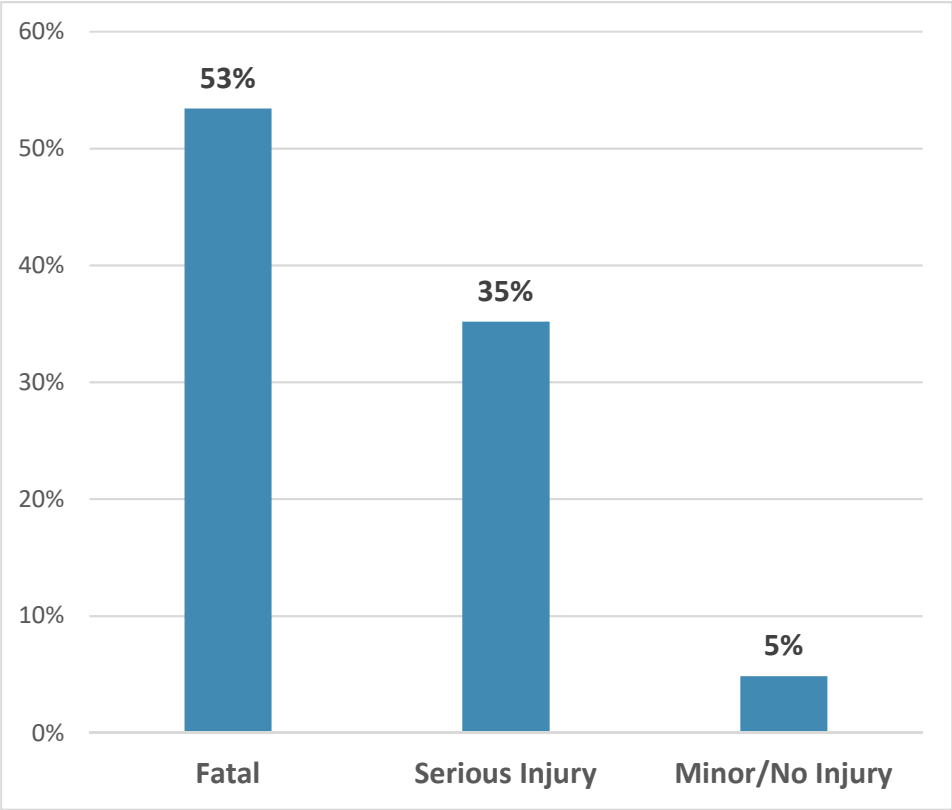


Figure 10: Crash by Light Condition and Injury Severity

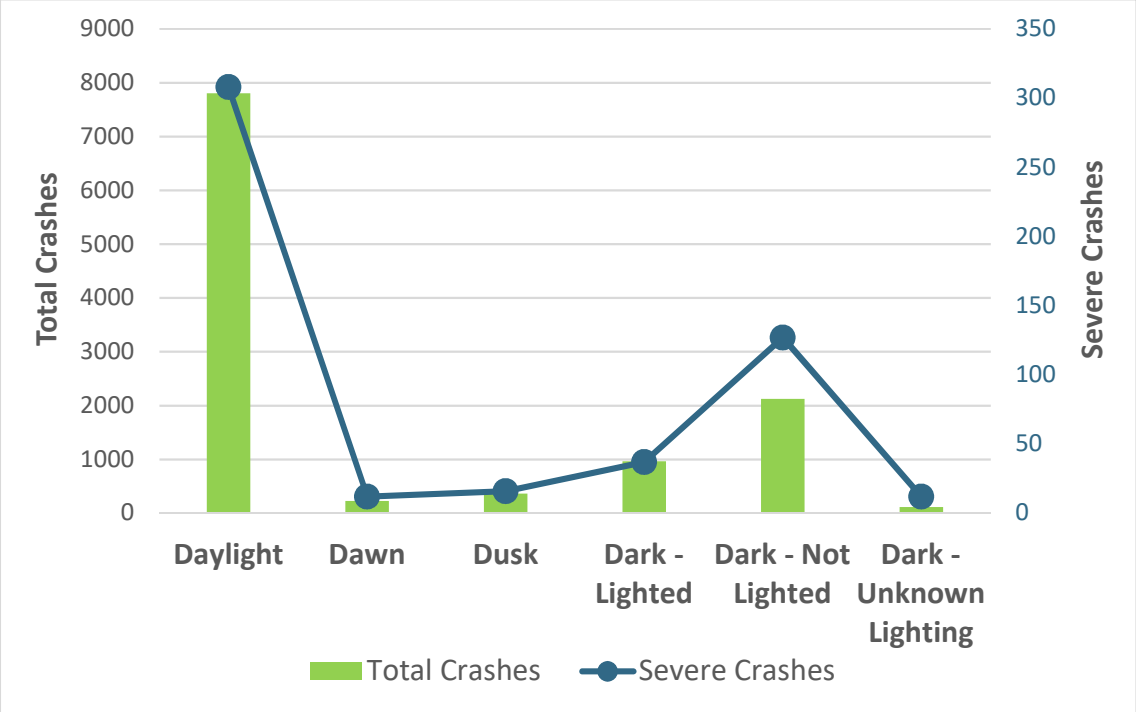


Figure 11: Drivers by Age Involved in Crashes

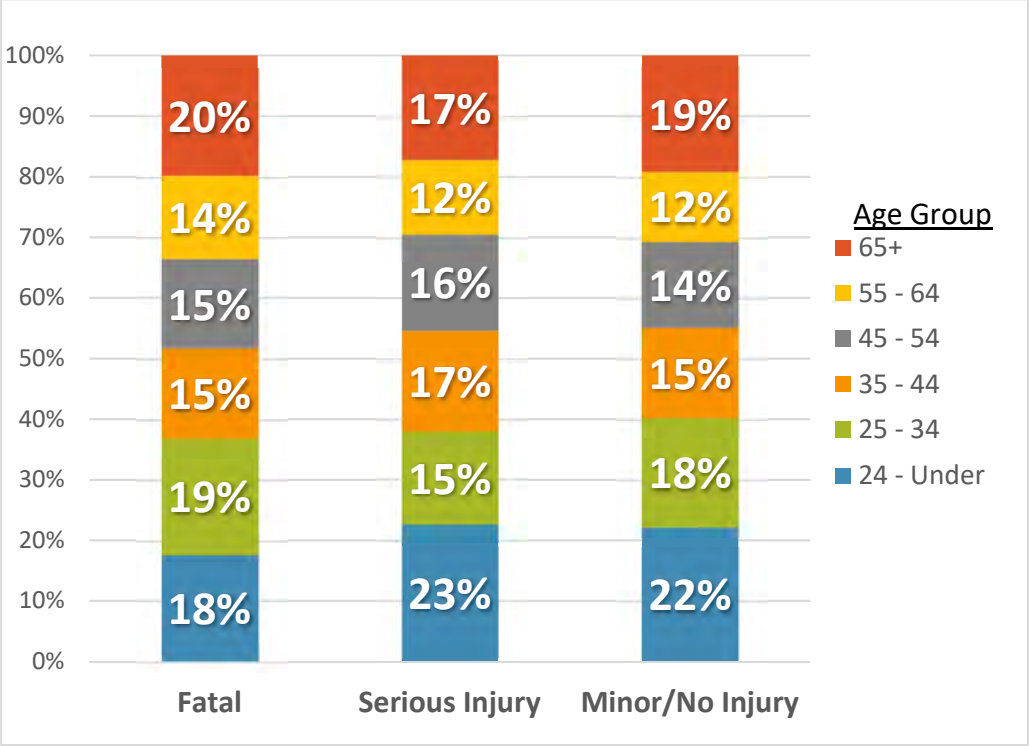


Figure 12: Crashes with At Least One Driver in Age Group

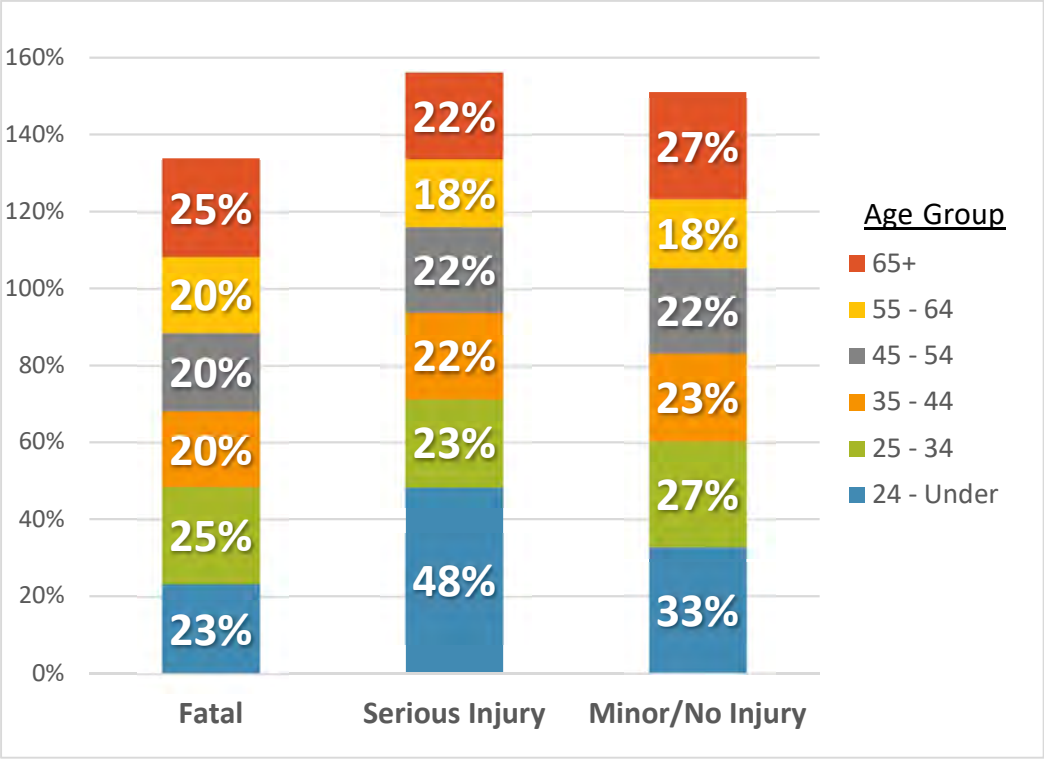
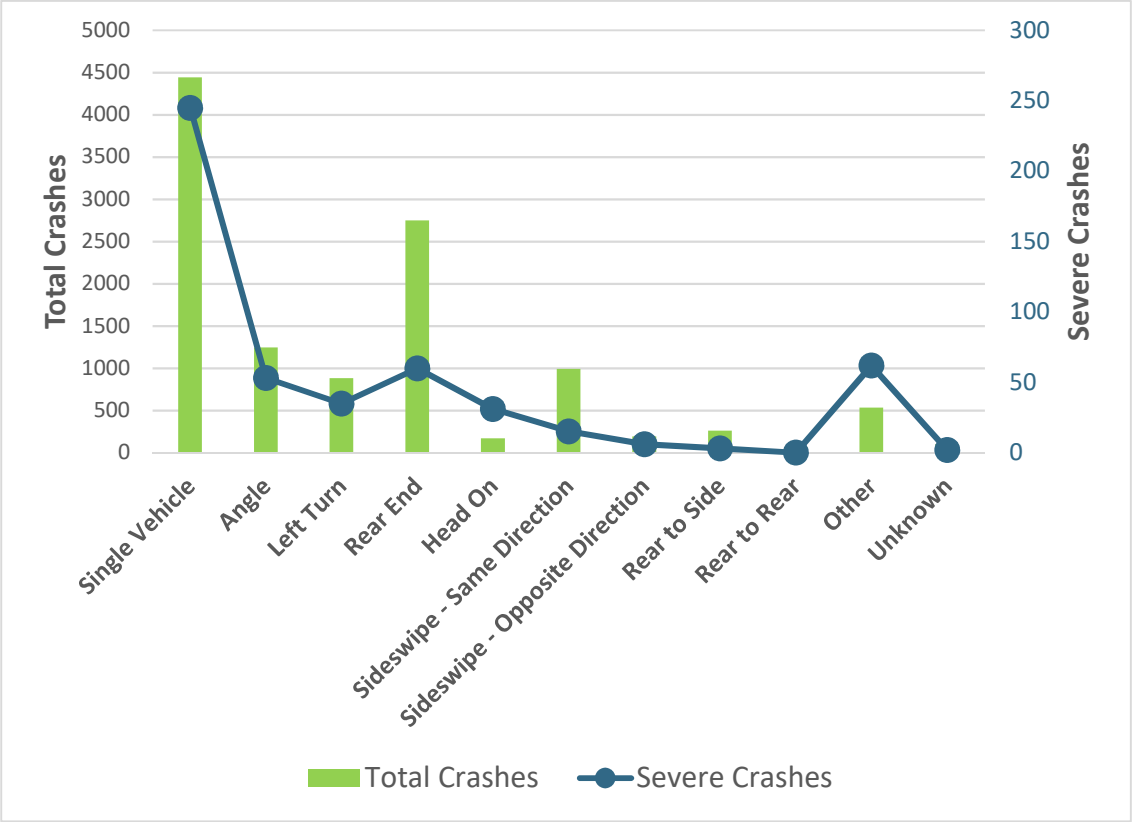


Figure 13: Crash by Collision Manner and Injury Severity



The maps in Figure 14 through Figure 25 show locations of all crashes, fatal and serious injury crashes, and pedestrian and bicycle crashes. Because ADOT crash data for 2016 became available late in this study, it was added to the crash maps, which include six years of crash data (2011-2016).

Figure 14: 2011-2016 All Crash Locations - Santa Cruz County

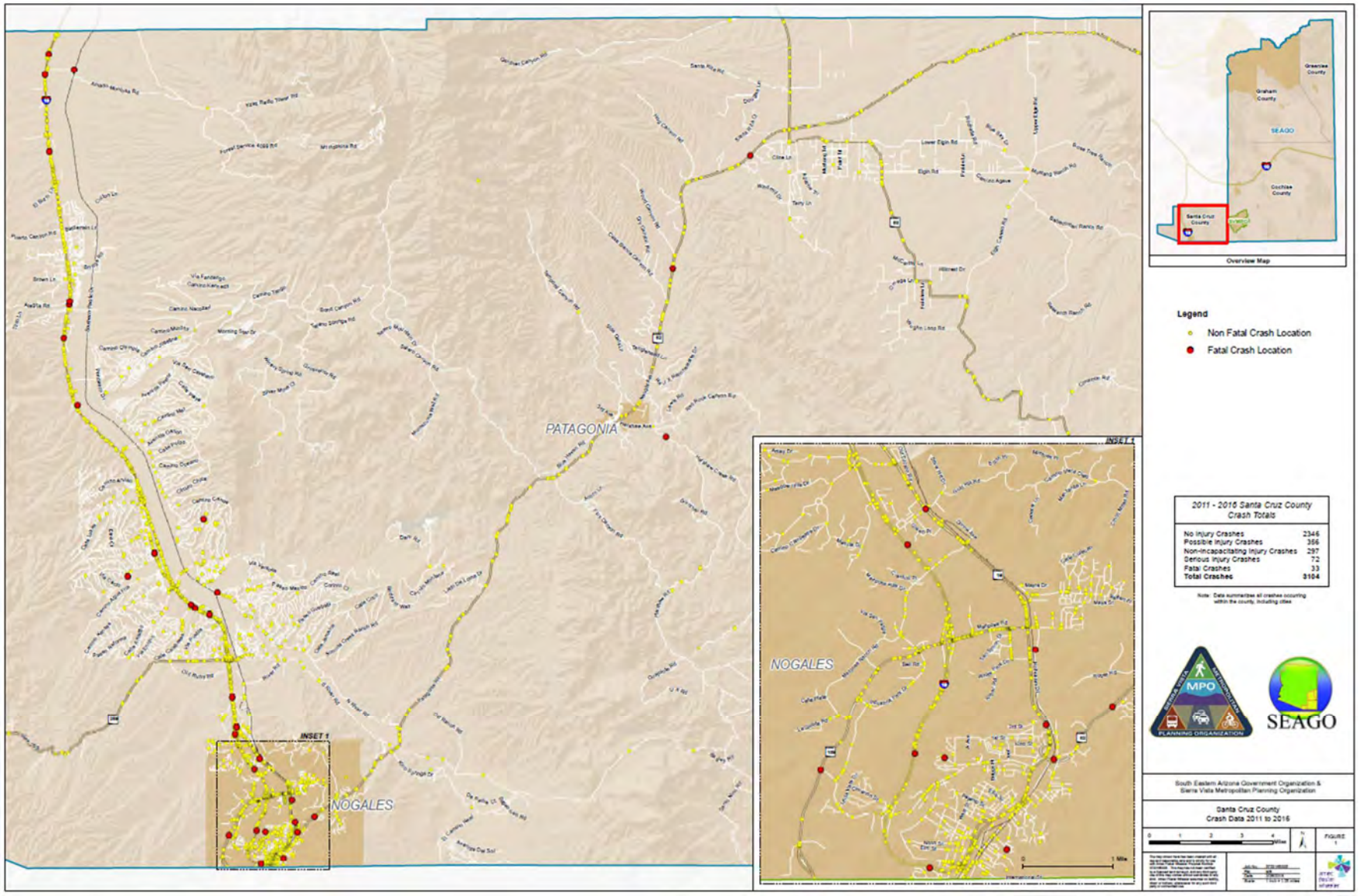


Figure 15: 2011-2016 Fatal and Serious Injury Crash Locations - Santa Cruz County

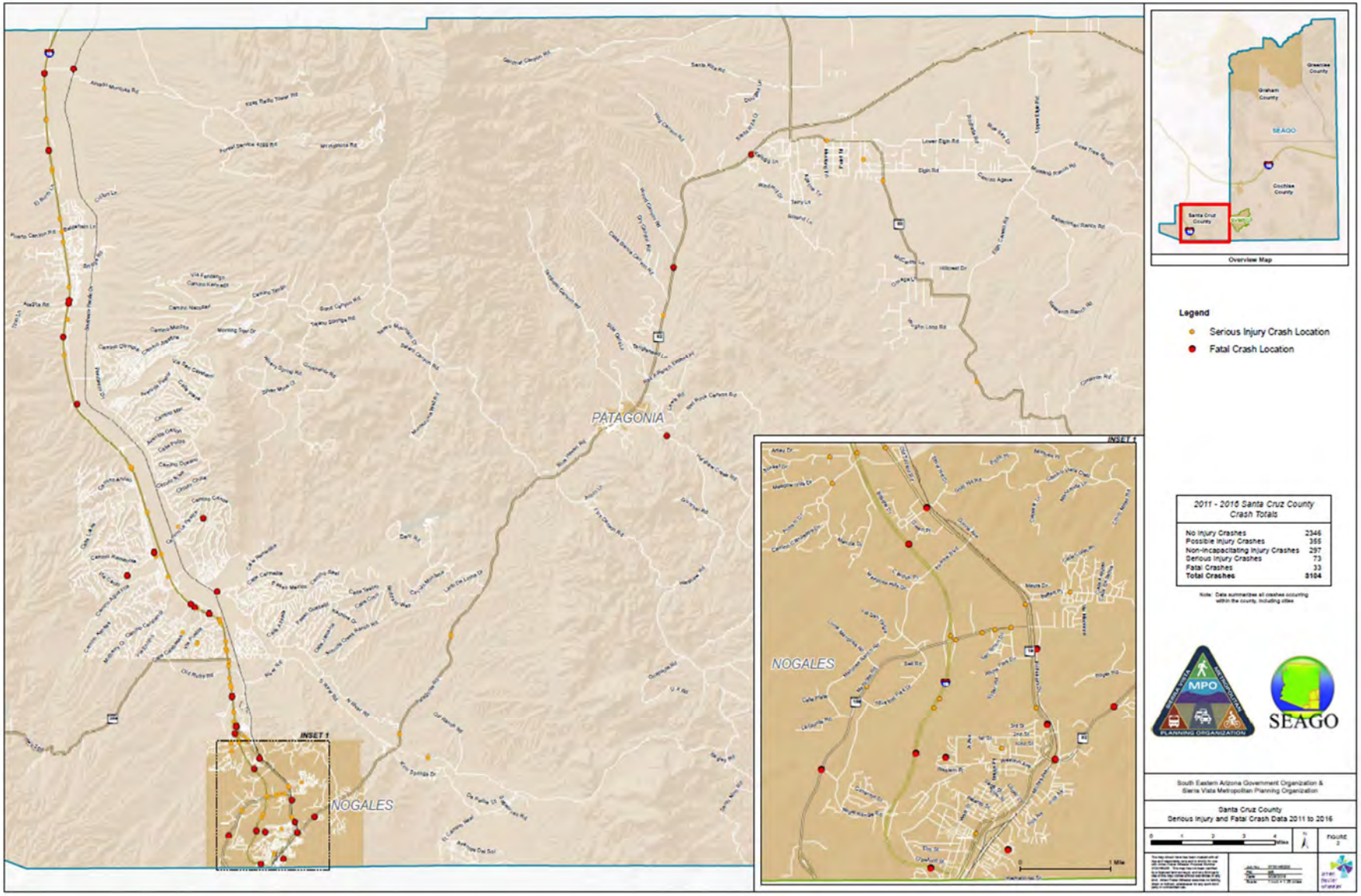


Figure 16: 2011-2016 Pedestrian and Bicycle Crash Locations - Santa Cruz County

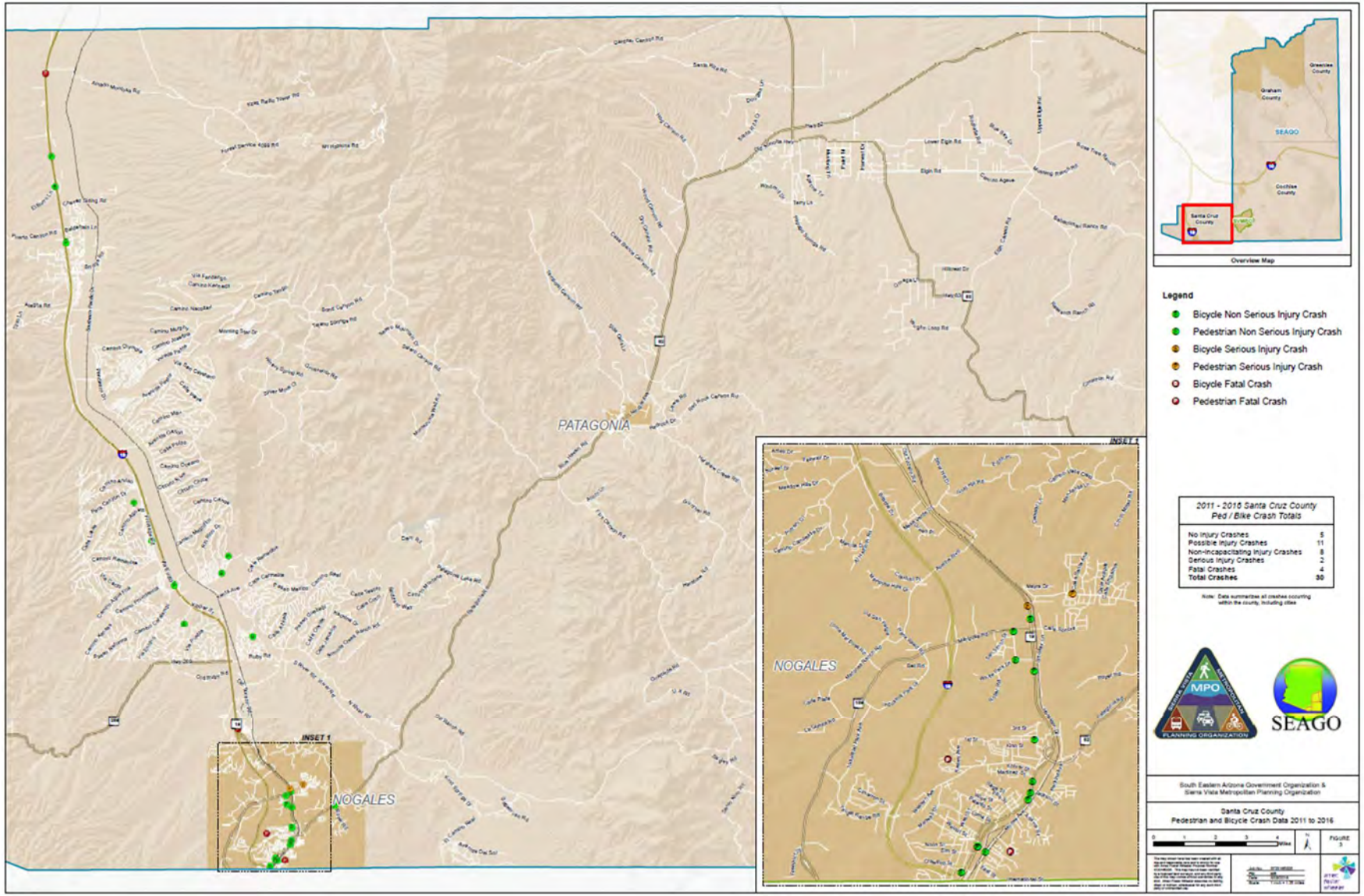


Figure 17: 2011-2016 All Crash Locations – Sierra Vista

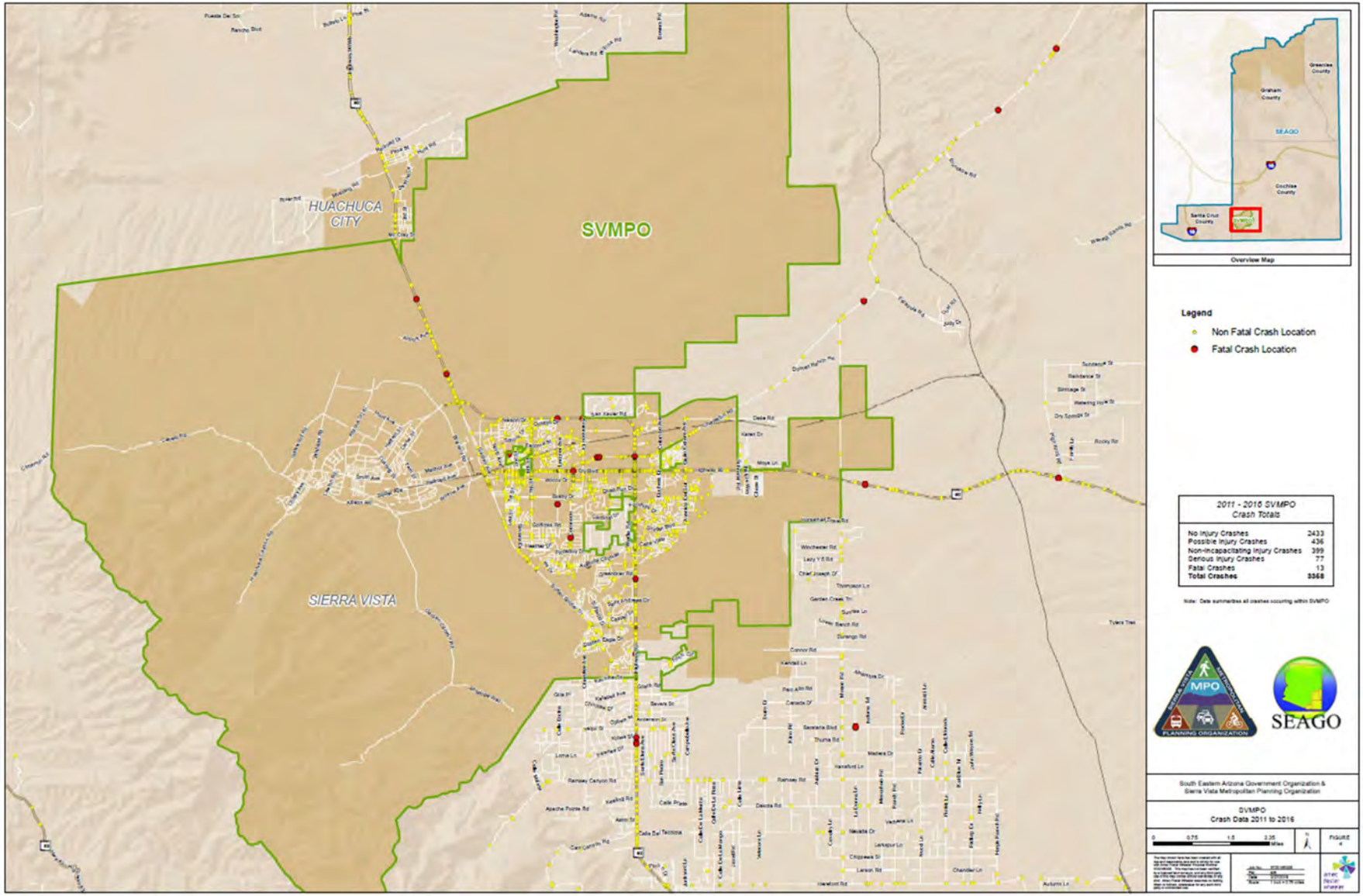


Figure 18: 2011-2016 Fatal and Serious Injury Crash Locations – Sierra Vista

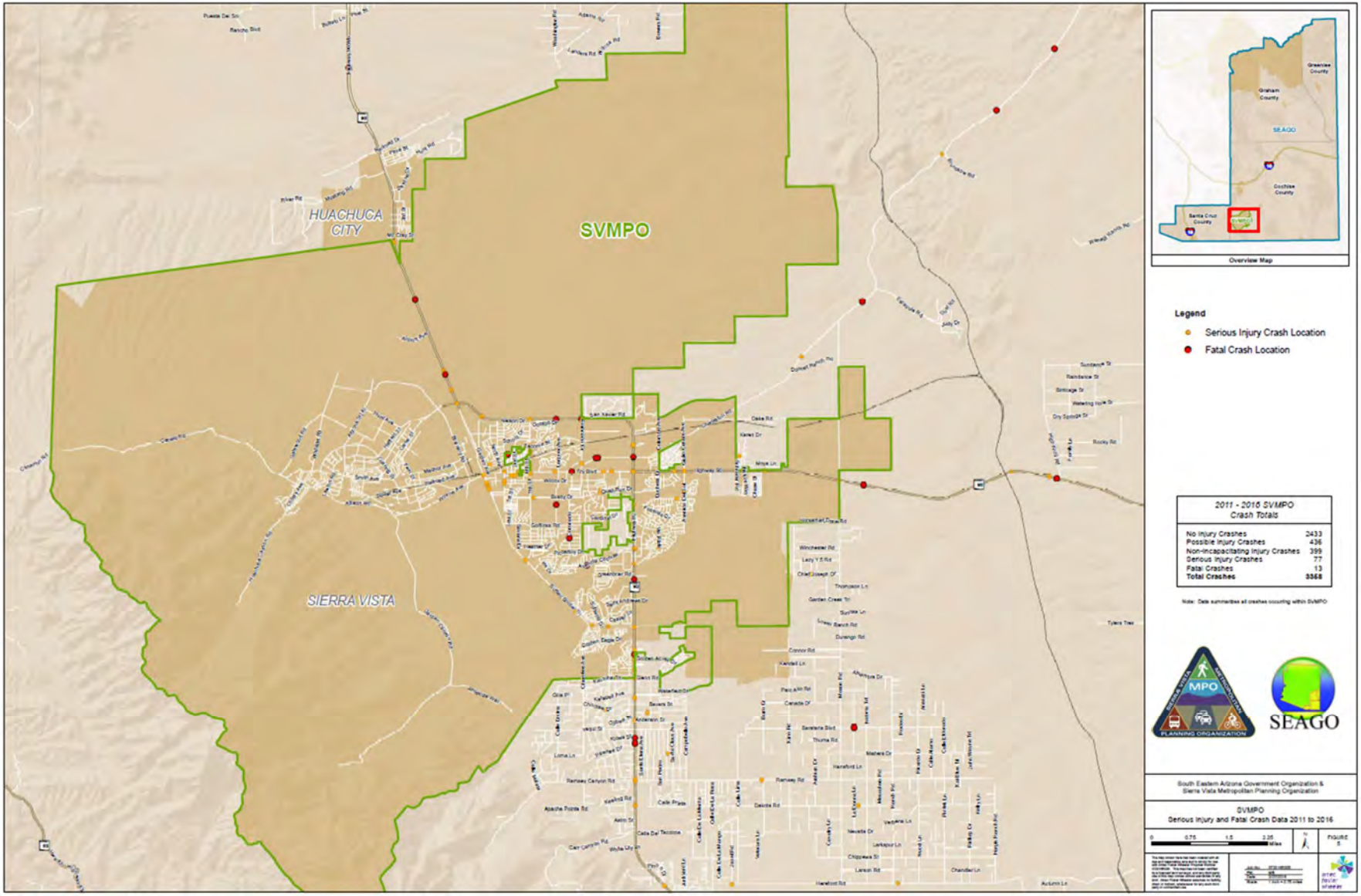


Figure 19: 2011-2016 Pedestrian and Bicycle Crash Locations – Sierra Vista

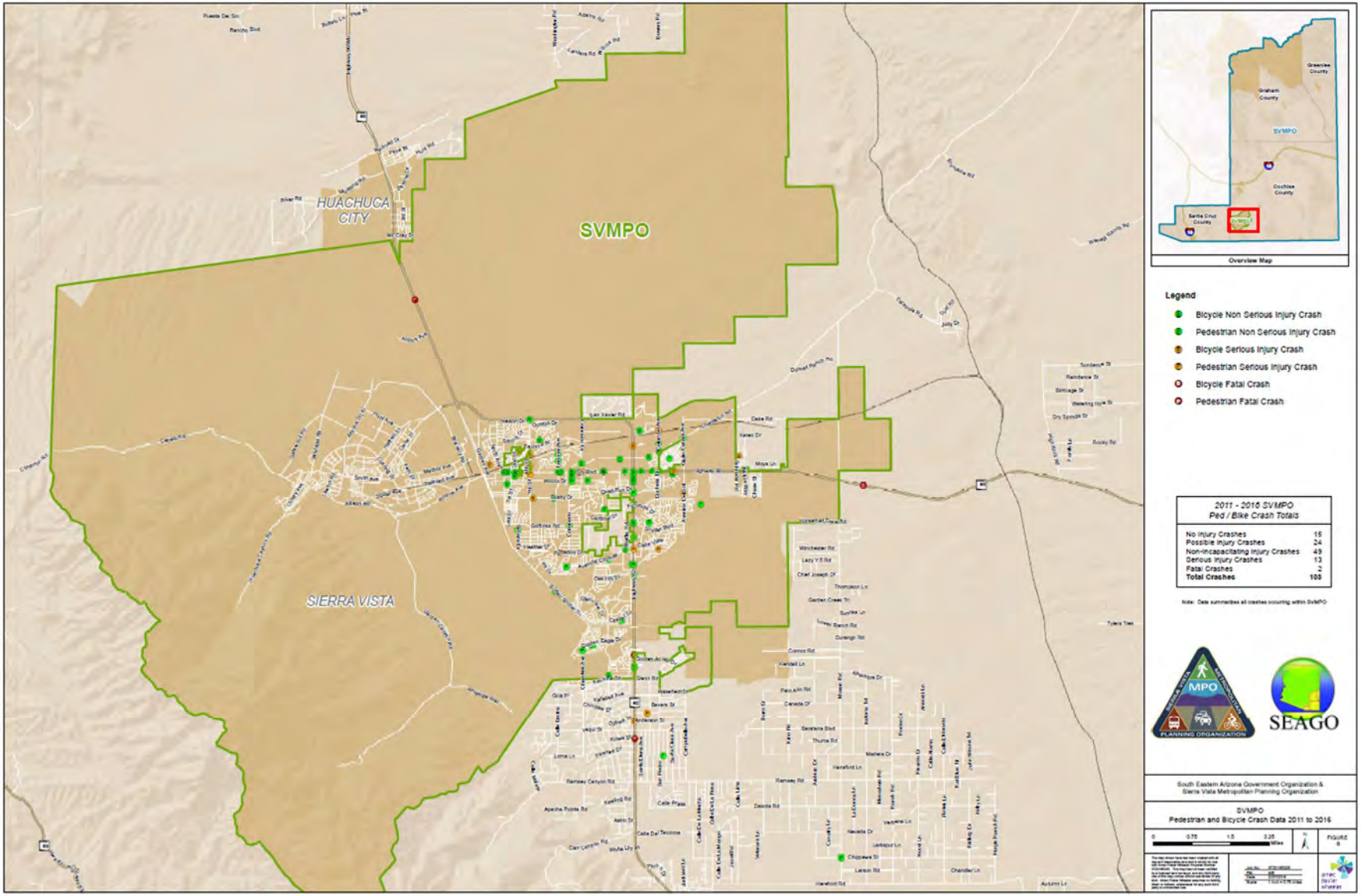


Figure 20: 2011-2016 All Crash Locations – Cochise County

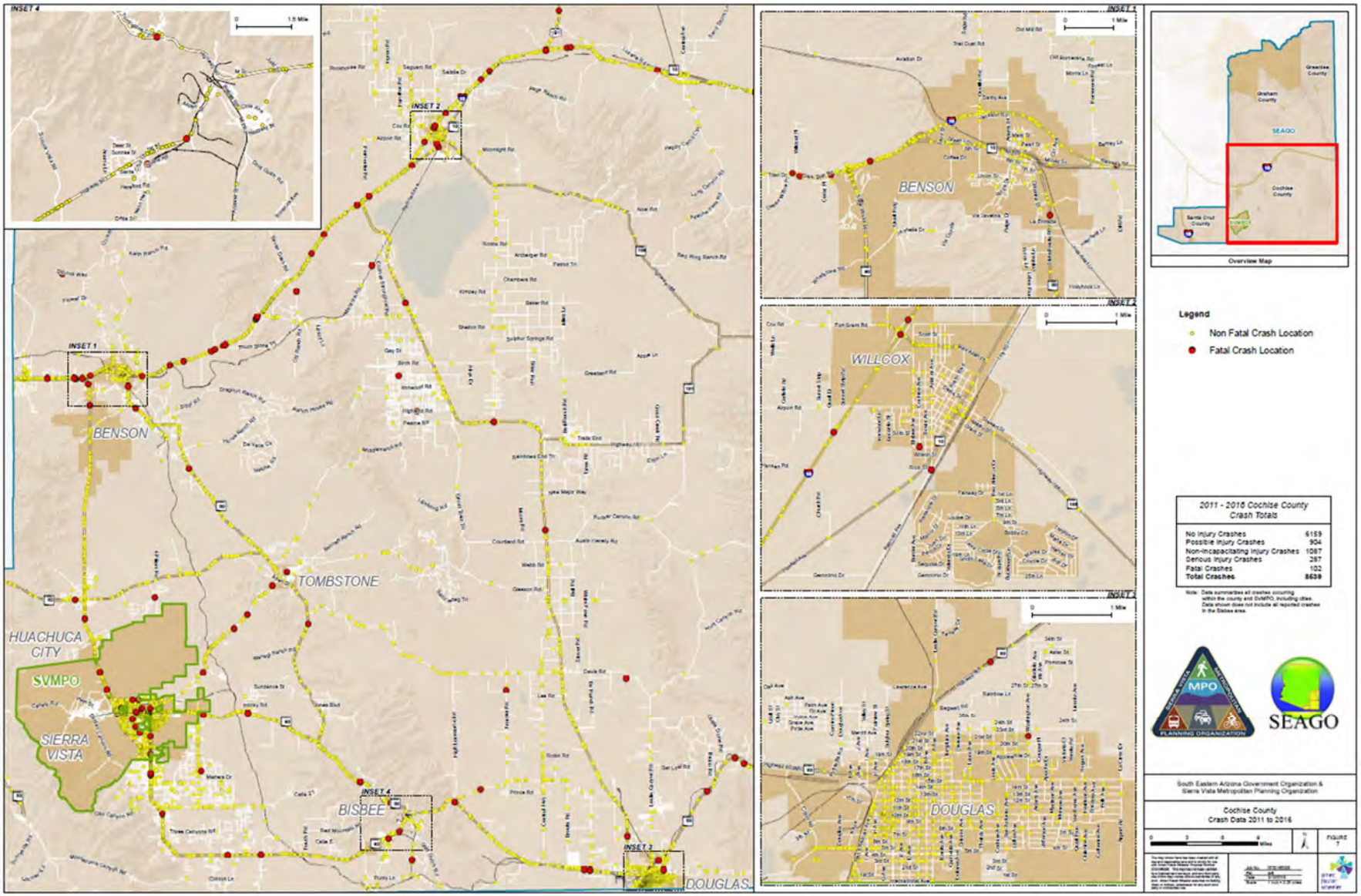


Figure 21: 2011-2016 Fatal and Serious Injury Crash Locations – Cochise County

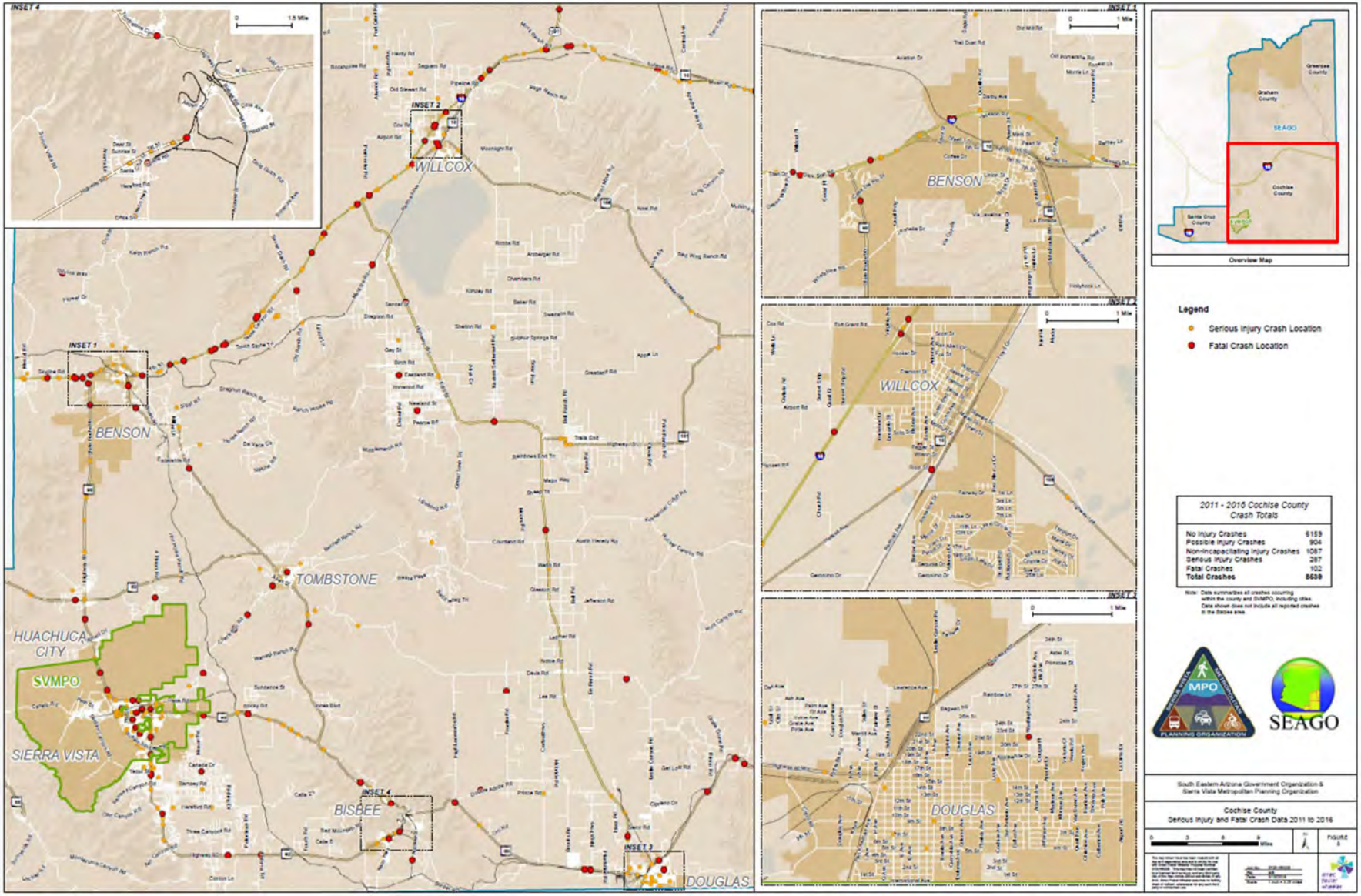


Figure 22: 2011-2016 Pedestrian and Bicycle Crash Locations – Cochise County

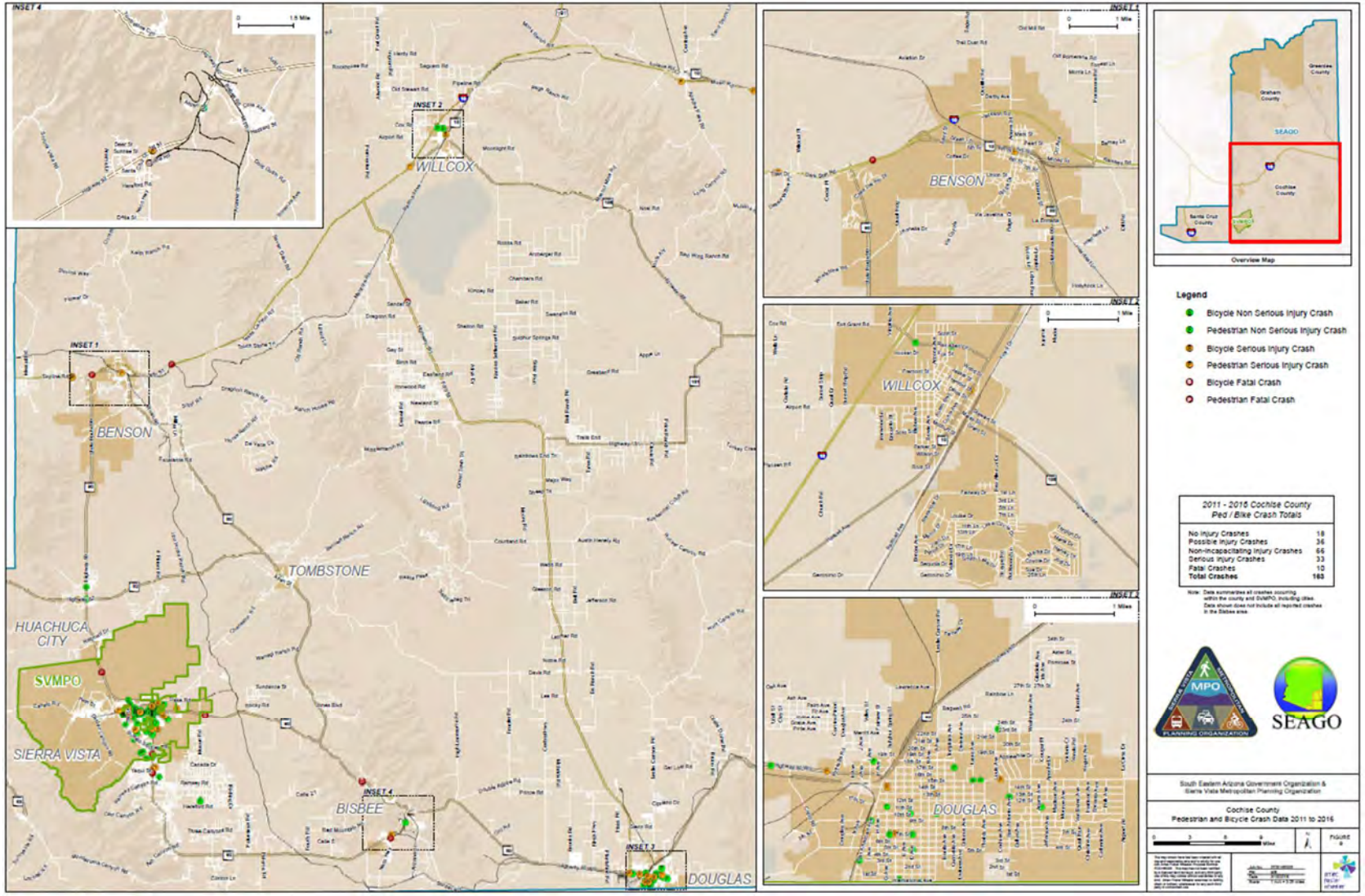


Figure 23: 2011-2016 All Crash Locations – Graham and Greenlee Counties

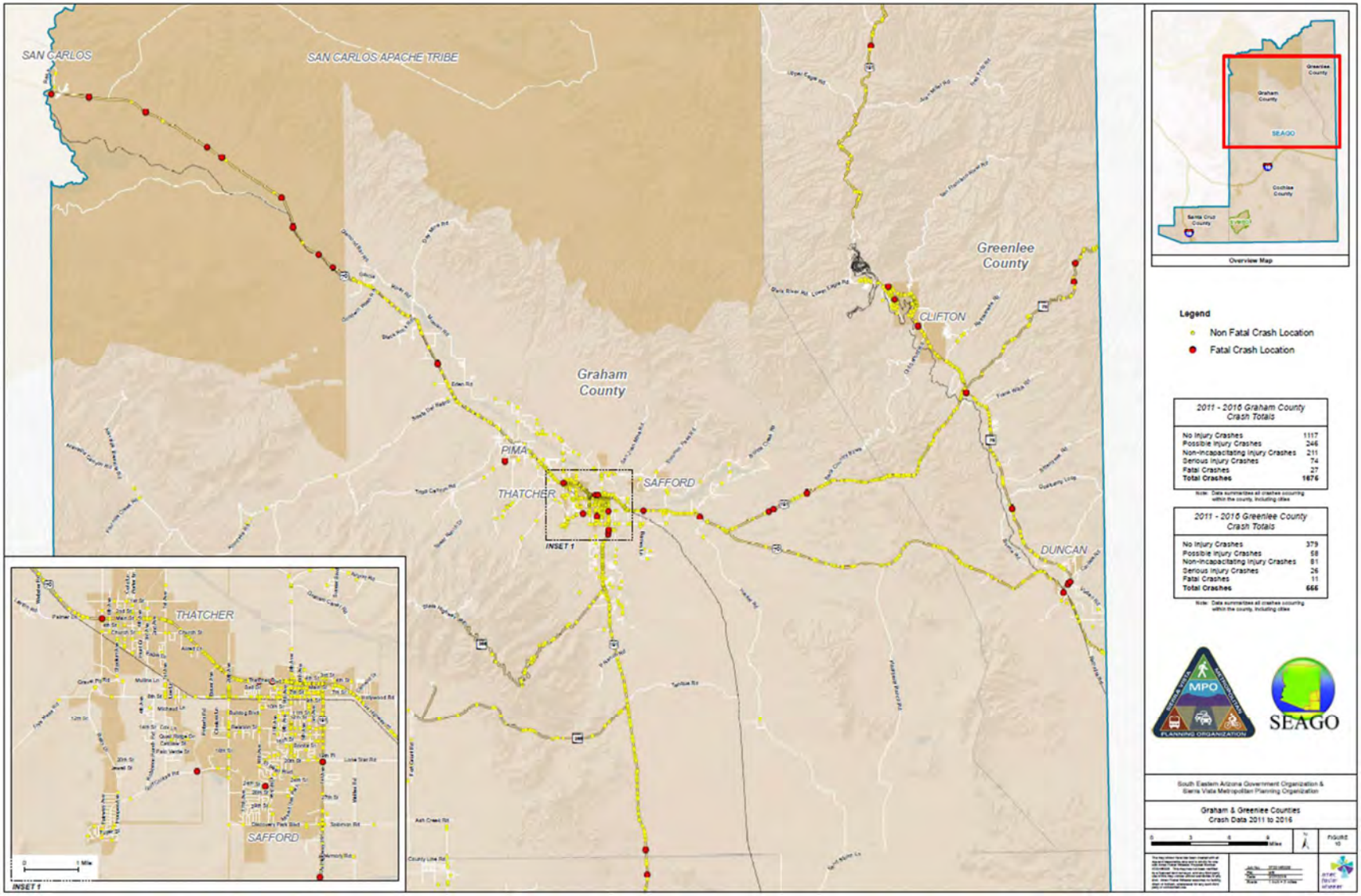


Figure 24: 2011-2016 Fatal and Serious Injury Crash Locations – Graham and Greenlee Counties

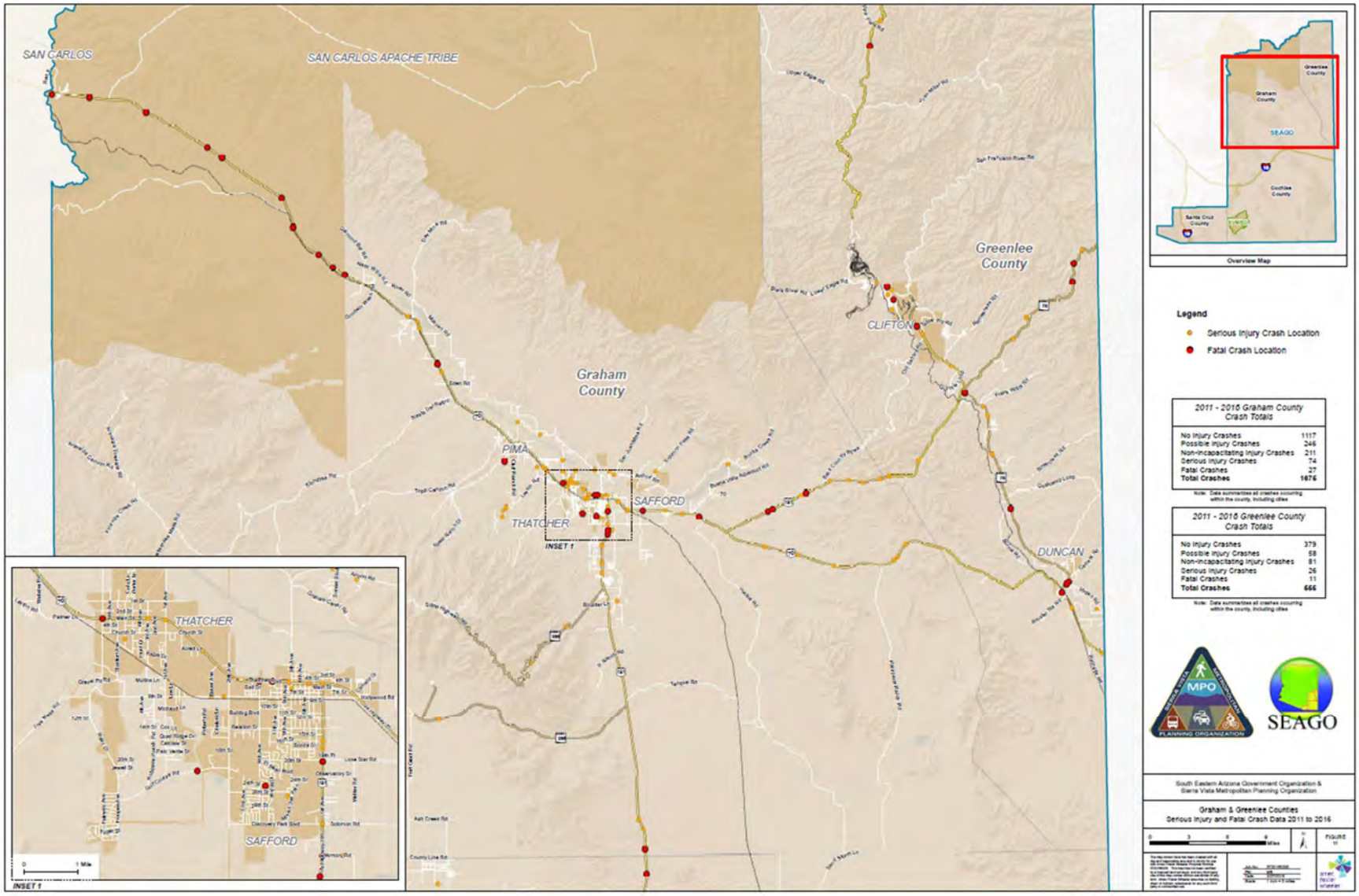
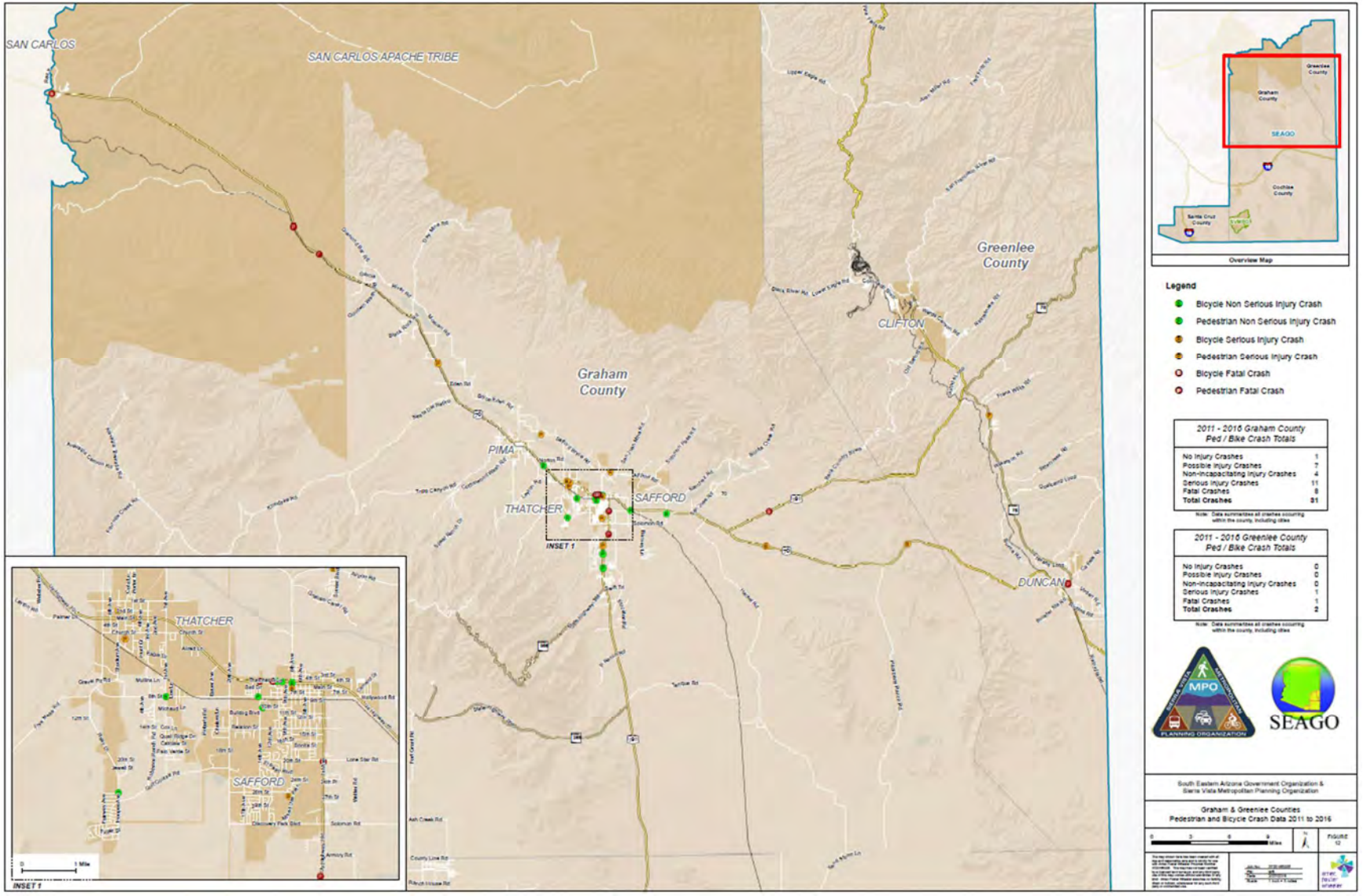


Figure 25: 2011-2016 Pedestrian and Bicycle Crash Locations – Graham and Greenlee Counties



Transportation Safety Resources

Available Programs

Several local and state safety programs are available to SEAGO/SVMPO and member agencies. The following programs are intended to be a resource to allow collaboration among the various agencies across the region regarding safety strategies.

National Highway Traffic Safety Administration (NHTSA) "5 to Drive" Campaign

The "5 to Drive" campaign encourages parents to visit www.safercar.gov/parents/teendriving and discuss with their teens one safety topic each day during the October national teen driver safety week. The "5 to Drive" campaign topics are:

1. No cell phone use or texting while driving,
2. No extra passengers,
3. No speeding,
4. No alcohol, and
5. No driving or riding without a seat belt.

The list is designed to counteract poor driving decisions that have contributed heavily to the high death rate among teen drivers

Arizona Bicycle and Pedestrian Program

ADOT maintains a website dedicated to providing bicycling and walking information. Resources such as maps, safety tips, organizations/programs, commuting information, walking and biking to school resources, as well as the Statewide Bicycle and Pedestrian Plan, are included at this website. More information can be found at the ADOT Bicycle and Pedestrian Program webpage (http://www.azbikeped.org/).

Arizona Road Safety Assessment Program

ADOT manages the Arizona Road Safety Assessment (RSA) Program, a free service to public agencies in Arizona. An RSA is a formal examination of user safety of a roadway by an independent multidisciplinary audit team. The RSA team identifies safety issues and appropriate countermeasures for the specific location. (https://www.azdot.gov/business/engineering-and-construction/traffic/traffic-safety/roadsafety-assessments).

Arizona Strategic Highway Safety Plan

The Arizona SHSP was developed through a data-driven, collaborative approach among Arizona's safety stakeholders. The SHSP represents the Arizona state safety goal statement and identifies the Emphasis Areas that the state will focus on to achieve its goal. The SHSP is an overarching strategic statewide safety document to guide safety planning and programming processes; facilitate implementation of recommended safety strategies and action steps or countermeasures through existing plans and programs; and modify current planning processes over time to adopt and institutionalize a change in Arizona's transportation safety culture. The plan can be accessed through the Arizona SHSP webpage (https://azdot.gov/about/transportation-safety/arizona-strategic-highwaysafety-plan).

Funding Sources

The Highway Safety Improvement Program (HSIP) is a core federal aid program administered by ADOT with Federal Highway Administration (FHWA) oversight. The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. Use of HSIP funding requires a data-driven, strategic, and performance-based approach to improving highway safety on all public roads. The federal legislation states that "a highway safety improvement project is any strategy, activity, or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem." Candidate projects submitted by local agencies for HSIP funding can address spot locations or systemic treatments. Potential projects are prioritized based on Benefit/Cost ratio, potential crash reduction for fatal and incapacitating injury crashes, and connection with the state's SHSP emphasis areas. With passage of the FAST Act, HSIP funds can no longer be used for non-infrastructure projects (e.g., education, enforcement, etc.).

Beginning with fiscal year 2019 call for HSIP projects, sub-allocations of HSIP funds to COGs and MPOs was discontinued. All agencies applications must now follow a competitive process for funding allocations through fiscal year 2024. The SEAGO/SVMPO SHSP has positioned SEAGO and SVMPO and its member agencies to better compete for the statewide HSIP funds by identifying and justifying safety projects through a data-driven process.

The Fixing America's Surface Transportation (FAST) Act replaced the MAP-21 Transportation Alternatives Program (TAP) with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives. These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, and safe routes to school projects. For example, STBG funds could be used for installing a pedestrian hybrid beacon, or HAWK, at a pedestrian crossing experiencing pedestrian crashes. Approximately $7,000,000 in transportation alternatives funding is available annually in Arizona for local agencies (excluding MAG and PAG regions, which have an additional set-aside). Similar to HSIP funding, STBG transportation alternatives funds will be allocated through a statewide competitive process.

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, as well as modernization of crash data collection systems. Local agencies have 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.

The 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 SEAGO member agencies if Arizona was found to have an increase in fatalities on rural roads over the most recent two years.

The Federal Transit Administration (FTA) Rural Transit Assistance Program (RTAP) provides funding for safety services, technical assistance projects and training for transit operators in rural areas. RTAP funding can be used to support four areas: training, technical assistance, research and related support services.

The ADOT Section 5311 Rural Public Transportation Program provides grants to fund transit services in rural parts of the state to increase mobility access to health care, shopping, employment centers and other community points of interest. Mobility can be a concern in rural areas that cover large areas or have limited pedestrian and bicycle facilities. Funding is provided to counties, cities, towns and Native American tribes to operate transit systems at the local level through an application process. The goal of the program is to support a statewide, multimodal transportation system.

The USDOT Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants program replaced the Transportation Investment Generating Economic Recovery (TIGER) grant program. BUILD Transportation grants are for investments in surface transportation infrastructure and are to be awarded on a competitive basis for projects that will have a significant local or regional impact. BUILD funding can support roads, bridges, transit, rail, ports or intermodal transportation. Projects for BUILD will be evaluated based on criteria that include safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-Federal revenue for future transportation infrastructure investments. USDOT intends to award a greater share of BUILD Transportation grant funding to projects located in rural areas that align well with the selection criteria.

Transportation Safety Vision and Goal

The FHWA vision for transportation safety is "Towards Zero Deaths". This campaign is a data driven effort to reduce fatal crashes and to create a traffic safety culture across the country. The 2014 Arizona SHSP further expanded on this vision by adopting "Towards Zero Deaths by Reducing Crashes for a Safer Arizona". The safety goal that was established to accomplish this statewide vision is to reduce fatalities and serious injuries by 3-7% over the next 5 years (2014-2018).

A SEAGO specific safety vision and goal was voted on and approved by the SEAGO TAC. The regional vision and goal were developed to be consistent with the statewide vision and goal.

The SEAGO/SVMPO safety vision is:

Stay Alive, Focus on the Drive

The goal for transportation safety is:

Improve the Safety of Our Roads…Let's Reduce Fatalities and Severe Injuries in the Next 5 Years

Emphasis Areas and Safety Strategies

Emphasis Areas

The 2014 Arizona SHSP identifies 12 emphasis areas that comprise the top crash categories for serious injury and fatal crashes across the state. The statewide emphasis areas are

1. Speeding and Aggressive driving
2. Impaired driving
3. Occupant protection
4. Motorcycles
5. Distracted Driving
6. Roadway Infrastructure and Operations
7. Age Related
8. Heavy Vehicles
9. Non-Motorized users
10. Natural Risks
11. Traffic incident management
12. Interjurisdictional

The first five listed emphasis areas are the top focus for the state, due to the high number of fatal and serious injury crashes or due to an upward trend in fatal and serious injury crashes that relate to those crash categories.

The SEAGO TAC selected 6 of the 12 statewide emphasis areas for the region to focus on to improve traffic safety. SVMPO identified an additional emphasis area, Pedestrians, in addition to the 6 SEAGO emphasis areas, due to the higher frequency of pedestrian fatalities in Sierra Vista (22% of fatal crashes were pedestrians). Table 3 shows these regional emphasis areas and gives the regional and statewide percentages of fatal crashes for each.

Table 3: Statewide Emphasis Areas vs. SEAGO/SVMPO Region

State Emphasis Areas	SEAGO/SVMPO Fatal Crashes	State Fatal Crashes
Lane Departure	**61%**	**45%**
Occupant Protection	**53%**	**45%**
Speeding	**39%**	**38%**
Impaired Driving	**36%**	**34%**
Young Driver Under 25	**25%**	**28%**
Distracted Driving	**5%**	**15%**
Pedestrian (SVMPO)	**22% (SVMPO)**	**18%**

Safety Strategies

The following safety strategies were developed as a response to the fatal and serious injury crashes related to the regional emphasis areas. The safety strategies follow the Four E's of safety: engineering, enforcement, education and emergency services. This list is provided to give ideas of potential safety improvements to target the emphasis areas; however, it is not intended to be a comprehensive list of potential solutions and project owners are encouraged to explore alternative solutions as needed.

Lane Departure

Engineering

- Use traffic control devices to better delineate the edge of the roadway (i.e. signs, raised pavement markers, edgelines, rumble strips)
- Construct roadway infrastructure improvements (e.g. paved/graded shoulders, gradual side slopes, Safety Edge, etc.)
- Install guardrail
- Proactively address potential sight distance issues during the development review process
- Identify and systematically re-configure "flying y" intersections

Education

- Increase public education on corrective roadway departure driving techniques

Occupant Protection

Enforcement

- Conduct high-visibility, saturated seat belt enforcement campaigns
- Consider adopting a primary seat belt law.

Education

- Conduct seat belt education events for children
- Provide child protection seat distribution programs coupled with high-profile inspection events/clinics utilizing certified child protection seat technicians
- Train law-enforcement personnel to check for proper child restraint use during all motorist encounters

Speeding

Enforcement

- Targeted enforcement in school zones and locations with speeding related crashes

Engineering

- Install speed feedback signs
- Install traffic calming to reduce speeds
- Reduce default speeds on unpaved roads to 45 mph

Education

- Launch NHTSA's "5 To Drive" campaign in area high schools
- Coordinate with the health department, medical facilities, and schools to strengthen driver education

Impaired Driving

Engineering

- Implement wrong-way detection systems to reduce wrong-way crashes on freeways

Education

- Improve public awareness of and access to alternate forms of transportation
- Partner with employers to suggest policies and procedures aimed at reducing impaired driving by their employees
- Develop materials for educating target groups for impaired driving including mass-media campaigns on DUI dangers and penalties
- Utilize Dynamic Message Signs for impaired driving educational messages

Enforcement

- Conduct high visibility DUI saturation patrols
- Promote policies and practices that result in the imposition of meaningful penalties for impaired-driving convictions

Young Drivers

Engineering

- Promote technology which monitors young driver behavior

Education

- Identify best practices for promoting and/or implementing Safe Driving pledge campaigns
- Strengthen driver education
- Promote stronger parental/guardian education and engagement in the licensure process for young drivers
- Launch NHTSA's "5 To Drive" campaign in area high schools
- Develop outreach campaigns to young drivers and their families about safe driving behavior and programs (e.g. consider adopting the Tucson Police Department's Safe Teen Accident Reduction Training (START) Program)
- Develop public relations campaigns highlighting the risks of distracted driving
- Promote insurance and other incentives for safe driving
- Conduct mock crash demonstrations for high school students

Distracted Driving

Engineering

- Install centerline and shoulder rumble strips

Education

- Initiate/strengthen distracted driving school campaigns

Enforcement

- Implement local ordinances banning texting while driving

Pedestrians

Engineering (Planning/Policy):

- Encourage submittal of TIP projects that include safety elements for all modes by including safety as an explicit project evaluation criterion
- Promote the use of “best practices” that integrate safety analysis and design throughout the planning process
- Identify high risk locations for potential implementation of enhanced pedestrian crossings
- Develop and implement a Complete Streets program
- Develop a system to evaluate whether certain midblock and/or multi-lane uncontrolled crosswalks should remain, be improved, or be removed
- Develop an ADA Transition Plan

Engineering (Design/Implementation)

- Evaluate and install controlled pedestrian crossings, making use of pedestrian hybrid beacons and rectangular rapid flash beacons
- Install medians and pedestrian crossing islands
- Provide sidewalks, multi-use paths, and/or marked crosswalks
- Improve sight distance and/or visibility between motor vehicles and pedestrians
- Utilize the Safe Routes to School program
- Provide street lighting at uncontrolled arterial crosswalks

Education

- Develop/maintain training and public information pedestrian safety campaigns
- Increase pedestrian safety education for all roadway users
- Promote the use of pedestrian safety lights

Network Screening

Network screening of a roadway system is the data-driven analysis of the intersections and segments within the system. The process utilizes spatial analysis of crash data and is performed to determine high priority locations that may require safety improvements. Crashes are spatially attributed to individual intersections and segments to facilitate network analysis.

The goal of network screening is to develop a list of specific sites, for example, signalized intersections, that are ranked by priority. Priority is typically developed from crash frequency, rate, and severity, but other crash factors can be incorporated into the analysis as appropriate. This priority list is then used to plan and implement safety projects at individual locations or at the

system-wide level. The list can also serve as a resource for local governments when applying for state or federal traffic safety funding.

A Priority Index (PI) ranking was used to screen intersections and a combination of PI ranking and sliding window analysis was used to screen segments. The PI ranking system has been used successfully in Arizona by the Pima County DOT, Pima Association of Governments (PAG), and other MPOs and COGs to identify high-risk locations and is recommended for use by SEAGO and SVMPO based on:

- Minimal data requirements (traffic volumes and crash frequency and severity)
- Reliability in identifying high-risk locations
- Flexibility (agencies can adjust the importance of the 3 crash factors used to calculate the PI)

The PI rankings developed for this SHSP gave equal weighting to crash frequency, crash severity, and crash rate.

Intersection Priority Index Ranking

The resulting lists of signalized and unsignalized intersections are intended to provide SEAGO and SVMPO with a guideline in determining locations that may require a closer examination for safety improvements. Individual priority ranking lists were developed for signalized and unsignalized intersections. Traffic volumes were assigned to intersections using the ADOT, SEAGO, and SVMPO Transportation Data Management System databases. The top 20 signalized intersection priority ranking is shown in Table 4. The top 20 unsignalized intersection priority ranking is shown in Table 5. Following are explanations of the values in each column:

- ADT – average daily traffic volume, in vehicles per day, entering the intersection
- Crash Freq. – number of crashes at the intersection in 5 years (2011-2015)
- Crash Rate – crashes per million vehicles entering the intersection
- Severity Index – weighted score based on the distribution of the five crash severity subtotals at the intersection
- PI Rank – Priority Index rank based on composite score of crash frequency, crash rate, and severity index rank

A complete ranking list of signalized and unsignalized intersections for local and ADOT owned facilities is shown in Appendix B. It should be noted that the traffic control in place at the time of the analysis is what is shown in the rankings, and that some intersections were signalized after completion of the network screening and ranking, including Golf Links and Coronado, Busby and Coronado, and Campus and Columbo.

Table 4: Top 20 Signalized Intersections

Intersection	Owner	ADT	Crash Freq	Crash Rate	Severity Index	PI Rank
Fry Blvd & Carmichael Ave	Sierra Vista	11791	29	0.67	1.57	1
Martin Luther King Jr Pkwy & Coronado Dr	Sierra Vista	13108	31	0.65	1.51	2
Fry Blvd & 7th St	Sierra Vista	25974	64	0.68	1.38	3
Coronado Dr & Fry Blvd	Sierra Vista	29890	83	0.76	1.34	4
Charleston Rd & Colombo Ave	Sierra Vista	11442	22	0.53	1.67	5
Lenzner Ave & Fry Blvd	Sierra Vista	21917	47	0.59	1.32	6
Calle Portal & Fry Blvd	Sierra Vista	22016	49	0.61	1.20	7
Avenida Cochise & Coronado Dr	Sierra Vista	7911	17	0.59	1.47	8
Buffalo Soldier Trail & Fry Blvd	Sierra Vista	18072	25	0.38	1.39	9
Fry Blvd & Avenida Escuela	Sierra Vista	22626	49	0.59	1.16	10
Buffalo Soldier Trail & Avenida Cochise	Sierra Vista	15562	21	0.37	1.48	11
Buffalo Soldier Trail & Wilcox Dr	Sierra Vista	19147	25	0.36	1.43	12
Buffalo Soldier Trail & Saint Andrews Dr	Sierra Vista	10648	24	0.62	1.17	13
Willcox Dr & Coronado Dr	Sierra Vista	17158	26	0.42	1.31	14
A Ave & 10th St	Douglas	13334	21	0.43	1.33	15
Avenida Cochise & Oakmont Dr	Sierra Vista	12562	16	0.35	1.50	16
El Camino Real & Fry Blvd	Sierra Vista	24472	27	0.30	1.37	17
Willcox Dr & 7th St	Sierra Vista	20028	18	0.25	1.60	18
Buffalo Soldier Trail & Cherokee Ave	Sierra Vista	13218	14	0.29	1.63	19
Charleston Rd & Guilio Cesare Ave	Sierra Vista	12322	15	0.33	1.45	20

Table 5: Top 20 Unsignalized Intersections

Intersection	Owner	ADT	Crash Freq	Crash Rate	Severity Index	PI Rank
Avenida Del Sol & Desert Shadows Dr	Sierra Vista	2740	6	0.60	2.30	1
Campus Dr & Colombo Ave	Sierra Vista	5568	12	0.59	1.57	2
Coronado Dr & Tacoma St	Sierra Vista	6259	10	0.44	1.50	3
Lenzner Ave & Busby Dr	Sierra Vista	8610	10	0.32	1.78	4
9th St & A Ave	Douglas	7626	14	0.50	1.49	5
Maley St & Arizona Ave	Willcox	3100	7	0.62	1.43	6
Tacoma St & 7th St	Cochise County	8622	8	0.25	1.85	7
Wilcox Dr & Carmichael Ave	Sierra Vista	7950	16	0.55	1.19	8
8th St & 10th Ave	Safford	6970	7	0.28	1.71	9
8th Ave & Airport Rd	Graham County	4160	7	0.46	1.43	10
Golf Links Rd & Coronado Dr	Sierra Vista	5804	7	0.33	1.43	11
Norton Rd & Reay Ln	Graham County	1494	2	0.37	2.00	12
Snyder Blvd & Avenida Del Sol	Sierra Vista	6408	6	0.26	1.50	13
Arizona Ave & Railroad Ave	Cochise County	162	1	1.69	5.80	14
8th St & G Ave	Douglas	5454	9	0.45	1.11	15
Relation St & 20th Ave	Safford	11890	11	0.25	1.36	16
Crawford St & Sonoita Ave	Nogales	5819	8	0.38	1.13	17
Coronado Dr & Busby Dr	Sierra Vista	10418	11	0.29	1.09	18
Hoopes Ave & Golf Course Rd	Graham County	4889	6	0.34	1.17	19
Crawford St & Terrace Ave	Nogales	11068	11	0.27	1.00	20

Segment Priority Index Ranking

Priority Index values were generated for segments using a sliding window analysis. This analysis excluded intersection crashes to focus on crashes on just the segments. PI values were calculated for a window length of 0.3 miles. This window is incrementally moved by 0.1 miles along each corridor and crash frequency and severity are aggregated within each window. This is repeated until the entire road has been analyzed by 0.3-mile segments. The 0.3-mile-long windows with the highest PI values are the segments identified as high crash risk locations. Results of the segment analysis are highlighted in Figure 26 through Figure 29.

Driver Violation Network Screening

Heat maps were created for major driver violations associated with crashes; the violations included exceeding the lawful speed, speed too fast for conditions, impaired driving, and not wearing a seat belt. These heat maps, shown in Figure 30 through Figure 44 are useful for law enforcement to conduct targeted enforcement and education campaigns.

Figure 26: Sliding Window Analysis – Santa Cruz County

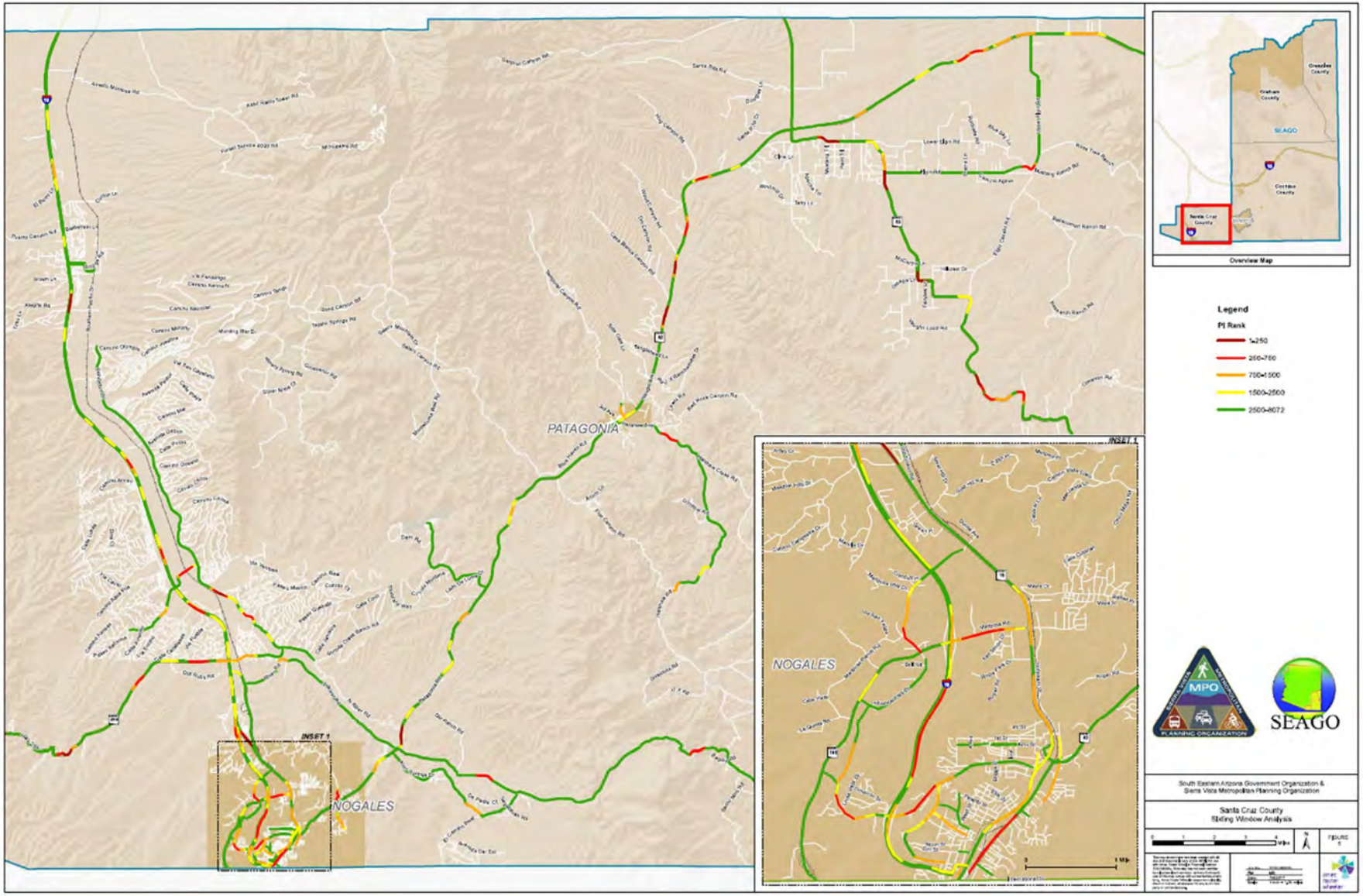


Figure 27: Sliding Window Analysis – Sierra Vista

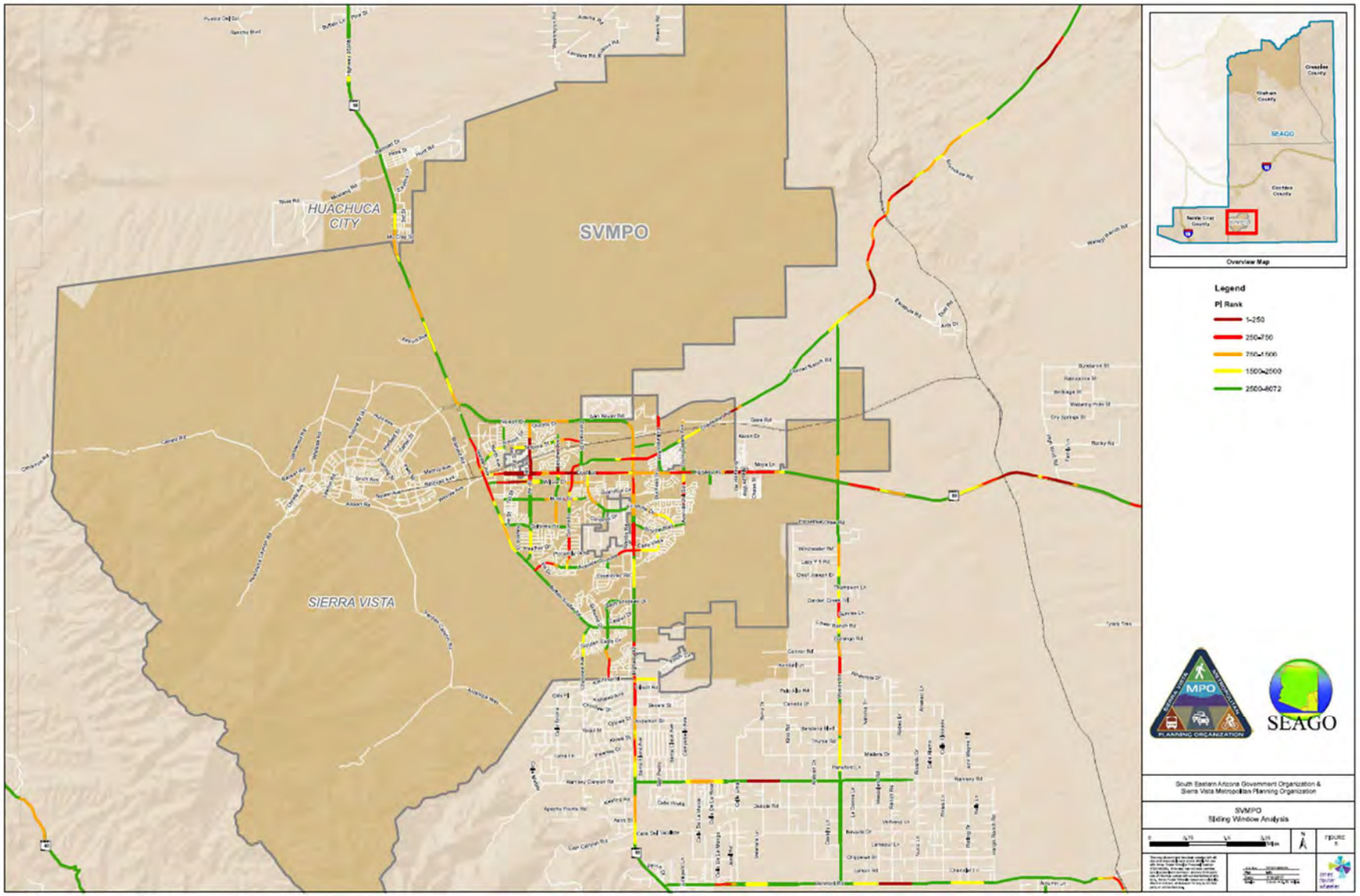


Figure 28: Sliding Window Analysis – Cochise County

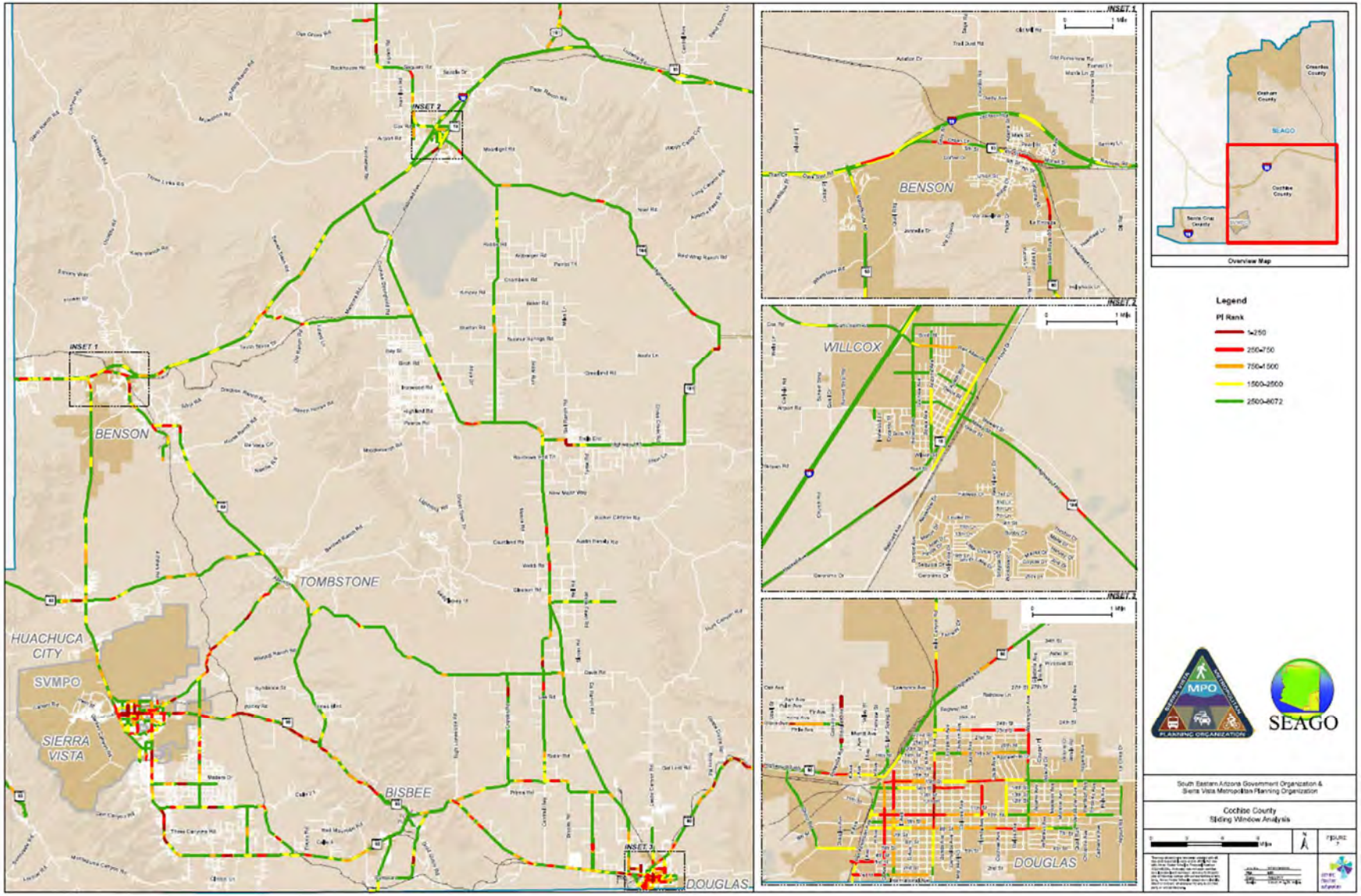


Figure 29: Sliding Window Analysis – Graham and Greenlee Counties

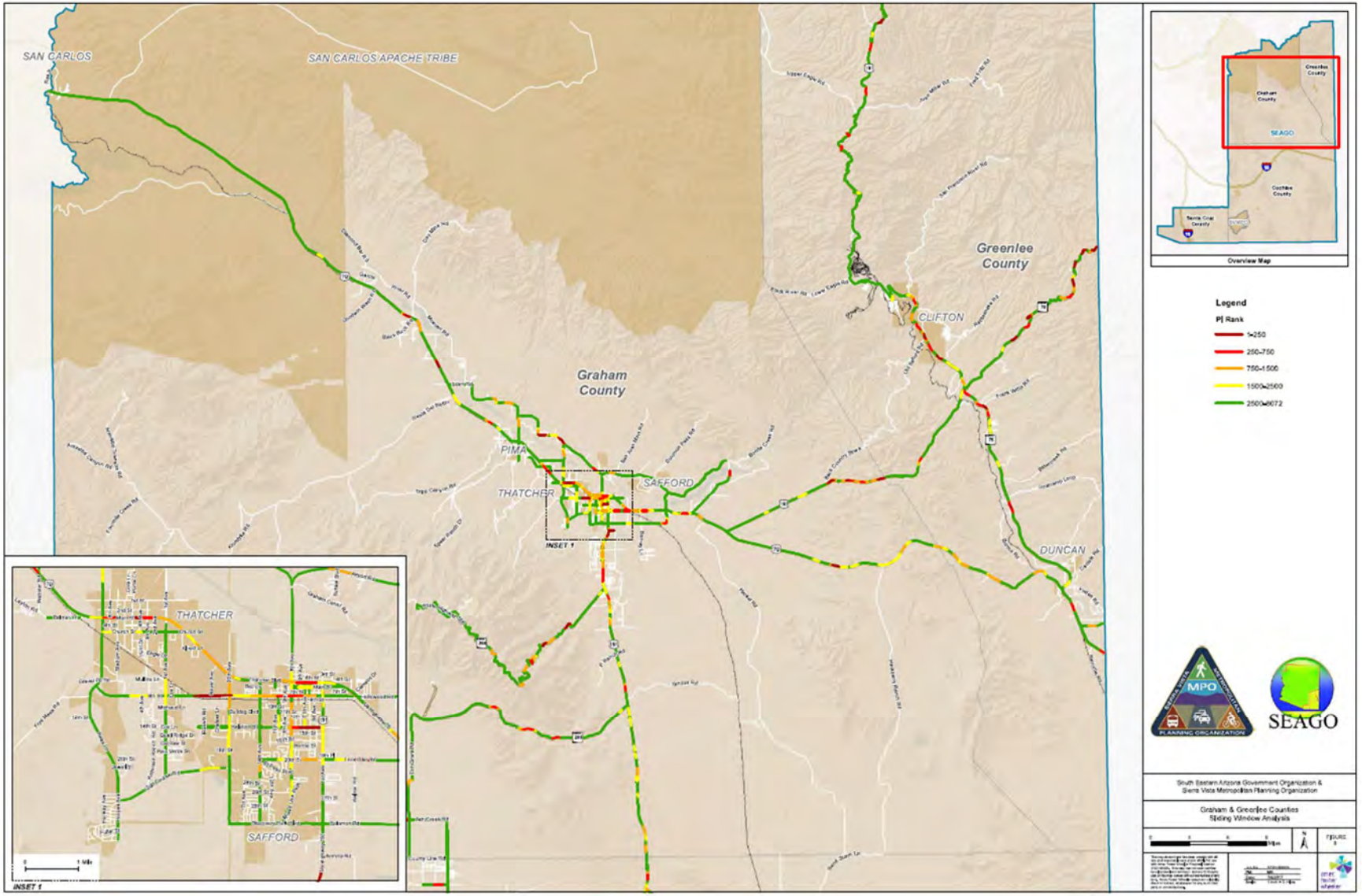


Figure 30: Heat Map – No Restraint Enforcement Area – Santa Cruz County

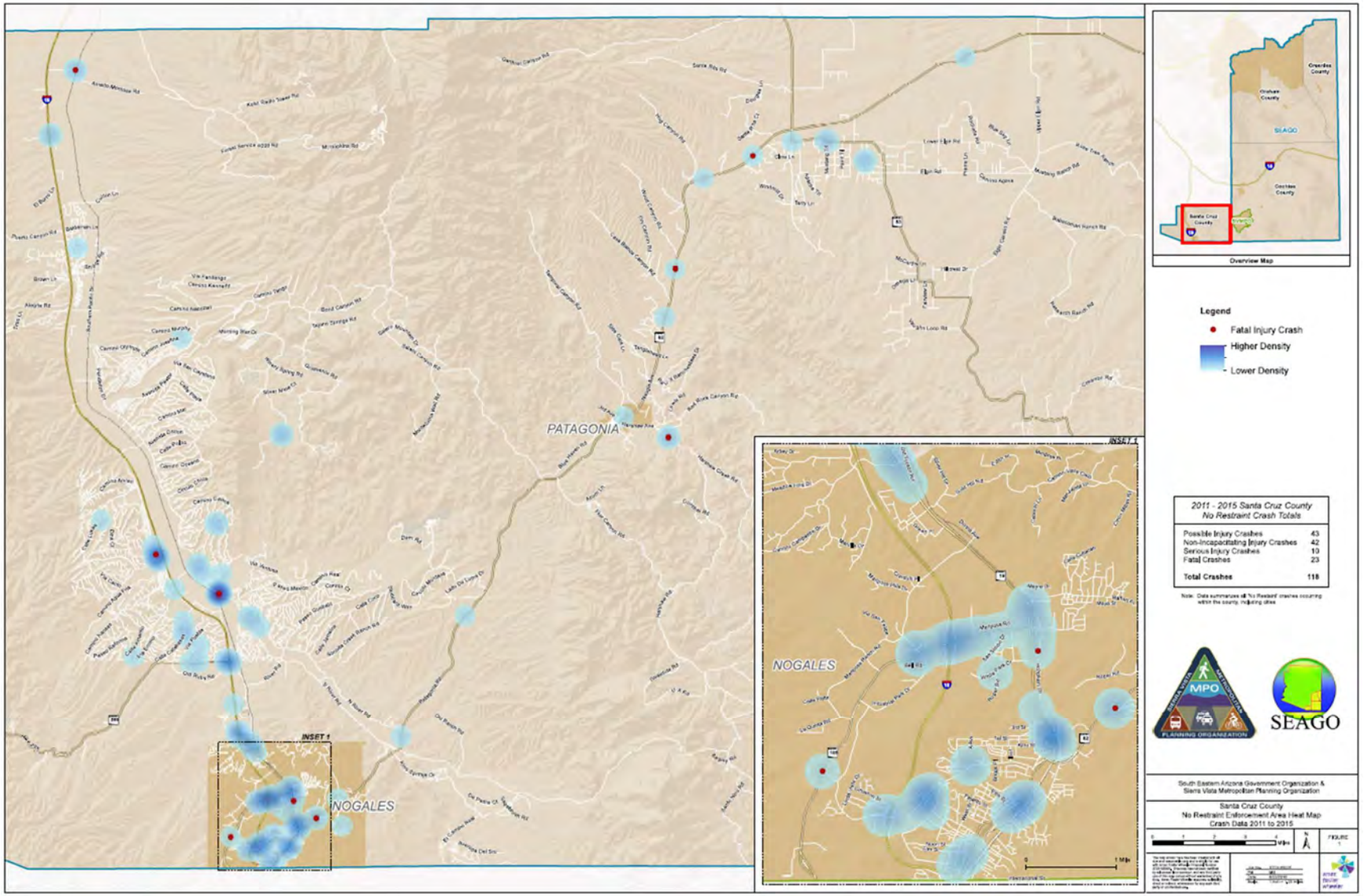


Figure 31: Heat Map – Driver Impairment Enforcement Area – Santa Cruz County

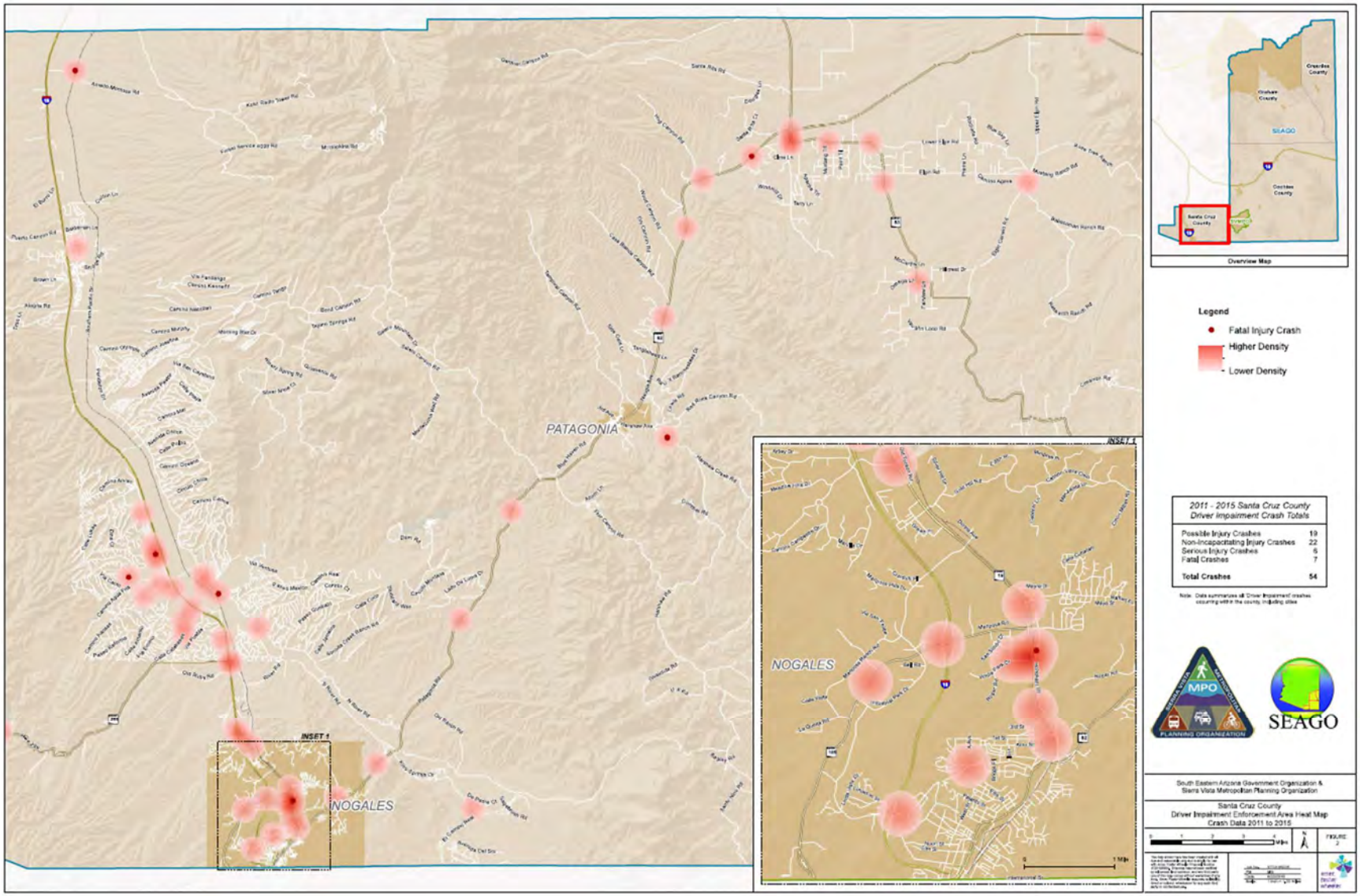


Figure 32: Heat Map – Unlawful Speeding Enforcement Area – Santa Cruz County

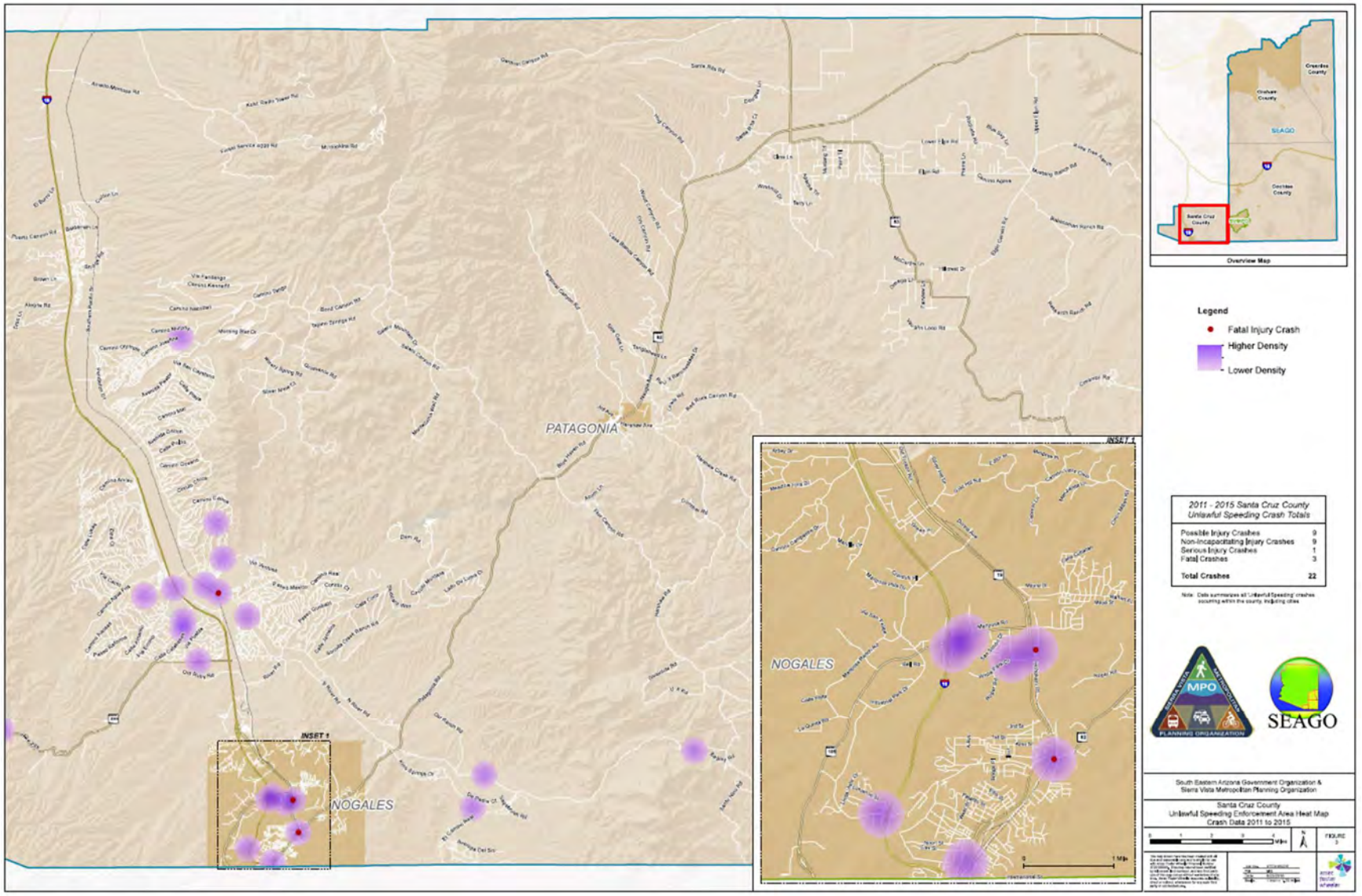


Figure 33: Heat Map – No Restraint Enforcement Area – Sierra Vista MPO

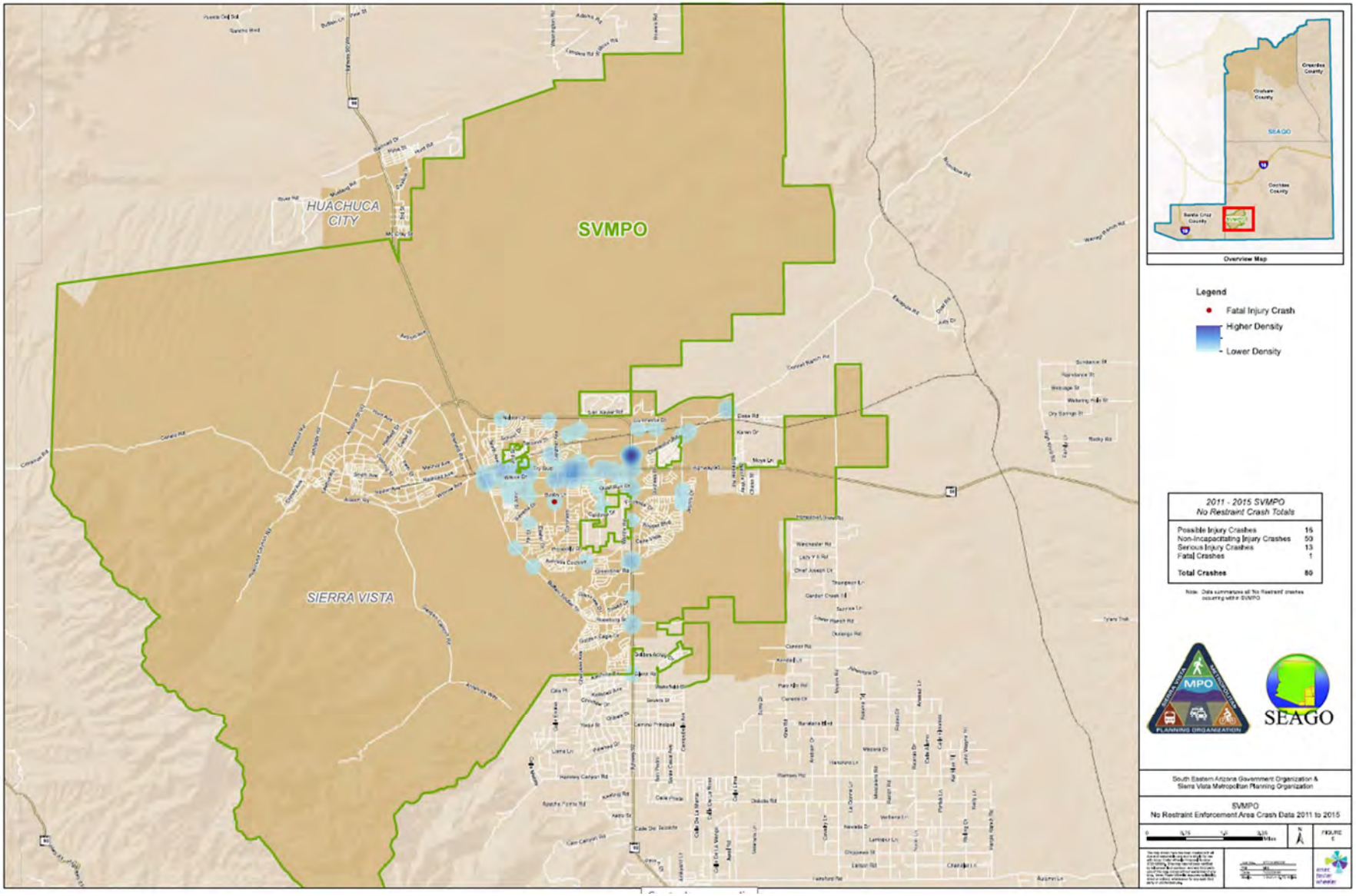


Figure 34: Heat Map – Speed Too Fast for Conditions Enforcement Area – Santa Cruz County

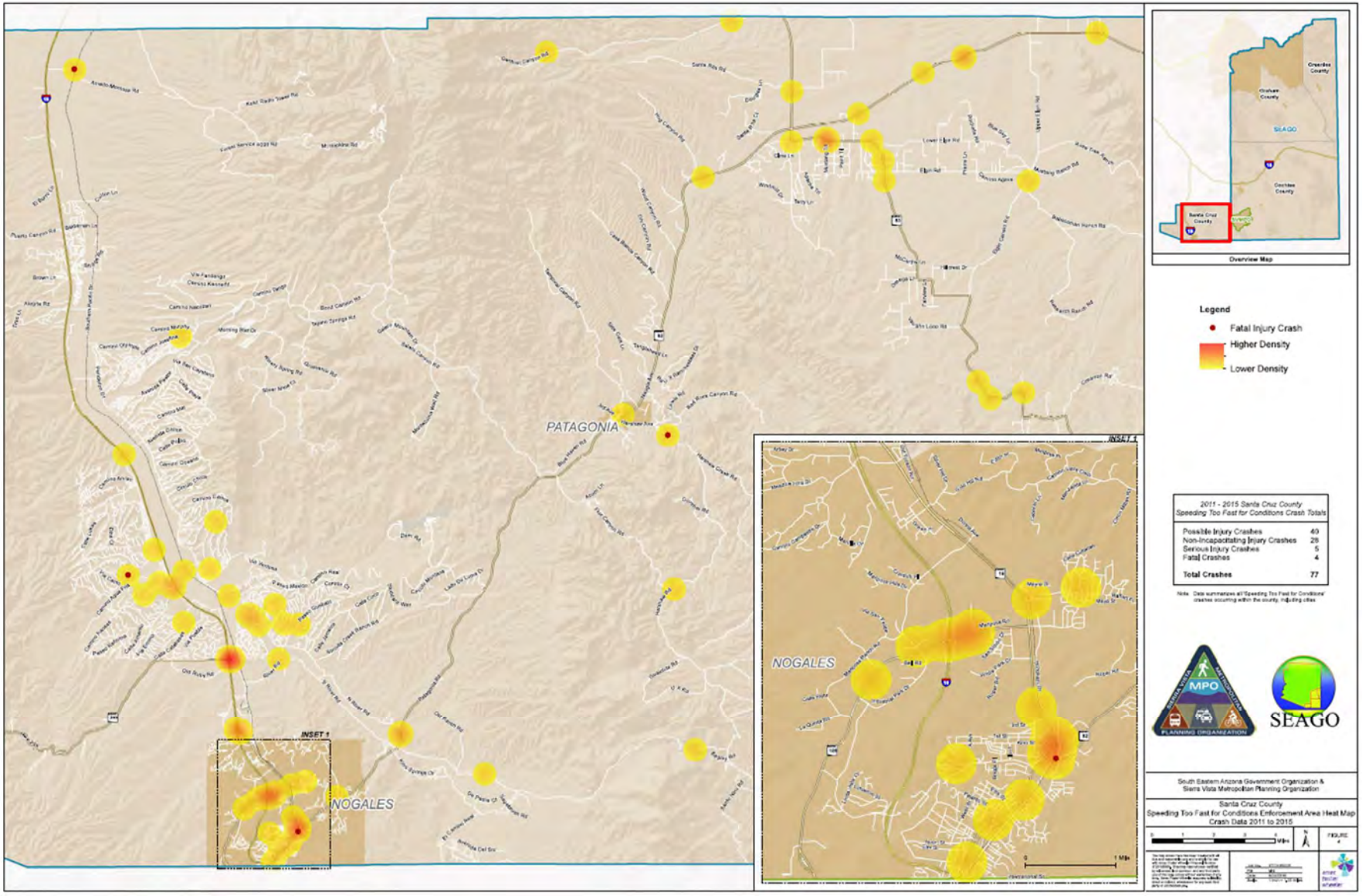


Figure 35: Heat Map – Driver Impairment Enforcement Area – Sierra Vista MPO

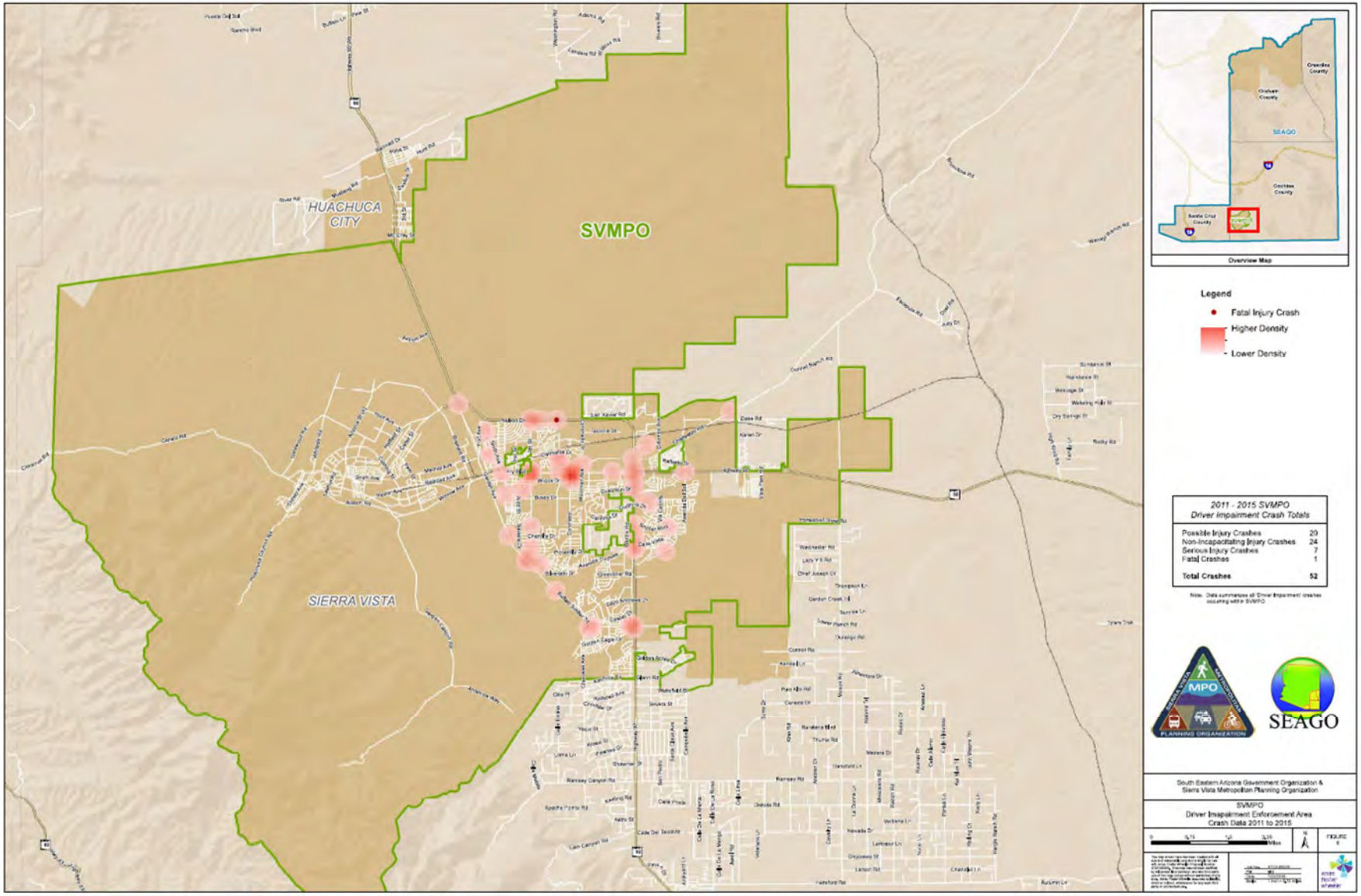


Figure 36: Heat Map – Unlawful Speeding Enforcement Area – Sierra Vista MPO

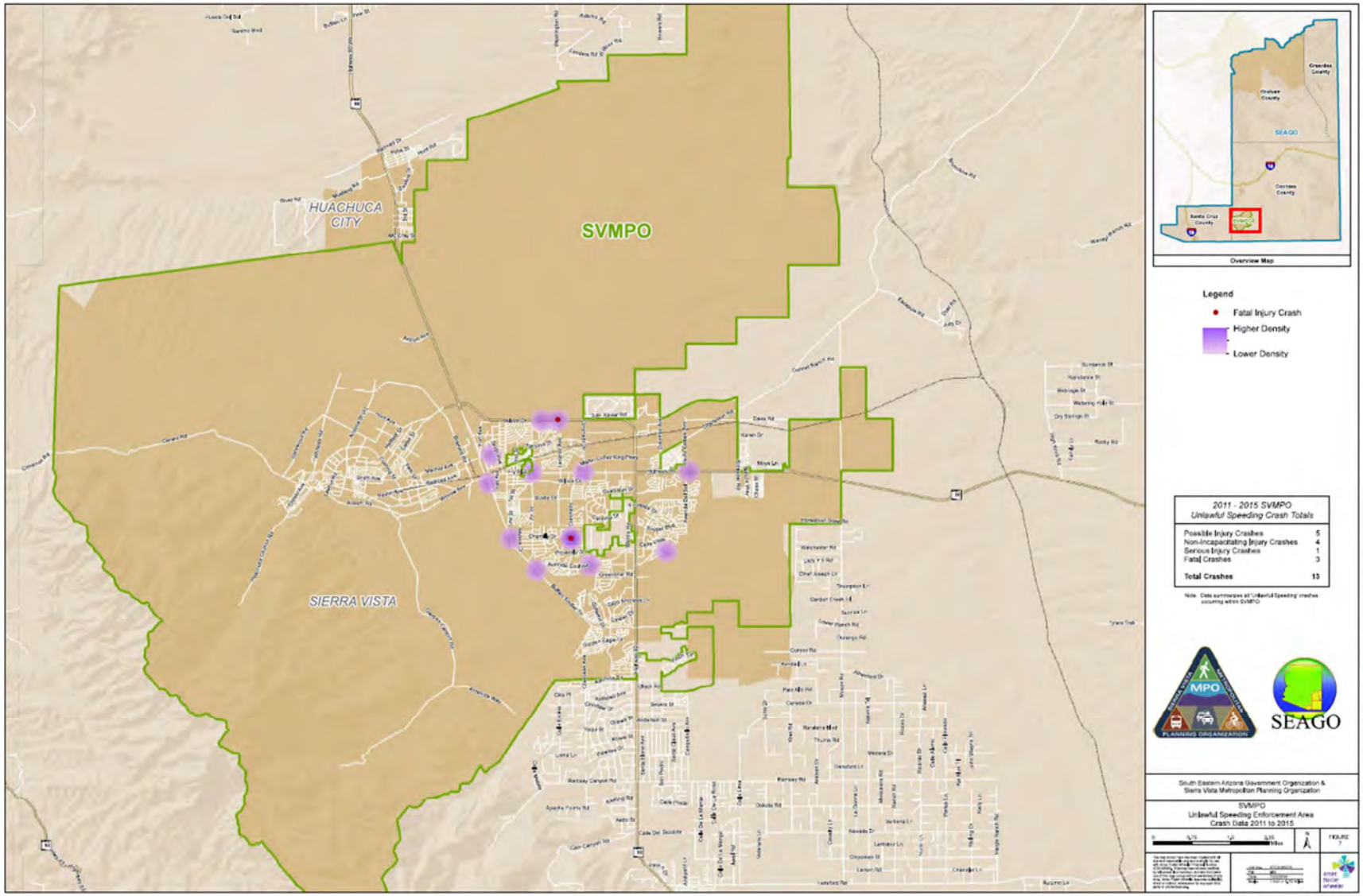


Figure 37: Heat Map – No Restraint Enforcement Area – Cochise County

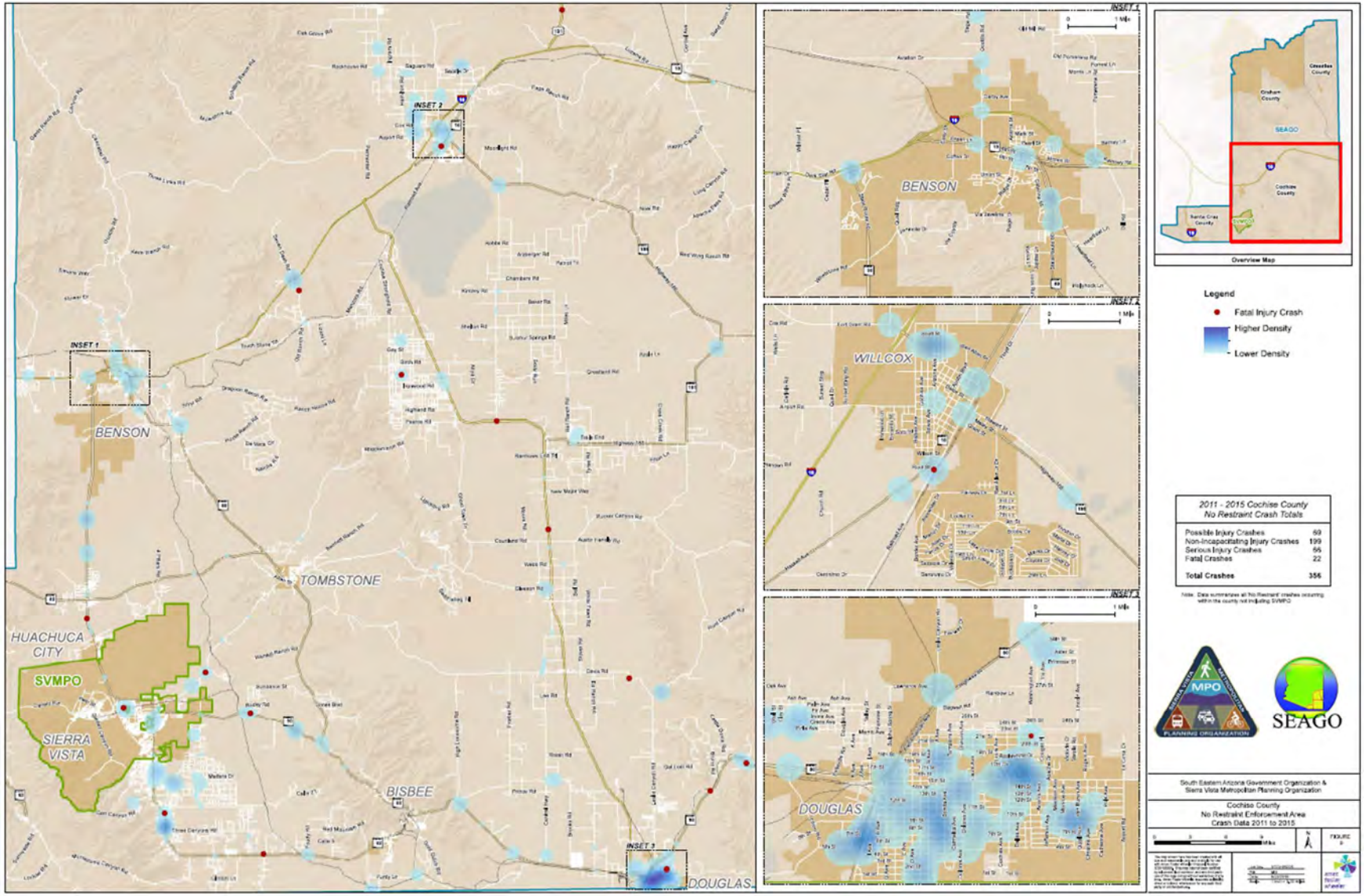


Figure 38: Heat Map – Speed Too Fast for Conditions Enforcement Area – Sierra Vista MPO

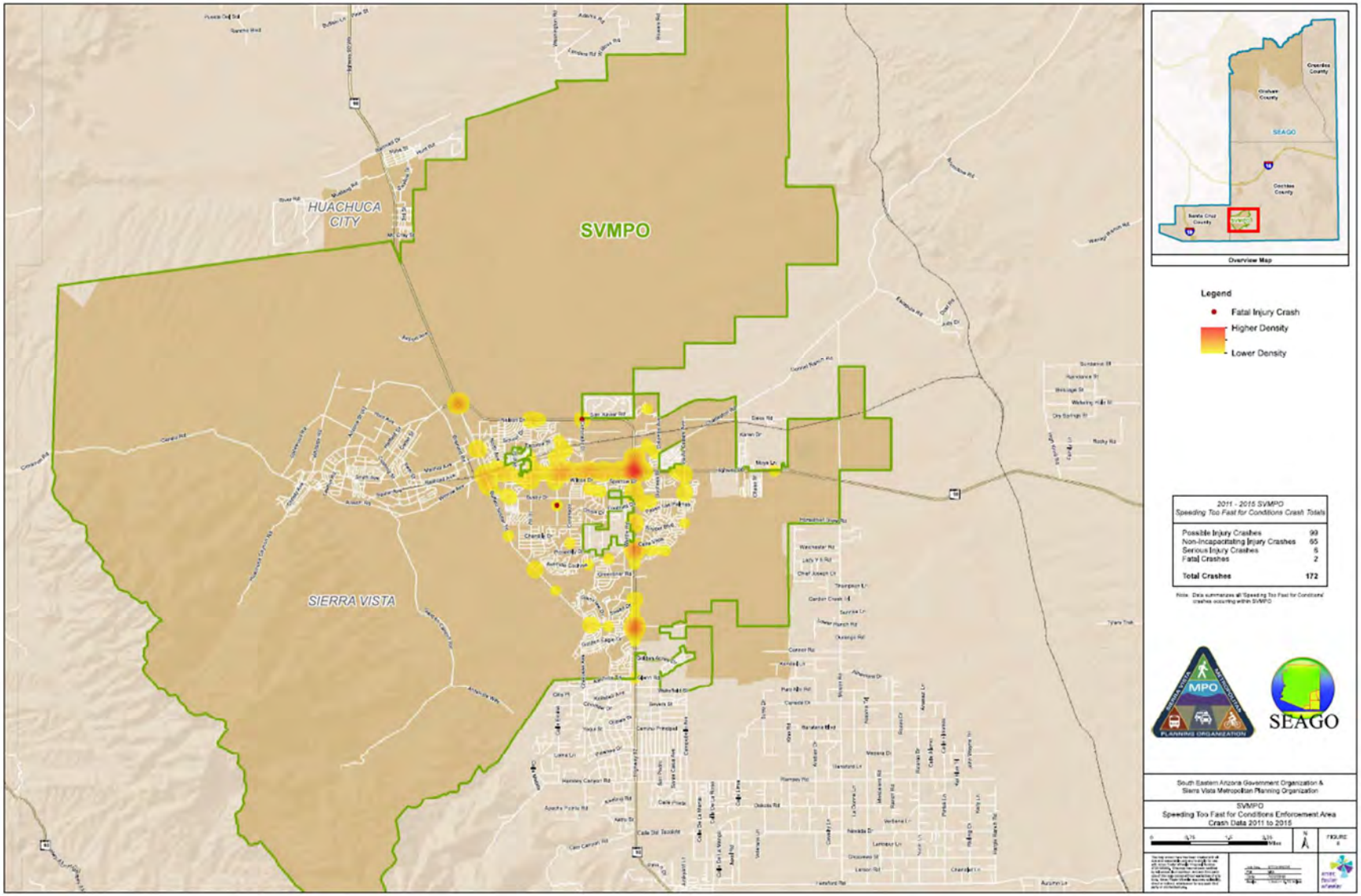


Figure 39: Heat Map – Unlawful Speeding Enforcement Area – Cochise County

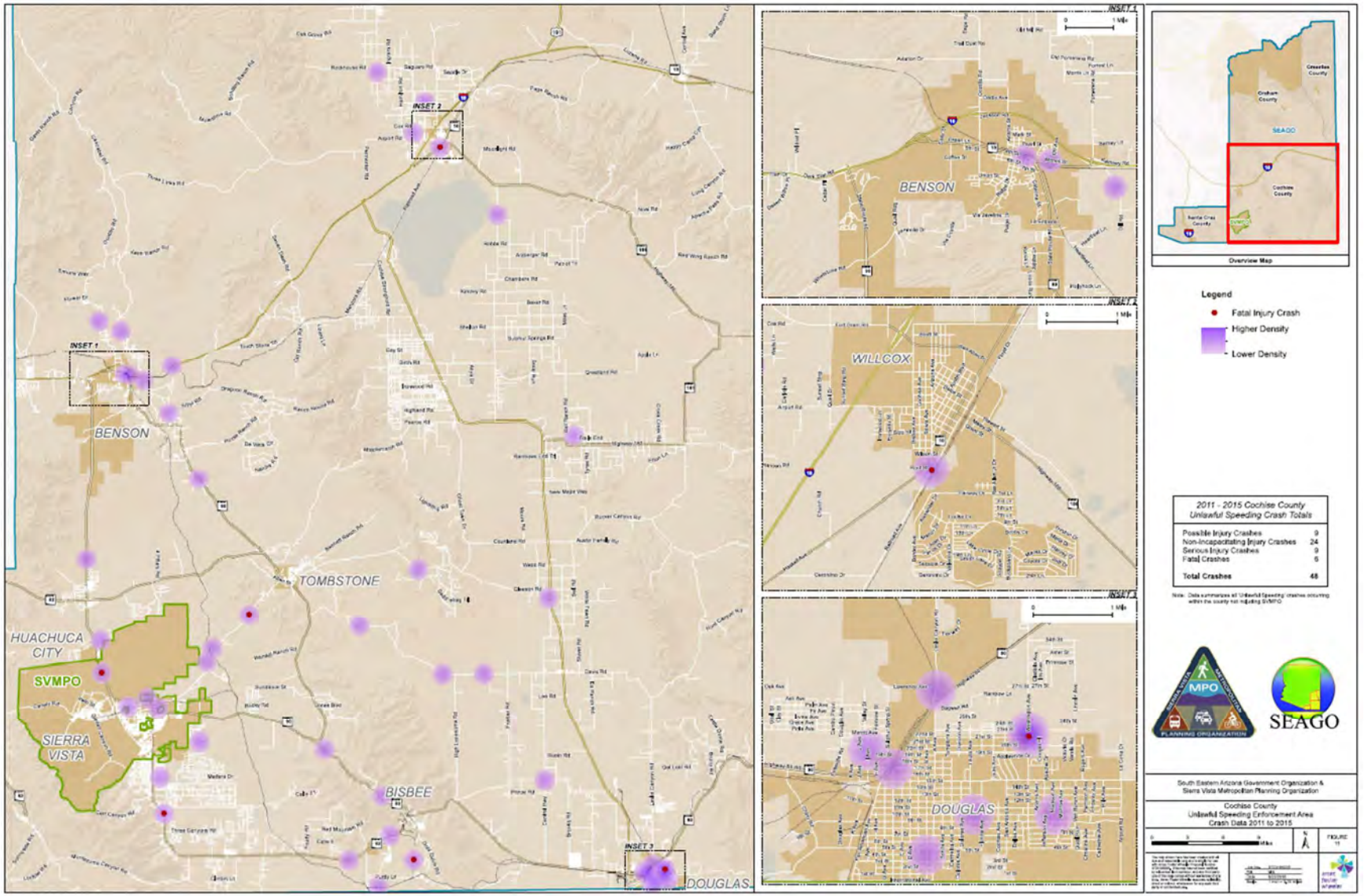


Figure 40: Heat Map – Driver Impairment Enforcement Area – Cochise County

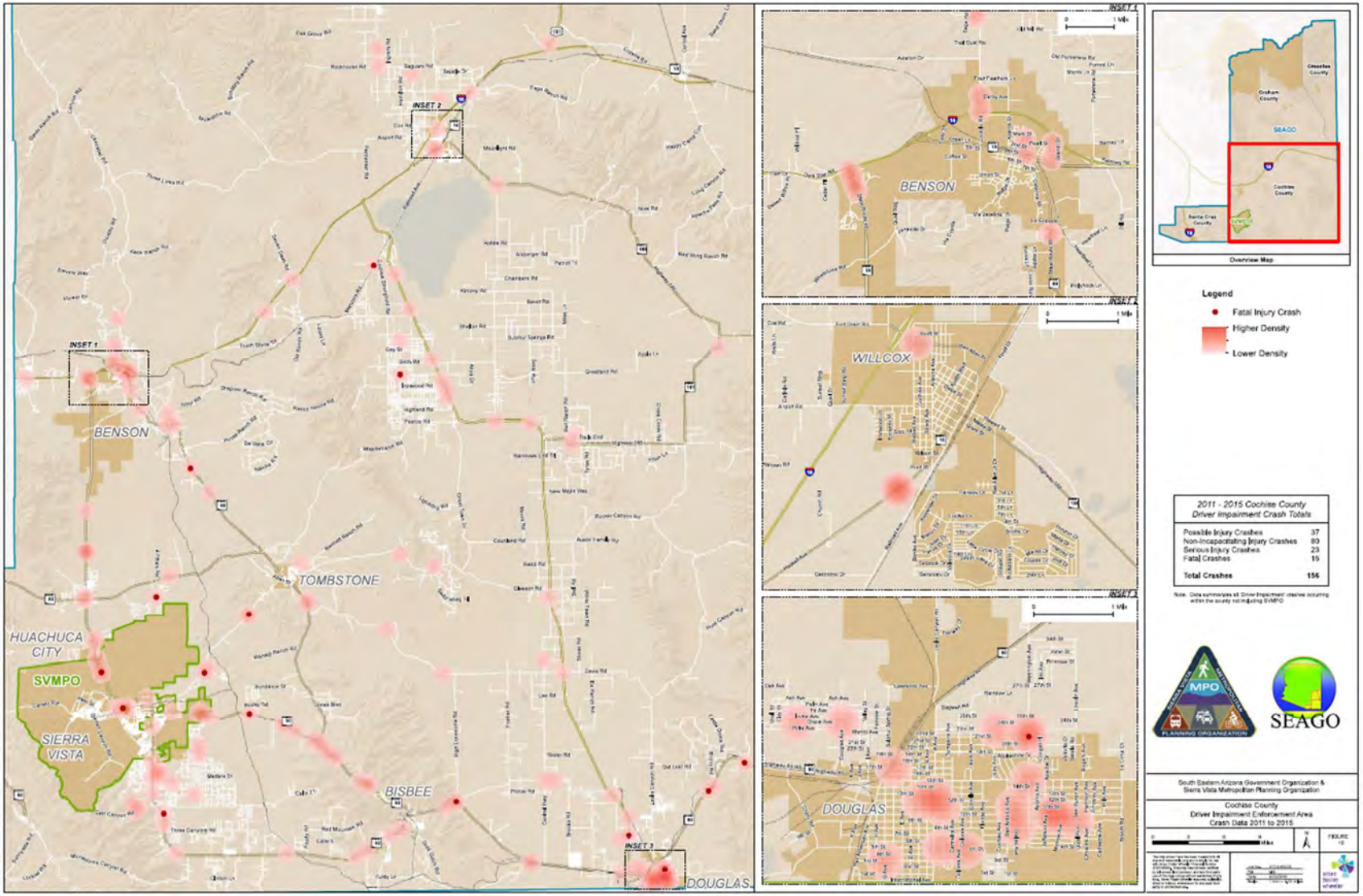


Figure 41: Heat Map – Speed Too Fast for Conditions Enforcement Area – Cochise County

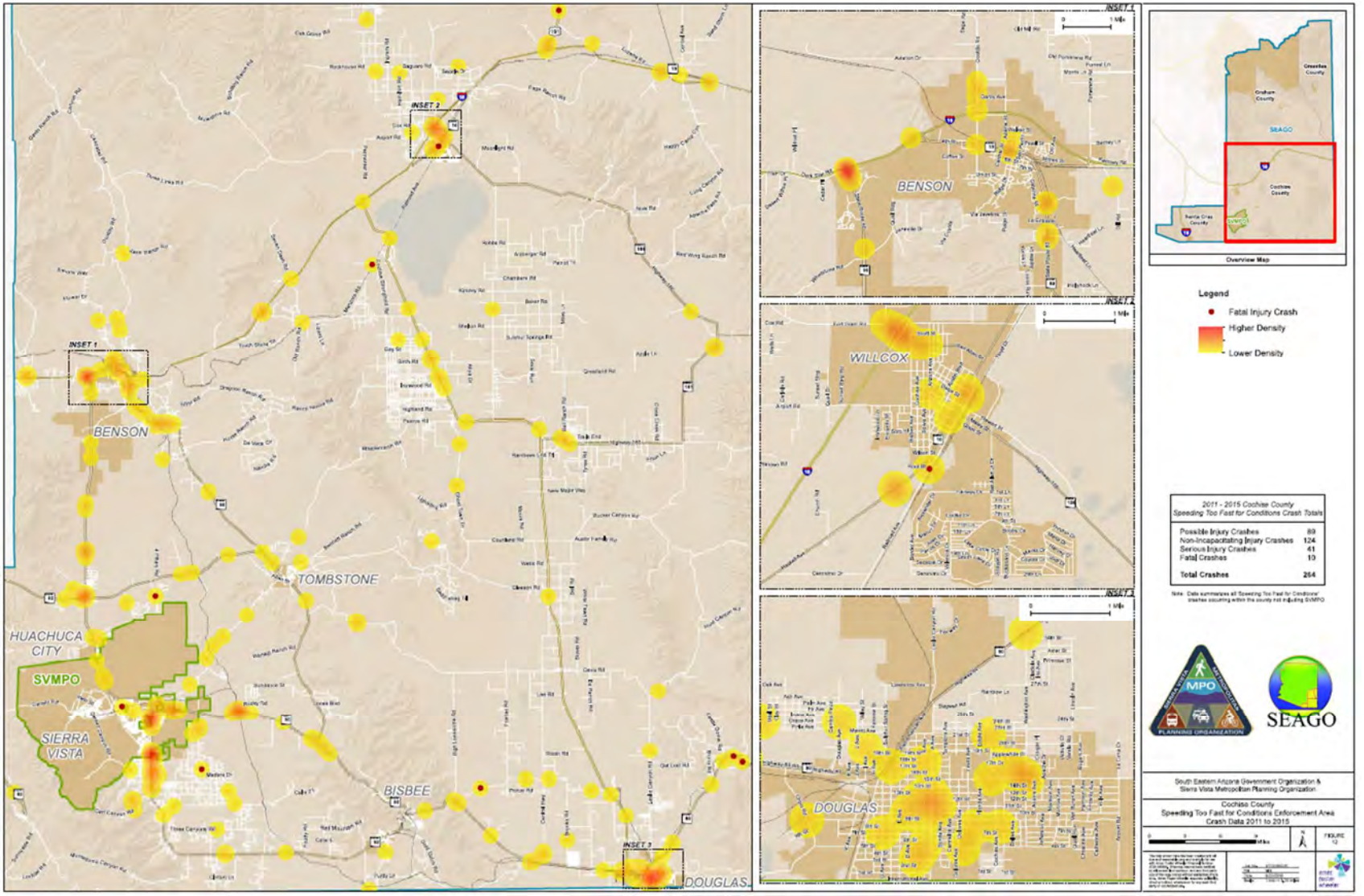


Figure 42: Heat Map – No Restraint Enforcement Area – Graham and Greenlee Counties

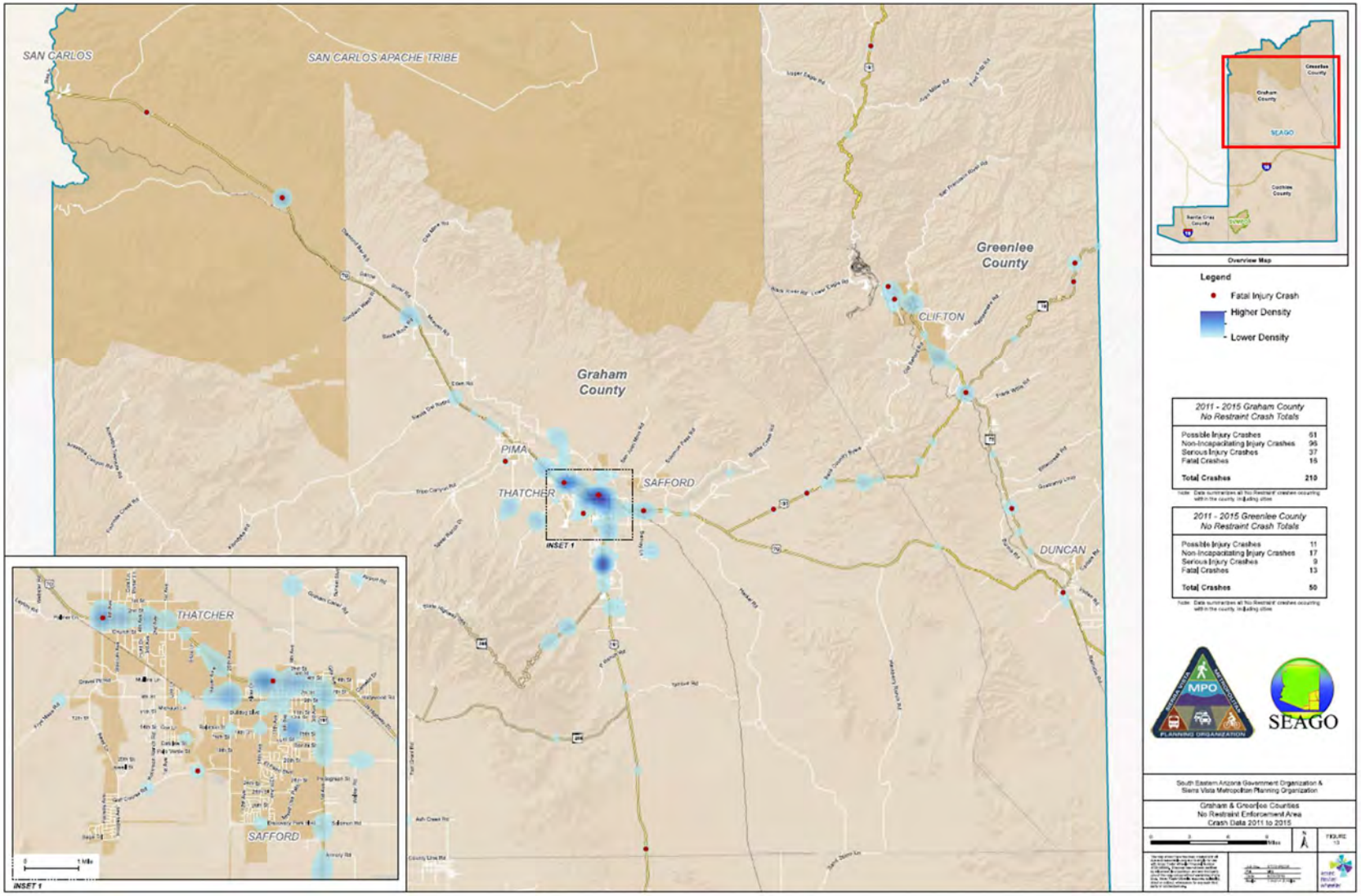


Figure 43: Heat Map – Driver Impairment Enforcement Area – Graham and Greenlee Counties

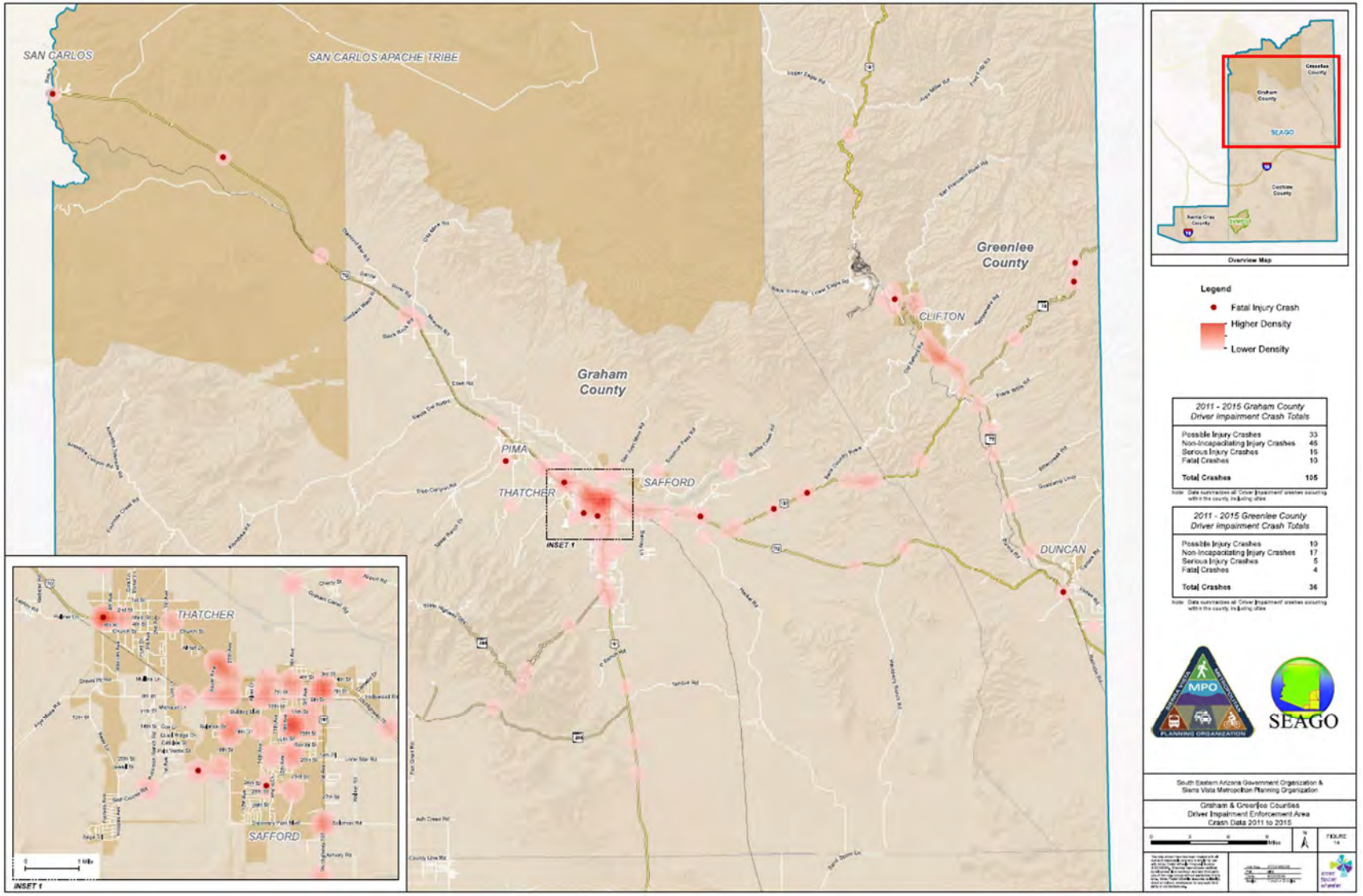
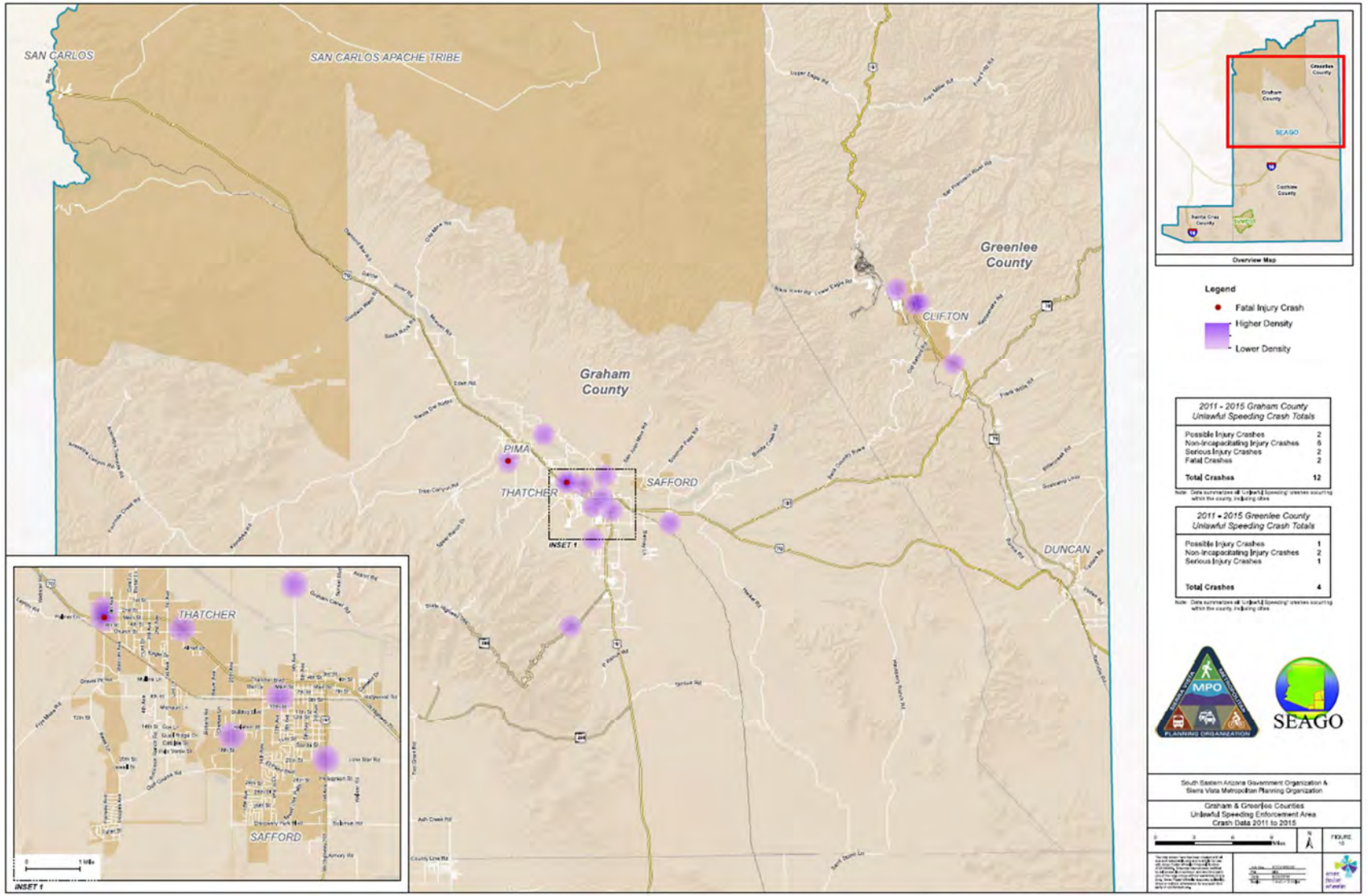


Figure 44: Heat Map – Unlawful Speeding Enforcement Area – Graham and Greenlee Counties



Performance Measures

On April 14, 2016, the FHWA final rule for "National Performance Management Measures: Highway Safety Improvement Program" went into effect. This rule established the procedures, data, reporting requirements, and potential consequences for safety performance at State DOT and MPO levels. In general, this rule is designed to further the use of data to better inform transportation planning and programming with the aim of reducing fatalities and serious injuries. Key provisions in the rule include:

- 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 update frequency
- A target must be set for each of the 5 performance areas by February 27, 2018
- 5-year rolling averages are used to smooth variability in data
- States have "met" or "made" significant progress if four out of five targets are met, or performance is better than baseline
- MPOs are to report their targets to the State in an agreed upon manner
- Fatality Analysis Reporting System FARS is to be used for fatal data
- State crash database is to be used for serious injury 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 must 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. COGs 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).

The Southeastern Arizona SHSP adopted the 2018 ADOT safety targets, based on five year rolling averages:

- Number of Fatalities: 4% Increase
- Rate of Fatalities: 2% Increase
- Number of Serious Injuries: 0% Increase
- Rate of Serious Injuries: 1% Decrease
- Number of Non-motorized Fatalities and Serious Injuries: 2% Increase

Some of these targets show an increase in crashes because the 5-year average is trending upward – while the overall goal is to reduce crashes, ADOT has established yearly targets based on the current upward or downward trend in crashes. These targets will be reset each year based on the 5-year rolling average of crashes.

Implementation Plan

Potential HSIP Projects

Fiscal year 2018 was the final year of regional apportionments of HSIP funds, which in the past amounted to approximately $500,000 each for SEAGO and SVMPO to program for regional safety projects. Beginning in 2019, ADOT will no longer provide these regional set-asides for safety funds; all agencies will compete statewide for HSIP funding. Spot improvement projects tend to generate low benefit/cost ratios with low fatal and serious injury crashes. To improve the odds of receiving these federal funds and generate projects with the greatest potential to reduce serious injury and fatal crashes, SEAGO and SVMPO should focus on corridor or systemic projects that have a significant number of fatal and serious injury crashes. Systemic projects address a particular crash type or road user for the entire roadway network (e.g., pedestrian crashes or road departure crashes).

ADOT's updated HSIP guidelines include the following requirements for a project to be considered for HSIP funds:

- Minimum benefit/cost ratio of 1.5
- Only fatal and serious injury crashes can be used to calculate benefits
- Minimum project cost of $250,000
- Most recent 5 years of crash data must be used
- Project must address emphasis area(s) in the state SHSP

In 2017, ADOT issued a statewide request for HSIP projects, with approximately $22 million in funding for fiscal years 2019 and 2020. A list of potential HSIP project locations was developed based on corridors with the highest number of fatal crashes, with the number of serious injury crashes as the secondary factor; this was based on ADOT's HSIP process which uses only fatal and serious injury crashes in determining the benefit/cost (B/C) ratio, which is the value used in determining HSIP eligibility. The most recent five years of crash data (2011-2015) was utilized in this analysis. Interstates were excluded from the selection process. Most of the locations incorporate state and US routes, since these are the locations with high number of fatal and serious injury crashes. Several of these state routes also serve as "main streets" in urban areas. Table 6 identifies the list of potential HSIP projects as ranked by the SEAGO TAC.

The region decided to support a SVMPO HSIP application for the Cochise County portion of Charleston Road. This Cochise County project was selected by ADOT and included $624,000 in FY19-20 design and construction funding.

Table 6: SEAGO TAC Ranking of Potential HSIP Projects

SEAGO Ranking	Region	Potential HSIP Corridor	Serious Crashes	Fatal Crashes
N/A	SVMPO	Coronado Dr/Martin Luther King Pkwy/Charleston Rd from Baywood Ln to about 4 miles north of Brunckow Rd	8	5
N/A	SVMPO	SR 90/SR 92, Pine St to Andalusian Way	31	9
1	Graham/Greenlee Counties	US 70/US 191 South, Reay Ln to south of Armory	15	6
2	Graham/Greenlee Counties	US 70/US 191 Northeast, Barney to Old Safford Rd	9	5
3	Graham/Greenlee Counties	US 70 thru San Carlos Apache Tribe boundaries	0	7
4	Santa Cruz County	Business 19/SR 82, Gold Hill Rd to E Ranch Grande	5	4
5	Cochise County	SR 80, Lee Station Rd to NM Border	4	5
6	Graham/Greenlee Counties	SR 78 near New Mexico Border	5	2
7	Graham/Greenlee Counties	US 191 Clifton area	4	2
8	Graham/Greenlee Counties	SR 75/Main St/North Ave/US 70, Virdan Rd to Escomillas Ln	1	2
9	Cochise County	Naco Highway/SR 92/SR 80, to Kings Highway	3	3
10	Santa Cruz County	Calle Toruno/Camino Ramanote/West Frontage, from Circulo Sopori to Camino Vencejo	1	2
11	Cochise County	SR 90 out of Benson, Barrel Cactus Ridge to Kartchner Trail	0	2

In 2018, ADOT issued another request for HSIP projects, with approximately $55 million in funding for fiscal years 2021 and 2022. A new list of potential HSIP project locations was developed with the focus on non-ADOT routes and ADOT routes running through local communities. The latest available crash data (2012-2016) was used in this analysis. Table 7 identifies the list of potential HSIP projects, with those selected for HSIP applications by the SEAGO TAC highlighted in yellow.

Table 7: Potential HSIP Project Ranking by B/C Ratio

Agency	Project	Road	Location	Length (miles)	Countermeasures	Estimated Cost	B/C Ratio
Cochise County	1	Charleston Rd	Tombstone to 4.8 miles S of Tombstone	4.8	Rumble strips	$253,000	34.3
	2	Purdy Rd/Arizona St	Naco Hwy to Hazzard St	6.8	Rumble strips	$340,000	12.8
	3	Double Adobe Rd	SR 80 to US 191	13.9	Rumble strips	$648,000	6.7
	4	Frontier Rd	Davis Rd to Double Adobe Rd	9.2	Rumble strips	$444,000	9.8
	5	Sanders/Adams/ Jefferson/Truman	SR 82 to SR 82	5.4	Rumble strips	$279,000	15.5
	6	Barataria Blvd	Moson Rd to Ranch Rd	1.0	Rumble strips	$88,000	48.2
	7	Cascabel Rd	E3 Links Rd to Pomerene Rd	13.5	Rumble strips	$630,000	6.9
	8	Projects 1-7 combined		54.6	Rumble strips	$2,412,000	14.3
Santa Cruz County	9	Pendleton Dr	Camino Olympia to Julie Ann Rd	12.5	Rumble strips	$587,000	7.4
	10	Calle Toruno/ Camino Ramanote/ Corrida de Toros	W Frontage to End of Pavement	6.0	Rumble strips	$305,000	14.2
	11	Harshaw Rd	Red Rock Dr to near Harshaw Creek Rd (S)	4.6	Rumble strips	$253,000	17.1
	12	Projects 9-11 combined		23.1	Rumble strips	$1,061,000	12.3
Graham County	13	US 191/20th St/Lone Star Intersection	ADOT/Graham Co/Safford		Pedestrian Hybrid Beacon (HAWK)	$330,000	16.1
	14	Cottonwood Wash Rd	1200 South to Saguaro Dr	3.5	Rumble strips	$197,000	22.0
	15	Golf Course Rd	Hoopes Ave to Elizabeth Ann Dr	1.6	Rumble strips	$114,000	37.5
	16	Projects 14-15 combined		5.1	Rumble strips	$281,000	30.9
Greenlee County/ Duncan/ADOT	17	SR 75 Duncan	Old Virden/Fairgrounds Rd to Family Dollar Store	0.8	Sidewalk both sides, high visibility crosswalk at Old Virden/Fairgrounds	$312,000	31.4
	18	SR 75	Virden Hwy to US 191	17.4	Rumble strips	$799,000	16.4
Safford/ADOT	19	US 70/just west of 11th Ave			Pedestrian Hybrid Beacon (HAWK)	$330,000	16.1
Sierra Vista	20	Coronado Dr/MLK Pkwy	Laurel Ln to SR 90	2.6	To be determined with City (signal improvements, speed feedback signs, etc.)	$721,000	24.3

In July 2018 ADOT announced FY 22-23 project awards, with Cochise County, Santa Cruz County, and Graham County projects being funded for $4,410,000 in design and construction. In addition, Sierra Vista will receive $939,000 for Phase 1 funding for a systemic adaptive signal control project.

ADOT plans to issue another request for HSIP applications in early 2019, with approximately $80 million in funding for fiscal years 2023 and 2024. It is highly recommended that SEAGO and SVMPO plan on updating their crash data in late 2018 to include the 2017 crashes to identify high priority HSIP corridors for project proposals.

Implementing an Effective SHSP

An effective strategic transportation safety plan is feasible, living, and regularly updated and embraced by safety stakeholders. Figure 45 highlights FHWA's eight elements of a SHSP Implementation Process Model.

Figure 45: SHSP Implementation Process Model, FHWA

These elements and the following components are key factors in the Implementation Plan:

- Document measurable objectives and performance measures for each emphasis area
- Determine the data requirements for each performance measure
- Identify the required resources and action steps for implementing each countermeasure
- Identify a process to track countermeasure and action step implementation
- Integrate the SHSP with other transportation safety plans
- Market SHSP through branding, news events, web sites, and newsletters
- Track regularly the extent to which emphasis area strategies are being implemented

Recommendations to implement, evaluate, and update the SHSP and to encourage stakeholder participation in implementing the plan include:

- At the September TAC meeting, review the SHSP and updated crash data
- Develop HSIP applications based on the review of updated crash data, and review the applications during the March TAC meeting
- Invite law enforcement to participate in a TAC meeting to discuss safety issues and any new crash patterns, especially fatal crashes
- Keep key advocacy groups, such as the Cochise Bicycle Advocates, involved by inviting them to participate in safety meetings and TAC meetings
- Develop a Regional Traffic Safety Conferences to promote traffic safety for all stakeholders
- Update the SHSP on a regular cycle (e.g., every 3 to 5 years)
- Update crash data annually
- Update intersection and segment crash analysis annually to determine high priority locations
- Collect traffic volumes to generate updated crash rates and performance measures
- Include safety recommendations and projects in regional and local agency transportation plans
- Utilize the ADOT RSA Program to address high risk locations
- Identify, apply for and construct awarded prioritized HSIP projects

Updated crash data for the previous year is typically made available by ADOT in June (e.g., crash data for all of 2017 should be available in June 2018 for updating regional crash data).

Appendices

Appendix A: Public Involvement and Social Pinpoint Mapping
Appendix B: Intersection Ranking Tables

Southeastern Arizona Metropolitan Planning Organization (SEAGO)

and

Sierra Vista Metropolitan Planning Organization (SVMPO)

Comprehensive Strategic Highway Safety Plan

Public Outreach Report

Prepared by Gunn Communications, Inc.

On behalf of Amec Foster Wheeler

CONTENTS

SEAGO/SVMPO
Regional Strategic Highway Safety Plan
Public Involvement Report

The following is the public involvement report for the Southeastern Arizona and Sierra Vista Strategic Highway Safety Plan.

1. OVERVIEW

A public outreach program was conducted June through November of 2016 to support the data collection phase for the Southeastern Arizona Metropolitan Planning Organization (SEAGO) and Sierra Vista Metropolitan Planning Organization (SVMPO) comprehensive Strategic Highway Safety Plan (SHSP) for the Southeastern Region. The goal of this program is to better understand the locations where community members feel unsafe traveling on local roadways in the region, the unsafe behaviors residents are observing on roadways and factors they perceive are causing crashes, as well as what they believe is most important in reducing crashes. This input will be used to help identify action areas the community should focus on to improve transportation safety.

Approximately 346 community members participated in outreach activities. Many public meeting attendees completed online safety surveys. Outreach activities included:

- An online safety survey conducted in June through November, 2016 (327 participants)
- A public meeting in Sierra Vista on July 13, 2016 (11 participants)
- A public meeting in Safford on October 27, 2016 (8 participants)

More details about these activities are provided below.

1.1 Key Issues Identified

- More than half of residents generally believe the roadways in the region are safe for drivers, motorcyclists and pedestrians. However, less than half believe roads are safe for other more vulnerable users, such as bicyclists and the elderly or disabled.
- Distracted driving – primarily cell phone usage – is viewed as a primary factor in crashes. Other key factors cited include: speeding, failure to signal a turn, and tailgating/following too closely.
- Community members believe updating laws to ban texting and additional enforcement of existing laws are the best strategies to make the roads safer.

2. ONLINE SURVEY

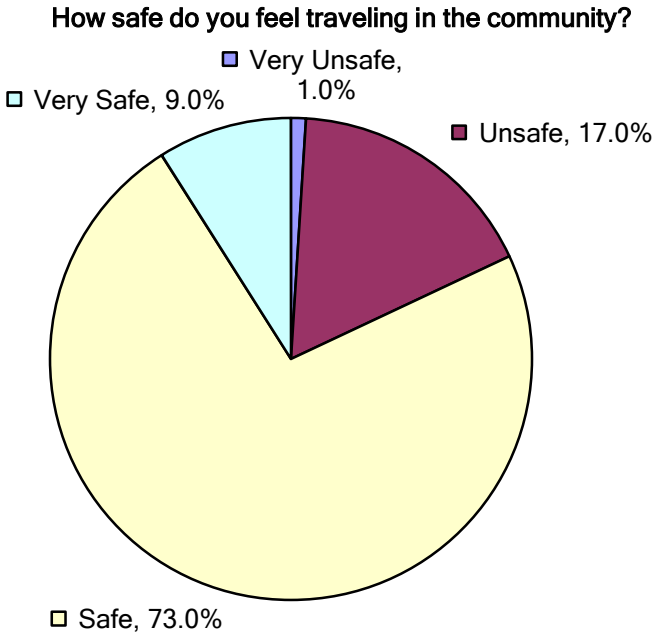
An online survey of community members in Southeastern Arizona, including Cochise, Graham, Greenlee, and Santa Cruz counties, was conducted to better understand the unsafe behaviors observed on roadways, perceived unsafe locations to travel in the area by various modes.

The survey was conducted between June 15 and November 30, 2016. A total of 327 responses were received. Survey responses are summarized in this report. A copy of the survey questions appears in Appendix A.

2.1 Perception of Safety Traveling on Regional Roads

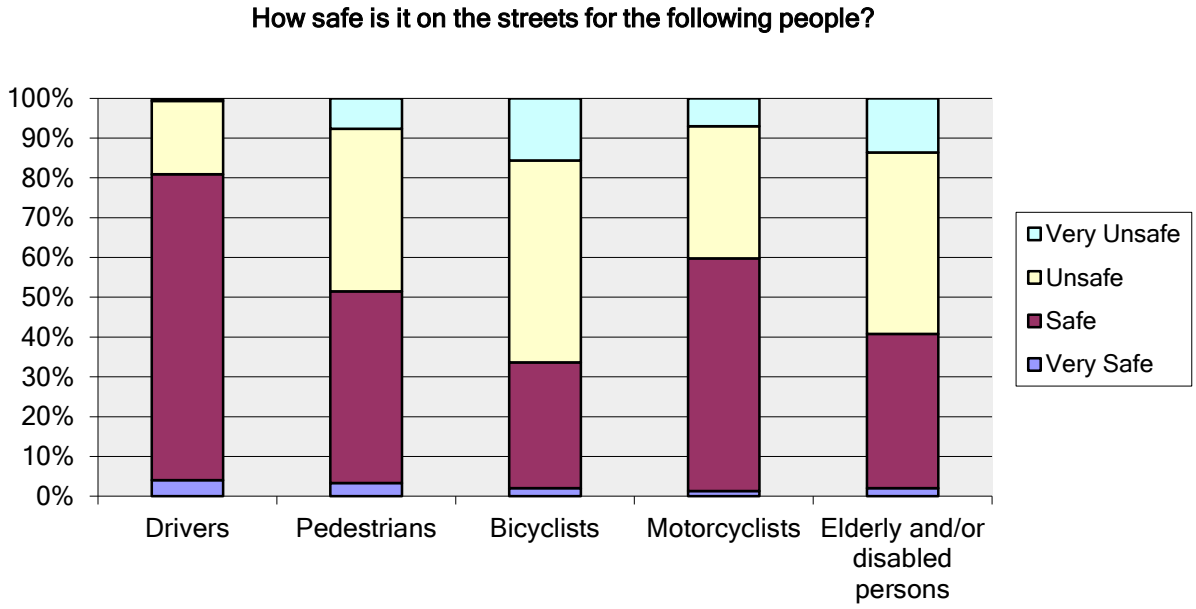
Residents generally feel safe traveling in the region, with 82% indicating they feel safe or very safe doing so, and 18% indicating they feel unsafe or very unsafe. (See Figure 1.)

Figure 1. Perception of Safety in Region



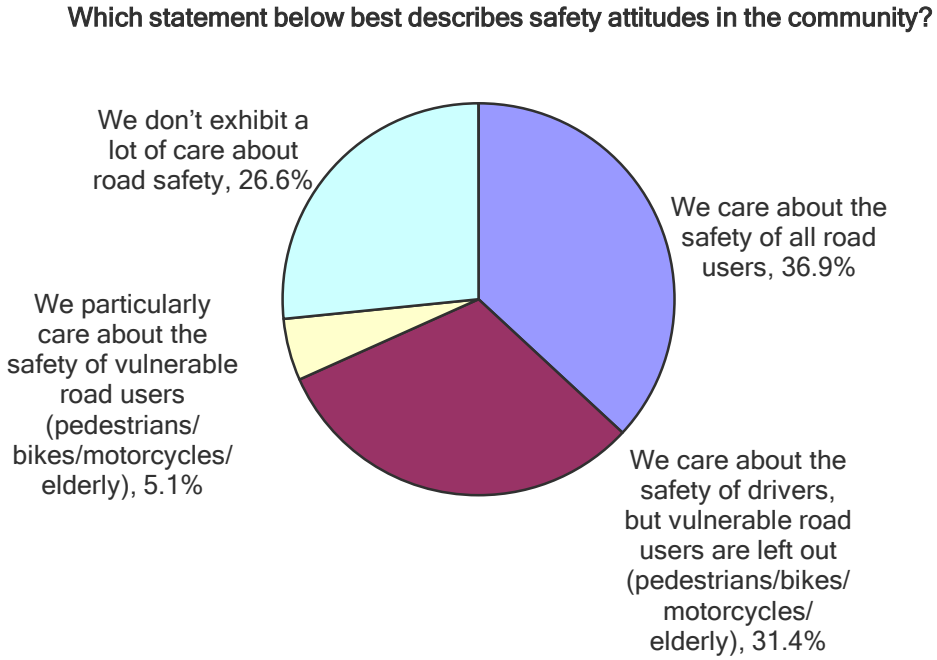
Residents believe the streets are relatively safe for drivers and motorcyclists, with 81% of respondents indicating they believe the roads are safe or very safe for drivers and 60% of respondents indicating they believe the roads are safe or very safe for motorcyclists. However, residents don't believe roads are safe for more vulnerable users, including bicyclists (66% unsafe/very unsafe) and the elderly or disabled (59% unsafe/very unsafe. Residents are split on whether pedestrians are safe or unsafe on local roads (52% said they are safe/very safe and 48% said they are unsafe/very unsafe). (See Figure 2.)

Figure 2. Perception of Safety by User Type



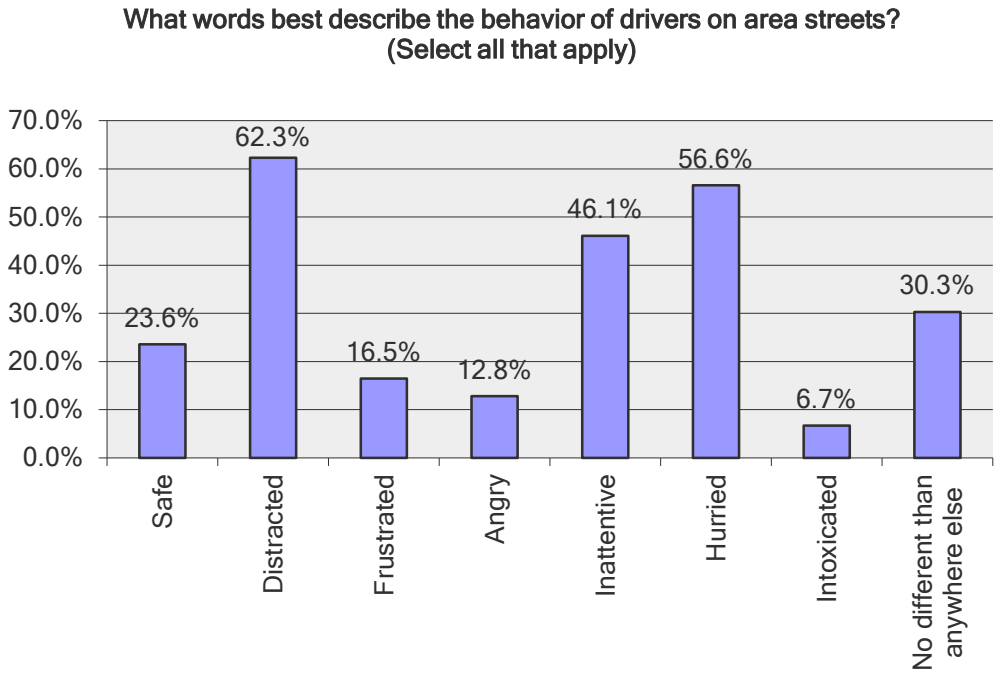
Respondents' perception about safety attitudes in the community vary. Care about the safety of all road users, when combined with care about the safety of vulnerable road users totals approximately 42%. However, 31% believe that the community only cares about the safety of drivers, and 27% believe the community does not exhibit a lot of care about road safety. (See Figure 3.)

Figure 3. Perception of Safety Attitudes in Community



In asking respondents about their perception of drivers' behaviors, responses selected by more than half included distracted driving (62%) and hurried driving (57%). Only 24% of respondents selected "safe" as the behavior of drivers on area streets. (See Figure 4.)

Figure 4. Perception of Drivers' Behaviors



Other descriptions of driver behavior are noted below. Comments are provided verbatim as specified in "other" including:

- Parking illegally and "visitng" in the middle of the street.
- Drivers speed down residential streets while children are out playing, this could cause a very serious accident
- Wreck less, careless
- Trying to be "cool" and speed down streets on motorcycles, big trucks, and hot rod cars.
- driving to fast. kids play and there is no bus stop sign
- Carelessness
- See earlier comments.
- most seem uneducated on driving and inconsiderate
- Question too generalized
- They know there is little enforcement so they do more illegal things.
- Too slow. People drive under the speed limit
- Border patrol agents drive too fast

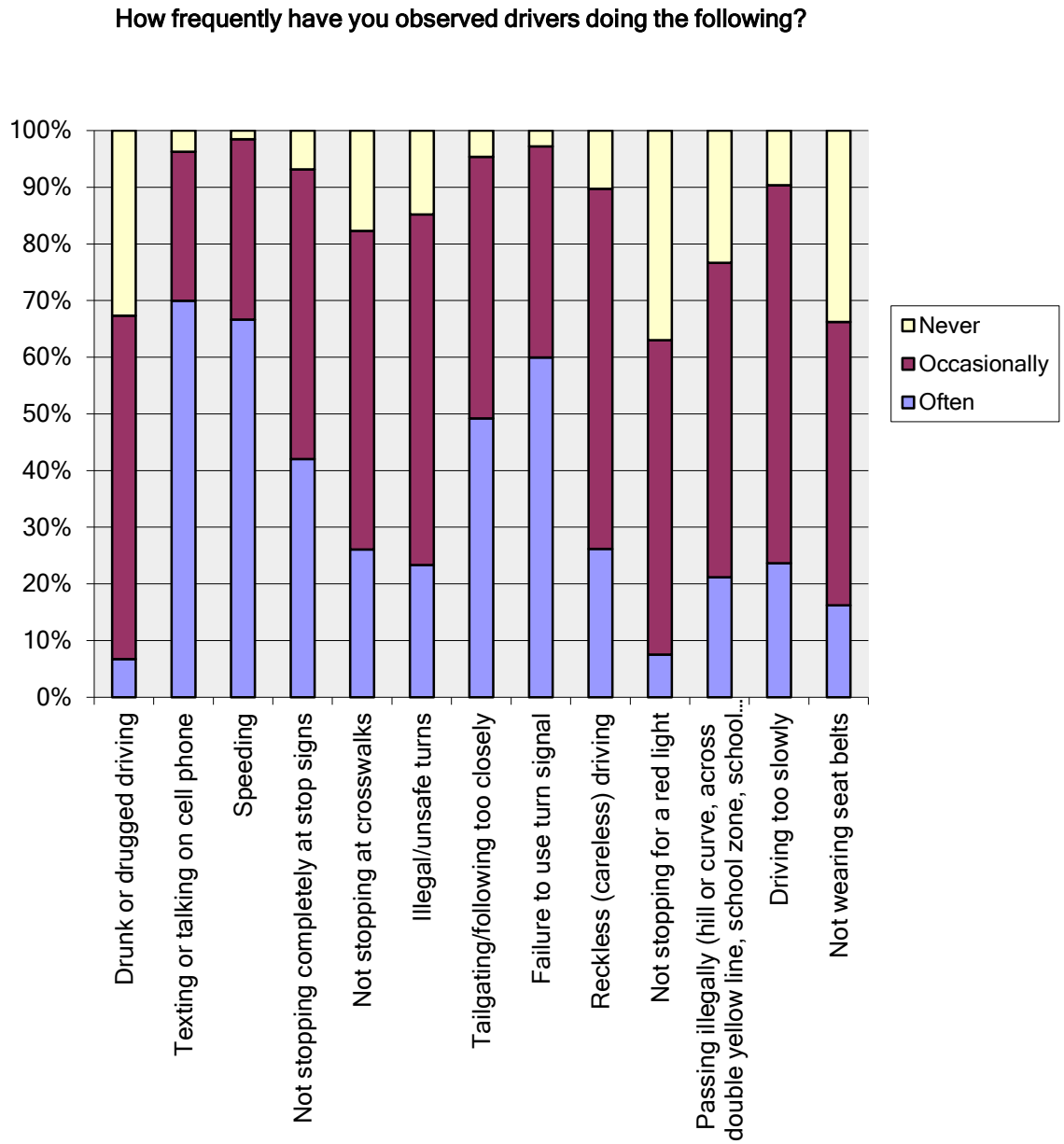
- Pedestrians and bicyclists think they own the road. They don't care that there are cars driving. They just go where they want without looking for cars before crossing roads. And bicyclists think it's ok to ride in the middle of a lane and slow down traffic.
- Slow
- Ignorant - Nobody seems to know the rules of the road anymore.
- Kids without seatbelts
- Except at 'rush hour' good.
- lack knowledge of traffic laws
- Where is the community? Rural, state highways, Interstate?

2.2 Unsafe Behaviors Observed

As shown in Figure 5, residents indicated they observed the following unsafe behaviors most frequently:

- Speeding (67% often and 32% occasionally observed)
- Failure to signal a turn (60% often and 37% occasionally observed)
- Texting or talking on cell phone (70% often and 26% occasionally observed)
- Tailgating/Following too Closely (49% often and 46% occasionally observed)

Figure 5. Unsafe Behaviors Observed



2.3 Other Unsafe Behaviors

Other unsafe behaviors are noted below. Comments are provided verbatim as specified in "other."

Poor Driving Habits (5)

- New Mexico drivers act like the world is coming to an end, they're the ones who drive like mad men.
- Not dimming head lights.
- Not stopping at the correct location at the railroad crossing by Walmart.
- Not turning into the correct lane.
- Stopping in the middle of the highway to make a right turn. It's mostly snowbirds turning into their RV parks.

Speeding (5)

- I live in Shannon hill Clifton az. and bus stop area they drive to fast. Maybe speed bumps.
- Lots of tailgating, and speeding.
- Speeding and tailgated on Hwy 92 between Ramsey Canyon road and BST.
- Speeding down Park Ave on the East side of Clifton trying to beat the train! I have a niece and nephew who walk home from the bus stop at legion. Also some of the neighborhood children.
- What does to slow mean? Speed limits are the maximum not the minimum or a suggested. Yes, some do drive slower than others.

Stop Lights/Signals (5)

- Going at red before the light turns green.
- Need stop light by Conoco in Morenci. Dangerous intersection.
- Not stopping completely making a right turn on a red light. Also. In same situation failing to yield to bikers in bike trails going through on a green light.
- On BST THERE ARE GREEN LIGHTS FOR LEFT HAND TURNS WHICH PUTS BICYCLES AND PEDESTRANS AT RISK. THE WALK INDICATOR CAN BE ON AND VEHICALS CAN TURN LEFT. THIS PUTS CROSSWAKS UNSAFE FOR CROSSERS. I HAVE WITNESSED SEVERAL CAR TURNING IN A HURRY, NOT SEEING PEDESTRIANS, AND TRYING TO BEAT ON COMING TRAFFIC. SOLUTION: HAVE STOPLIGHTS FOR LEFT HAND TURN. ALSO, WARNINGS FOR RIGHT HAND TURNS ON RED LIGHTS TO CHECK THE BIKE PATHS FOR CROSSERS.
- Too much distance between cars stopped at lights.

Aggressive Driving (2)

- Border patrol uses tailgating w/high beams as intimidation tactic.
- Driving aggressively.

Bicycling Safety (2)

- Bicycles running stop signs – Daily.
- Not providing three feet when passing bicyclist.

Distracted Driving (2)

- Distracted (kids, lost, etc.).
- Eating while driving.

Improper Signaling (2)

- No turn signal use on 4th St. at 4th Lane--2-lane merge.
- U-turns in school zones; not using turn signal to change lanes.

Parking (2)

- Many people park in designated handicapped spots without any proper insignia.
- Parking in handicapped parking spaces and near curbs not designed for parking! Letting children out or picking children up in places not designated as school drop off zones and blocking traffic!

Passing (2)

- Passing in the turn lane when a vehicle is turning right.
- Passing on the right on freeway. Cruising on the left.

Phone (2)

- The main concern is the texting or on the cell phone while driving.
- Using their phone often.

Roadway Configuration/Geometry (2)

- Westbound I10 exit at Mescal - Can't see northbound traffic because of fence over freeway.
- When 4th street goes from one two to one lanes people still drive as two lanes. This is very dangerous! Wish something could be done about this.

Other

- For the most part I feel safe driving in Safford.
- The majority of the things happen at shift change when law enforcement is patrolling the infractions are fewer.
- There are a lot of people who drive under the speed limit in the left lane, forcing people to pass them on the right.

2.4 Primary Cause of Crashes

In this open-ended question, respondents indicated the following factors are the most common cause of crashes in the region. The most common response was distracted driving, primarily due to cell phone use or texting. Many respondents indicated a combination of factors, such as speeding along with careless driving, contributes to most crashes.

- Distracted Driving/Inattention/Cell Phone Usage (145 comments)
- Speeding (46 responses)
- Hurried/Careless Driving (14 responses)
- Impaired Driving (9 responses)
- Congested Intersections/Population Increase (6 responses)
- Poor Roads/Configurations/Turn Lanes (5 responses)
- Not Obeying Traffic Laws (4 responses)
- Signals/Signage/Traffic Control (4 responses)
- Don't Know (4 responses)
- Weather (4 responses)
- Failure to Stop/Yield at Intersections (3 responses)
- Area is safe (3 responses)
- Lack of Driver Education (2 responses)
- Elderly Drivers (1 response)
- Lack of Enforcement (1 response)
- Roadway Lighting (1 response)
- Inexperienced Drivers (1 response)
- Jaywalkers (1 response)

2.5 What Needs to be Changed to Make it Safer?

The top response to this open-ended question was to update laws, particularly regarding cell phone use, to improve safety in the region. This response was followed by additional enforcement, and education and awareness. Some respondents did not know or believed the region was currently safe. Many of the remaining responses focused on improvements to existing/building additional roads, signals, sidewalks, bike lanes, and lighting.

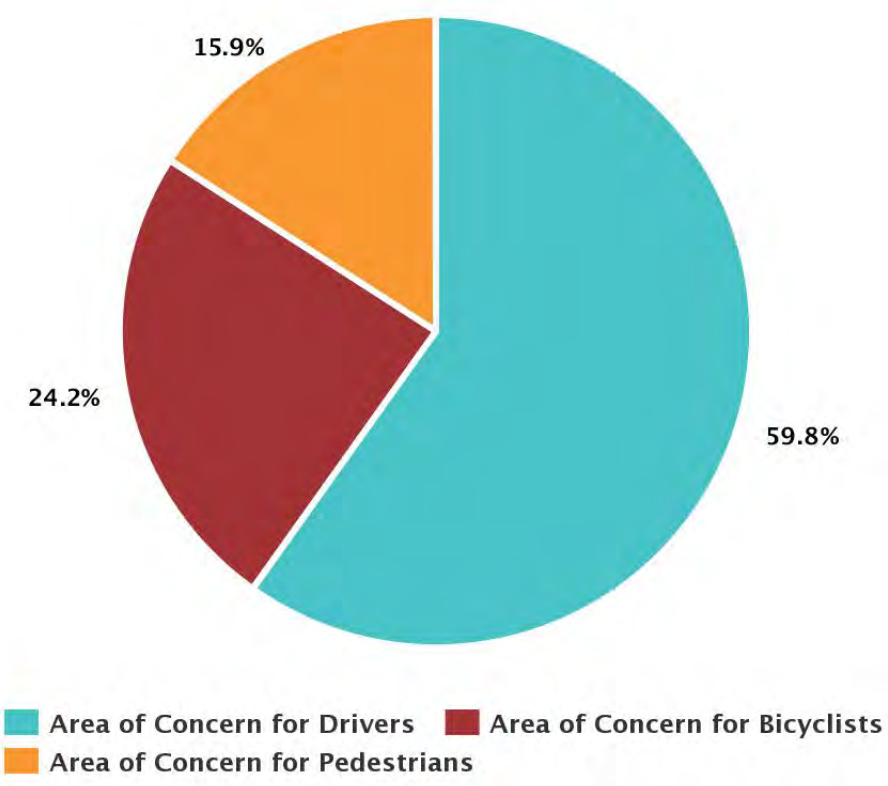
- Update Laws/Texting (e.g., driver license renewal, ban on cell phone use/texting) (63 responses)
- Additional Enforcement (49 responses)
- Education/Awareness (28 responses)
- Don't Know/Currently Safe (21 responses)
- Improve Road Conditions/Pave/Widen Roads (17 responses)
- New Signals/Signage (13 responses)
- More sidewalks/crosswalks/safer curb cuts (12 responses)

- Additional Roads/Highway Lanes (5 responses)
- Update the Roadway Configuration (5 responses)
- New Bike Lanes/No Bikes on Highways (4 responses)
- Install Speed Bumps (2 responses)
- Reduce Speed Limits (2 responses)
- Improve Street Lighting (1 response)
- Increase Speed Limits (1 response)
- More Public Transportation (1 response)
- Prioritize Traffic Safety (1 response)
- Recording technology for drivers (1 response)

2.6 Unsafe Locations to Drive, Bicycle or Walk

Respondents were able to link to an online map of the SEAGO/SVMPO region and identify specific locations on the map where they currently feel unsafe driving, walking, or riding a bicycle, along with a comment for each location. A total of 131 unsafe locations were identified. (See Figure 6.) A map and listing of individual responses is included in Appendix B.

Figure 6. Unsafe Locations Identified by Mode



Drivers

A total of 79 unsafe locations for cars were identified. Comments varied on the reasons for lack of safety and included: speeding, failure to stop for school buses, failure to yield to emergency vehicles, speed limits too high, unsafe bicyclist practices, drivers stopping on railroad tracks, roadway geometry, driving under the speed limit, failure to stop at red lights, wrong-way driving on exit, poor pavement conditions, pedestrians on roadway, inadequate passing lanes, the need for additional signals, visibility/obstructions, traffic volume, and distracted driving.

Pedestrians

A total of 21 unsafe locations for pedestrians were identified. Most comments were related to lack of crosswalks/shoulder and unsafe driver behaviors (e.g., failure to yield to pedestrians, speeding, etc.) Some comments were related to poor visibility for drivers, walking along the highway and railroad bridge, poor lighting conditions, and unsafe curb cuts.

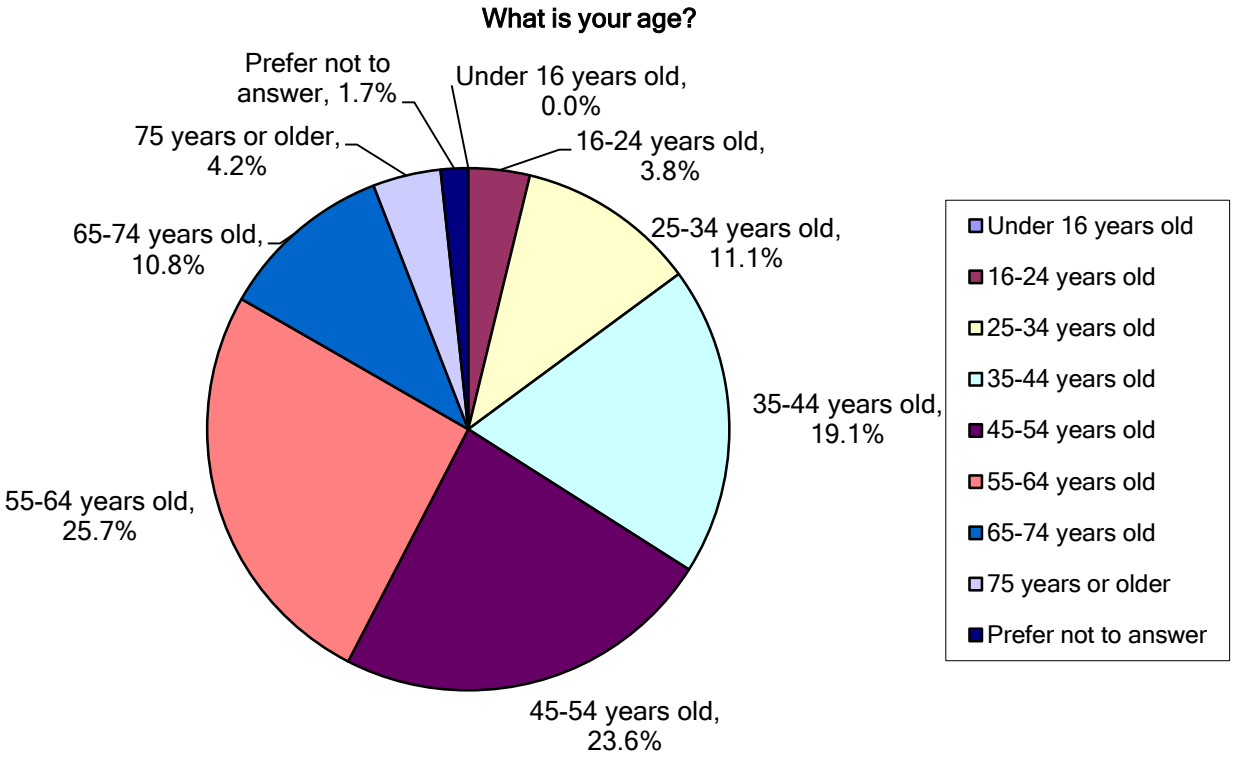
Bicyclists

A total of 31 unsafe locations for bicyclists were identified. Most comments were related to the lack of bike lanes/facilities or shoulders and the desire for dedicated bike lanes. Some comments related to bicyclists riding two abreast, lack of road maintenance, driver habits such as speeding and making unsafe turns, traffic volume, and suggestions for signage instructing drivers to be aware of bicycle areas.

2.7 Respondent Demographics

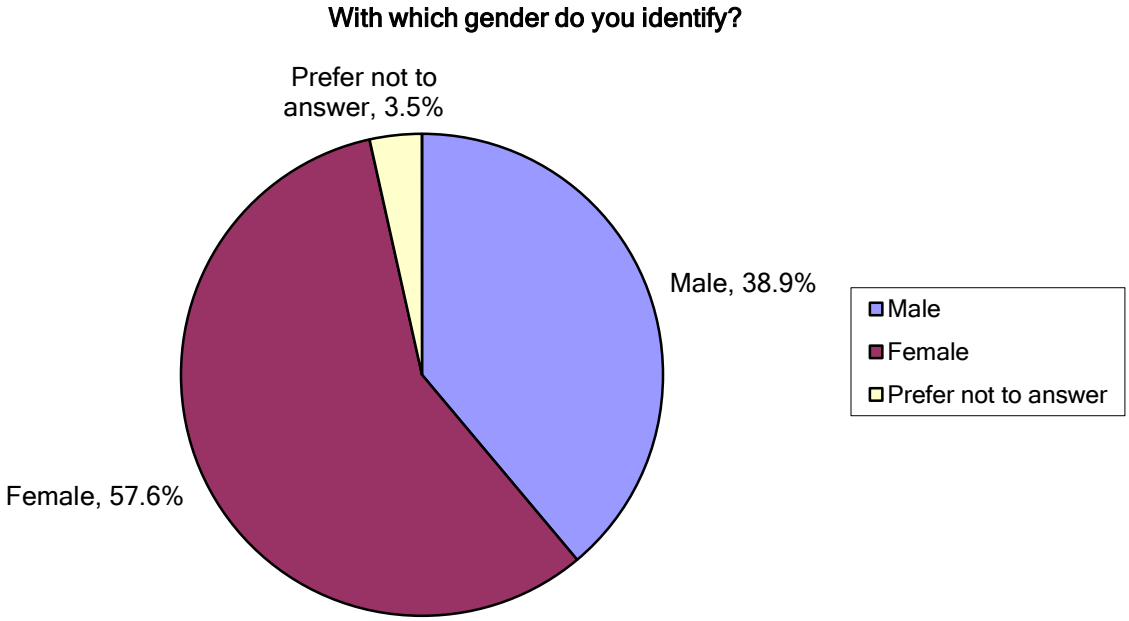
Responses to demographic questions were optional. The majority of respondents (68 %) reported that they were between 35 and 64 years old. Approximately 15% were 34 years old or younger, and 15% were 65 years old or older. (See Figure 7.)

Figure 7. Respondent Age



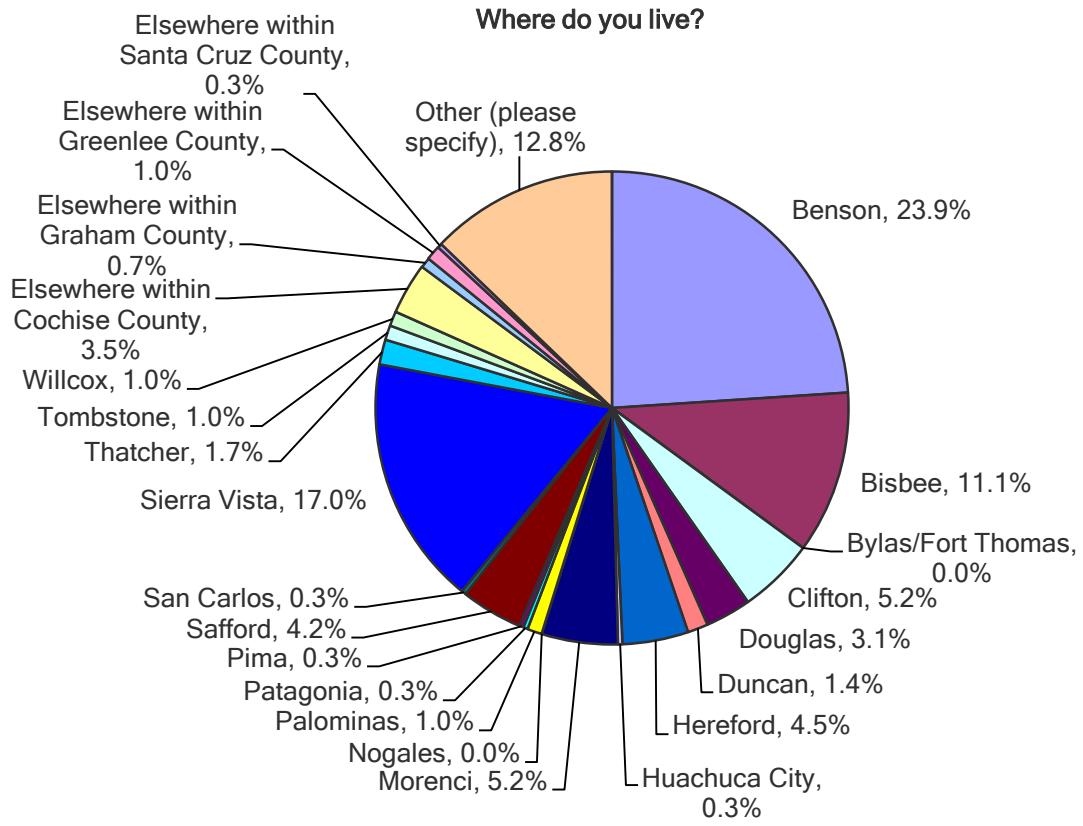
The majority of respondents (58%) identified themselves as female and 39% identified themselves as male. Approximately 4% chose not to respond. (See Figure 8.)

Figure 8. Respondent Gender



A chart showing locations where respondents reported that they live is shown in Figure 9.

Figure 9. Respondent Location

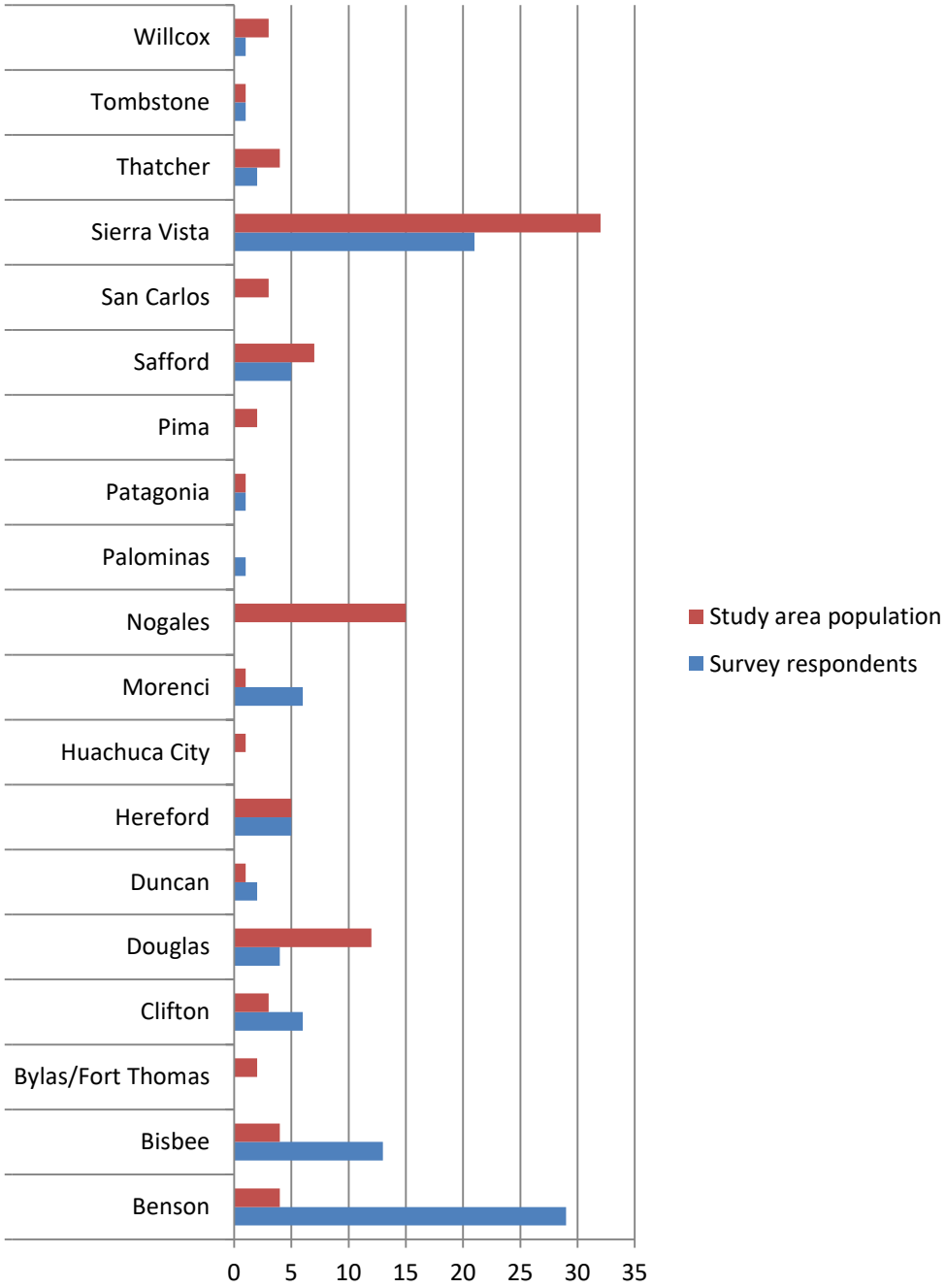


"Other" locations provided included:

- Cascabel
- Cascabel rd
- Catalina but travel in Graham, Greenlee and Cochise counties extensively
- Double Adobe
- Have homes in Patagonia and Bisbee
- J-6
- K
- Marana
- Mescal (2 responses)
- Naco (2 responses)
- One mile south of SV city limits.
- Oro Valley
- Sahuarita. Own land in county and serve on board. Travel extensively in Cochise County.
- Sheldon
- St David
- St. David (11 responses)
- The Clifton/Morenci area
- Tucson (3 responses)
- Vail (3 responses)
- We have a house in St David & Benson work in St David.
- York Valley, Greenlee County

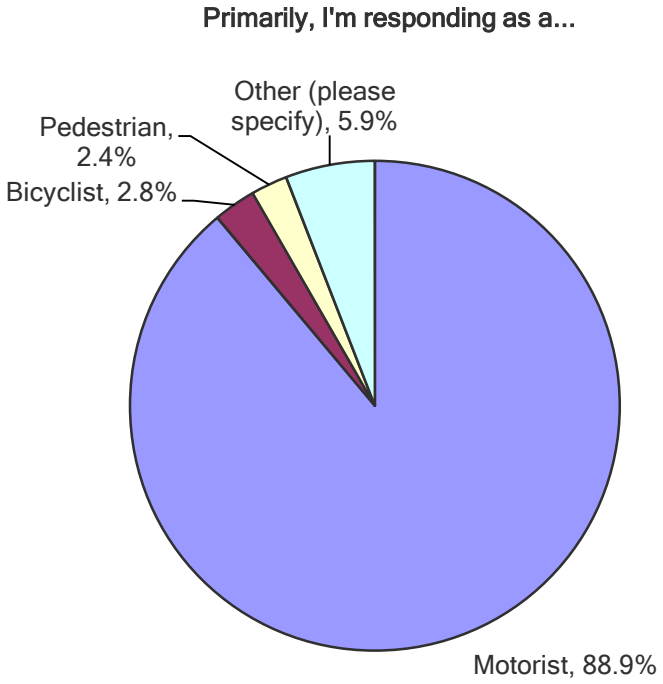
In comparing a respondent's city to the population of the survey area, some locations were over- and under-represented. (See Figure 10.) Cities reported with at least double the responses compared to the population included: Benson, Bisbee, Clifton, Duncan, and Morenci. Cities reported with less than half the responses compared to the population included: Bylas/Fort Thomas, Douglas, Huachuca City, Nogales, Pima, San Carlos, Thatcher, and Willcox. Cities with responses most closely matching the population included: Hereford, Palominas, Patagonia, Safford, Sierra Vista, and Tombstone.

Figure 10. Percent Study Area Population vs. Survey Respondents



The vast majority of respondents identified themselves as motorists (89%). (See Figure 11.)

Figure 11. Type of Traveler



"Other" responses are provided verbatim and included:

- All the above
- Citizen
- Citizen biker pedestrian motorist
- Concerned Resident of Clifton, AZ
- Driver (2 responses)
- Driving a car
- Elderly driver
- Human
- I drive and walk about 3 miles a day also
- Motorist who has a disabled child and is limited on parking availability due to irresponsible motorists who abuse the handicapped parking spots. Concerned mother who can't let her older children play out front because of irresponsible motorists flying up and down her street.
- Motorist/pedestrian for my patients
- Property Owner and TAXPAYER
- Resident
- Runner using the roads and paths
- Tribal Transit Director
- Vehicle driver

3. PUBLIC MEETINGS

3.1 Overview

Workshops were held in two locations to accommodate participants in the region. The workshops included the same information and format. Workshops included:

- Sierra Vista: July 13, 2016, 2:30-4:30 p.m. at the Sierra Vista Public Library, 2600 E. Tacoma St., Sierra Vista
- Safford: October 27, 2016, 2:30-4:30 p.m. at the Safford City-Graham County Library, 808 S. 7th Ave., Safford

The purpose of the workshops was to share information about the purpose of the Strategic Highway Safety Plan and regional crash data, and seek the community's input on the locations they feel unsafe traveling in the region and their priorities for reducing crashes. Workshop agendas and meeting notes are included in Appendix C.

3.2 Workshop Format

Meetings were held from mid-day to accommodate those traveling. The rooms were set up with participants facing each other at tables to encourage engagement. A table was also set up at the back of the room for drinks and cookies. Maps of the region were posted on the wall with an overlay for people to mark unsafe road, bicycle, and pedestrian locations. A microphone will be available at the front of the room and if possible a second wireless microphone for use in taking questions.

As people arrived, they were greeted and offered refreshments and given assistance to set up Poll Everywhere on their phones. Attendees were given a nametag with their first names. Sign-in sheets were provided each table to avoid creating a barrier at the front door.

Highlights of workshop agenda topics included:

- Welcome: Workshop purpose and introductions
- What is an SHSP?
- Survey/Mapping Tool: Unsafe behaviors and causes
- Data Analysis: Crash data summary and locations
- SHSP Vision and Goal
- Next Steps: Online survey and schedule

4. PUBLIC OUTREACH NOTIFICATION

The following methods were used to notify residents about the public meetings and online survey:

- Electronic flyer and survey opportunity – emailed to 176 subscribers in the region on 6/28/16
- Sierra Vista meeting invitation and survey information – emailed to 169 subscribers on 7/5/16
- Flyer and survey information – distributed to SEAGO Technical Advisory Committee and local agencies (mid-July)
- Follow up flyer/survey information email – emailed to 13 Sierra Vista attendees for extended distribution opportunities on 7/19/16
- News article including a request to participate in the survey – provided for distribution from SEAGO to local media in mid-August
- "Meeting-in-a-Box" PowerPoint and associated tools – provided to TAC Members to use to make presentations to their local community groups (mid-August)
- News article including an invitation to the Safford meeting and survey participation request – provided to SEAGO for distribution to local media (mid-September)
- Safford meeting invitation, including survey information – emailed to 204 subscribers in the region on 10/17/16
- A link to the survey was posted on the SEAGO website, and other local websites

APPENDICES

Appendix A: Online Survey Questions

Appendix B: Locations Identified

Appendix C: Workshop Agendas and Meeting Notes

- Agenda: July 13, 2016, workshop in Sierra Vista
- Notes: July 13, 2016, workshop in Sierra Vista
- Agenda: October 27, 2016, workshop in Safford
- Notes: October 27, 2016, workshop in Safford

Appendix A: Online Survey Questions

How frequently have you observed drivers doing the following? (Scale - Never, Occasionally, Often)

- Drunk or drugged driving
- Texting or talking on cell phone
- Speeding
- Not stopping completely at stop signs
- Not stopping at crosswalks
- Not yielding to other cars, bicycles and pedestrians
- Speeding or passing in school zones
- Illegal/unsafe turns
- Tailgating/following too closely
- Failure to use turn signal
- Reckless (careless) driving
- Not stopping for a red light
- Passing illegally hill or curve, across double yellow line, school zone, school bus)
- Driving too slowly
- Not wearing seat belts
- Other:

How safe is it on the streets for the following? (Very Unsafe, Unsafe, Safe, Very Safe)

- Drivers
- Pedestrians
- Bicyclists
- Motorcyclists
- Elderly and/or disabled persons

How safe do you feel traveling in the community?

- Very Unsafe
- Unsafe
- Safe
- Very Safe

What words best describe the behavior of drivers on area streets? (Select all that apply)

- Safe
- Distracted
- Frustrated
- Angry
- Inattentive
- Hurried
- Intoxicated
- No different than anywhere else
- Other (please specify)

Which statement below best describes safety attitudes in the community?

- We care about the safety of all road users.
- We care about the safety of drivers, but vulnerable road users are left out (pets/bikes/motorcycles/elderly).
- We particularly care about the safety of vulnerable road users (pets/bikes/motorcycles/elderly).
- We don't exhibit a lot of care about road safety.

What do you think is the primary cause of crashes in the area? (Open-ended)

What do you think needs to be changed to make it safer to travel? (Open-ended)

On the following map, please identify locations where it is unsafe to drive, ride a bicycle or walk.

Demographics:

Where do you live?

- Benson
- Bisbee
- Bylas/Fort Thomas
- Clifton
- Douglas
- Duncan
- Hereford
- Huachuca City
- Morenci
- Nogales
- Palominas
- Patagonia
- Pima
- Safford
- San Carlos
- Sierra Vista
- Thatcher
- Tombstone
- Willcox
- Elsewhere within Cochise County
- Elsewhere within Graham County
- Elsewhere within Greenlee County
- Elsewhere within Santa Cruz County
- Other (please specify)

Primarily, I'm responding as a...

- Motorist
- Bicyclist
- Pedestrian
- Other (please specify)

Age:

- Under 16 years old
- 16-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65-74 years old
- 75 years or older
- Prefer not to answer

Gender:

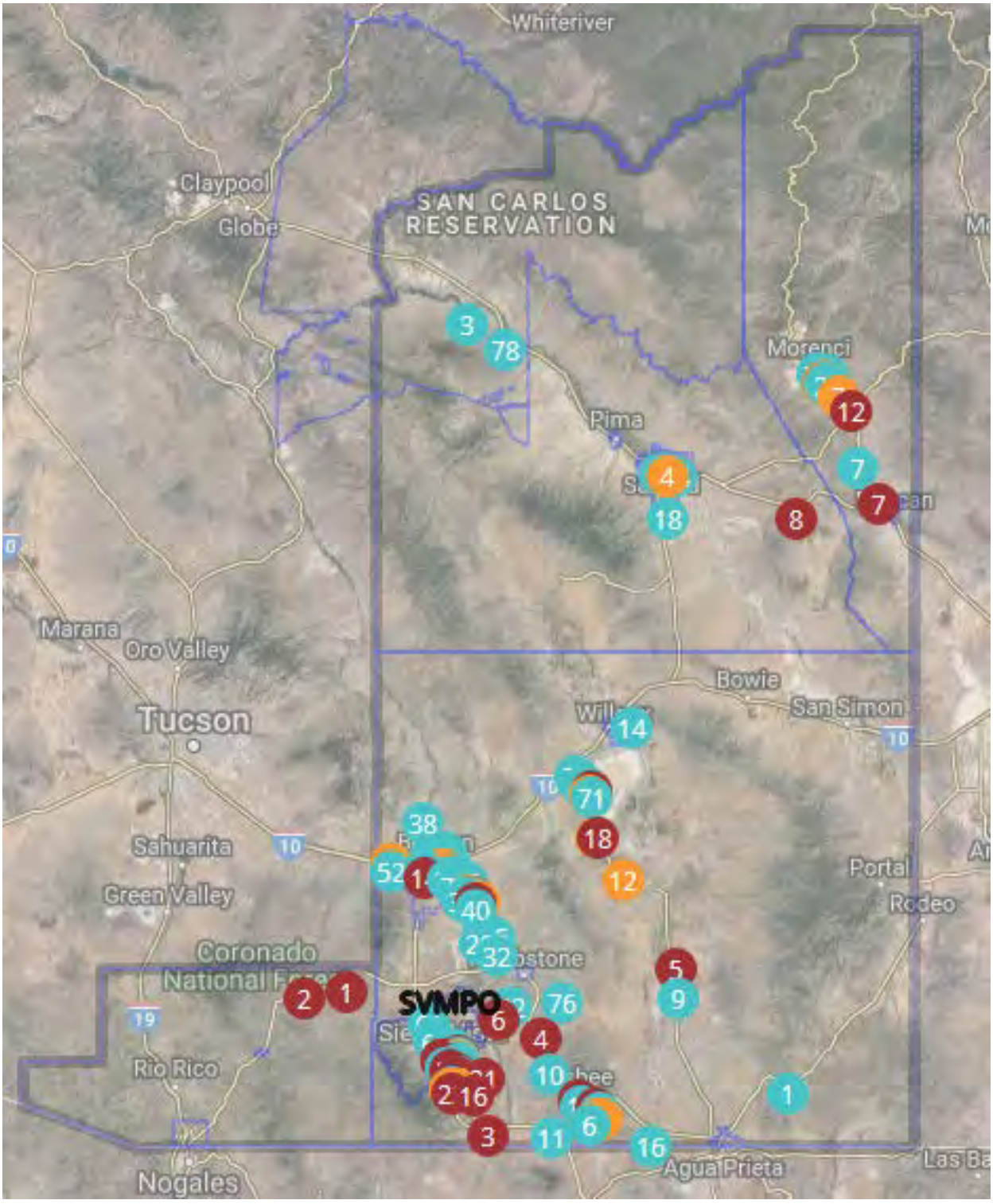
- Male
- Female
- Prefer not to answer

If you'd like to receive updates regarding THIS PROJECT ONLY please provide your contact information. Otherwise, skip this question.

- Name
- Organization (if applies)
- Email Address

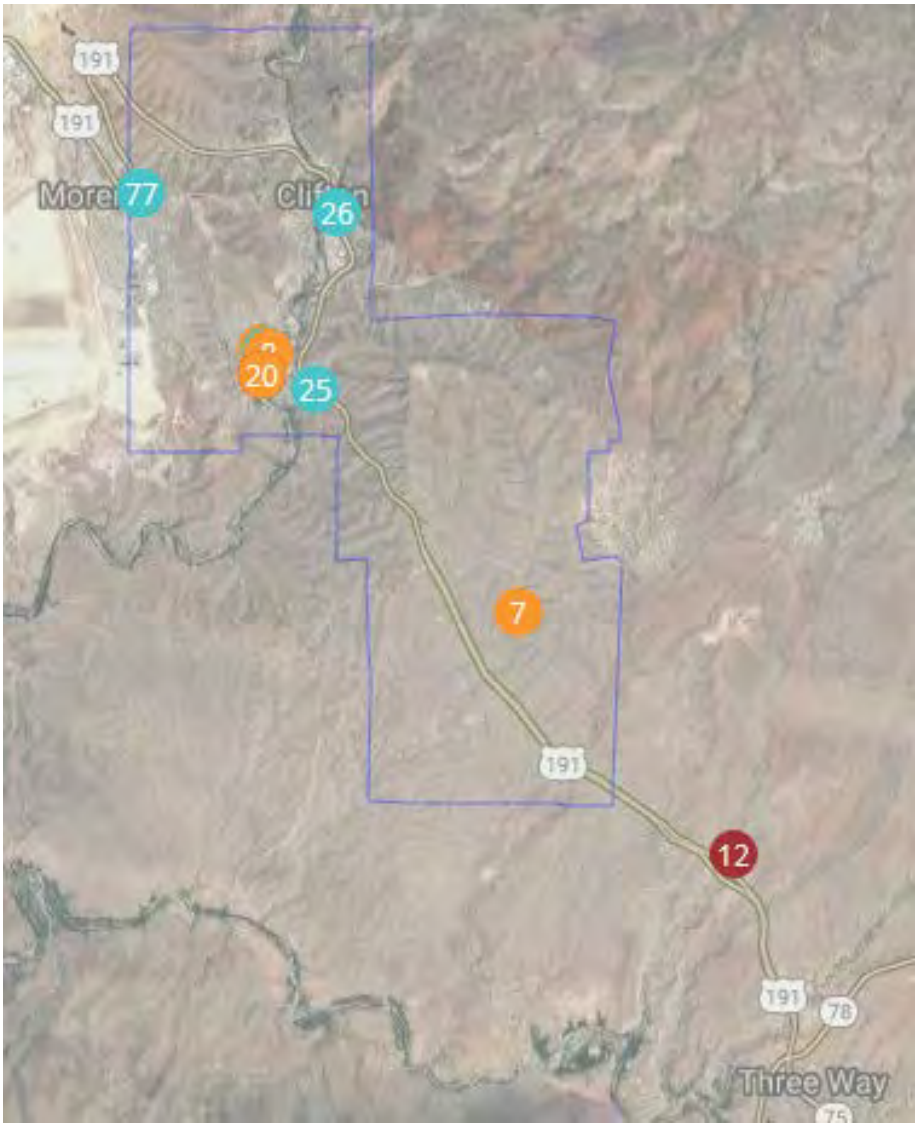
Appendix B: Locations Identified

Regional Map



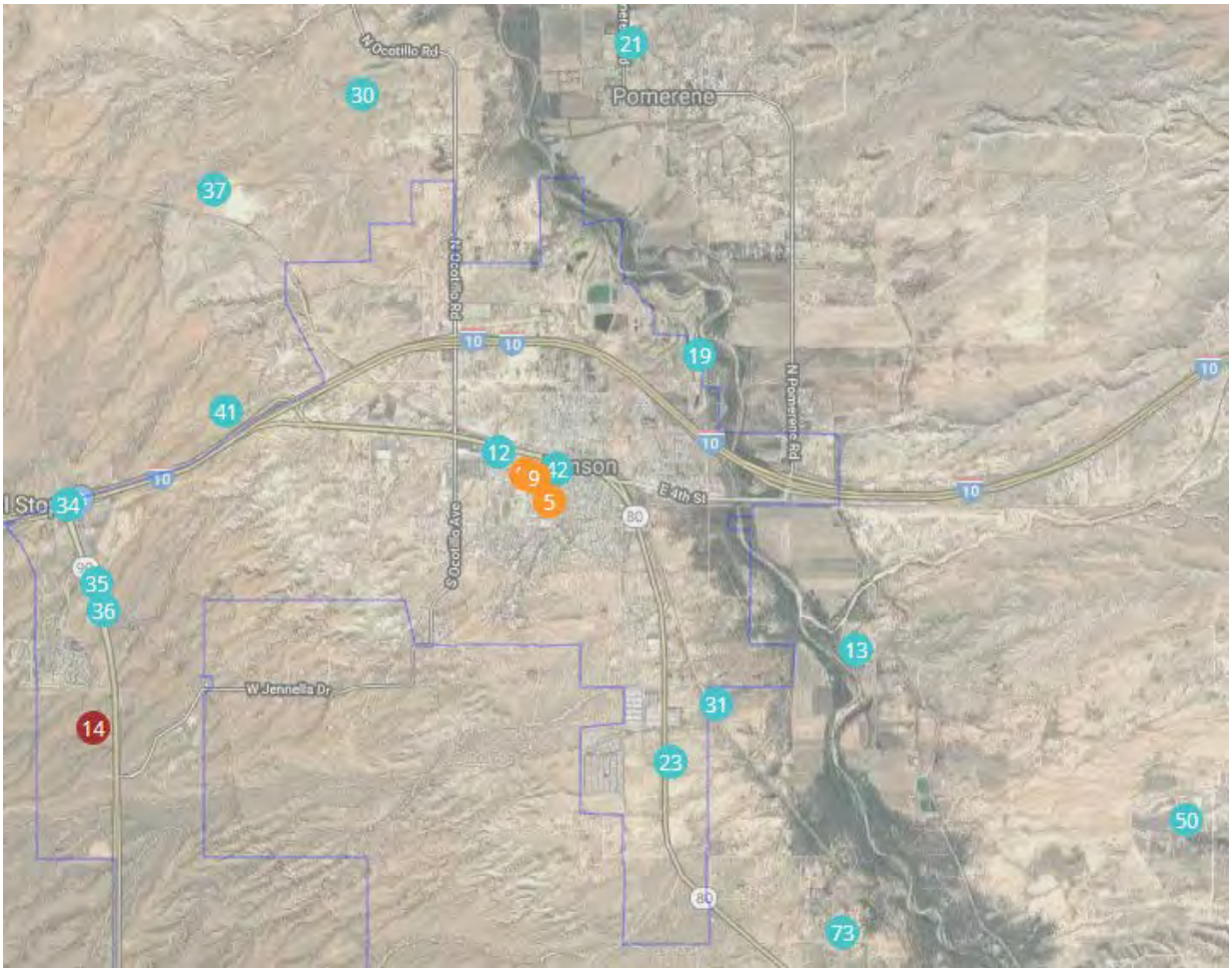
Safford

Morenci/Clifton



Cochise

Benson

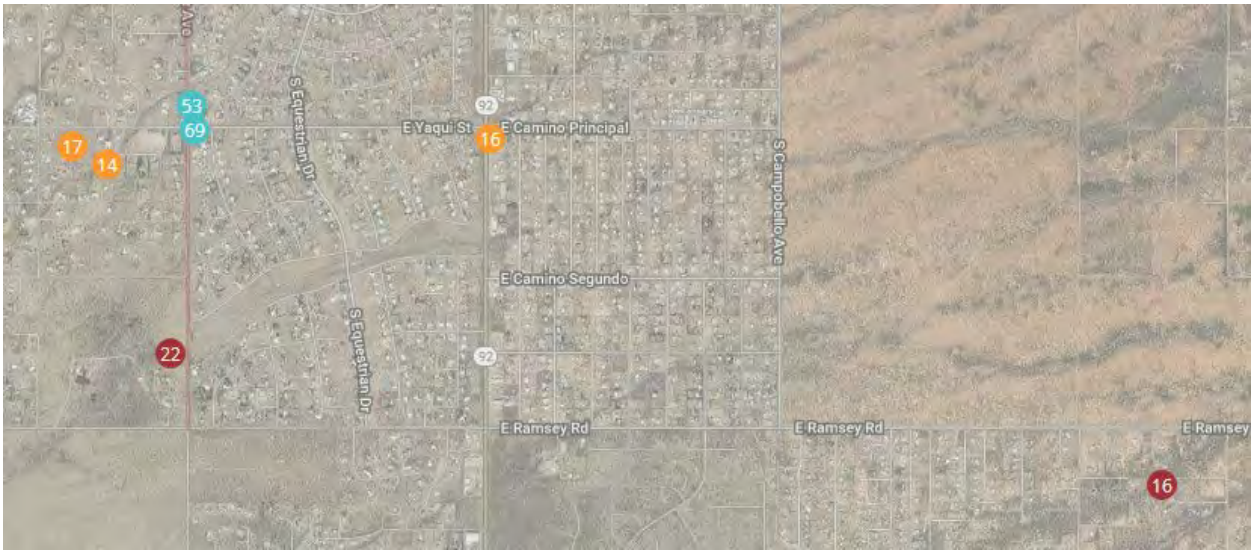


St. David

Sierra Vista (north of Golf Links)

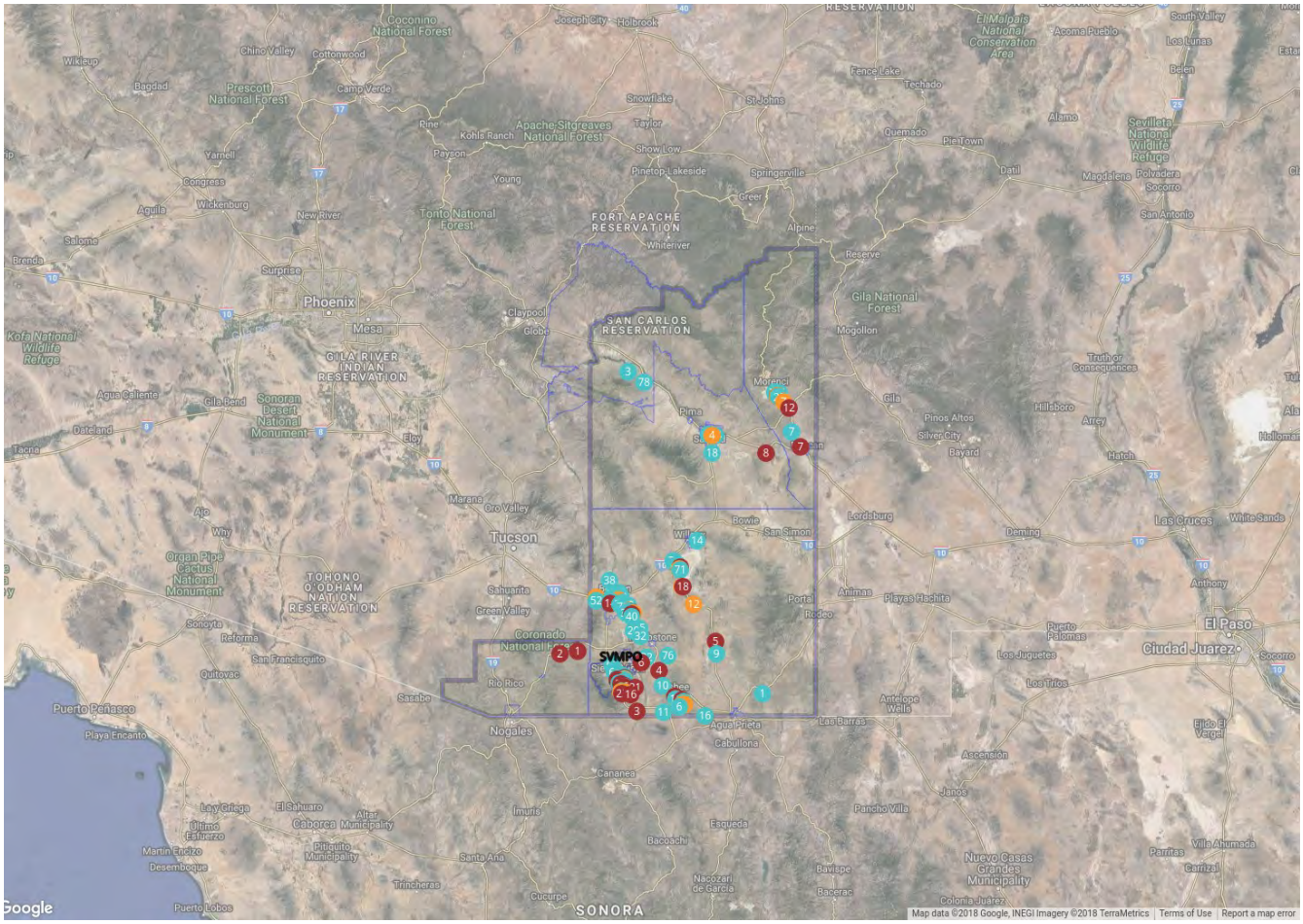
Sierra Vista (south of Golf Links)

South of Sierra Vista



Bisbee


9
80
Bisbee
Bisbee Mining &
Historical Museum
17
Lavender Pit
30
Abandoned Pool Snooker
Joker Pool Libations
5
92
Bisbee Rd
South Bisbee
2
1
Arizona St
6



Area of Concern for Drivers

1 This whole stretch is dangerous because the road curves and it is narrow.

2 This stretch of four-lane, 65-mph highway feels like it should have a barrier in the middle.

3 passing lanes

4 passing lanes

5 Two lanes on US92 dropping to one lane on the circle itself

6 A lot of drivers don't stop for school buses on Naco Highway. The speed limit on Naco Highway is 45 MPH. A lot of driver speed.

7 There used to be a Flying Y at the Three Way. Please put it back to make turning to Safford safer.

8 tailgating. Especially in the morning go to work traffic and returning home traffic.

9 flying Y intersection with poor visibility

10 flying y intersection with poor visibility

11 Tailgating weekday mornings

12 Drivers confused about merging as two lanes drop down to one. Road still wide enough for two vehicles so drivers act as if there are still two lanes especially if they are turning right nearby.

13 Exit to Willcox is confusing and left turn is made onto oncoming traffic, rather that driving further to the lane that is intended for Willcox bound traffic

14 Exit is used as entry onto I-10

15 Hydroplaning on 1-10 when it rains, and cards drive too fast

16 Many cars drive too slowly on this highway and will not pull to the side when there are 5 or more cars behind them.

17 Bicycles riding 2 or more side by side. It is a speedway in the morning going toward SV from Douglas/Bisbee.

18 Need a turn lane. This is located at a curve and very dangerous for drivers heading south.

19 Pomerene Road..a lot of speeders, passing illegally, road floods bad!

20 Use of cell phone while driving. Also passing on yellow line, Hwy 80. Tailgating is also a problem.

21 No patrol on this road. Lots of speeders.

22 Drivers go too fast around curves. Passes even solid lines.

23 need turn lane into SKP Park

24 The Oleanders in the Sunrise Village Mobile Home Park impair the line of sight for vehicles traveling out of the mobile home park onto E Hollywood Rd which affects drivers traveling on E Hollywood Rd.

25 The lack of a turning lane here (not that there's any space for one) has resulted in some pretty serious accidents since the speed limit I believe is 65 mph.

26 When there is a train, northbound traffic backs up causing some drivers to cross the yellow line and drive on the wrong side of the road to take a left onto Riverside.

27 The posted speed limit is 15. Most vehicles excessively speed up and down this street. There is a high volume of traffic as well due to it being the only road in and out of the neighborhood.

28 Hard to see westbound traffic around this guy's fence

29 Would be extremely beneficial if this traffic light had a left turn signal. Especially between 1pm and 7pm

30 Speeding and passing in no passing lanes.

31 Highway 80 between Benson and St. David is terrible not only for motorists but cyclists especially. Speeding is a big problem.

32 speeding and passing in "no passing" zones.

33 Young unlicensed drivers whose parents allow to drive, often speeding or showing-off.

34 Drivers of both cars & semi trucks are not stopping at the red lights. There is insufficient monitoring of this area & minimal traffic. Again the semi drivers are even running the red lights.

35 The speed limit drops to 35 mph here & if you drive 35 mph you are going to get run over by the other drivers.

36 There is no turn lane driving south on 90 where you turn into Barrel Cactus- you have to slow down to turn (right) safely into the housing development & the traffic is just getting up to speed.

37 Road needs repair and resurface. Hazardous conditions.

38 Extend paving of road to end of county maint. to improve safety of road

39 Passing in no passing zones, speeding

40 More passing in a no passing zone. Speeding.

41 I-10 west bound on-ramp from Benson (going up the hill) is a place that I see close calls nearly every day. Trucks are going slow, people on the on ramp cut across the gore point over to left lane

42 Very busy intersection. Left turn arrows on the traffic light would help with traffic flow.

43 New paving has created ponding on the roadway. Hard for drivers to see.

44 Cars and trucks making U-Turns, not wide enough. I have seen trucks back up to make the U-Turn holding up traffic.

45 Road not wide enough to make a U-Turn, I have seen trucks back up and hold up traffic to make a U-Turn.

46 need red light or NO left turn coming out of Snyder Blvd. I have seen too many close calls.

47 No U-Turns for Circle K

48 Driver do not stop at the correct location at this stop light. They stop on the railroad tracks.

49 A lot of people turn in this area because of the church and housing but the speed limit is so fast it becomes dangerous to stop.

50 Turning onto or off of 7th street at Hwy 80 is scary people come around the curve just north of the intersection very fast.

51 Need a turn lane into the RV park.

52 Westbound I10 exit at Mescal. Can't see approaching northbound traffic on Mescal Rd because of fence over freeway.

53 Many bicyclists ignore the multi-use path and ride down the very narrow Cherokee, obstructing traffic.

54 Highway 92 in need of resurfacing

55 People making u-turn on Hwy 92 light at Avenida Cochise at the same time as potential red right turn from Avenida Cochise onto Hwy 92 is potential cause of accident.

56 Numerous running of red light by north bound traffic turning onto BST during early morning work hours.

57 Bicyclists not utilizing the multi-use path available to them and instead, riding their bikes in the street.

58 Traffic signal changes very quickly for those on Avenida Cochise, not allowing enough time to clear the intersection.

59 Drivers not paying attention at this intersection - results in serious MVC.

60 Drivers not paying attention / failing to yield to emergency vehicles.

61 Drivers not paying attention / failing to yield to emergency vehicles.

62 Drivers not paying attention to speed limit and driving 10-15 MPH under posted speed limit. Happens very frequently, even in good driving conditions.

63 Traffic light on Coronado will not change from red to green unless there are 3 or more cars present at the light. Turning west on to Hwy 90 is difficult when there is little to no traffic on Coronado.

64 This intersection needs to be redesigned with a right turn lane from Foothills onto Highway 92. The crosswalks need to redesigned. The shoulder area is very dangerous. There needs to be sidewalks.

65 This area is full of potholes and needs to be repaved. This is a highly traffic intersection.

66 I've witnessed cars, trucks, and motorcycles run red lights at this intersection as well as BST and Cherokee. Zero tolerance for these idiots!

67 The stop lights at these intersections (7th St, Av Cochise, and Coronado) are dumb! When an East bound driver is making a LEFT turn, all traffic must stop. EAST bound should not stop.

68 The speed limit her is to high for an undivided highway. Crashes in this area are severe due to head-on at high speed rates.

69 Many bicyclists on Cherokee use the road instead of the multi-use trail.

70 This interchange is not adequate for truck traffic. If this were improved Highway 191 could serve as an alternate route for truck traffic from Douglas and this would improve safety on Hwy. 80.

71 The railroad bridge on 191 is not adequate for truck traffic. If this were improved 191 could better serve as an alternate route for traffic from Douglas and this would improve safety on Highway 80.

72 The I-10 / 191 interchange is not adequate for truck traffic. If this were improved 191 could better serve as an alternate route for traffic from Douglas and this would also improve safety on Hwy 80

73 The stretch of Hwy 80 between Benson and St. David is unsafe because there is too much traffic for 2-lane road and there is a mix of elderly, slow drivers and traffic from Mexico/Douglas going fast

74 Hwy 80 through St. David has far too much traffic to be passing through this residential area. People do not slow down for school crossing, too much truck traffic, people drive too fast,

75 Hwy 80 between Benson and Tombstone is unsafe due to volume of traffic, volume of truck traffic, too few places to pass, people driving too fast.

76 The volume of traffic on Davis Rd is too great for design of road. People go to fast, Unsafe passing. Mexico/Douglas to I-10 traffic should be encouraged to use 191.

77 Light needed to slow down traffic and allow people to turn safely!

78 lots of people crossing road lots of hitchhickers walking with traffic

79 Needs a stop light. Very dangerous with the blind hill.

Area of Concern for Pedestrians

1 This crosswalk in front of the school is well marked, but most cars will not stop for pedestrians and a lot of them speed. The speed limit here is 25 MPH

2 Homeless Shelter - All clients required to leave building by 8 Am. A lot of pedestrians mill about and walk along the highway to the Safeway area.

3 Safeway - 4 lane road with no crosswalk available. Lighting is poor. People often seen running across the road. A few people have been hit.

4 Crosswalk needed.

5 There is high traffic of kids crossing the street during the school year, but there isn't a crossing guard for this crosswalk.

6 The road is narrow and lined with trees not giving much time for motorist to react to pedestrian or vehicle coming from a side road or yard. Cars travel so fast down this road - no Enforcement

7 Need cross - walk areas near businesses in Clifton. Concerned about safety of visitors to the area.

8 The combination of parked cars lining the streets, cars speeding in and out of the neighborhood and the lack of sidewalks or lanes for children to walk in have created a very dangerous situation.

9 Unsafe curb cuts

10 unsafe curb cuts/sidewalks, broken and uneven pavement

11 Walking on Mescal Road at night without lights, lines on the road and no walking path is difficult.

12 No shoulders--hard to walk along highway

13 This road is not safe for pedestrians. There have been several instances where a motorist almost hit a woman jogging early in the morning.

14 There is effectively no apron on the north side of Yaqui west of Cherokee, and the apron on the south side is covered by gravel. OLM school and mass traffic is quite heavy at times.

15 This needs to be redesigned with a better crosswalk for Pedestrians and bicyclists.

16 How many people have died crossing or walking (riding a bike) along Hwy 92? To many! There needs to be a bike/walking path parallel to Hwy 92.

17 No apron on north side of Yaqui west of Cherokee. East of Cherokee the apron on north and south sides of Yaqui is 6 ft wide.

18 The 191 railroad bridge is not safe for pedestrians. If this were improved to serve all forms of traffic it could also be made safe for pedestrians.

19 Hwy 80 in St. David is not safe for pedestrians due to the volume of traffic, volume of truck traffic, people not slowing down, unsafe passing

20 Blind corner, too many cars, poor visability.

21 Speeding and lots of kids.

Area of Concern for Bicyclists

1 No shoulder; Traffic too fast to share the road

2 When the road was repaved the shoulder was narrowed.

3 The shoulder from the Coronado National Monument to Palominos is un-ridable.

4 From Tombstone to the intersection of Hwy 90 there was no crack maintenance preformed. Because of this, many sections are becoming un-rideable.

5 There was no crack maintenance preformed on the shoulders. The shoulder on the road is becoming un-rideable.

6 There are no shoulders from the San Pedro to Tombstone. From Sierra Vista to the San Pedro there was no crack maintenance preformed on the shoulders. The shoulder on the road is becoming un-rideable.

7 Share the road signs should be installed along this route.

8 share the road signs should be installed along this route.

9 Bicycling through the Mule Pass tunnel is very hazardous. There is no road shoulder and motorists entering the tunnel from bright sunshine cannot see bicycles. Old Divide Road is a good alternative.

10 People heading South in the Multi Use Path don't know to slow down or stop at St Andrews B4 crossing. Vehicles on St Andrews who want to head N on Buffalo Soldier Trail do not look RT B4 turning.

11 People heading South in the Multi Use Path don't know to slow down or stop at Ave Cochise B4 crossing. Vehicles on Ave Cochise who want to head N on Buffalo Soldier Trail do not look RT B4 turning

12 Share the Road signs needed for drivers to give save to bicycles Hwy 191, Hwy 75 and 78.

13 Patton St in St David is a highway & there should be walking paths & bike paths on both sides of the highway from San Pedro River bridge to around the corner from the school, down to Goldenbell Rd.

14 Lots of trucks, lots of cars trying to get around the intersection at Loves

15 Cyclists using BST to commute have a great MUP for most of the trip, but it needs extended all the way to FRy

16 Bikes ride beside each other going from Moson Rd to HWY 92. Some drivers do not slow down or don't give a safe space the the bike. Bike path or a little wider road would help.

17 Some bikes do not use the bike path, some should stop them and let them know someone spent a lot of money and time to put them in. And that is a safe place to ride.

18 This road is unsafe for bicyclists in general. There is no way at times for motorists to move over and bicyclists have almost been hit.

19 Not enough room to bike south on 92 after passing Buffalo Soldier.

20 There's not a safe way, that I know of, to bike to the west end of town through the middle of town.

21 Maybe add a path for bicyclists & pedestrians along Moson Rd.

22 Bicyclist have a right of way to use the street. However, far to often they ride two abreast on Cherokee Ave. This frustrates drivers...especially when there is a bike/walking path not 10 feet from

23 Left and right stop lights with warning signs to drivers to watch the bike paths. Also, when pedestrians have walk sign, vehicular CANNOT turn.

24 Extend the bike path to Free blvd.

25 Right left warning signs to drivers. Stop light that allow a pedestrian to walk with the crossing light without worrying that left or right hand vehicular turning will hit the.

26 Connect the bike path to Carmichael.

27 Cut the over grown weeds that make the path almost unuseable. Also, the drainage area cleaned for safety.

28 The 191 railroad bridge is not safe for bicycles. If this were improved for all forms of traffic it could also be made safe for bicycles.

29 Hwy 80 through St. David is not safe for cyclists due to the volume of traffic, volume of truck traffic, people not slowing down, unsafe passing.

30 Needs to go to three lanes with bicycle lanes on both sides around the pit.

32 Poor visibility, had kids hit by car.

Appendix C: Workshop Agendas and Meeting Notes

- Agenda: July 13, 2016, workshop in Sierra Vista
- Notes: July 13, 2016, workshop in Sierra Vista
- Agenda: October 27, 2016, workshop in Safford
- Notes: October 27, 2016, workshop in Safford

SouthEastern Arizona Governments Organization &
Sierra Vista Metropolitan Planning Organization

Strategic Highway Safety Plan (SHSP)

Stakeholder/Public Workshop Agenda

Date: Wednesday, July 13, 2016
Time: 2:30-4:30 p.m.
Location: Sierra Vista Public Library, Mona Bishop Room
2600 E Tacoma St, Sierra Vista, AZ 85635

Time	Task	Lead
2:30 pm	**Welcome** • Workshop Purpose • Introductions	Chris Vertrees, SEAGO Theresa Gunn, GCI, Facilitator
2:40 pm	**What is a SHSP?**	Michael Blankenship, AMEC Foster Wheeler
2:50 pm	**Survey/Mapping Tool** • What are the unsafe behaviors you've witnessed locally? • What do you think are the primary cause of crashes in your community? • Discussion of the crash causes based on data analysis	Theresa Gunn, GCI, Facilitator Michael Blankenship, AMEC Foster Wheeler
3:00 pm	**Data Analysis** • Crash data summary • Where are the unsafe vehicle, bicycle and pedestrian locations?	Michael Blankenship, AMEC Foster Wheeler
4:00 pm	**SHSP Vision and Goal** • Building on the National, State and Regional Vision • What is the future to which we aspire? • Group discussion and selection of a vision and goals	Michael Blankenship, AMEC Foster Wheeler Small Group Exercise
4:20 pm	**Next Steps** • Online Survey: o http://tinyurl.com/AZ-SAFETY o http://tinyurl.com/AZ-SEGURO • Schedule	Chris Vertrees, SEAGO Theresa Gunn, GCI, Facilitator
4:30 pm	**Adjourn**	

Sierra Vista MPO Stakeholder Workshop #1

DATE/TIME: July 13, 2016 – 2:30 pm – 4:30 pm

LOCATION: Sierra Vista Public Library, 2600 E Tacoma Street, Sierra Vista, AZ

Attendees

Stakeholders

- Jackie Watkins, ADOT
- Maria Deal, ADOT
- Becky Smyth, Lfsaz
- Stu Carter, Cochise Bicycle Advocates
- Andy Haratyk, City of Bisbee
- Jing Lue, City of Sierra Vista
- Michelle Johnson, City of Benson
- John Dekeift, City of Sierra Vista
- Thomas Armstrong, Cochise Bicycle Advocates
- Karen Lamberton, Cochise County
- Dan Coxworth, SVMPO
- Chris Vertrees, SEAGO

Project Team

- Mike Blankenship, AMEC Foster Wheeler
- Scott Kelley, AMEC Foster Wheeler
- Jaye Jackson, GCI

-

Welcome and Introductions

Chris Vertrees welcomed the group and introduced study team members in attendance. He thanked attendees for participating and explained the purpose of the study. He invited attendees to introduce themselves by name and organizational affiliation.

Presentation and Activities

Mike Blankenship from AMEC Foster Wheeler presented a brief description of a Strategic Highway Safety Plan (SHSP) and funding processes.

Theresa Gunn from GCI facilitated a live group polling activity to gather input from the community regarding travel safety within the region. She also led a group discussion to review the poll results and the perceived causes of crashes.

Mike Blankenship provided information on the study process and the data that has been gathered and generated, including: crash trends, statistics on emphasis areas and the first harmful events, at fault behavior and crashes by collision manner. He then presented various maps showing crash locations.

SHSP Vision and Goals

Mike Blankenship led a group discussion of a goal and vision for the project building on the National, State and Regional Visions.

Next Steps

Theresa Gunn gave the website information for the project safety survey.

Chris Vertrees thanked attendees for participating and adjourned the meeting.

SouthEastern Arizona Governments Organization &
Sierra Vista Metropolitan Planning Organization

Strategic Highway Safety Plan (SHSP)

Stakeholder/Public Workshop Agenda

Date: Thursday, October 27, 2016
Time: 2:30-4:30 p.m.
Location: Safford City-Graham County Library
808 S. 7th Avenue, Safford, AZ

Time	Task	Lead
2:30 pm	**Welcome** • Workshop Purpose • Introductions	Chris Vertrees, SEAGO
2:40 pm	**What is a SHSP?**	Michael Blankenship, AMEC Foster Wheeler
2:50 pm	**Survey/Mapping Tool** • What are the unsafe behaviors you've witnessed locally? • What do you think are the primary causes of crashes in your community? • Discussion of the crash causes based on data analysis	Jaye Jackson, GCI, Facilitator Michael Blankenship, AMEC Foster Wheeler
3:00 pm	**Data Analysis** • Crash data summary • Where are the unsafe vehicle, bicycle and pedestrian locations?	Michael Blankenship, AMEC Foster Wheeler
4:00 pm	**SHSP Vision and Goal** • Building on the National, State and Regional Vision • What is the future to which we aspire? • Group discussion and selection of a vision and goals	Michael Blankenship, AMEC Foster Wheeler Small Group Exercise
4:20 pm	**Next Steps** • Online Survey: o http://tinyurl.com/AZ-SAFETY o http://tinyurl.com/AZ-SEGURO • Schedule	Chris Vertrees, SEAGO Jaye Jackson, GCI, Facilitator
4:30 pm	**Adjourn**	

SEAGO Stakeholder Meeting #1

DATE/TIME: October 27, 2016 – 2:30 pm – 4:30 pm

LOCATION: Safford-Graham County Library, 808 S 7th Avenue, Safford, AZ

Attendees

Stakeholders

- Dee Crumbacher, ADOT
- Chris Vertrees, SEAGO
- Ian McGaughey, Town of Clifton
- Jeff McCormick, Town of Pima
- Reza Javier, EA Courier

Project Team

- Mike Blankenship, AMEC Foster Wheeler
- Scott Kelley, AMEC Foster Wheeler
- Jaye Jackson, GCI

-

Welcome and Introductions

Chris Vertrees welcomed the group and introduced study team members in attendance. He thanked attendees for participating and explained the purpose of the study. He invited attendees to introduce themselves by name and organizational affiliation.

Presentation

Mike Blankenship from AMEC Foster Wheeler presented a brief description of a Strategic Highway Safety Plan (SHSP). He provided information on the study process and the data that has been gathered and generated, including: crash trends, statistics on emphasis areas and the first harmful events, at fault behavior and crashes by collision manner. He then presented various maps showing crash locations.

Jaye Jackson provided an overview of the community outreach approach and requested attendees join a Poll Everywhere, real-time electronic poll to provide their feedback on questions related to the attendees' personal experiences as drivers in the region.

Group Discussion

Mike Blankenship led a group discussion of a goal and vision for the project.
Some of the suggestions are as follows:

- Reduction in fatalities for vehicles and bicyclists every year.
- The vision should be realistic and measurable.

Overarching Goals:

- Agencies and communities must work together toward the goal of Zero Deaths.

- Data collection and report findings will be helpful in defining goals and creating further visioning.

Next Steps

Mike Blankenship gave the website information for the bilingual project safety survey.

Chris Vertrees thanked attendees for participating and adjourned the meeting.

Intersection	Owner	ADT	Crash Freq	Crash Rate	Severity Index	PI Rank
Seventh St & Turner Ave	Clifton	198	1	1.38	1.00	56
Tacoma St & 7th St	Cochise County	8622	8	0.25	1.85	7
Arizona Ave & Railroad Ave	Cochise County	162	1	1.69	5.80	14
Central Hwy & Double Adobe Rd (North)	Cochise County	872	1	0.31	2.00	21
Ramsey Rd & Moson Rd	Cochise County	4672	4	0.23	1.25	32
Grave Ave & Douglas Ave	Cochise County	2474	2	0.22	1.50	33
Hereford Rd & Moson Rd	Cochise County	2568	1	0.11	2.00	67
Central Hwy & Double Adobe Rd (South)	Cochise County	1006	1	0.27	1.00	71
Douglas Ave & Merritt Ave	Cochise County	2984	2	0.18	1.00	72
23rd St & Washington Ave	Cochise County	3604	1	0.08	2.00	77
Frontier Rd & Davis Rd	Cochise County	1487	1	0.18	1.00	84
Ranch House Rd & Fort Grant Rd	Cochise County	1674	1	0.16	1.00	89
Central Hwy & Davis Rd	Cochise County	1714	1	0.16	1.00	91
Charleston Rd & Moson Rd	Cochise County	2208	1	0.12	1.00	95
9th St & A Ave	Douglas	7626	14	0.50	1.49	5
8th St & G Ave	Douglas	5454	9	0.45	1.11	15
8th St & A Ave	Douglas	7847	6	0.21	1.17	35
15th St & Washington Ave	Douglas	7545	4	0.15	1.50	39
8th St & F Ave	Douglas	5919	5	0.23	1.00	41
14th St & F Ave	Douglas	4316	4	0.25	1.00	44
15th St & San Antonio Ave	Douglas	10868	7	0.18	1.14	45
3rd St & G Ave	Douglas	3400	2	0.16	1.50	55
Chino Rd & 3rd St	Douglas	3138	2	0.17	1.00	76
10th St & Florida Ave	Douglas	8449	2	0.06	1.50	79
14th St & A Ave	Douglas	7137	3	0.12	1.00	80
19th St & A Ave	Douglas	5076	2	0.11	1.00	87
Chino Rd & 5th St	Douglas	15118	3	0.05	1.33	88
15th St & Florida Ave	Douglas	6838	2	0.08	1.00	93
15th St & Airport Rd	Douglas	2400	1	0.11	1.00	96
10th St & Washington Ave	Douglas	8044	2	0.07	1.00	97
23rd St & A Ave	Douglas	2677	1	0.10	1.00	100
19th St & Washington Ave	Douglas	3716	1	0.07	1.00	102
15th St & Van Buren Ave	Douglas	3730	1	0.07	1.00	103
8th Ave & Airport Rd	Graham County	4160	7	0.46	1.43	10
Norton Rd & Reay Ln	Graham County	1494	2	0.37	2.00	12
Hoopes Ave & Golf Course Rd	Graham County	4889	6	0.34	1.17	19
1st Ave & Golf Course Rd	Graham County	3922	3	0.21	1.67	27
Golf Course Rd & Robinson Ranch Rd	Graham County	3308	2	0.17	1.50	52
Bowie Ave & Clifton St	Graham County	1736	1	0.16	2.00	61
8th St & Reay Ln	Graham County	2844	2	0.19	1.00	69
8th St & Robinson Ranch Rd	Graham County	4840	1	0.06	1.00	111
20th Ave & Discovery Park Blvd	Graham County	4890	1	0.06	1.00	112
Crawford St & Sonoita Ave	Nogales	5819	8	0.38	1.13	17
Crawford St & Terrace Ave	Nogales	11068	11	0.27	1.00	20
Park St & Morley Ave	Nogales	4786	5	0.29	1.00	28
Macnab Dr & Walnut St	Nogales	2315	2	0.24	1.50	31
Kino St & Bayze Ave	Nogales	1183	2	0.46	1.00	38
Morley Ave & La Castellana Dr	Nogales	4315	4	0.25	1.00	43
Nelson Ave & East Ave	Nogales	1793	2	0.31	1.00	50
Morley Ave & Bankerd Ave	Nogales	5126	4	0.21	1.00	53
Western Ave & Macnab Dr	Nogales	7416	4	0.15	1.25	63
Kelsey Ave & Hughes St	Nogales	3814	1	0.07	2.00	78
Morley Ave & East St	Nogales	3661	2	0.15	1.00	80
Hughes St & Western Ave	Nogales	6341	1	0.04	2.00	86
Monroe St & Tyler Ave	Nogales	1903	1	0.14	1.00	94
Sonoita Ave & Elm St	Nogales	3738	1	0.07	1.00	104
Target Range Rd & Industrial Park Ave	Nogales	3918	1	0.07	1.00	106
Morley Ave & Adams St	Nogales	4694	1	0.06	1.00	110

Intersection	Owner	ADT	Crash Freq	Crash Rate	Severity Index	PI Rank
8th St & 10th Ave	Safford	6970	7	0.28	1.71	9
Relation St & 20th Ave	Safford	11890	11	0.25	1.36	16
Golf Course Rd & 20th Ave	Safford	8862	5	0.15	1.80	25
Relation St & 8th Ave	Safford	10726	7	0.18	1.43	26
8th Ave & 8th St	Safford	10835	9	0.23	1.00	28
Relation St & 14th Ave	Safford	8437	4	0.13	1.75	37
20th St, El Paso Blvd & 14th Ave	Safford	2726	2	0.20	1.50	39
10th Ave & Main St	Safford	1498	1	0.18	2.00	47
20th St & 8th Ave	Safford	6785	3	0.12	1.67	54
26th St & 12th Ave	Safford	1990	2	0.28	1.00	59
5th Ave & 8th St	Safford	6757	4	0.16	1.25	60
Discovery Park Blvd & 14th Ave	Safford	3464	1	0.08	2.00	75
8th Ave & Discovery Park	Safford	4568	1	0.06	2.00	83
Relation St & 10th Ave	Safford	5267	1	0.05	2.00	85
8th St & Central Ave	Safford	6792	2	0.08	1.00	92
El Paso Blvd & 8th Ave	Safford	4403	1	0.06	1.00	108
8th Ave & 10th Ave	Safford	5430	1	0.05	1.00	113
Yavapai Dr & Camino Caralampi	Santa Cruz County	10627	8	0.21	1.25	24
Pendleton Dr & Rio Rico Dr	Santa Cruz County	6833	5	0.20	1.20	42
Pendleton Dr & Ruby Rd	Santa Cruz County	3745	3	0.22	1.00	62
Yavapai Dr & Frontage Rd	Santa Cruz County	12676	5	0.11	1.00	72
Old Tucson Rd & River Rd	Santa Cruz County	2578	1	0.11	1.00	99
Avenida Del Sol & Desert Shadows Dr	Sierra Vista	2740	6	0.60	2.30	1
Campus Dr & Colombo Ave	Sierra Vista	5568	12	0.59	1.57	2
Coronado Dr & Tacoma St	Sierra Vista	6259	10	0.44	1.50	3
Lenzner Ave & Busby Dr	Sierra Vista	8610	10	0.32	1.78	4
Wilcox Dr & Carmichael Ave	Sierra Vista	7950	16	0.55	1.19	8
Golf Links Rd & Coronado Dr	Sierra Vista	5804	7	0.33	1.43	11
Snyder Blvd & Avenida Del Sol	Sierra Vista	6408	6	0.26	1.50	13
Coronado Dr & Busby Dr	Sierra Vista	10418	11	0.29	1.09	18
Golf Links Rd & Lenzner Ave	Sierra Vista	1969	2	0.28	1.50	22
Avenida Cochise & Via Riata	Sierra Vista	4802	3	0.17	2.60	23
Lenzner Ave & Tacoma St	Sierra Vista	3321	3	0.25	1.33	36
Snyder Blvd & Via Riata	Sierra Vista	4876	4	0.22	1.00	48
Garden Ave & Taylor Dr	Sierra Vista	4208	3	0.20	1.33	51
El Camino Real & Wilcox Dr	Sierra Vista	19007	9	0.13	1.11	57
7th St & Golf Links Rd	Sierra Vista	15447	4	0.07	1.50	64
El Camino Real & Foothills Dr	Sierra Vista	4886	2	0.11	1.50	65
Coronado Dr & Las Brisas Way	Sierra Vista	9736	5	0.14	1.00	66
El Camino Real & Paseo Media	Sierra Vista	7668	4	0.14	1.00	68
Busby Dr & Carmichael Ave	Sierra Vista	6324	2	0.09	1.50	70
Calle Del Norte & Busby Dr	Sierra Vista	5354	2	0.10	1.00	90
Snyder Blvd & Foothills Dr	Sierra Vista	3939	1	0.07	1.00	107
Calle Del Norte & Paseo Media	Sierra Vista	4674	1	0.06	1.00	109
8th St & 1st Ave	Thatcher	7654	3	0.11	1.33	74
Reay Ln & Church St	Thatcher	2528	1	0.11	1.00	98
Church St & 1st Ave	Thatcher	3874	1	0.07	1.00	105
Maley St & Arizona Ave	Willcox	3100	7	0.62	1.43	6
Fremont St & Bisbee Ave	Willcox	4824	5	0.28	1.00	30
Airport Rd & Bisbee Ave	Willcox	2214	3	0.37	1.00	34
Steward St & Railroad Ave	Willcox	1472	2	0.37	1.00	46
Arizona Ave & Soto St	Willcox	1542	1	0.18	2.00	49
Patte Rd & Arizona Ave	Willcox	378	1	0.72	1.00	58
Fremont St & Fremont St	Willcox	4879	1	0.06	5.80	82
Austin Blvd & Maley St	Willcox	2818	1	0.10	1.00	101

Local Signalized

Intersection	Owner	ADT	Crash Freq	Crash Rate	Severity Index	PI Rank
A Ave & 10th St	Douglas	13334	21	0.43	1.33	15
G Ave & 10th St	Douglas	10191	22	0.59	1.05	21
G Ave & 14th St	Douglas	5941	6	0.28	2.13	22
F Ave & 10th St	Douglas	9956	17	0.47	1.00	25
9th St & F Ave	Douglas	5188	7	0.37	1.00	31
15th St & A Ave	Douglas	9136	6	0.18	1.17	35
10th St & San Antonio Ave	Douglas	10443	6	0.16	1.17	36
G Ave & 9th St	Douglas	4773	4	0.23	1.00	39
Morley Ave & Bank Bridge	Nogales	9697	8	0.23	1.13	34
20th Ave & 8th Ave	Safford	17594	16	0.25	1.25	26
Main St & 5th Ave	Safford	4470	4	0.25	1.00	38
Main St & Central Ave	Safford	5556	4	0.20	1.00	40
Fry Blvd & Carmichael Ave	Sierra Vista	11791	29	0.67	1.57	1
Martin Luther King Jr Pkwy, Coronado Dr & Moorman Ave	Sierra Vista	13108	31	0.65	1.51	2
Fry Blvd & 7th St	Sierra Vista	25974	64	0.68	1.38	3
Coronado Dr & Fry Blvd	Sierra Vista	29890	83	0.76	1.34	4
Charleston Rd & Colombo Ave	Sierra Vista	11442	22	0.53	1.67	5
Lenzner Ave & Fry Blvd	Sierra Vista	21917	47	0.59	1.32	6
Calle Portal & Fry Blvd	Sierra Vista	22016	49	0.61	1.20	7
Avenida Cochoise & Coronado Dr	Sierra Vista	7911	17	0.59	1.47	8
Buffalo Soldier Trail & Fry Blvd	Sierra Vista	18072	25	0.38	1.39	9
Fry Blvd & Avenida Escuela	Sierra Vista	22626	49	0.59	1.16	10
Buffalo Soldier Trail & Avenida Cochise	Sierra Vista	15562	21	0.37	1.48	11
Buffalo Soldier Trail & Wilcox Dr	Sierra Vista	19147	25	0.36	1.43	12
Buffalo Soldier Trail & Saint Andrews Dr	Sierra Vista	10648	24	0.62	1.17	13
Willcox Dr & Coronado Dr	Sierra Vista	17158	26	0.42	1.31	14
Avenida Cochise & Oakmont Dr	Sierra Vista	12562	16	0.35	1.50	16
El Camino Real & Fry Blvd	Sierra Vista	24472	27	0.30	1.37	17
Willcox Dr & 7th St	Sierra Vista	20028	18	0.25	1.60	18
Buffalo Soldier Trail & Cherokee Ave	Sierra Vista	13218	14	0.29	1.63	19
Charleston Rd & Guilio Cesare Ave	Sierra Vista	12322	15	0.33	1.45	20
Martin Luther King Jr Pkwy & Walmart Strip Mall	Sierra Vista	19612	17	0.24	1.41	23
Martin Luther King Jr Pkwy & Avenida Escuela	Sierra Vista	5324	10	0.51	1.30	24
Buffalo Soldier Trail & 7th St	Sierra Vista	19772	13	0.18	1.31	27
Buffalo Soldier Trail & Coronado Dr	Sierra Vista	16208	3	0.05	1.67	29
N Garden Ave & Fry Blvd	Sierra Vista	11042	13	0.32	1.08	30
Martin Luther King Jr Pkwy & Jean Randle Ave	Sierra Vista	5004	2	0.11	1.50	32
Willcox Dr & Lenzner Ave	Sierra Vista	15900	7	0.12	1.29	33
Busby Dr & 7th St	Sierra Vista	14656	7	0.13	1.14	37
Maley St & Haskell Ave	Willcox	4962	6	0.33	1.17	28

ADOT Signalized

Intersection	Owner	ADT	Crash Frequency	Crash Rate	Severity Index	PI Rank
SR 92 & Avenida Cochise	ADOT	27228	105	1.06	1.42	1
SB 19 (Grand Ave) & Mesa Verde Dr	ADOT	21964	34	0.42	1.60	2
SR 90, Charleston Rd & Martin Luther King Jr Pkwy	ADOT	21555	120	1.53	1.30	3
SR 92 & Buffalo Soldier Trail	ADOT	28506	91	0.87	1.33	4
SR 92 & Canyon De Flores	ADOT	21699	41	0.52	1.39	5
SB 10 (Fourth St) & Patagonia Ave	ADOT	16300	31	0.52	1.41	6
Hwy 191, Discovery Park Blvd & Solomon Rd	ADOT	10892	18	0.45	2.03	7
SR 90, Hatfield St & Buffalo Soldier Trail	ADOT	26402	69	0.72	1.30	8
US 70 & 20th Ave	ADOT	31764	37	0.32	1.63	9
SR 92 & Foothills Dr	ADOT	34908	69	0.54	1.29	10
SR 90, Fry Blvd & SR 92	ADOT	42812	159	1.02	1.20	11
US 70 & 8th Ave	ADOT	24240	36	0.41	1.38	12
SR 189 (Mariposa Rd) & Congress Dr	ADOT	27094	50	0.51	1.28	13
SR 90 & I-10 South Ramp	ADOT	15509	25	0.44	1.36	14
SR 92 & Glenn Rd	ADOT	19784	24	0.33	1.45	15
SR 92 & Calle Mercania	ADOT	19003	31	0.45	1.32	16
SR 90 & Moson Rd	ADOT	7591	14	0.51	1.56	17
SR 189 (Mariposa Rd) & Mastick Way	ADOT	32521	44	0.37	1.31	18
SB 19 (Grand Ave) & Baffert Dr	ADOT	25239	31	0.34	1.38	19
SR 90 & 7th St	ADOT	18222	22	0.33	1.45	20
US 70 & 1st Ave	ADOT	23103	23	0.27	1.43	21
SB 19 (Grand Ave) & SR 189 (Mariposa Rd)	ADOT	40634	61	0.41	1.20	22
SR 90, Coronado Dr & San Xavier Rd	ADOT	18470	18	0.27	1.60	23
Pan American Ave (UB 191) & 5th St	ADOT	22938	33	0.39	1.24	24
SR 189 (Mariposa Rd) & Frank Reed Rd	ADOT	23785	33	0.38	1.24	25
SR 90 & Campus Dr	ADOT	15474	15	0.27	1.91	26
US 70 & Reay Ln	ADOT	12354	12	0.27	2.45	27
SB 19 (Grand Ave) & Country Club Dr	ADOT	19698	21	0.29	1.33	28
US 70 & 14th Ave	ADOT	23926	23	0.26	1.38	29
SR 92 & Ramsey Rd	ADOT	18000	15	0.23	1.65	30
SR 92 & St Andrews Dr	ADOT	20212	20	0.27	1.35	31
SB 19 (Grand Ave) & Crawford St	ADOT	19173	26	0.37	1.12	32
SR 90, Ave Del Sol & Guilio Cesare Ave	ADOT	17514	23	0.36	1.13	33
SR 186 & I-10 East Ramp	ADOT	6338	6	0.26	2.30	34
SB 19 (Grand Ave) & Old Tucson Rd	ADOT	16720	15	0.25	1.40	35
SB 19 (Grand Ave) & Bank Bridge	ADOT	23256	17	0.20	1.41	36
SR 186 & Bisbee Ave	ADOT	7382	11	0.41	1.27	37
SR 92 & Hereford Rd	ADOT	11394	10	0.24	1.58	38
US 70 & 5th Ave	ADOT	18521	12	0.18	1.42	39
SB 10 (Fourth St) & Ocotillo Ave	ADOT	11513	12	0.29	1.25	40
US 70 & Stadium Ave	ADOT	11892	15	0.35	1.07	41
SR 92 & Camino Principal	ADOT	18974	8	0.12	1.50	42
SB 19 (Grand Ave) & SR 82	ADOT	23884	20	0.23	1.20	43
SR 80 & US 191	ADOT	8214	4	0.13	1.50	44
SR 90 & Village Loop	ADOT	12216	14	0.31	1.14	45
SR 90 & I-10 North Ramp	ADOT	12543	15	0.33	1.00	46
SR 186 & I-10 West Ramp	ADOT	6668	7	0.29	1.29	47
SB 19 (Grand Ave) & Doe St	ADOT	24580	18	0.20	1.22	48
SR 92 & Bisbee-Naco Hwy	ADOT	9576	2	0.06	2.00	49
SB 19 (Grand Ave) & Frank Reed Rd	ADOT	19208	18	0.26	1.11	50
Pan American Ave (UB 191) & 10th St	ADOT	14232	9	0.17	1.33	51
SB 19 (Grand Ave) & White Park Dr	ADOT	30068	19	0.17	1.16	52
SR 90 & SR 82	ADOT	11206	11	0.27	1.18	53
SR 90 & Colonia De Salud	ADOT	9466	9	0.26	1.22	54
SR 90 & Cochise Crossroads Strip Mall	ADOT	27505	13	0.13	1.23	55
US 191 & Burro Alley	ADOT	10566	3	0.08	1.33	56
SB 19 (Grand Ave) & Walnut St	ADOT	33442	13	0.11	1.08	57
Pan American Ave (SR 80), G Ave & 16th St	ADOT	15449	4	0.07	1.25	58
SB 19 (Grand Ave) & Bejarano St	ADOT	18897	9	0.13	1.11	59
SB 19 (Grand Ave) & Park St	ADOT	19146	7	0.10	1.00	60
SR 92 & Bevers St	ADOT	18469	5	0.07	1.00	61
SR 189 (Mariposa Rd) & Mariposa Ranch Rd (Or La Quinta Rd?)	ADOT	21371	2	0.03	1.00	62

Intersection	Owner	Daily Volume	Crash Frequency	Crash Rate	Severity Index	PI Rank
US 191 & Kansas Settlement Rd	ADOT	1565	4	0.70	2.45	1
SR 189 & Target Range Rd	ADOT	14114	16	0.31	1.68	2
I-10 Ramp (South) & Dragoon Rd	ADOT	2186	4	0.50	2.45	3
SR 90 & SR 80	ADOT	5018	8	0.44	1.63	4
US 191 & 20th St	ADOT	9308	8	0.24	2.10	5
SR 186 & Arizona Ave	ADOT	6510	10	0.42	1.50	6
SR 83 & SR 82	ADOT	3415	7	0.56	1.57	7
I-10 Ramp (North) & SB-10 (Pomerene Rd)	ADOT	4373	4	0.25	2.20	8
SR 80 & Kings Hwy	ADOT	5006	4	0.22	2.45	9
US 191 & SR 75	ADOT	6549	7	0.29	1.43	10
SR 80 & Washington Ave	ADOT	2972	4	0.37	1.50	11
US 191 & Relation St	ADOT	11636	11	0.26	1.27	12
SR 92 & Snyder Blvd	ADOT	26062	22	0.23	1.27	13
SR 92 & Busby Dr	ADOT	27178	17	0.17	1.35	14
SR 80 & Chino Rd	ADOT	9233	6	0.18	1.50	15
SR 186 & Kansas Settlement Rd	ADOT	1562	4	0.70	1.25	16
US 191 & 8th St	ADOT	9820	6	0.17	1.50	17
US 191 & Jefferson Rd	ADOT	2108	4	0.52	1.25	18
Pan American Ave (UB 191) & 1st St	ADOT	9824	10	0.28	1.00	19
SR 80 & Davis Rd	ADOT	2780	2	0.20	3.90	20
US 70 & Central Rd	ADOT	10374	4	0.11	2.70	21
I-10 Ramp (West) & Western Ave	ADOT	7132	4	0.15	1.75	22
US 191 & South St	ADOT	6518	5	0.21	1.40	23
US 70 & Central Ave	ADOT	19164	6	0.09	2.30	24
SR 186 & Railroad Ave	ADOT	2229	3	0.37	1.33	25
SB 10 & Stewart St	ADOT	5260	5	0.26	1.20	26
Pan American Ave (UB 191) & 3rd St	ADOT	9556	5	0.14	1.40	27
Pan American Ave (UB 191) & 9th St	ADOT	14703	7	0.13	1.29	28
US 191 & SR 366	ADOT	5982	5	0.23	1.20	29
SR 82 & Rancho Grande Dr	ADOT	4620	2	0.12	3.40	30
SR 80 & Double Adobe Rd	ADOT	5716	3	0.14	1.67	31
US 191 & Seventh St	ADOT	6366	3	0.13	1.67	32
US 70 & US 191	ADOT	5342	4	0.21	1.25	33
SR 80, Leslie Canyon Rd & A Ave	ADOT	7242	5	0.19	1.20	34
US 191 & Grace Ave	ADOT	2932	3	0.28	1.00	35
SB 19 & Elm St	ADOT	20410	8	0.11	1.13	36
US 70 & 11th Ave	ADOT	22594	7	0.08	1.29	37
US 70, Bowie Ave & Sanchez Rd	ADOT	7773	2	0.07	3.90	38
US 191 & Roper Lake Rd	ADOT	7714	2	0.07	3.40	39
SB 19 (Noncard) & Plum St	ADOT	33349	4	0.03	2.20	40
SR 92 & Coronado Memorial Rd	ADOT	4676	2	0.12	1.50	41
SB 19 (Noncard) & Elm St	ADOT	34534	8	0.06	1.25	42
SR 83, Old Highway Ln & Papago Springs Rd	ADOT	2530	1	0.11	2.00	43
US 191 & Armory Rd	ADOT	7820	3	0.11	1.33	44
US 191 & Main St	ADOT	10840	4	0.10	1.25	45
I-10 Ramp (North) & Ocotillo Rd	ADOT	3545	1	0.08	5.80	46
SR 82 & River Rd	ADOT	2522	2	0.22	1.00	47
SR 189 & Industrial Park Dr	ADOT	16658	5	0.08	1.20	48
SR 82 & Kino Springs Dr	ADOT	2902	1	0.09	2.00	49
US 70 & Eden Rd	ADOT	2981	1	0.09	2.00	50
US 191 & SR 266	ADOT	2880	2	0.19	1.00	51
US 191 & Chasecreek St (East)	ADOT	6662	3	0.12	1.00	51
US 191 & Riverside Dr	ADOT	6992	3	0.12	1.00	53
US 70 & 10th Ave	ADOT	22339	3	0.04	1.67	54
I-10 Ramp (East) & Palo Parado Rd	ADOT	1109	1	0.25	1.00	55
SR 82 & Old Patagonia Rd	ADOT	3772	1	0.07	2.00	56

Intersection	Owner	Daily Volume	Crash Frequency	Crash Rate	Severity Index	PI Rank
SR 80 & Judd St	ADOT	3906	2	0.14	1.00	57
US 70 & Lone Star Rd	ADOT	9224	2	0.06	1.50	58
SR 83 & Elgin Rd	ADOT	1220	1	0.22	1.00	59
Pan American Ave (UB 191) & 8th St	ADOT	14454	3	0.06	1.33	60
US 70 & Palmer Ln	ADOT	10296	2	0.05	1.50	61
SR 90 & Colombo Ave	ADOT	21000	3	0.04	1.33	62
US 70 & Hollywood Rd	ADOT	11496	1	0.02	2.00	63
SR 80 & Arizona St	ADOT	5812	2	0.09	1.00	64
I-10 Ramp (East) & Western Ave	ADOT	6356	2	0.09	1.00	65
US 70 & Main St	ADOT	14856	3	0.06	1.00	66
US 191 & Central Hwy	ADOT	2443	1	0.11	1.00	67
SR 82 & Aurora Dr	ADOT	2684	1	0.10	1.00	68
SB 10 & Soto St	ADOT	2689	1	0.10	1.00	69
SR 289 & Frontage Rd	ADOT	2693	1	0.10	1.00	70
US 191 & Davis Rd	ADOT	2720	1	0.10	1.00	71
Pan American Ave (UB 191) & 14th St	ADOT	10593	2	0.05	1.00	72
US 70 & Webster Rd	ADOT	10715	2	0.05	1.00	73
SR 82 & Royal Rd	ADOT	4139	1	0.07	1.00	74
SB 19 & Santa Cruz St	ADOT	18602	2	0.03	1.00	75
US 191 & Leonard Ave	ADOT	6482	1	0.04	1.00	76
US 191 & Park Ave	ADOT	6547	1	0.04	1.00	77
US 70 & San Jose Rd	ADOT	6666	1	0.04	1.00	78
SR 80 & Apache Powder Rd	ADOT	6688	1	0.04	1.00	79
US 70 & Barney Ln	ADOT	9194	1	0.03	1.00	80