SCAG™

Transportation Safety Program

Regional Existing Conditions Report

OCTOBER 2025

MOBILITY + COMMUNITIES + ENVIRONMENT + ECONOMY

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Executive Summary

Transportation safety remains a critical issue in the SCAG region. The SCAG region is home to almost 19 million people, which represents nearly half of the state's population. From 2014 to 2024, the region accounted for a significant portion of California's traffic-related fatalities and serious injuries. Approximately 18,000 fatalities and 71,000 serious injuries occurred within the region during this period. Comparatively, the state of California saw around 42,000 fatalities and approximately 170,000 reported serious injuries during the same period. Nearly half of all traffic fatalities and serious injuries statewide occurred within the region.

These figures highlight the urgent need to address transportation safety, which includes addressing contributing factors, such as impaired and distracted driving, excessive speeding, and infrastructure deficiencies. Without a concerted, multi-faceted effort, the region and state will continue to encounter significant setbacks in achieving safer roads and preventing needless loss of life.

During the peak COVID-19 pandemic years (2020–2022), traffic fatalities in the United States rose by 7 percent, revealing a troubling trend: more people were killed in traffic collisions even though fewer drivers were on the road. California mirrored this pattern with fatal and serious injury crash rates rising by 25 percent. Key contributing factors for speeding-related crashes in 2022 included unsafe speed (74 percent), alcohol-impaired driving (15 percent), and improper turning (4 percent), according to the University of California, Berkeley Safe Transportation Research and Education Center (SafeTREC).

A recent report from the National Highway Traffic Safety Administration (NHTSA) showed some progress has been made as traffic fatalities declined by about 4 percent from 41,000 in 2023 to 39,000 in 2024 (NHSTA, 2025). This was the first time since 2020 that the annual death toll dropped below 40,000, and it marked the third consecutive year of decline since fatalities peaked in 2022. While these numbers improved, traffic deaths in the United States remained significantly higher than they were a decade ago. Traffic death rates were also still elevated compared to many peer nations. A recent analysis by the Centers for Disease Control and Prevention, using data from the International Road Traffic and Accident Database (covers the United States and 27 other high-income countries), found that U.S. traffic death rates rose by about 23 percent between 2013 and 2022 (Naumann, 2025). Among all countries studied, the United States experienced the largest increase in traffic-related fatalities.

While these statistics are startling, SCAG is responding to regional safety challenges through multi-agency coordination. SCAG, acting as a grant administrator for the FHWA Safe Streets and Roads for All (SS4A) program and through its *Go Human* program, has helped local jurisdictions, community-based organizations, and other agencies secure funding for safety educational campaigns, quick-build projects, complete streets pop-up demonstrations, and mini-grants dedicated to community-based initiatives. In addition, the SS4A grant will support the development of the Regional Safety Action Plan covering all six counties in the SCAG region. In 2024, SCAG awarded 28 mini-grants through the *Go Human* program to community-based organizations and local agencies. These projects range from resiliency planning to bike repair events and community rides.

SCAG is also developing several new analytical tools to assist local jurisdictions in their safety planning efforts. The SoCal Transportation Safety Community Model Tool is a scenario planning tool that allows planners and decision-makers to visualize how planning level-decisions and demographic or land use changes might affect safety performance in a selected community. As an area-based model, the SoCal Transportation Safety Community Model Tool comprehensively assesses changes within a community to forecast future traffic safety performance. This capability allows planners to proactively anticipate and mitigate the safety impacts of potential developments before they are implemented. The SoCal Transportation Safety Community Modeling Tool provides an important mechanism for communicating important safety information with local jurisdictions and community stakeholders. The tool is also equipped to monitor regional safety performance relative to underserved communities, which have historically experienced the greatest transportation safety risk burden.

Performance-based planning is also conducted to fulfill requirements for the federal transportation performance management program. Collision data for this report was obtained from the University of California, Berkeley, Safe Transportation Research and Education Center (SafeTREC) through the Transportation Injury Mapping system (TIMS), which geocodes data from the California Statewide Integrated Traffic Reporting system (SWITRS). Bikeway mileage is sourced from SCAG, and roadway centerline miles is sourced from Caltrans. Vehicle Miles Traveled (VMT) data was generated from the Highway Performance Monitoring System (HPMS). Mode share and demographic data was obtained from the U.S. Census Bureau's American Community Survey (ACS).

In collaboration with state and federal partners, SCAG sets annual regional safety performance targets to reduce traffic fatalities and serious injuries. These metrics include:

- Number of Fatalities
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT
- Number of Non-motorized Fatalities and Serious Injuries

Data-driven strategies, infrastructure investments, public education, and enforcement are essential to achieve safer roads and reduce the human and economic toll of traffic collisions across the region. To identify meaningful and effective strategies, SCAG must first understand existing conditions, such as where, when, and why collisions are happening and who is involved in collisions. This report has two purposes. The first is to provide some answers to these questions by reviewing the SCAG region's most recent roadway collision data, patterns, and trends. The second purpose is to serve as a reference and resource when considering future planned improvements and actions.

Introduction

The SCAG region is home to almost 19 million people, nearly half of the state's population, and about 13 million licensed drivers. The region comprises a wide variety of land uses and population densities and, as a result, depends on various transportation modes including cars, buses, rail lines, bicycles, and walking. From 2014 to 2023, residents in the SCAG region collectively drove an average of 422 million miles each day. During this span, about 7.2 million daily trips were generated in the region across all modes. People in Southern California commute to work, school, grocery stores, parks, and other daily destinations using the regional multimodal transportation network. Unfortunately, with all these trips, mistakes are made and not every trip ends by simply traveling from point A to point B. Each year, an average of 1,616 people are killed, 6,517 are seriously injured, and 118,773 are injured in traffic collisions across the six-county SCAG region.

Recognizing these challenges, SCAG continues to support efforts to prevent and reduce traffic deaths in the region, particularly in communities facing economic, social, and racial disparities. To better identify and address these disparities, SCAG uses the designation of Priority Equity Communities, which are census tracts in the SCAG region that include historically marginalized populations, which are susceptible to inequitable outcomes based on socioeconomic factors such as income, age, and education.

In addition, SCAG developed the Regional High Injury Network (HIN) to identify corridors with high concentrations of traffic collisions that pose the most significant risk to traffic safety. By overlapping these two datasets, SCAG found that a disproportionate share of the Regional HIN (approximately 70 percent), is located within or adjacent to designated Priority Equity Communities, which cover nearly 51 percent of the region's population. The multi-faceted challenges of traffic safety are often compounded by multiple challenges and variables, such as needing to walk or bike despite a lack of adequate infrastructure or missing critical transportation safety information due to limited English proficiency.

As the SCAG region continues to grow its population and economy, travel demand on the regional roadway network will also increase, leading to an increase in traffic density and making safety more critical than ever for the diverse population who use the transportation network. Recognizing the transportation safety challenges confronting the region, in 2021, SCAG adopted a resolution affirming its regional leadership role and commitment to advancing transportation safety, and adopting a Regional Safety Policy that:

- Endorses Toward Zero Deaths (TZD) as part of a comprehensive effort to strive to achieve zero transportation-related fatalities and serious injuries in the SCAG region by 2050, if not sooner.
- Motivates data driven approaches, including high injury networks and safety modeling, to inform safety policy and planning and the strategic use of available funds and resources.
- Promotes equity in regional safety policies and plans by considering and analyzing impacts in Priority Equity Communities and protecting vulnerable roadway users such as pedestrians, bicyclists, older adults, and youth.
- Engages regional stakeholders in transportation safety policy and plan development, implementation, and evaluation, with the goal of achieving alignment with TZD.
- Provides leadership at the state and regional levels to promote safety, including supporting work on statewide efforts (e.g., Strategic Highway Safety Plan) and legislation that furthers TZD.

SCAG, in partnership with the state of California and local jurisdictions, is committed to ensuring transportation safety for all people in the region. Interagency collaboration and coordination are essential to identifying solutions to create a safer region for everyone. To identify solutions, it is essential to analyze existing regional safety conditions. Specifically, there is a need for a better understanding of transportation safety on the types of incidents occurring, where and when they happen, why they occur, and who is being affected.

SCAG's Progress

CONNECT SOCAL 2024

The Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy outlines the agency's ongoing efforts to improve transportation safety and eliminate traffic-related fatalities and serious injuries, particularly those involving vulnerable road users, which include people, especially older adults and children, walking and bicycling across the regional multimodal transportation system. Connect SoCal 2024 integrates equity into regional transportation safety planning by analyzing and mitigating disproportionate impacts on Priority Equity Communities. It also supports innovative strategies to address transit safety issues, aiming to protect both transit employees and the public. Additionally, Connect SoCal 2024 promotes data-driven decision-making in the regional transportation safety planning process by identifying and advancing roadway, transit, rail, and active transportation projects that best meet regional safety performance objectives.

Connect SoCal Technical Reports

Mobility- The Connect SoCal 2024 Mobility technical report provides a detailed overview of how the region plans to address transportation challenges, while identifying opportunities to meet regional emission standards and greenhouse gas reduction targets. It outlines key objectives for enhancing mobility and transportation safety for vulnerable road users. The report also integrates equity considerations into regional transportation safety planning. Serving as a resource for local and county agencies, it helps define existing conditions and mobility-related needs. Additionally, the report provides important data, best practices, and a shared framework for understanding the connection between environmental factors and daily travel choices. A dedicated section on transportation safety can be found on page 151 of the technical report.

Performance Monitoring- The Performance Monitoring technical report outlines the regional transportation safety performance measures and targets used to assess the performance of Connect SoCal 2024 relative to the metrics established by the federal performance management program. These include the total number of collision-related fatalities, the fatality rate per 100 million vehicle miles traveled (VMT), the total number of collision-related serious injuries, the serious injury rate per 100 million VMT, and the total combined number of active transportation-related fatalities and serious injuries. The report also includes data on transit-related fatalities, injuries, safety events, and system reliability. In addition, the report provides insights into vulnerable road users, the plan's regional safety planning approach, roadway collision factors, and SCAG's transportation safety initiatives in a dedicated section specifically on transportation safety.

TRANSPORTATION SAFETY WORK

Go Human- Funded by grants from the California Office of Traffic Safety, the SCAG *Go Human* program is a community engagement initiative aimed at reducing traffic collisions in the region. It encourages individuals to walk and bike more while urging drivers to prioritize the safety of pedestrians and bicyclists. The program also supports active transportation-based projects that promote traffic safety strategies through community involvement. Additionally, it provides resources such as the *Go Human* Kit of Parts, traffic safety webinars, community ambassador programs, regional traffic safety workshops, and planning for safer streets. The program also organizes pop-up events, biking demonstrations, and walking tours.

SoCal Transportation Safety Resource Hub- Developed by SCAG, the SoCal Transportation Safety Resource Hub is an online information resource focused on improving transportation safety throughout the region. The hub provides access to safety data including collision data and safety predictive modeling platforms as well as resources and tools to conduct local safety analyses. The hub also links to community engagement resources such as the *Go Human* Kit of Parts. The platform outlines the agency's transportation objectives, including regional targets for reducing fatalities and serious injuries. Additionally, the Hub is home to the Regional High Injury Network (HIN) which is an interactive map identifying areas in the region with the highest concentrations of fatal and serious injury collisions. The Regional HIN is focused on helping local jurisdictions develop their own HINs and to provide data to support the lowering of speed limits in high safety risk areas. The hub also highlights funding opportunities to support local transportation safety initiatives.

Traffic Safety Analysis Tools- As part of a comprehensive effort to promote a performance-based planning and programming approach in our regional planning efforts, SCAG has been developing a set of new tools for use by local agencies to support local traffic safety planning activities. This new resource, the SoCal Transportation Safety Community Modeling Tool is described in the Executive Summary of this report. These technical resources will allow local jurisdictions to develop and implement data-focused transportation safety planning strategies to improve travel safety performance in their communities. All resources will be accessible through the Transportation Safety Resource Hub.

Safe Streets and Roads for All (SS4A)- SCAG was awarded an SS4A grant by the U.S. Department of Transportation to improve pedestrian safety and access in preparation for major upcoming events, including the 2026 World Cup, 2027 Super Bowl, and the 2028 Summer Olympic and Paralympic Games. This funding supports SCAG's Events and Games Pedestrian Safety Program, which aims to reduce the disproportionate number of pedestrian and bicyclist injuries and fatalities along high-traffic corridors. This initiative aligns with the goal of "Pedestrianization of Roadways for LA28 and Beyond," a collaboration between SCAG and the Los Angeles Department of Transportation (LADOT) to implement safe street reconfigurations on key corridors in the city of Los Angeles. These efforts will also support the LA28 Games. SCAG was awarded an additional SS4A grant to fund the development of the Regional Safety Action Plan for the six counties of the SCAG region. Additionally, the grant will support the expansion of SCAG's *Go Human* program, including local safety campaigns, complete streets pop-up demonstrations, and the allocation of 15 mini-grants to community-based organizations in the region. Funding will also be used for quick-build demonstration activities aimed at improving street safety and accessibility.

Active Transportation Program (ATP)- The California Active Transportation Program (ATP), established by Senate Bill 99 and Assembly Bill 101, provides funding to encourage increased use of active modes of transportation, such as biking and walking. The ATP funds infrastructure projects, plans, non-infrastructure projects, infrastructure projects with non-infrastructure components, and quick-build projects. SCAG coordinates with the six county transportation commissions to facilitate a Regional ATP as part of each ATP cycle, which is typically administered every two years.

Safe and Active Streets Working Group (SASWG)- Formerly known as the Active Transportation Working Group, Safety Working Group, and *Go Human* Steering Committee, the SCAG SASWG engages and collaborates with transportation safety partners in developing regional transportation safety and active transportation strategies. These strategies are intended to be incorporated in the region's next Connect SoCal long-range plan update in 2028. The working group explores methods to increase the value of the plan's active transportation and safety components for local jurisdictions. The working group also serves as a forum to share information on SCAG initiatives and funding programs, discusses emerging issues, and discuss innovations and best practices to improve safety. The SASWG also assists SCAG staff in developing transportation safety analyses and encourages information sharing among regional partners involved in transportation safety planning. Meetings of the SASWG are held quarterly, and agendas and presentations are available on the SCAG Regional Planning Working Group webpage.

EMERGING TOPICS

SCAG also acknowledges several emerging areas that impact transportation safety across the region and within local jurisdictions but are not necessarily straightforward enough to track through collision data. The following considerations will be qualitatively incorporated into SCAG's various safety efforts and analysis.

The 2028 Summer Olympic and Paralympic Games (LA28 Games) - The LA28 Games will focus on transit-accessible venues to accommodate an anticipated one million additional daily transit trips (LA Metro, 2025). In preparation, plans include additional shuttles, improvements to stations, sidewalks, and streets, as well as LA Metro rail and bus line expansions, and the addition of new express lanes. These changes might significantly impact transportation safety, particularly in venue and venue adjacent cities across the region. The LA28 Games are anticipated to accelerate work on first-mile and last-mile connections and enhancements to the built environment. In preparation for the Games, SCAG is collaborating with the Games Mobility Executive (GME) partners including the Los Angeles Mayor's Office, LA Metro, LADOT, Caltrans, and Metrolink via the GME Transportation Demand Management (TDM) Subcommittee. SCAG has also launched passenger- and freight-focused Regional TDM Forums to support coordination and planning.

Autonomous Vehicles (AVs)- AVs are self-driving vehicles that use artificial intelligence and sensor technologies, such as radar and light detection, to perceive the environment and road elements. AVs have shown promise in reducing pedestrian and bicyclist-related fatalities by up to 90 percent, though real-world performance is still under study (Almaskati, 2023). Field tests indicate AVs can recognize human presence, but challenges remain in consistently detecting pedestrian variability across different environments. While AVs might reduce human error in driving, they are more frequently involved in rear-end collisions. California is one of the few states permitting AV testing, requiring AV companies to publicly report any AV-involved crashes through the Department of Motor Vehicles. However, limited crash data and low levels of deployment mean much of our current understanding of AV-involved crashes relies on pilot studies. SCAG acknowledges the emerging influence of AVs on transportation safety, including the need to better understand infrastructure demands for daily operations, public adoption, interactions with vulnerable road users, and accessibility disparities. To learn more about SCAG's approach to AVs, please see the Connect SoCal 2024 Mobility technical report.

Vehicle Size- The physical size of a vehicle plays a significant role in crash severity and the likelihood of serious injuries or fatalities. Larger vehicles such as SUVs, vans, pickup trucks, and light trucks, which now account for 80 percent of vehicle production, have raised safety concerns (National Safey Council, 2024). Since the 1980s, all vehicle body class types have become heavier, particularly trucks, pickup trucks, and light trucks (California Transportation Commission, 2025). These vehicles pose greater risks for pedestrians and bicyclists due to their height, weight, larger blind zones, and high hoods. In addition, Americans are keeping their vehicles for longer. In 2024, the average vehicle owner held onto their vehicle for approximately 13 years, which means that heavier vehicles remain on the road for longer periods. Approximately half of the United States have weight-based vehicle fees, California and New Hampshire having the highest weight fees. However, current regulations and policies have not kept pace with the increasing presence of SUVs, sedans, and different classes of trucks and their impact on vulnerable road users. In response, California passed Assembly Bill 251 in 2023, mandating a study on the relationship between vehicle weight and injuries to vulnerable road users and degradation to roads, including an assessment of the costs and benefits of a vehicle weight fee and how the revenue could be used to improve roadway safety. The passage also includes an established task force to study the relationship between vehicle weight and injuries to vulnerable road users. Additional steps to address the increase in larger vehicle sizes include raising awareness of the safety risks and examining how vehicle electrification, which often increases vehicle weight, may further endanger other drivers, pedestrians, and bicyclists.

Traffic Speed Cameras- In 2023, Assembly Bill 645 and Senate Bill (SB) 1297 were passed and went into effect in 2025. These laws require the cities of Los Angeles, Long Beach, Glendale, and Malibu (through SB 1297) to install traffic speed cameras in areas with a history of speeding-related crashes or school zones. Speed cameras help deter reckless driving and reduce traffic injuries and fatalities by capturing license plates of vehicles exceeding the speed limit. Drivers going more than 11 miles per hour over the speed limit will be subject to fines. Studies have shown that speed cameras reduce serious and fatal crashes and serve as an alternative to police-led traffic stops, which require more resources and may involve racial bias (Vision Zero Network, 2024). Equity concerns remain, particularly for low-income drivers and cameras operating within priority equity areas, potentially exacerbating racial disparities. To address these concerns, jurisdictions must offer reduced fines or community service options for low-income drivers, conduct community outreach, and develop a Speed Safety System Impact Report before implementation. This report includes guidelines for handling confidential data, including photographic and administrative records. In the SCAG region, cameras are planned in Los Angeles County, including in the cities of Los Angeles, Long Beach, and Glendale. These cities are in the early stages of implementation, currently drafting reports and identifying high-risk areas for future camera installations. Malibu has completed its outreach and drafted its impact report, with camera installation expected in summer 2025 and enforcement starting in fall 2025.

Electric Bicycles and Scooters (e-bikes and e-scooters)- Electric bicycles and scooters (e-bikes and e-scooters) expand opportunities to travel using active transportation but also pose increasing safety risks for riders, pedestrians, and drivers in the SCAG region. Powered by electric motors, these vehicles typically travel faster than traditional bikes and scooters, heightening the risk of serious collisions, especially with the growing availability of rentals. Injuries involving e-bikes and e-scooters have doubled annually, largely due to a lack of helmet use and excessive speeds (Fernandez, 2024). California Vehicle Code Sections 21235 and 312.5 require riders to use bike lanes when available, travel under 25 mph (unless otherwise permitted), wear helmets, be at least 18 years of age, hold a valid driver's license, and ride alone. However, compliance and enforcement remain inconsistent. Risky behaviors, such as riding

without helmets, riding under the influence, doubling, speeding, inexperience, and underage use increase safety concerns. Dockless models also obscure sidewalks, creating tripping hazards and obstacles for wheelchair users. E-scooter safety is also hindered by underreporting, inconsistent regulation, and misclassification across jurisdictions. To improve micromobility safety, recommended actions include public education, stricter enforcement, promotion of helmet use, and integration of safety features like lights and bells. The SCAG Connect SoCal 2024 Mobility Technical Report addresses micromobility but focuses primarily on active transportation, offering limited analysis of safety impacts.

Overview

SCAG Regional Safety Targets

The federal transportation funding legislation passed in 2012 (Moving Ahead for Progress in the 21st Century Act or MAP-21) and in 2015 (Fixing America's Surface Transportation Act or the FAST Act) called for the establishment of transportation system performance measures for various system performance elements. Relative to transportation safety, the Federal Highway Administration (FHWA) requires state Departments of Transportation (DOTs) to coordinate with Metropolitan Planning Organizations (MPOs) to assess fatalities and serious injuries on all public roads and set annual statewide and regional performance targets for the following five transportation safety performance measures.

- Total Number of Fatalities
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- Total Number of Serious Injuries
- Rate of Serious Injuries per 100 million VMT
- Total (combined) Number of Non-motorized Fatalities and Serious Injuries

Annual safety performance targets are developed using five-year rolling averages. A five-year rolling average is the average of five individual, consecutive annual points of data for each performance measure. Using a multiyear average approach provides a better understanding of the overall fatality and serious injury data over time. For instance, if a particularly high or low number of fatalities and/or serious injuries occur in one year, a return to a level consistent with the average in the previous year may occur. State DOTs and MPOs are expected to use the information and data generated from the annual safety target development analysis to help make better transportation planning and funding decisions that result in fewer transportation fatalities and serious injuries.

REGIONAL SAFETY TARGETS TIMELINE

The California Department of Transportation (Caltrans) is required to establish statewide safety targets on an annual basis, typically releasing the updated targets in August of each calendar year. SCAG is required to establish regional targets for the same five safety performance measures up to 180 days after Caltrans releases the statewide targets, which means by the end of February of each year. SCAG has the option to agree to support Caltrans' targets, establish numerical targets specific to its region, or use a combination of both. The 2025 calendar year was the eighth year for which safety targets were established pursuant to federal requirements. SCAG currently develops its annual safety targets with the support of output provided through a regional transportation safety model. Since the safety targets are updated annually, SCAG may revisit and update the regional targets each calendar year. SCAG is required to provide regular updates on progress toward achieving regional targets for the federal performance measures, including within Connect SoCal and in updates to the Federal Transportation Improvement Program (FTIP). Historical and current regional and statewide safety targets are provided in **Table 1** and **Table 2**.

Table 1: Statewide and Regional Safety Targets: 2018-2021

Target Measure	2018		2019		2020		2021	
	SCAG	*Caltrans*	*SCAG*	*Caltrans*	*SCAG*	*Caltrans*	*SCAG*	*Caltrans*
Number of Fatalities	1,601.0	3,590.8	1,467.0	3,445.4	1,607.0	3,518.0	1,608.9	3,624.8
Rate of Fatalities per 100M VMT	0.97	1.03	0.89	1.00	0.96	1.02	1.31	1.04
Number of Serious Injuries	5,752.0	12,823.4	5,552.0	12,688.1	5,735.6	13,740.4	6,490.1	15,419.4
Rate of Serious Injuries per 100M VMT	3.50	3.83	3.37	3.66	3.42	3.99	5.30	4.42
Total Number of Non-motorized Fatalities and Serious Injuries	2,068.2	4,271.1	2,133.0	3,949.8	1,916.0	4,147.4	2,162.6	4,340.8

Table 2: Statewide and Regional Safety Targets: 2022-2025

Target Measure	2022		2023		2024		2025	
	SCAG	*Caltrans*	*SCAG*	*Caltrans*	*SCAG*	*Caltrans*	*SCAG*	*Caltrans*
Number of Fatalities	1,511.4	3,491.8	1,485.2	3,808.2	1,511.4	3,491.8	1,485.2	3,808.2
Rate of Fatalities per 100M VMT	0.95	1.04	0.93	1.22	0.95	1.04	0.93	1.22
Number of Serious Injuries	7,164.7	16,704.2	7,441.8	15,156.2	7,164.7	16,704.2	7,441.8	15,156.2
Rate of Serious Injuries per 100M VMT	4.50	4.90	4.68	4.90	4.50	4.90	4.68	4.90
Total Number of Non-motorized Fatalities and Serious Injuries	2,162.6	4,684.4	2,235.5	4,131.7	2,162.6	4,684.4	2,235.5	4,131.7

TRACKING PROGRESS TOWARD MEETING SAFETY TARGETS

FHWA considers whether Caltrans has met or made significant progress toward meeting the statewide safety targets when at least four of the five targets are met or the outcome for the performance measure represents an improvement over the baseline performance the year prior to the target year. The "met or made significant progress" determination only applies to the statewide targets, not the regional targets set by SCAG. If FHWA determines that a state has not met or made significant progress toward achievement of its annual safety targets, that state would be required to obligate HSIP (Highway Safety Improvement Program) funds in the amount apportioned for the prior year only for HSIP projects and to also submit an HSIP Implementation Plan to FHWA to demonstrate progress planned toward achieving the targets. The purpose of the HSIP Implementation Plan is to identify tangible actions a state would be taking in the subsequent Federal Fiscal Year to facilitate achievement of the statewide safety targets.

SCAG and Caltrans have focused on improving interagency coordination on safety planning activities to facilitate achievement of the statewide targets. In addition to the annual statewide safety performance assessment, FHWA reviews how MPOs such as SCAG are addressing their regional targets or assisting the state in addressing statewide targets during Transportation Management Area (TMA) Certification Reviews, when FHWA reviews regional Transportation Improvement Programs (TIPs) and State Transportation Improvement Programs (STIPs). FHWA also

reviews MPO progress toward regional target achievement during the Federal Planning Finding associated with the STIP approval process.

PROGRESS TOWARD IMPROVING TRANSPORTATION SAFETY IN CALIFORNIA

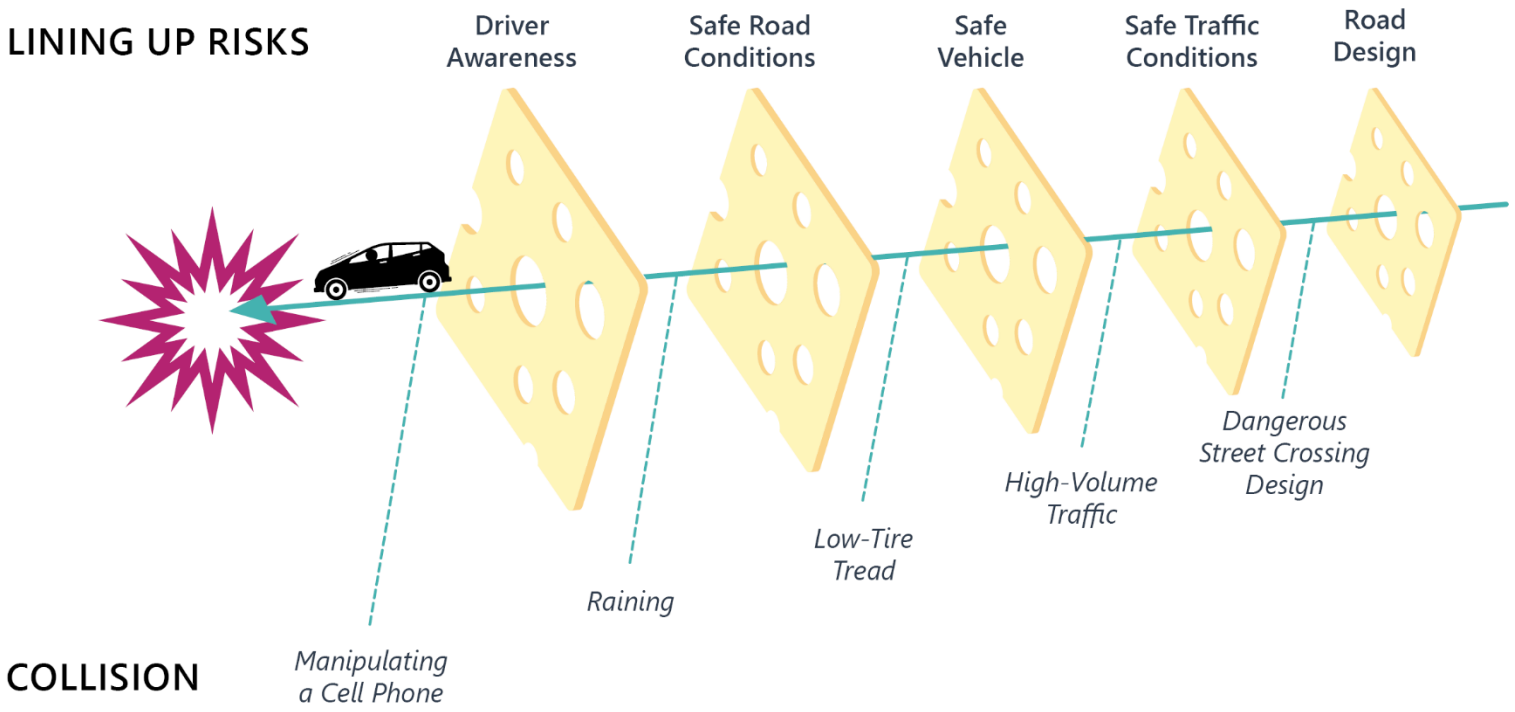
California has its own Strategic Highway Safety Plan (SHSP), which was initially developed in 2006 and is currently being updated for 2025. As a statewide coordinated safety plan, the SHSP provides a comprehensive framework for reducing fatalities and serious injuries experienced by motorists, pedestrians, and bicyclists on all public roads. California aims to provide a safe transportation system for all users. Like SCAG, the state of California's overarching traffic safety goal is Toward Zero Deaths.

Caltrans is currently working on implementing the SHSP. The current SHSP Implementation Plan includes recommendations provided by the Zero Traffic Fatalities Task Force, which convened in 2019 to focus on identifying effective strategies to reduce traffic injuries and fatalities, including changes in methodologies for setting speed limits. SCAG has provided leadership in advancing SHSP Implementation Plan action items including development of statewide guidance on establishing a definition of, and methodology for, high injury networks and in the acquisition of HIN spatial data from the larger MPOs in the state to identify the intersection of statewide HIN networks with Priority Equity Communities. These efforts are intended to support a more data-focused investment decision-making process for improving roadway safety throughout the state and to provide an assessment of disproportionate travel safety impacts on Priority Equity Communities. In addition to these statewide efforts, many jurisdictions in California and throughout the nation are implementing comprehensive traffic safety strategies including Vision Zero, Toward Zero Deaths, and the Safe System Approach to facilitate progress toward the ultimate goal of zero transportation fatalities and serious injuries. These strategies are based on the understanding that even one traffic-related fatality is unacceptable. In the United States, the Toward Zero Deaths National Strategy was launched in 2014, adopting the zero-focused imperative along with a strong commitment to fostering a safety culture. The principles underpinning the approach include:

- People make mistakes which can lead to crashes; however, no one should die or be seriously injured on the road as a result of these mistakes.
- The human body has a limited physical ability to tolerate crash forces.
- Road safety is a shared responsibility amongst everyone, including those that design, build, operate and use the road system.
- All parts of the road system must be strengthened in combination to multiply the protective effects and if one part fails, the others will still protect people.

People are at the center of the transportation system and, because we are all human, mistakes happen that lead to crashes. Recognizing this, the roadway system must include layers of protection in the form of safe roads, safer vehicles, safer speeds, and responsible road use to help prevent serious injuries and deaths. Collisions often result from several variables including human error, poor urban design, poor weather conditions, and vehicle safety. **Image 1** illustrates how all of these factors working together can cause a collision to occur.

Image 1: Swiss Cheese Model of Crash Causation



SCAG Region

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

8,200
annual/per capita

Injuiries from Collisions

118,733
people sustain injuries every year from collisions

6,517
people sustain serious injuries every year from collisions

41%
of all traffic collision victims are people 18-34

122,755
collisions occur per year on the streets—*that's roughly*

336
collisions per day

Where Collisions Occur

97%
in urban areas

63%
on local roads

24%
on highways

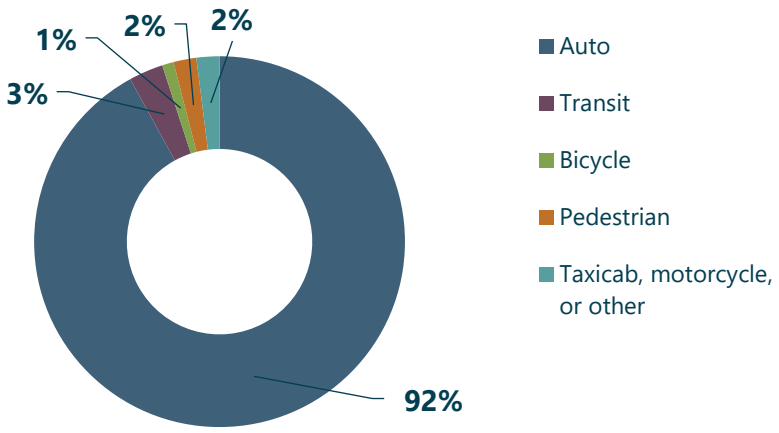
Fatalities from Collisions

1,616
people die every year from collisions

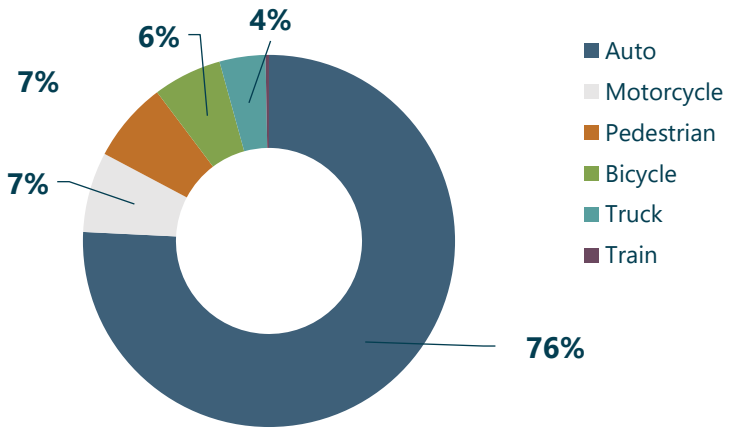
34%
of all deaths involve people walking or bicycling

22%
of all pedestrian fatal victims are 65 and older

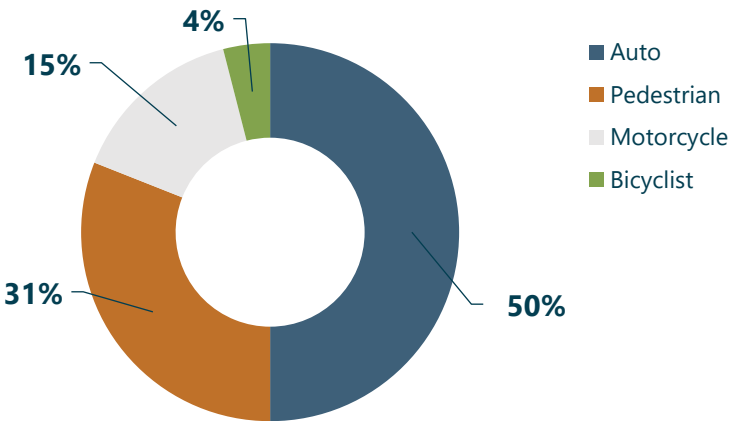
SCAG Region, Daily Commute Trips (By Mode 2014-2024)



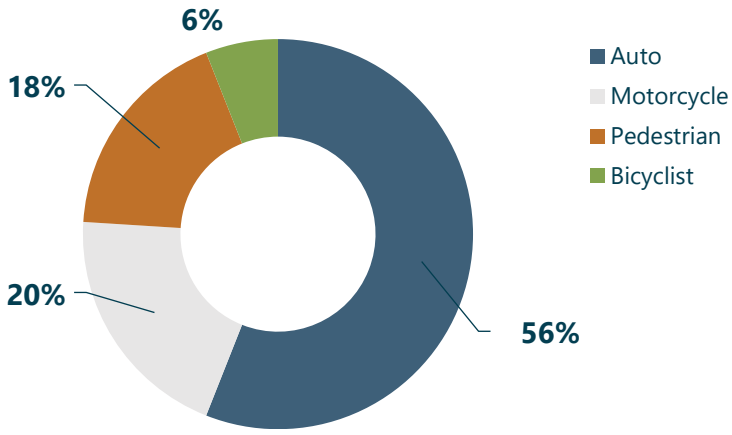
SCAG Region, Total Collisions (By Mode at Fault 2014-2024)



SCAG Region, Fatal Collisions Victims (By Mode 2014-2024)



SCAG Region, Serious Injury Collisions Victims (By Mode 2014-2024)



SCAG Region

Between 2014 and 2024, an average of 1,616 people died, 6,517 people were seriously injured, and 118,773 people sustained other injuries (injuries that were not fatal or serious) in traffic collisions each year in the SCAG region. During that period, the number of fatal victims began to rise in 2019 and peaked in 2022 at approximately 1,900 fatalities. After 2022, the number of fatal victims gradually began to decline, as reflected in **Figure 1**. Between 2014 and 2021, the number of serious injury victims steadily increased, except for 2020, at an average rate of four percent per year (**Figure 2**). In contrast, the number of non-serious injury victims generally decreased at an average rate of three percent over the same period (**Figure 3**). Changes in driving behavior during the COVID-19 pandemic and lower traffic volumes led to more open roads and higher travel speeds. Under these conditions, collisions that might have caused minor injuries at lower speeds resulted in fatal or serious outcomes (Stiles, 2023), which could explain the trend of increasing fatalities and serious injuries with decreasing non-serious injuries in the region during the height of the pandemic. From 2014 to 2024, under two percent of collisions resulted in fatalities, five percent with serious injuries, and nearly 94 percent with non-serious injuries.

Maps 1 and **2** illustrate the locations of reported fatal and serious injury collisions, respectively, that occurred in the region in 2024. Only one year of collision data is mapped due to visualization constraints. Both maps indicate that fatal and serious injury collisions are concentrated in areas of denser population and roadway networks, like central Los Angeles County and southwest San Bernardino County. The heat map of fatalities shows areas of higher collision density in the cities of Long Beach, Lancaster, and Ontario, the highest density in Southeast Los Angeles. The heat map of serious injuries shows similar areas of higher collision density in the cities of Long Beach, Newport Beach, Upland, Claremont, Fontana, San Bernardino, and the Valley Glen neighborhood in the city of Los Angeles.

Of the 1,616 fatal collisions that occurred on average each year in the SCAG region, 557 collisions involved someone walking or bicycling. Overall, for collisions involving pedestrians and bicyclists, the number of fatalities remained roughly consistent while the number of serious injuries steadily increased during the study period. **Figures 4** and **5** show the number of pedestrians and bicyclists killed and seriously injured in collisions from 2014 to 2024, respectively. The number of pedestrian and bicyclist fatalities was generally consistent during the study period except for an increase in 2021 and 2022, which may be associated with an increase in the number of people walking and biking during the stay-at-home and social distancing orders related to the COVID-19 pandemic. The number of pedestrian and bicyclist serious injuries has been steadily climbing since 2014 at an average annual rate of four and a half percent per year. **Maps 3** and **4** illustrate the pedestrian- and bicyclist-involved collisions that resulted in fatal and serious injuries that occurred in the region in 2024, respectively. For both pedestrian- and bicyclist-involved collisions, the map shows that, while collisions occurred throughout the region, they were more frequently located within urbanized areas, and most were in Los Angeles County, particularly central and south Los Angeles.

Although much understanding can be gained by analyzing the absolute number of fatalities and serious injuries, it is important to also consider external factors. For example, during the COVID-19 pandemic, vehicle miles traveled (VMT) decreased due, at least in part, to city, county, and state stay-at-home orders, resulting in reduced exposure to the potential for collisions. In addition, given the varying levels of population density across the region, normalizing the number of fatal and serious injury victims per 100,000 people provides a comparable measurement of roadway safety across counties. Although population steadily increased in the region, the growth was incremental: from 2014 to 2024, regional population increased by less than one percent per year. As shown in **Figure 6**, when standardizing by population, the rate of fatalities and serious injuries per 100,000 people follows a similar pattern as the absolute number of victims, with fatalities per 100,000 people reached a peak in 2022 and serious injuries per 100,000 people peaked in 2021. Similarly, **Figure 7** demonstrates that when standardizing by VMT, the rate of fatal and serious injury victims per 100 million VMT in the region followed a similar pattern as the absolute number of fatal and serious injury victims. The consistency between the patterns of the absolute number and rate of fatalities and serious injuries suggested that factors other than population growth and VMT may have contributed to the collision trends. Research conducted during the peak pandemic years (2020-2022) indicated that reductions in VMT, driven by factors such as stay-at-home orders, telecommuting, social distancing, and an increase in e-shopping, were associated with a decline in the number of fatal collisions. However, more recent studies have identified a rise in fatal and serious injury

collisions. This increase may be attributed to higher risk driving behaviors, including driving under the influence of alcohol or drugs, as well as an increase in excessive travel speeds (Patwary, 2023).

Figure 1: SCAG Region, Total Number of Fatal Victims (2014-2024)

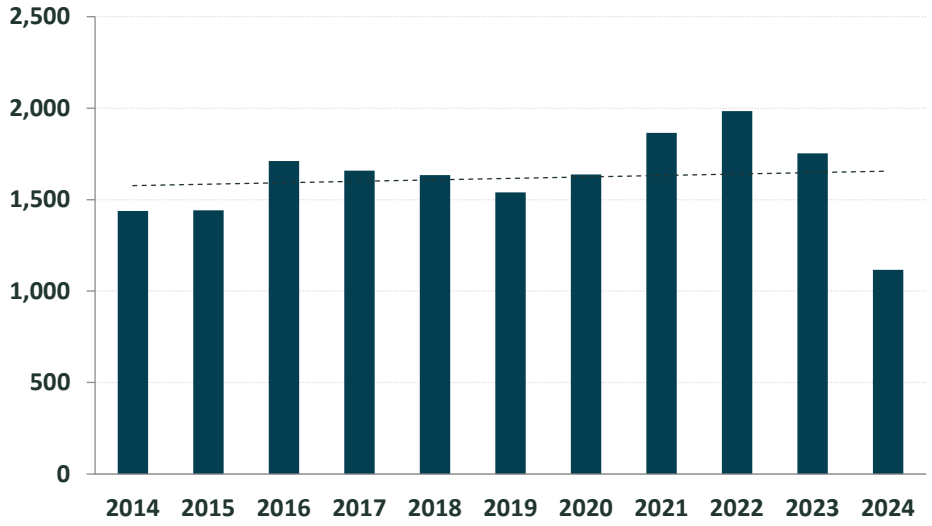


Figure 2: SCAG Region, Total Number of Serious Injury Victims (2014-2024)

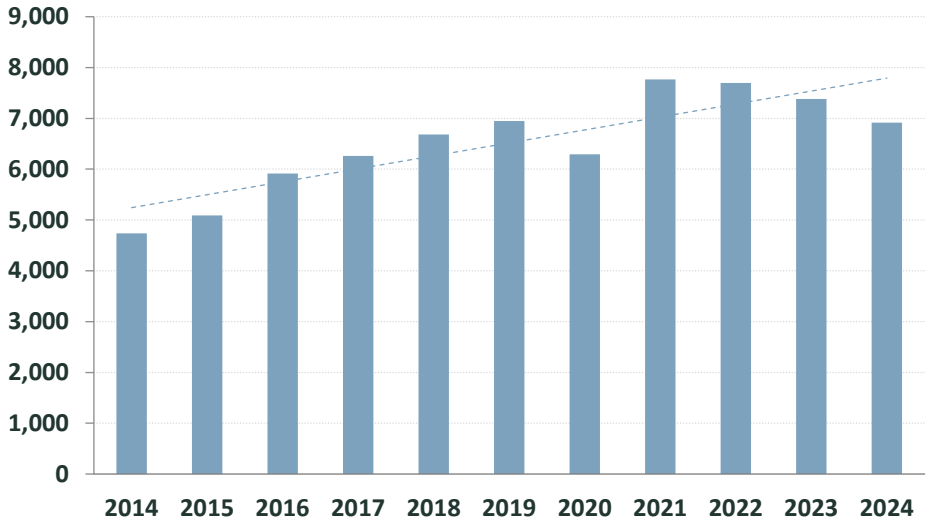


Figure 3: SCAG Region, Total Number of Non-Serious Injury Victims (2014-2024)

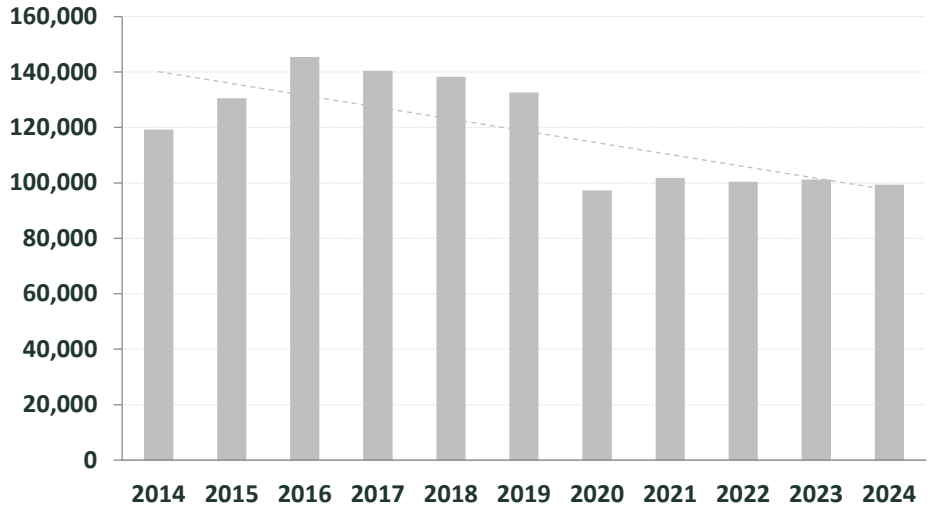


Figure 4: SCAG Region, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)

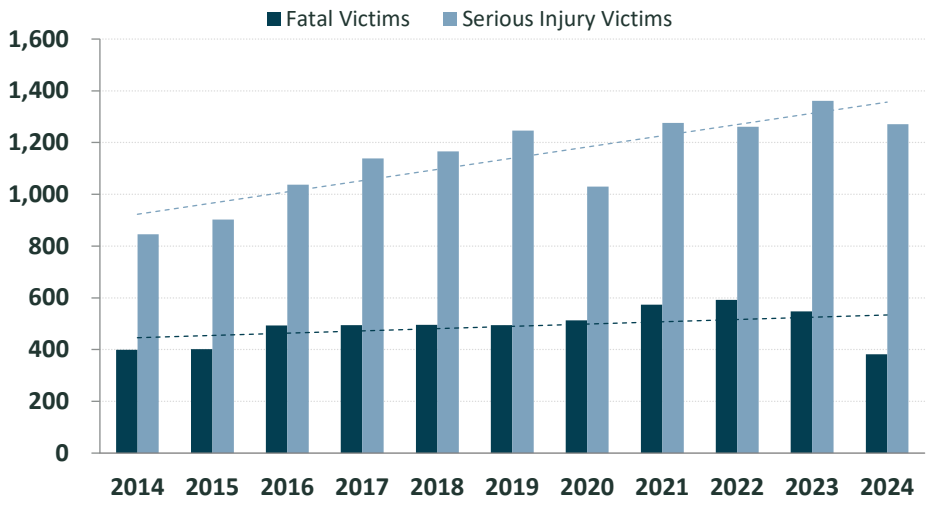


Figure 5: SCAG Region, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)

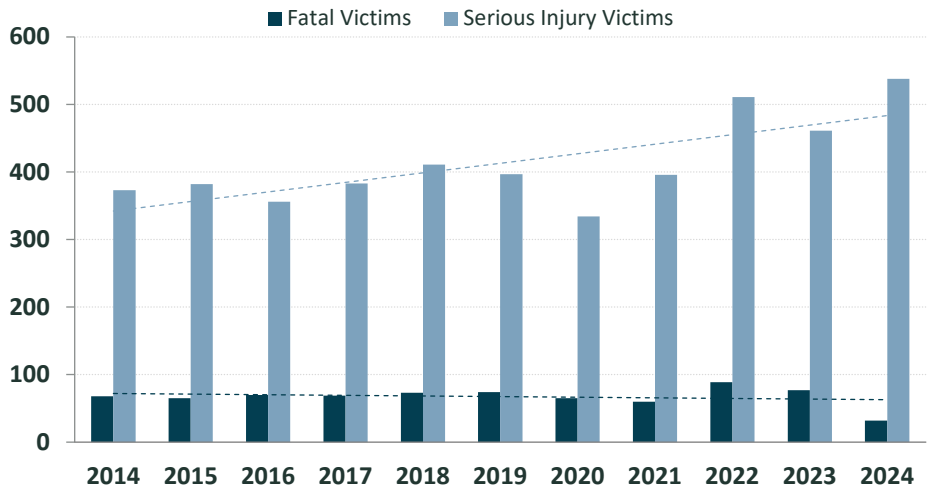


Figure 6: SCAG Region, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)

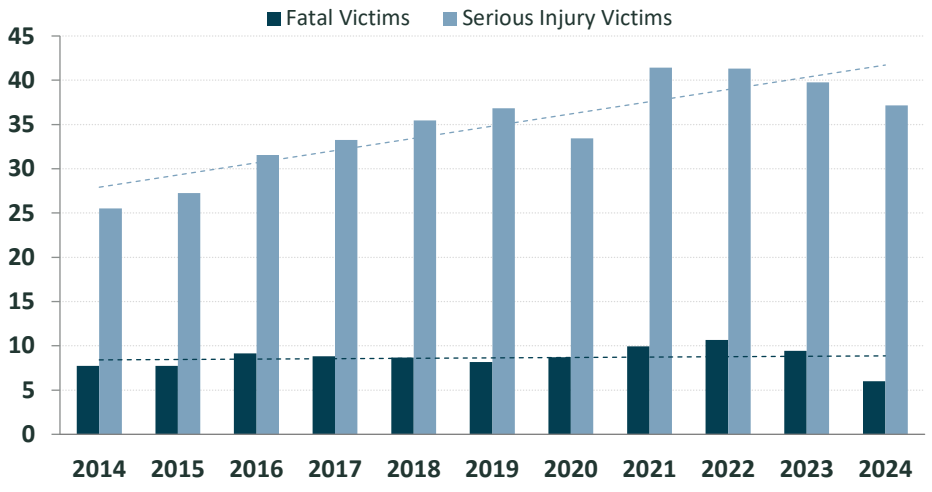
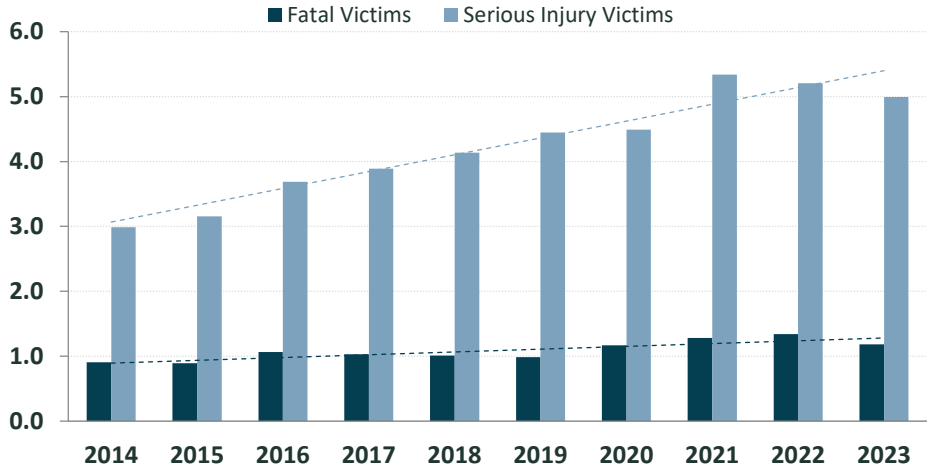
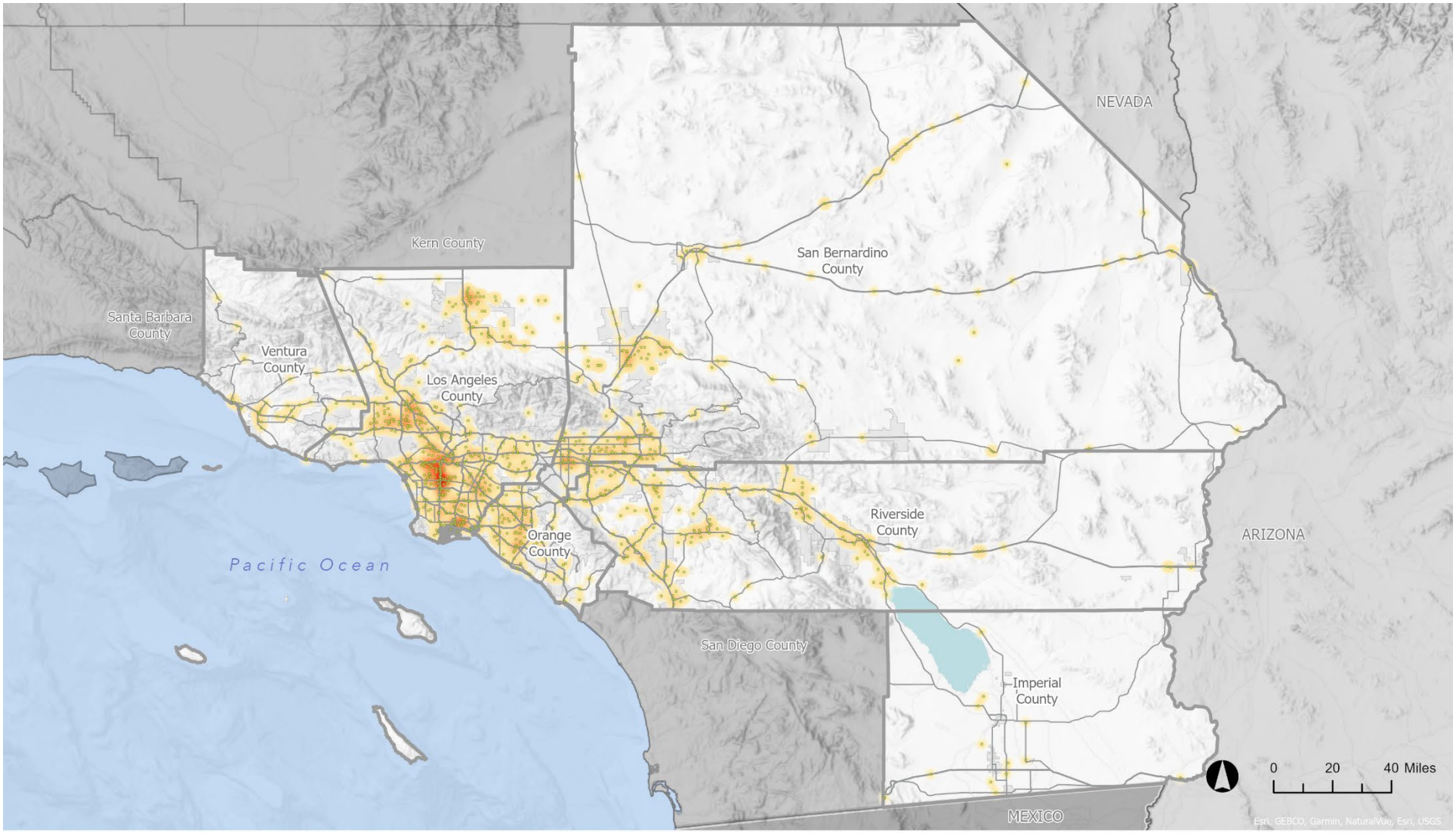


Figure 7: SCAG Region, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)



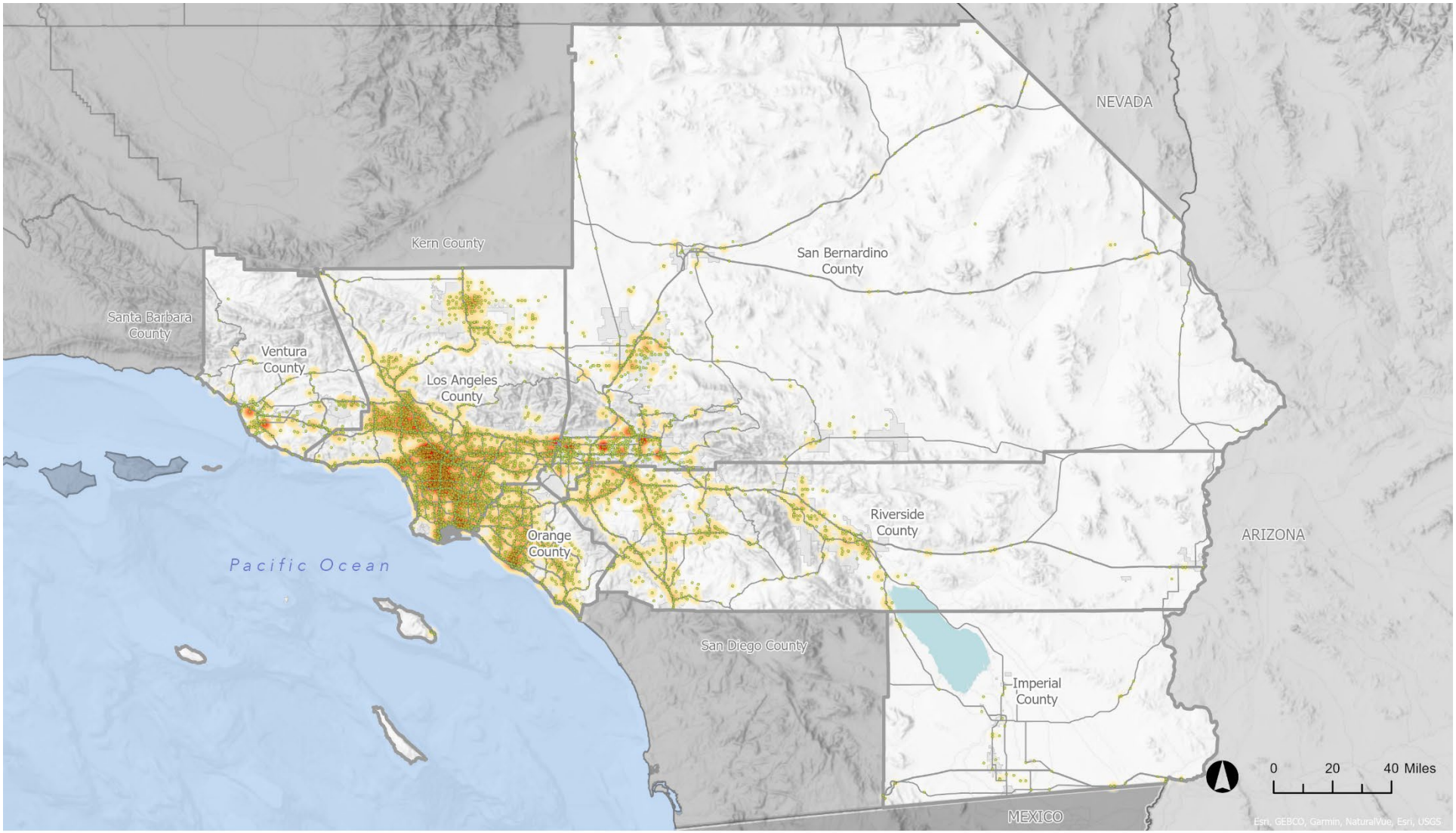
Note: 2024 VMT data was not available at the time of analysis.

Map 1: SCAG Region Fatal Collisions (2024)



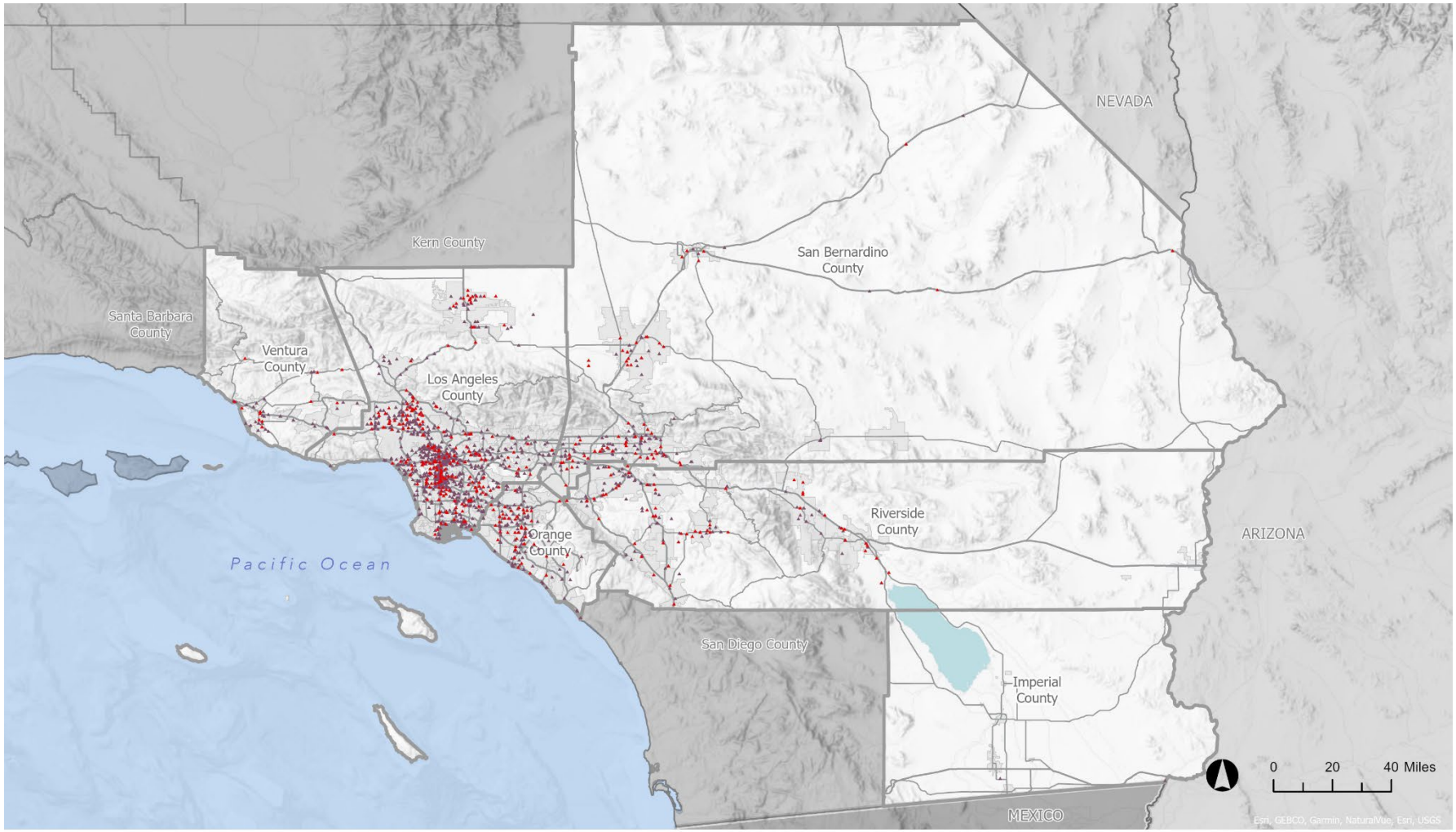
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Map 2: SCAG Region Serious Injury Collisions (2024)



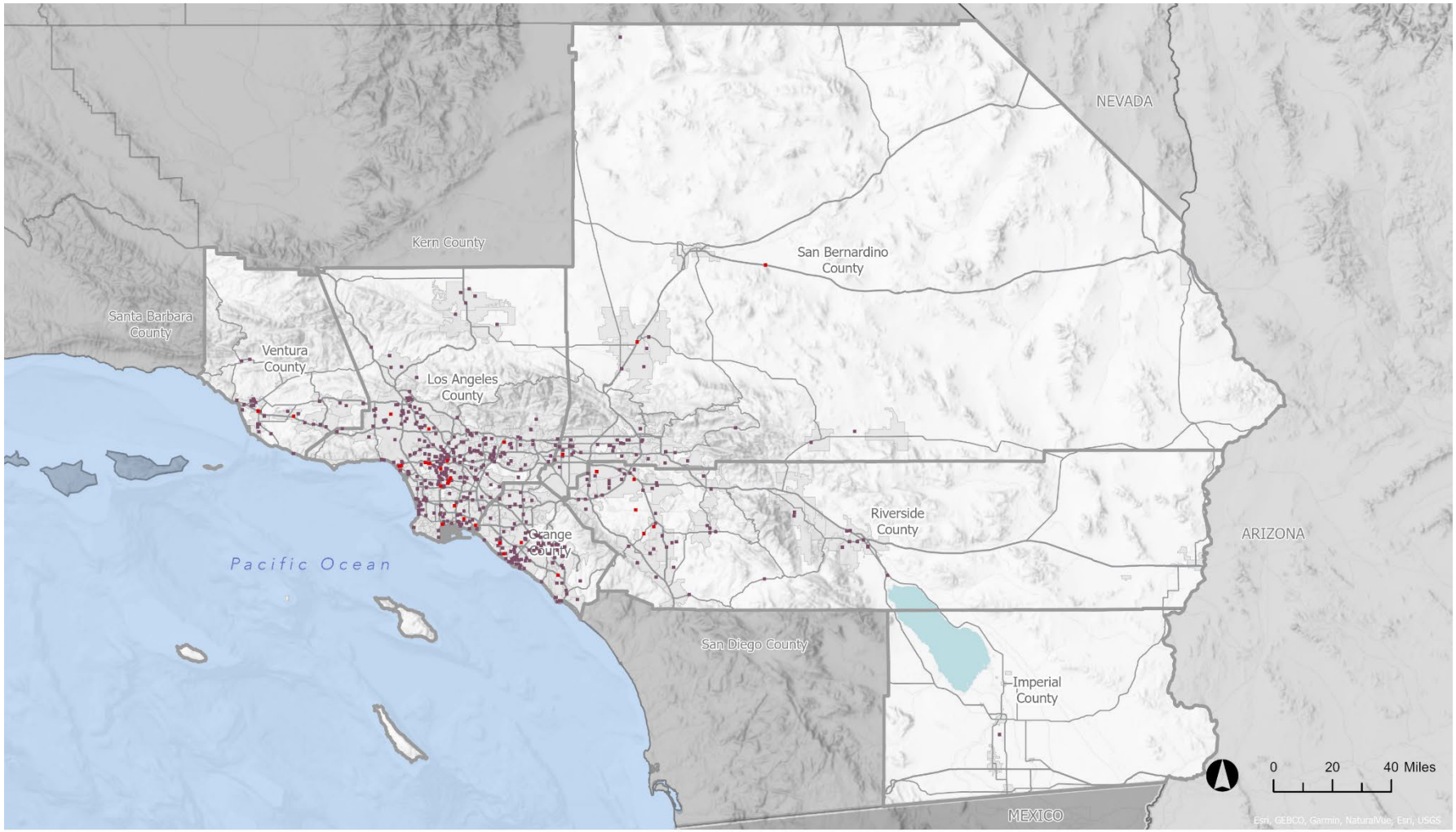
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Map 3: SCAG Region Pedestrian-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Map 4: SCAG Region Bicyclist-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Where Collisions are Occurring

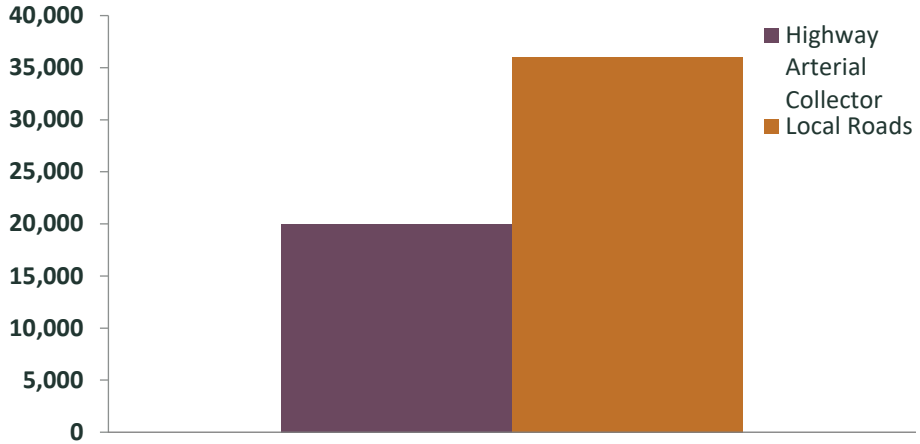
The California Department of Transportation (Caltrans) adjusted definitions of urban and rural areas from the U.S. Census to create distinct identifications of rural and urban areas in California. Per the Caltrans definition, urbanized areas were defined as having populations of 50,000 or more people, small urban areas have 5,000 to 49,999 people, and rural areas have populations below 5,000 people. In 2019, the vast majority of fatal and serious injury collisions in the SCAG region occurred within urbanized areas and urban clusters. This included 73 percent of all fatal collisions (including pedestrian-, bicyclist-, and motorcyclist-in-involved) and 75 percent of all serious injury collisions. **Maps 1-4** display collisions (by mode) that resulted in a fatality or serious injury, highlighting their concentration in the region, the majority of which were in urbanized areas. For more specific information on which corridors experienced the highest concentrations of collisions in the region, see SCAG's Regional High Injury Network on the SoCal Transportation Safety Resource Hub.

The Southern California highway, arterial, and collector system includes around 20,000 centerline miles and 36,000 centerline miles of local roads as shown in **Figure 8** (Caltrans, 2024). As shown in **Figure 9**, the region has approximately 5,600 bikeway miles, including around 900 miles of Class I bikeways (multi-use paths), about 3,300 miles of Class II bikeways (a striped lane for one-way bicycle travel), approximately 1,300 miles of Class III bikeways (signs or pavement markings, but no separation), and 75 miles of Class IV bikeways (separated cycle tracks), with over 9,000 additional planned bikeway miles (SCAG, 2024).

In 2024, most fatal collisions across all transportation modes in the SCAG region occurred on three primary roadway types: local roads, arterials, and highways. Local roads are primarily designed to provide access to residences, businesses, and other adjacent properties (FHWA, 2023). While they typically support lower traffic volumes and speeds, they were still the site of severe collisions, particularly involving vulnerable road users such as pedestrians and bicyclists. Arterials serve as key routes for traffic, often carrying higher volumes at greater speeds, which can contribute to more severe crashes. Collectors are major and minor roads that connect local roads and streets with arterials with typical speeds ranging between 35 and 55 mph. Highways, in this context, generally refer to high volume roadways without full access control where higher travel speeds and at-grade intersections, combined with direct access from adjacent properties, have a higher risk of fatal collisions.

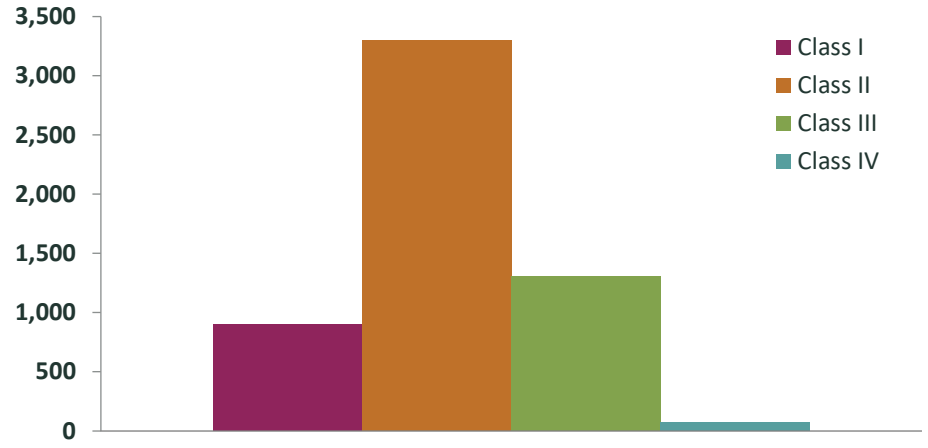
Figure 10 shows that in 2024, most fatalities collisions across all modes in the SCAG region occurred on local roads (55 percent) compared with fatalities collisions on arterials (13 percent) and highways (26 percent). While local roads are typically low-speed residential streets with low traffic volumes, they also include similar streets in commercial and industrial areas. Local roads also generally account for the largest percentage of all roadways in terms of mileage, and vehicles that travel on these roads have more opportunities to interact with oncoming traffic, cross-traffic, and vulnerable road users like pedestrians and bicyclists. All these factors may explain why so many collisions occurred on these types of roadways. Notably, when specifically assessing pedestrian-involved and bicyclist-involved fatal collisions, 68 percent of pedestrian fatalities occurred on local roads (compared to 10 and 22 percent on arterials and highways, respectively), and 88 percent of bicyclist fatalities occurred on local roads (compared to six percent each on arterials and highways).

Figure 8: SCAG Region, Centerline Miles by Roadway Classification (2024)



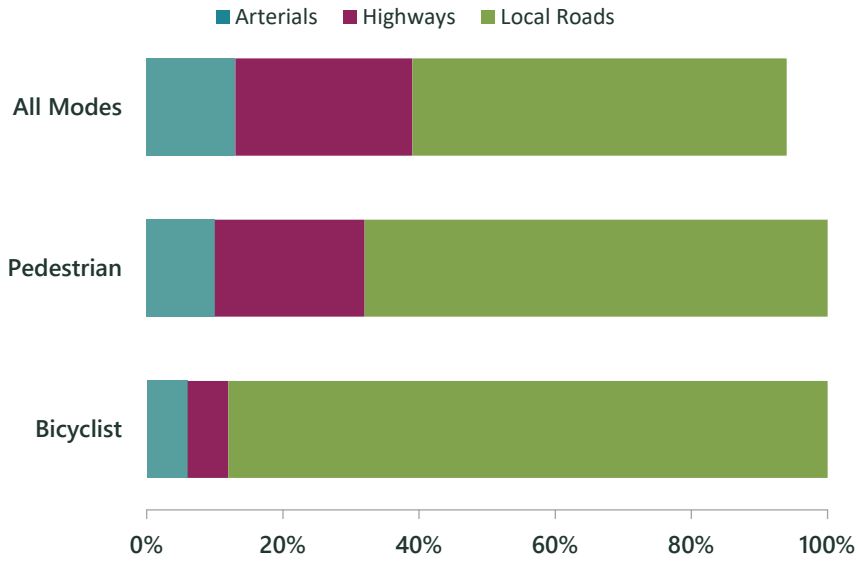
Source: U.S Census Bureau and Caltrans, 2024

Figure 9: SCAG Region, Bikeway Miles by Classification (2024)



Source: SCAG, 2024

Figure 10: SCAG Region, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



When Collisions are Occurring

Figures 11 through 20 explore collision trends in the SCAG region across several time periods, including time of day, day of week, and month between 2014 and 2024 in the SCAG region.

The occurrence of collisions varied by time of day based on a variety of factors. For example, during the evening peak travel period, traffic volumes increased and, with reduced visibility after sunset, these risk factors make collisions more likely to occur. **Figure 11** illustrates how total fatal collisions were at their highest at the end of the evening peak travel period (6 p.m. to 9 p.m.) and continued to be elevated through midnight (9 p.m. to midnight), which suggests that nighttime driving conditions may be a factor in the severity of collisions. **Figure 12** shows that pedestrian fatalities and serious injuries occurred most frequently in the evening (6 p.m. to 9 p.m.). As shown in **Figure 13**, collisions resulting in bicyclist fatalities also occurred most frequently in the evening (6 p.m. to 9 p.m.), but bicyclist serious injuries peaked earlier during rush hour (3 p.m. to 6 p.m.). **Figure 14** shows the trend of pedestrian-involved fatal collisions in the SCAG region that occurred between 6 p.m. to 9 p.m. from 2014 to 2024. This chart shows reported pedestrian-involved fatal collisions reached an initial peak in 2016 with 146 collisions, then dipped before peaking again in 2021 with 157 collisions, after which there was a steady decline in fatal collisions.

By day of week, the number of fatal and serious injury collisions generally rose over the course of the week, with the highest numbers occurring from Friday to Sunday (**Figure 15**). Differences in travel patterns by day of week, for example, peak volumes with most people commuting on weekdays and more spread out non-work related travel on weekends, may have contributed to some of the differences observed in the number of fatal and serious injury collisions. For pedestrian-involved collisions, as shown in **Figure 16**, Fridays stand out with the highest frequency of collisions involving both fatal and serious injuries, potentially reflecting increased evening activity and higher volumes of both pedestrians and vehicles at the end of the work week. For bicyclist-involved collisions, as shown in **Figure 17**, fatal and serious injury collisions were both highest on Saturdays.

When examining trends by month, as illustrated in **Figure 18**, the number of fatal collisions remained relatively stable, and the number of serious injury collisions generally rose throughout the course of the year. The highest number of collisions involving both fatalities and serious injuries occurred in October, likely due to the transition to reduced daylight hours and reduced visibility. **Figure 19** shows that pedestrian-involved fatal collisions were highest in January and lowest in June, and pedestrian-involved serious injury collisions were highest in October and lowest in April. **Figure 20** shows that bicyclist-involved fatal collisions were highest in October and lowest in March, and bicyclist-involved serious injury collisions were highest in August and lowest in February.

Figure 11: SCAG Region, Fatal and Serious Injury Collisions by Time of Day (2014-2024)

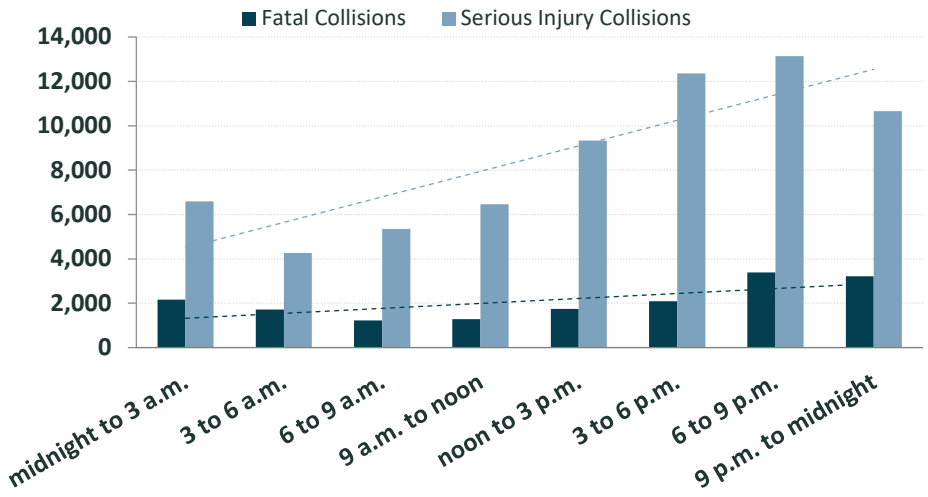


Figure 12: SCAG Region, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)

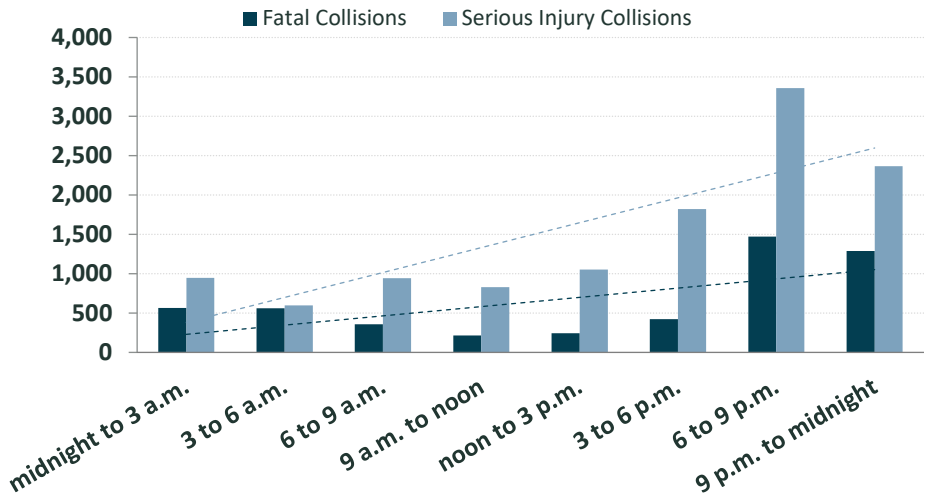


Figure 13: SCAG Region, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)

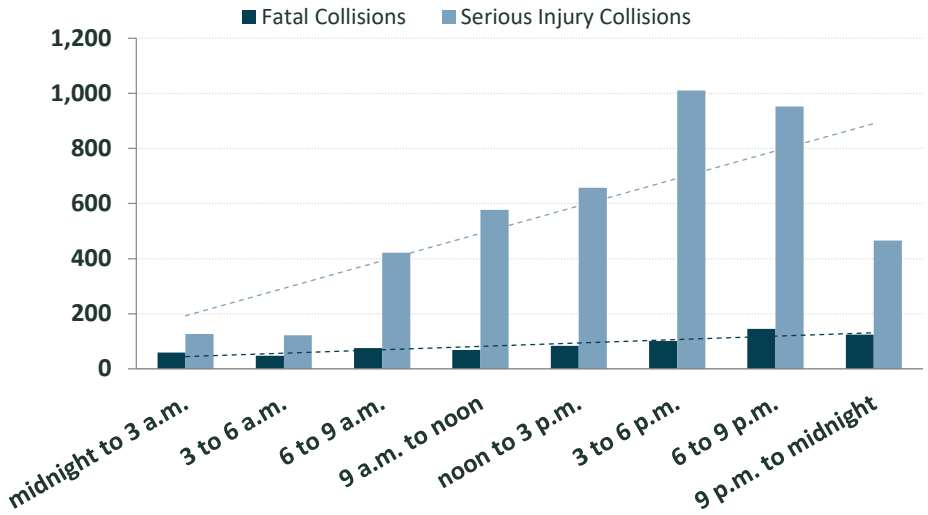


Figure 14: SCAG Region, Pedestrian-Involved Fatal Collisions between 6:00-9:00 p.m. (2014-2024)

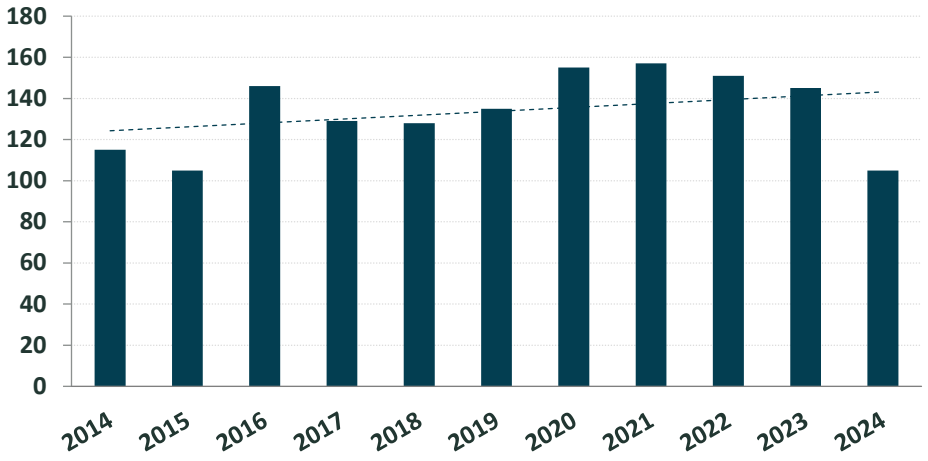


Figure 15: SCAG Region, Fatal and Serious Injury Collisions by Day of Week (2014-2024)

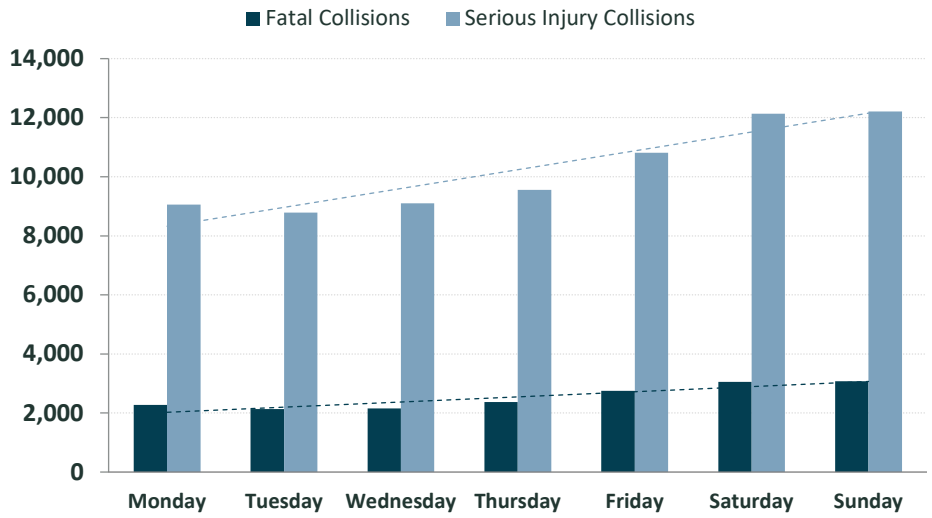


Figure 16: SCAG Region, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)

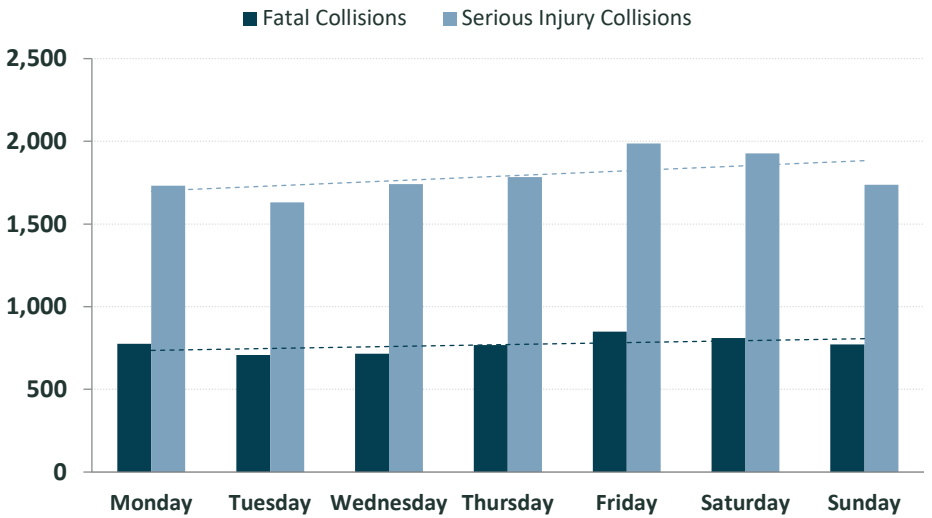


Figure 17 SCAG Region, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)

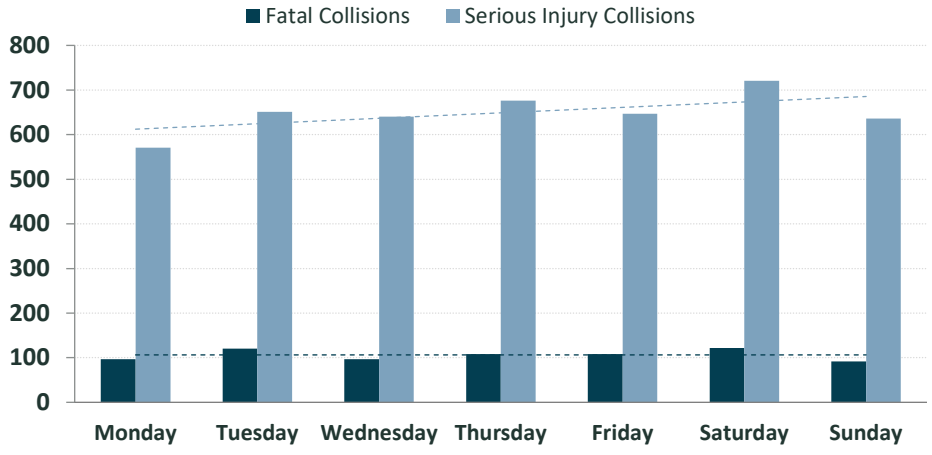


Figure 18: SCAG Region, Fatal and Serious Injury Collisions by Month (2014-2024)

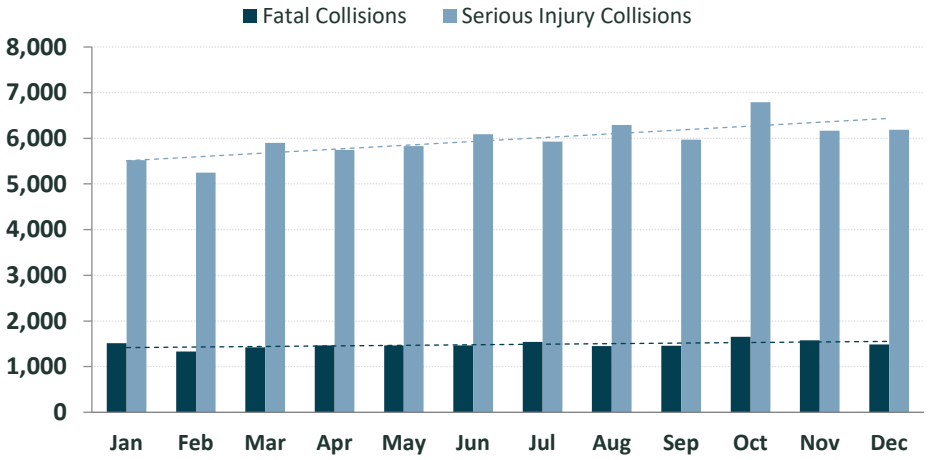


Figure 19: SCAG Region, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)

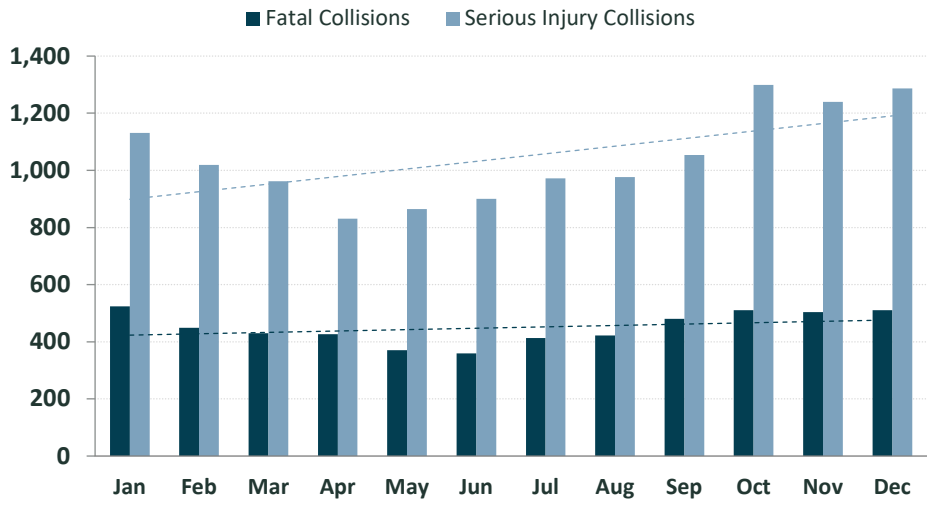
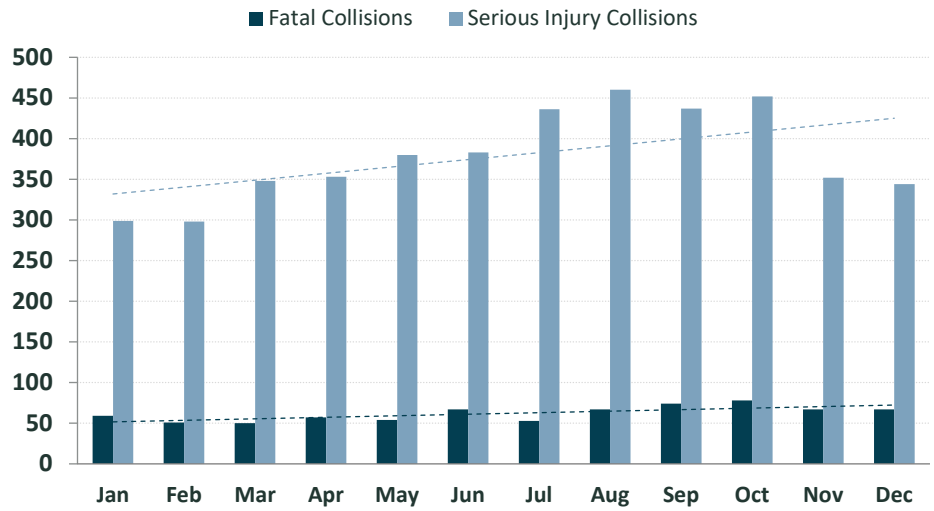


Figure 20: SCAG Region, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

From 2014 to 2024, about 66 percent of people killed in traffic collisions in the SCAG region were in vehicles or on motorcycles, while the other 34 percent of fatal victims were walking or biking. Pedestrians and bicyclists were overrepresented in fatal and serious injury collisions compared to their mode share of just under three percent of people who walk or bike to work (U.S. Census Bureau). In addition, nearly 13 percent of all trips (work and non-work) in the region were taken via walking or biking, which was also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

Figures 21 through 25 examine regional collision trends across several demographic factors between 2014 and 2024. Significantly more men than women were killed or sustained serious injuries in traffic-related collisions across the region. Compared to women, nearly three times as many men were killed (13,044 men and 4,576 women) and almost twice as many men sustained serious injuries (54,959 men and 28,432 women). Additionally, between 2019, when data collection on non-binary persons began, and 2024, there was one reported fatality and five reported serious injury victims among non-binary people in the region. Although several researchers have demonstrated links between gender and travel behaviors and experiences, research on non-binary people and their mobility, particularly related to transportation safety, is scarce but needed to increase inclusivity and equitable access within transportation systems (Ivanova and O'Hern, 2024).

As observed in **Figure 21**, when victims of fatal collisions are stratified by age group, the largest number of fatal victims were among ages 25-34, who accounted for 22 percent of all fatal victims in the region. This was a consistent pattern across genders. Similarly, those ages 25-34 sustained more serious injuries than any other age group, comprised of 25 percent of all serious injury victims (**Figure 22**).

Men ages 25-34 were overrepresented in the proportion of fatalities. While the proportion of men between the ages of 25-34 represented about 14 percent of the regional population, they constituted about 17 percent of all fatal victims and all serious injury victims. Women in this age range constituted approximately five percent of all fatal victims and seven percent of serious injury victims, while they represented 14 percent of the regional population.

When analyzing trends by a victim's involvement in a collision (i.e., whether the victim is a driver, vehicle passenger, bicyclist, pedestrian, or other), additional patterns emerged as seen in **Figures 23** and **24**. Drivers represented the largest number of fatal victims (8,911 victims), followed by pedestrians (5,362), vehicle passengers (2,630), bicyclists (733), and other (58) (other refers to victims on/in a non-motor vehicle, such as a ridden animal, horse-drawn carriage, train, or building). Over four times as many drivers who were killed during a collision were men (7,295 victims) than women (1,586 victims). Of all men killed in traffic collisions between 2014 and 2024, 56 percent were drivers, followed by 29 percent who were pedestrians, and 10 percent who were passengers. Of the women killed in traffic collisions, 34 percent were pedestrians, 35 percent were drivers, and 29 percent were passengers. Overall, men who were driving constituted 41 percent of all fatal victims across gender and victim status. Dissecting these factors further, men between the ages of 25-34 who were driving experienced the highest number of fatalities (1,917 victims), followed by men between the ages of 18-24 who were driving (1,436 victims).

Understanding the ways in which individuals of different races/ethnicities are impacted by collisions is challenging due to limitations of data collection. Collision data, which is most frequently derived from SWITRS, may obscure the true statistics on who experiences fatalities and serious injuries because race and ethnicity are recorded based on an officer's judgement at the scene. In addition, officers are only able to record one response on the collision reporting form. This is particularly important in the context of the regional High Injury Network, the majority of which (81 percent) is located within Priority Equity Communities, or census tracts in the SCAG region that have been historically marginalized and are vulnerable to inequitable outcomes based on various socioeconomic factors. **Maps 5** and **6** highlight the concentration of fatal and serious injury collisions in 2024 that occurred in Priority Equity Communities across the SCAG region. These maps illustrate that most collisions occurred in and around Priority Equity Communities, though certainly not exclusive to these designated areas. This suggests that safety improvements should remain focused on the vulnerabilities of people rather than generalized geographies.

Figure 25 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the region's population in 2024, the most recent year of available data. Across the region, Black, Hispanic/Latino, and individuals of the "Other Ethnicity" category (aligned with the U.S. Census Bureau's definitions to include American Indian, Alaska Native, Native Hawaiian, Pacific Islander, some other race alone, and multiracial people) were overrepresented as fatal and serious injury victims compared to their proportion of the region's population. Most notably, Black individuals constituted about ten percent of fatal and serious injury victims, but only represented six percent of the region's population, while individuals of the "Other Ethnicity" category constituted seven percent of serious injuries while representing only four percent of the region's population. Hispanic/Latino individuals constituted 56 percent of all fatalities and 50 percent of serious injuries, while representing only 47 percent of the region's population. These discrepancies in the number of fatal and serious injury victims could be due to a variety of factors, including historical discrimination in housing that has placed people of color in more high-risk areas for collisions, as described above.

Figure 21: SCAG Region, Fatal Victims by Age and Gender (2014-2024)

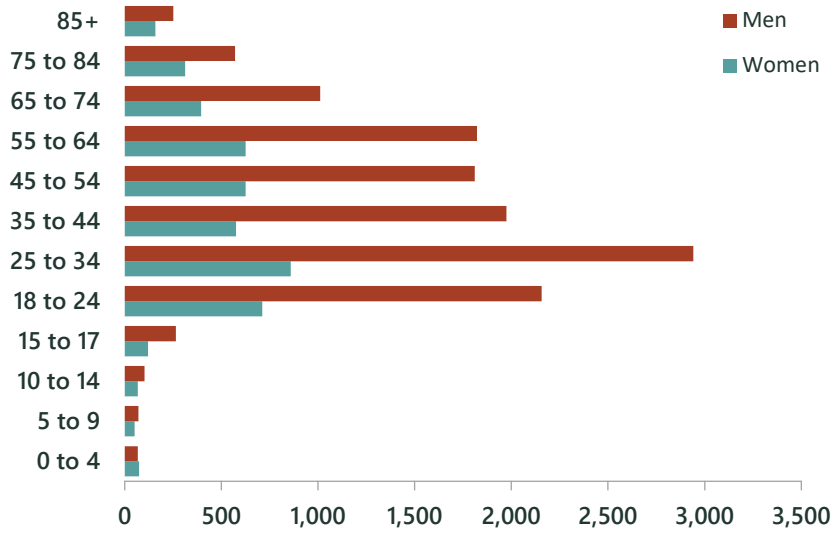


Figure 22: SCAG Region, Serious Injury Victims by Age and Gender (2014-2024)

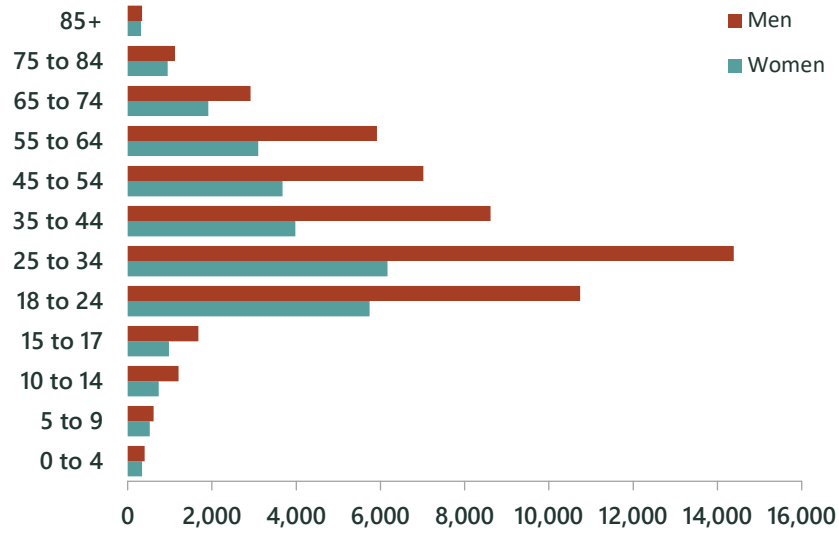


Figure 23: SCAG Region, Fatal Victims by Involvement in Collision and Gender (2014-2024)

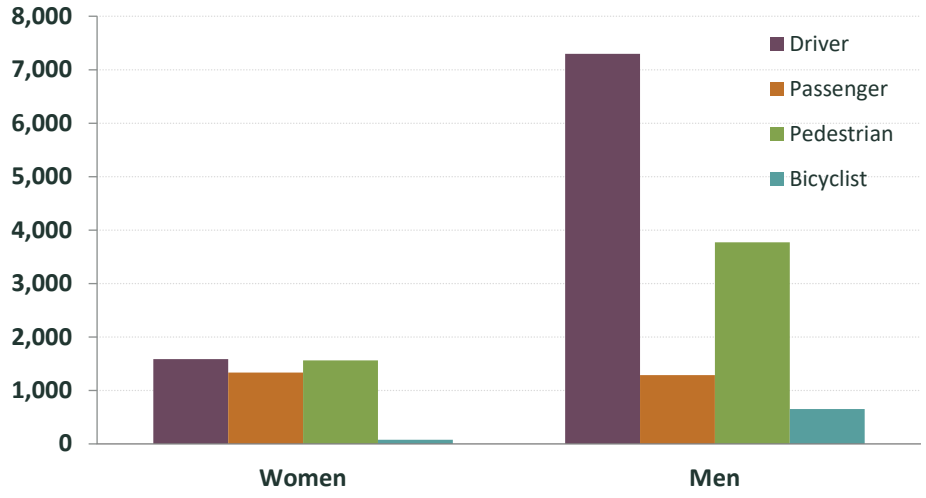


Figure 24: SCAG Region, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)

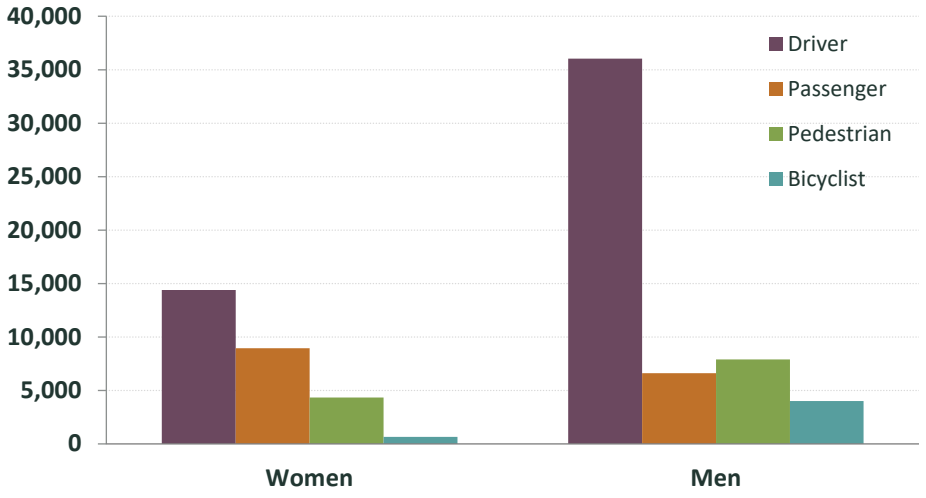
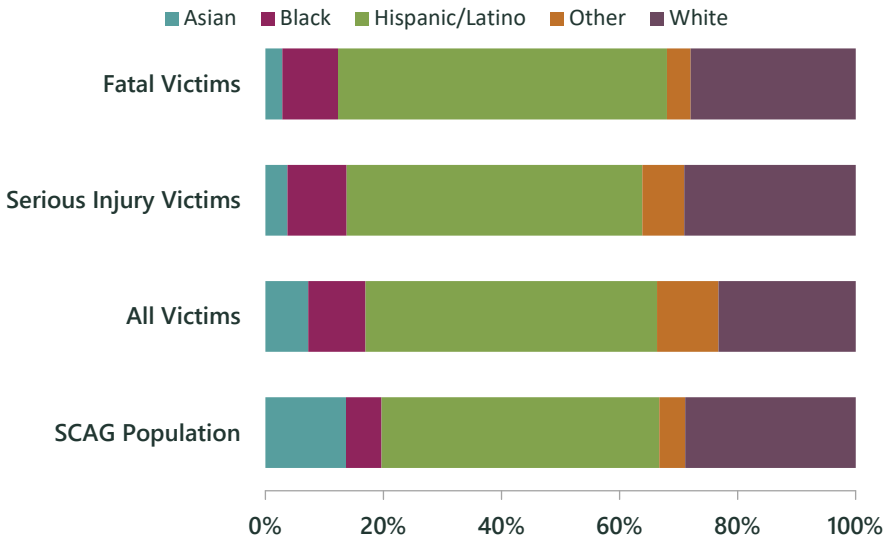
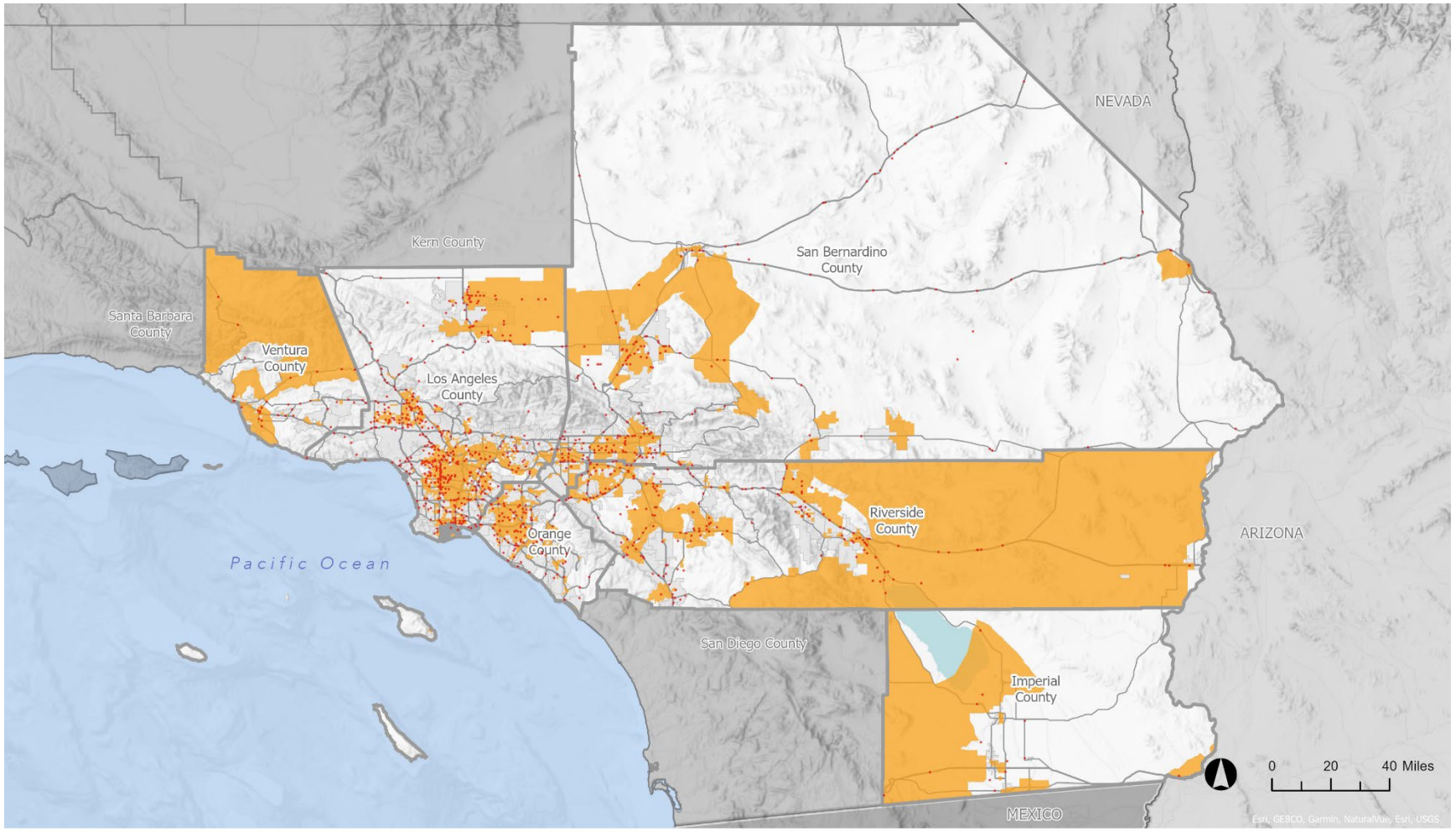


Figure 25: SCAG Region, Fatal and Serious Injury for All Victims by Race/Ethnicity (2024)

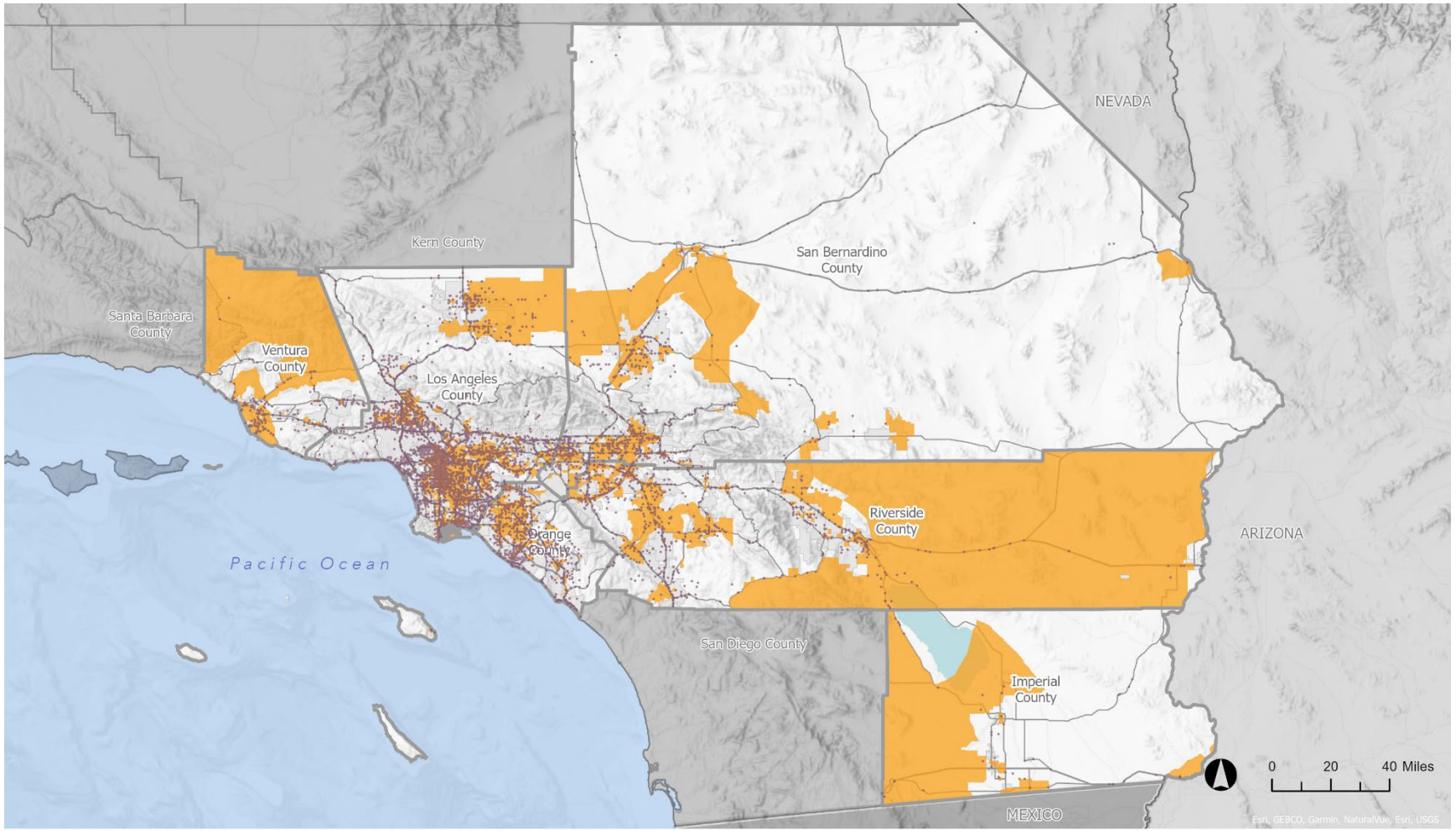


Map 5: SCAG Region Fatal Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Map 6: SCAG Region Serious Injury Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

Why Collisions Are Occurring

Across the SCAG region, about 17 percent of collisions were a result of unsafe speed. This is important to note as the survivability of a collision decreases significantly with increases in speed. For example, if a person driving 40 miles per hour hits a pedestrian, the pedestrian is estimated to have only a 35 percent chance of surviving. However, if a person driving 25 miles per hour hits a pedestrian, then the pedestrian is estimated to have an 89 percent chance of surviving (**Figure 26**). The Federal Highway Administration (FHWA) defines a safe speed as one that reduces kinetic energy and accounts for human injury tolerance. This approach highlights the importance of setting speed limits and designing safety measures that prioritize human survivability in the event of a crash for vulnerable roads users such as pedestrians and bicyclists.

Figures 27 and Figure 29 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions. The PCF is the main cause of the collision as determined by the officer at the collision scene and there may be other factors which the officer notes as "other associated factors" on the collision report. As shown in **Figure 27**, the top three PCFs for fatal collisions in the SCAG region were pedestrian violation (19 percent), unsafe speed (17 percent), and driving under the influence (17 percent). For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

Figure 28 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions. The top two PCFs for fatal and serious injury pedestrian-involved collisions were pedestrian violations (63 percent and 48 percent) and pedestrian right of way (11 percent and 21 percent). These PCFs were specifically related to pedestrians, so further analysis that considered the "other associated factors" noted in the collision data and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide useful insights on how to reduce the risk of these collisions.

Figure 29 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions. The top PCFs for fatal bicyclist-involved collisions were the wrong side of the road (15 percent), improper turning (14 percent), and traffic signals and signs (13 percent), while for serious injury collisions it was automobile right of way (19 percent), traffic signals and signs (15 percent), and unsafe speed (14 percent) and improper turning (14 percent).

It is important to note that there may be additional factors leading to traffic collisions, such as distracted driving, which can include the use of cellphones while driving. In 2017, Assembly Bill (AB) 1785 went into effect, restricting the operation of a motor vehicle while holding a handheld wireless phone or electronic device (cellphone). In 2021, AB 47 went into law, further prohibiting the use of any type of hands-free device while driving. In 2023, AB 276 was introduced, prohibiting drivers from holding electronic devices in their hands, even for navigation or when the device is not in use. The law went into effect in 2025. California's commitment to progressively reducing distracted driving through increasingly comprehensive legislative action is a key tool, but it also must be supported through public education and technology solutions such as built-in hands-free systems.

Marijuana has been legal for recreational use in California since 2016 with the passage of Proposition 64. Since then, questions have emerged on its impacts as a potential factor leading to collisions, particularly relative to the overlap between drivers who are between the ages of 18-24, one of the age ranges with the highest proportion of fatalities (as mentioned above), and one of the demographics with the highest rates of marijuana use (National Institute on Drug Abuse, 2024). While some systematic literature reviews and research have explored this concern, there remains much that is unknown and needs to be evaluated. Several factors such as a lack of standardized physiological measures to assess cannabis impairment are still in development. As such, continued monitoring and research are necessary to better understand the relationship between marijuana use and roadway safety.

Figure 26: SCAG Region, Relationship Between Vehicle Speed, Collisions, and Fatalities

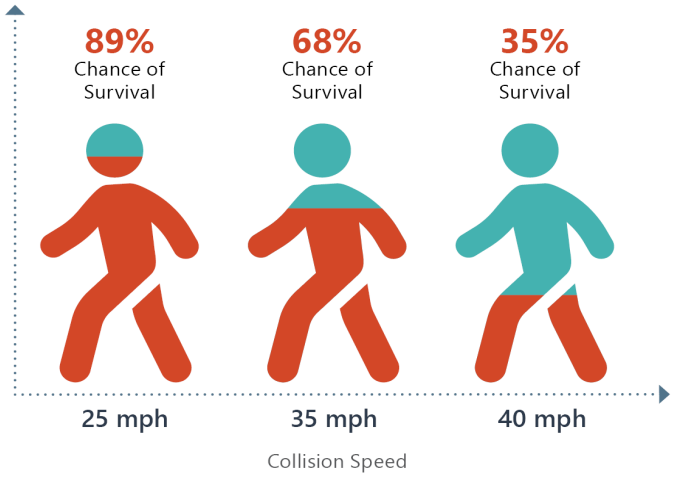


Figure 27: SCAG Region, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)

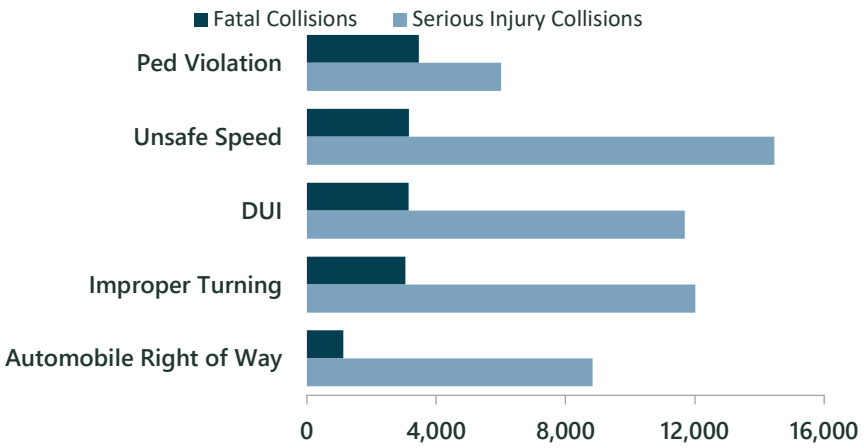


Figure 28: SCAG Region, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)

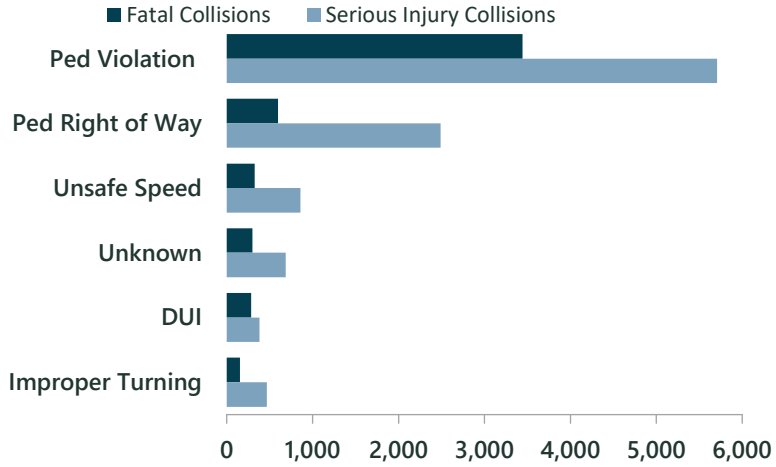
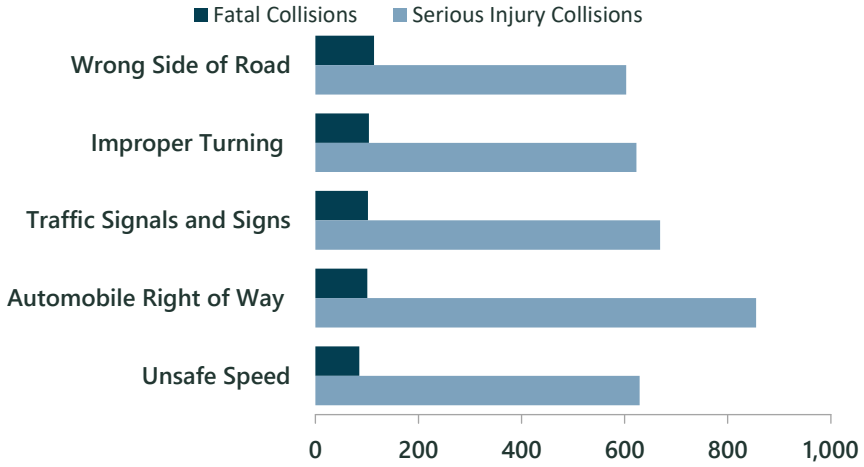


Figure 29: SCAG Region, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



SCAG Region Conclusion

Overall, the SCAG region experienced several shifts in transportation safety between 2014 and 2024, with complex relationships between behavioral, infrastructural, and demographic factors contributing to collisions. While fatal and serious injury collisions have fluctuated over time, particularly during the COVID-19 pandemic, pedestrians and bicyclists remain extremely vulnerable road users. Urbanized areas remained collision hotspots and local roads continue to be critical areas of concern, accounting for over half of fatal collisions and the majority of pedestrian- and bicyclist-related fatalities. Examining temporal patterns revealed evening hours, weekends, and the month of October as periods of heightened risk. Demographic data highlighted young adults, especially men aged 25–34, and Black, Hispanic/Latino, and individuals in the "Other Ethnicity" category to be disproportionately represented in collisions resulting in fatalities and serious injuries. Unsafe speed, pedestrian violations, and wrong-side bicyclist riding were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety interventions in these areas.

As the region continues to grow and evolve, the broader implication is clear: improving transportation safety requires a holistic approach that prioritizes human survivability, addresses systemic disparities, and fosters a culture of responsible mobility. Through sustained collaboration, data-driven planning, and inclusive policymaking, the SCAG region can move toward a safer and more equitable transportation future.

Imperial County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

13,900
annual/per capita

Injuiries from Collisions

671
people sustain injuries every year from collisions

82
people sustain serious injuries every year from collisions

39%
of all traffic collision victims are people 18-34

544
collisions occur per year on the streets—*that's roughly*

1.5
collisions per day

Where Collisions Occur

38%
in urban areas

32%
on local roads

28%
on highways

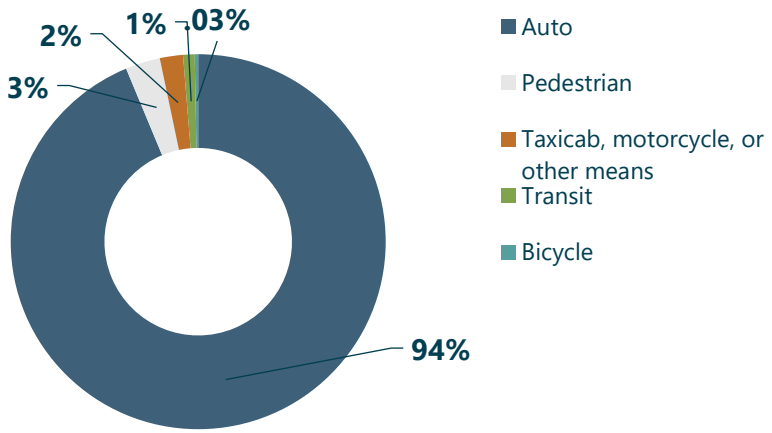
Fatalities from Collisions

32
people die every year from collisions

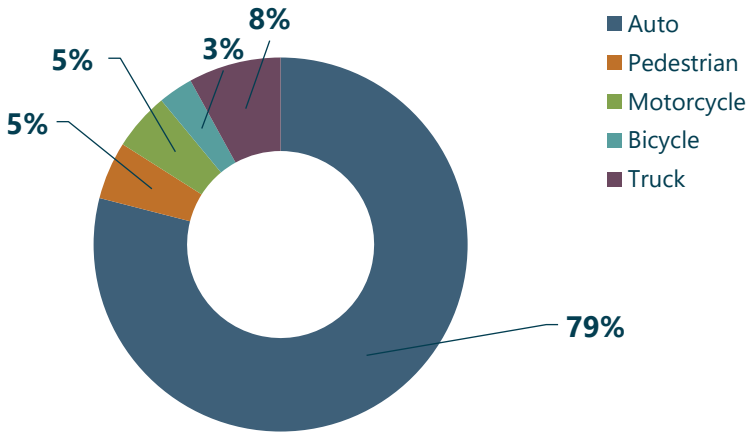
16%
of all deaths involve people walking or bicycling

25%
of all pedestrian fatal victims are 65 and older

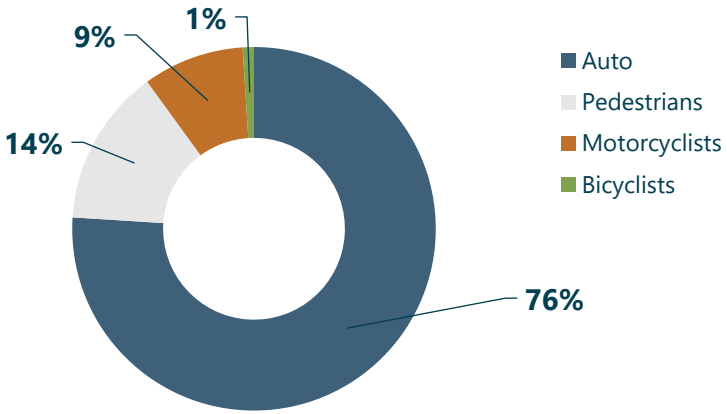
Imperial County, Daily Commute Trips (By Mode 2014-2024)



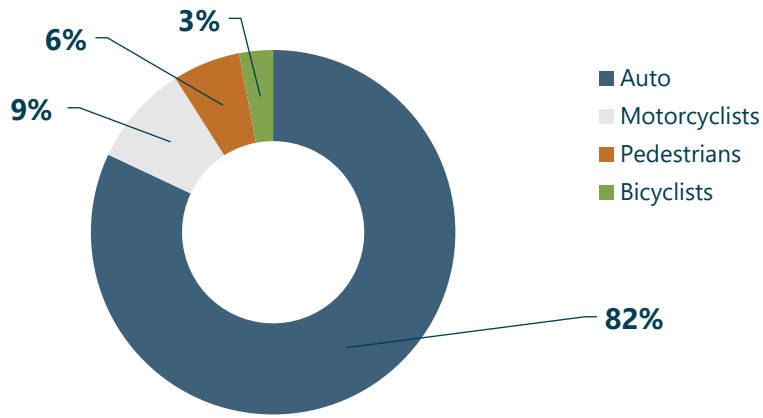
Imperial County, Total Collisions (By Mode at Fault 2014-2024)



Imperial County, Fatal Collisions Victims (By Mode 2014-2024)



Imperial County, Serious Injury Collisions Victims (By Mode 2014-2024)



Imperial County

Imperial County is located in the southeast corner of California, bordering the counties of Riverside (north), San Diego (west), and Yuma, Arizona (east). To the south lies the international border with Mexico. With 4,176 square miles of land, Imperial County is slightly larger than Los Angeles County (4,057 square miles), but has a much smaller population, with 182,881 residents in 2024. Between 2014 and 2024, residents of Imperial County drove an average of roughly 13,900 miles per capita each year, more than any other county in the SCAG region (Caltrans and California Department of Finance, 2024). This may be due to the area's low density land use and limited options for alternative forms of transportation (e.g., commuter rail, light rail, and dedicated bus lanes).

Overall Safety Trends

Between 2014 and 2024, an average of 32 people were killed, 82 people seriously injured, and 671 people sustained other injuries each year in traffic collisions in Imperial County. Over the past decade, Imperial County has generally seen a downward trend in the total number of fatalities, with the lowest number of fatalities (16 victims) reported in 2024 except for a brief peak in 2021 (54 victims) and 2022 (41 victims), as shown in **IMP Figure 1**. In contrast, the number of serious injury victims generally increased over the past decade, reaching a peak in 2021 (133 victims), before declining to 51 in 2024 (**IMP Figure 2**). **IMP Map 1** and **IMP Map 2** reflect the locations of reported collisions resulting in fatalities and serious injuries, respectively, in Imperial County in 2014 through 2024 from the Transportation Injury Mapping System. The maps for Imperial County display data from 2014 through 2024 to provide a historical overview of fatal and serious injuries. This broader timeframe was beneficial because Imperial County had a relatively smaller number of collisions in 2024 alone, making it difficult to identify meaningful patterns or conclusions from a single year of data. Areas with a high density (or concentration) of collisions are referred to as collision hot spots. The maps show that collisions occurred all over the county, with hot spots in the City of El Centro and along Interstate 8 in Ocotillo, next to the border of San Diego County.

From 2014 to 2024, about 84 percent of people killed in traffic collisions were in vehicles or on motorcycles while the other 16 percent of fatal victims were walking or bicycling. Of the 32 fatalities that occurred on average each year in Imperial County, an average of five fatalities involved someone walking or biking. **IMP Figure 3** reflected the number of people killed or seriously injured while walking in Imperial County between 2014 and 2024. The number of pedestrian fatalities peaked in 2021 at 12, to a low of zero fatalities reported in 2024. Pedestrian serious injury victims do not display a clear trend over the years but have remained relatively steady except for a rise during the COVID-19 pandemic. **IMP Map 3** illustrates the reported pedestrian-involved collisions resulting in a serious injury that occurred in Imperial County between 2014 and 2024. Several pedestrian-involved collisions were reported in the more urban areas of Brawley, Imperial, El Centro, and Calexico, but notably, there were several pedestrian fatalities that occurred along State Route 86 in the northwestern portion of the county and along Interstate 8 in the southeastern portion of the county.

IMP Figure 4 reflects the reported number of people killed or seriously injured while biking in Imperial County between 2014 and 2024. Bicyclist fatalities were reported in the county in only three years of the study period – 2016 (one victim), 2018 (one victim), and 2019 (three victims), while bicyclist serious injury victims fluctuated between zero to six victims per year. **IMP Map 4** illustrates the bicyclist-involved collisions resulting in a fatality or serious injury reported in Imperial County between 2014 and 2024. The bicyclist-involved collisions were primarily concentrated in the populated areas of Salton City, Brawley, El Centro, and Holtville, with two of the five bicyclist-involved fatal collisions reported in Calexico.

To provide a point of comparison across the region, **IMP Figure 5** shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Compared to the SCAG region, Imperial County generally had a higher fatality rate per 100,000 people, roughly two to three times the regional rate, before a decline toward alignment with the regional fatality rate in 2023 and 2024. Similarly, Imperial County had a higher serious injury rate per 100,000 people, roughly twice the regional serious injury rate, until 2023 and 2024. Overall, Imperial County has experienced more fluctuation in the rate of fatalities and serious injuries compared to the region, possibly due to the county's relatively small population. **IMP Figure 6** demonstrates that when standardizing for vehicle miles traveled (VMT), the trends in fatality rate and serious injury rates were generally consistent with the absolute number trends.

However, one noticeable difference is the increasing fatality rate per 100 million VMT observed in Imperial County between 2018 and 2020. Although there was a significant decrease in average daily VMT in the county from a peak of eight million in 2018 down to 5.7 million in 2020, the rate of fatalities did not appear to correspond to the reduced travel during the COVID-19 pandemic.

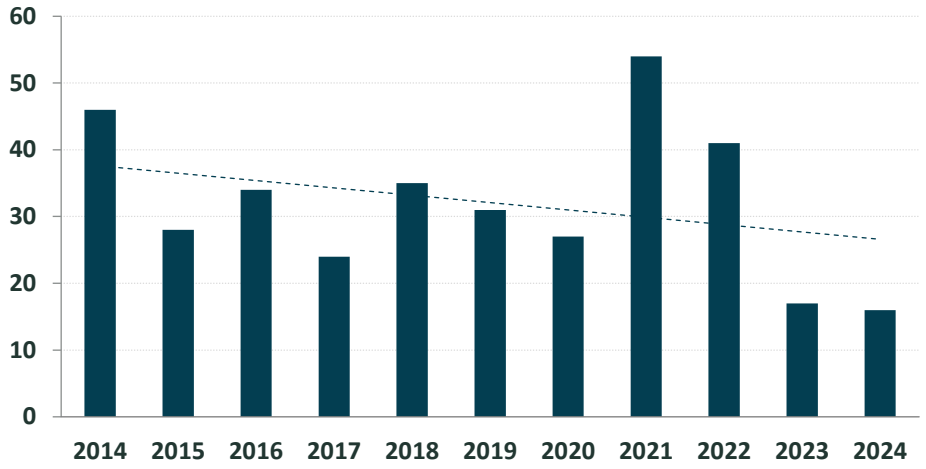
Where Collisions are Occurring

In Imperial County, most collisions resulting in fatalities (74 percent) and serious injuries (64 percent) disproportionately occurred in rural areas between 2014 and 2024, while only 27 percent of the county population lives in rural areas. However, the pattern differs for pedestrians where 62 percent of pedestrian-involved fatal collisions and 57 percent of pedestrian-involved serious injury collisions occurred in urban areas with 73 percent of the county population living in urban areas (37 percent in urbanized areas and 36 percent in small urban areas) (U.S. Census Bureau and Caltrans). **IMP Maps 1-4** display total fatal and serious injury collisions by mode that occurred between 2014 and 2024.

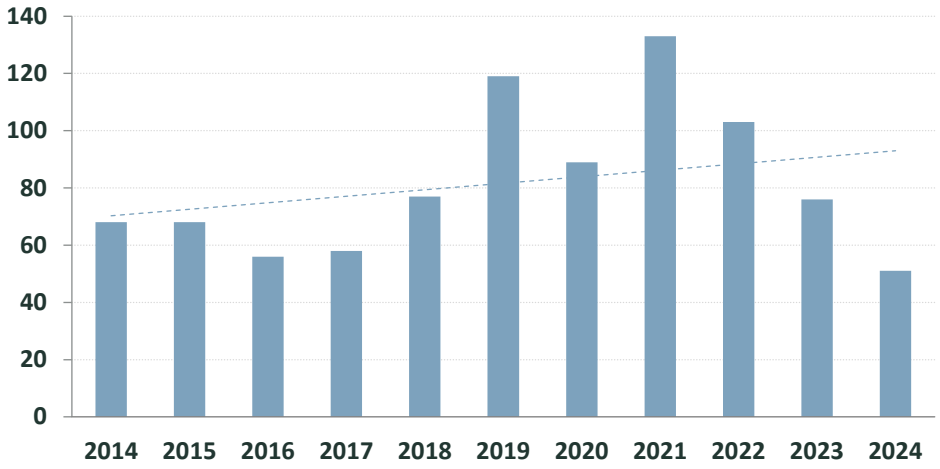
IMP Figure 7 shows that Imperial County's roadway network consists of 94 highway centerline miles (three percent), 502 arterial centerline miles (13 percent), 1,026 collector centerline miles (27 percent), and 2,139 local road centerline miles (57 percent) (Caltrans, 2024). In IMP Figure 8, Imperial County has 1.3 miles of Class I bikeways (one percent of all bike facilities), more than 13 miles of Class II bikeways (15 percent), and nearly 78 miles of Class III bikeways (84 percent) (SCAG, 2024).

Between 2014 and 2024, fatalities disproportionately occurred on arterial roads (40 percent) and highways (28 percent) while 32 percent of fatalities occurred on local roads as shown in **IMP Figure 9**. In **IMP Figure 10,** approximately 43 percent of serious injuries occurred on local roads, 35 percent on arterials, and 22 percent on highways. During the same period, about 37 percent of pedestrian fatalities occurred on local roads, 39 percent on arterials, and 24 percent on highways. For bicyclist fatalities, about 60 percent occurred on local roads and 40 percent occurred on highways, while no bicyclist fatalities were reported on Imperial County arterials. For pedestrian serious injuries, 61 percent occurred on local roads (with 27 percent on arterials and 13 percent on highways), while 81 percent of bicyclist serious injuries occurred on local roads (11 percent on arterials and seven percent on highways).

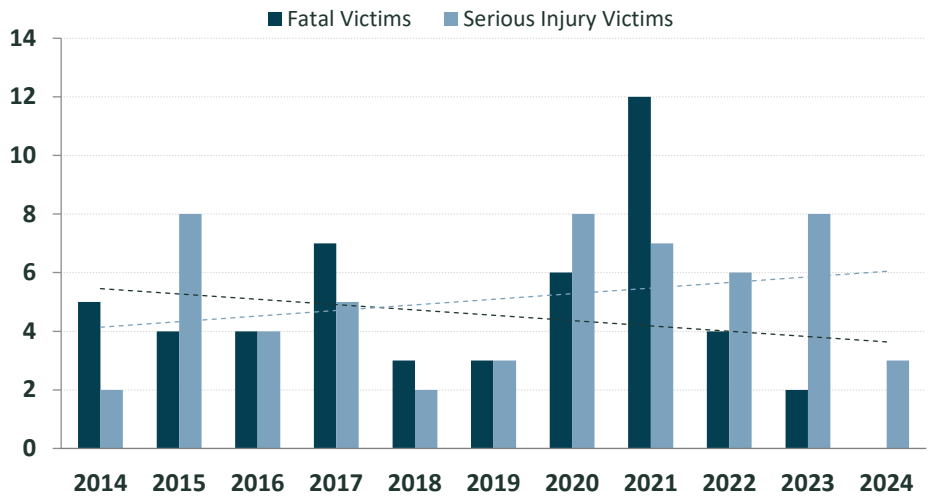
IMP Figure 1: Imperial County, Total Number of Fatal Victims (2014-2024)



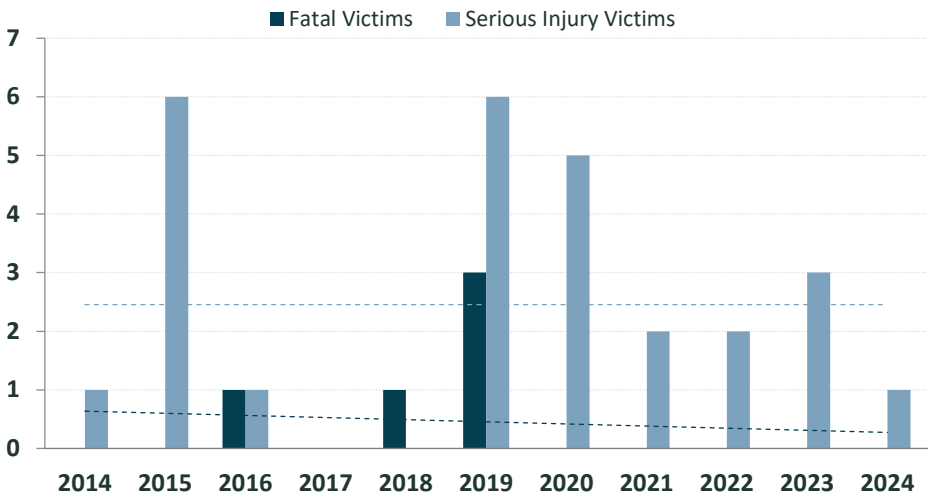
IMP Figure 2: Imperial County, Total Number of Serious Injury Victims (2014-2024)



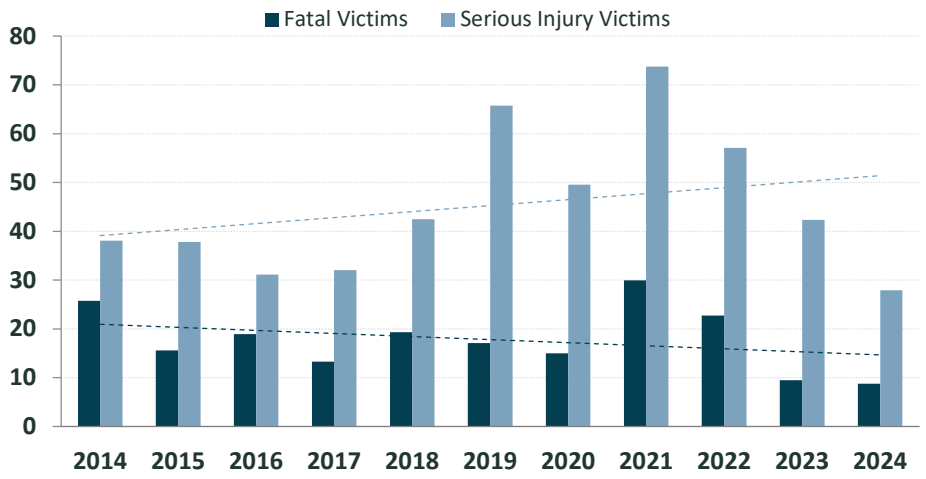
IMP Figure 3: Imperial County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



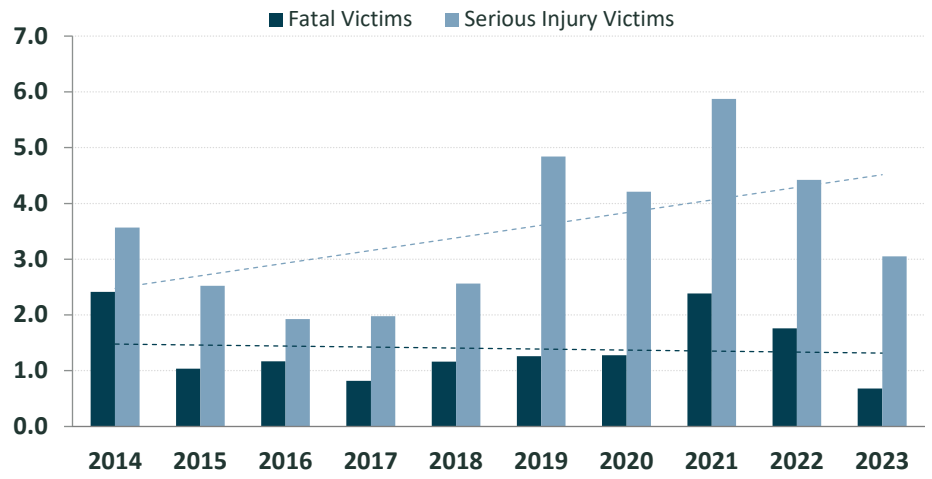
IMP Figure 4: Imperial County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



IMP Figure 5: Imperial County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)

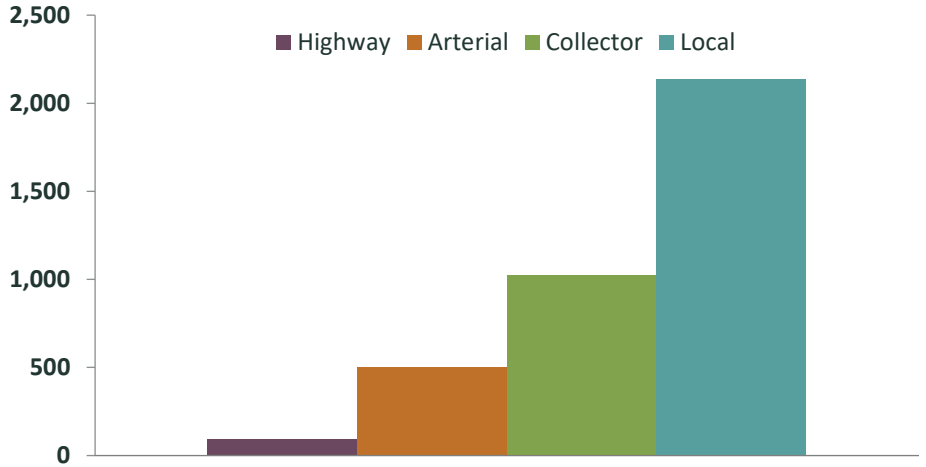


IMP Figure 6: Imperial County, Total Fatal and Serious Injury Victims per 100 Million VMT (2014-2023)



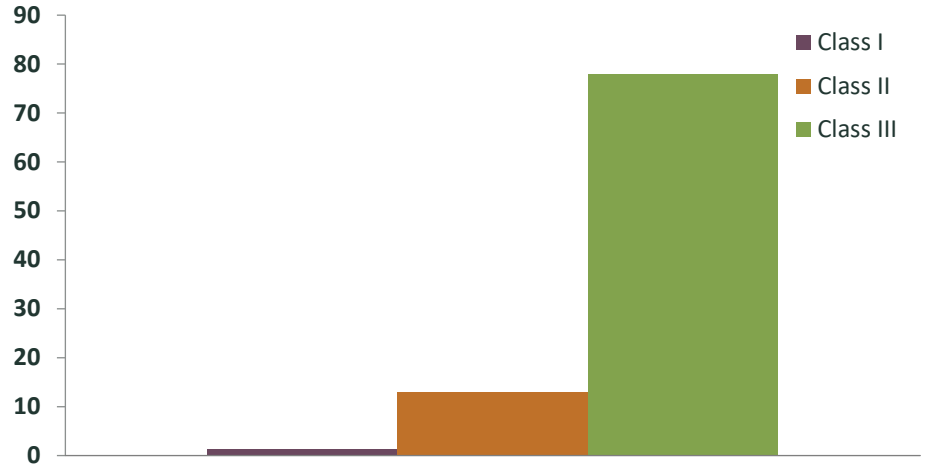
Note: 2024 VMT data was not available at the time of analysis.

IMP Figure 7: Imperial County, Centerline Miles by Roadway Classification (2024)



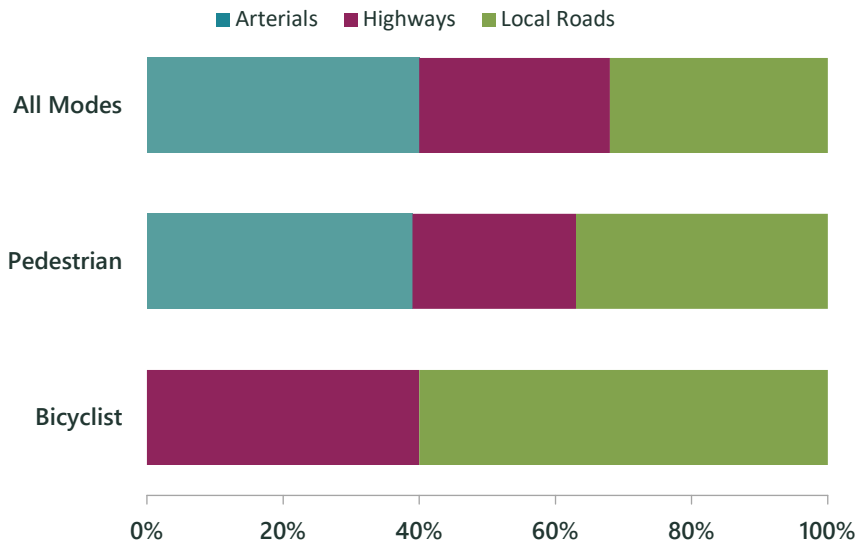
Source: Caltrans, 2024

IMP Figure 8: Imperial County, Bikeway Miles by Classification (2024)

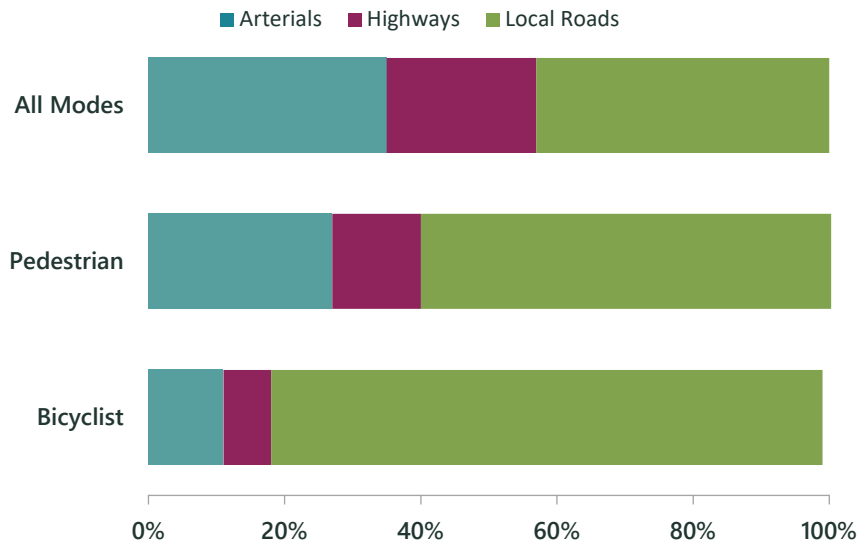


Source: SCAG, 2024

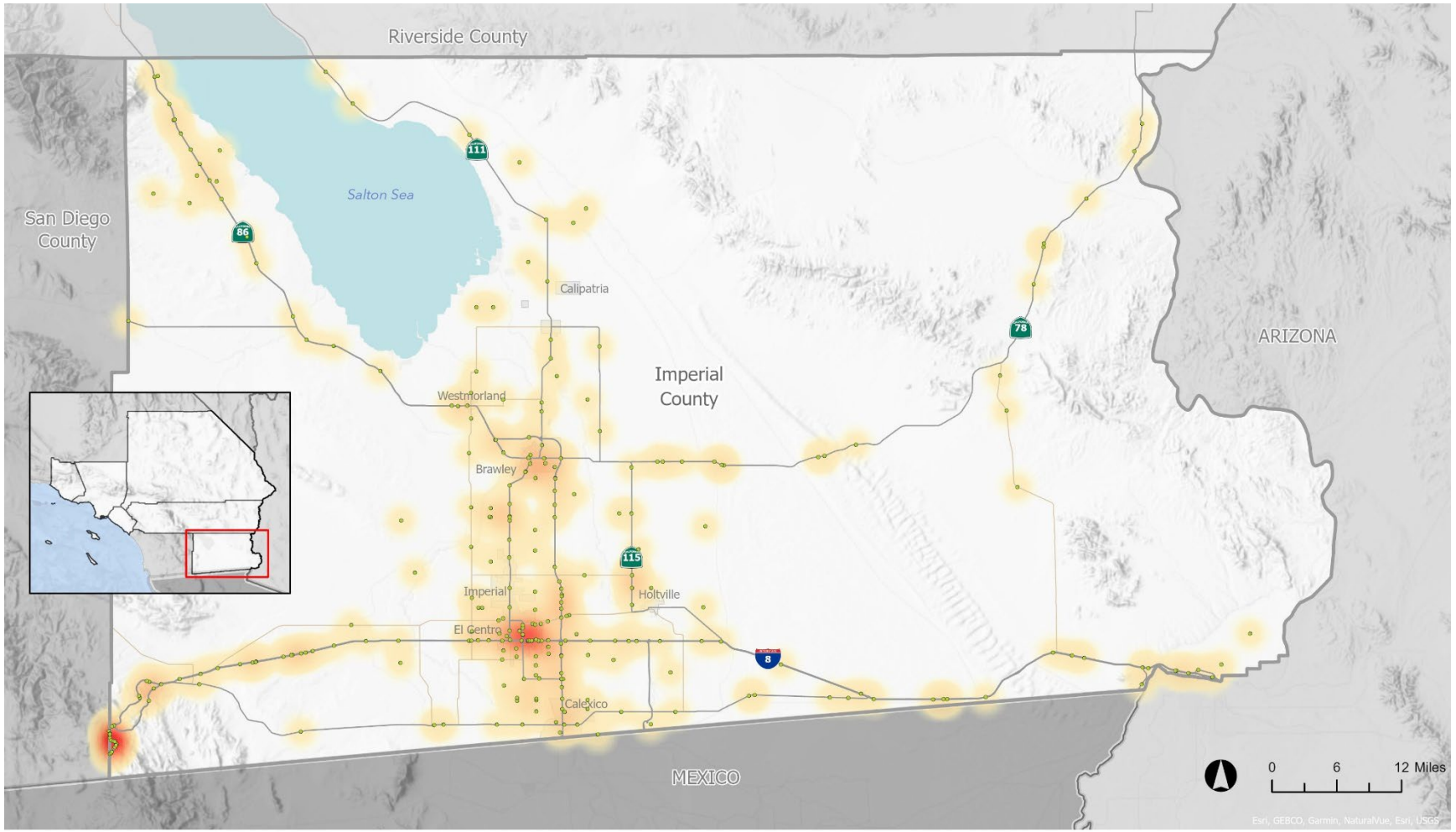
IMP Figure 9: Imperial County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



IMP Figure 10: Imperial County, Distribution of Serious Injury Victims by Mode and Roadway Classification (2014-2024)

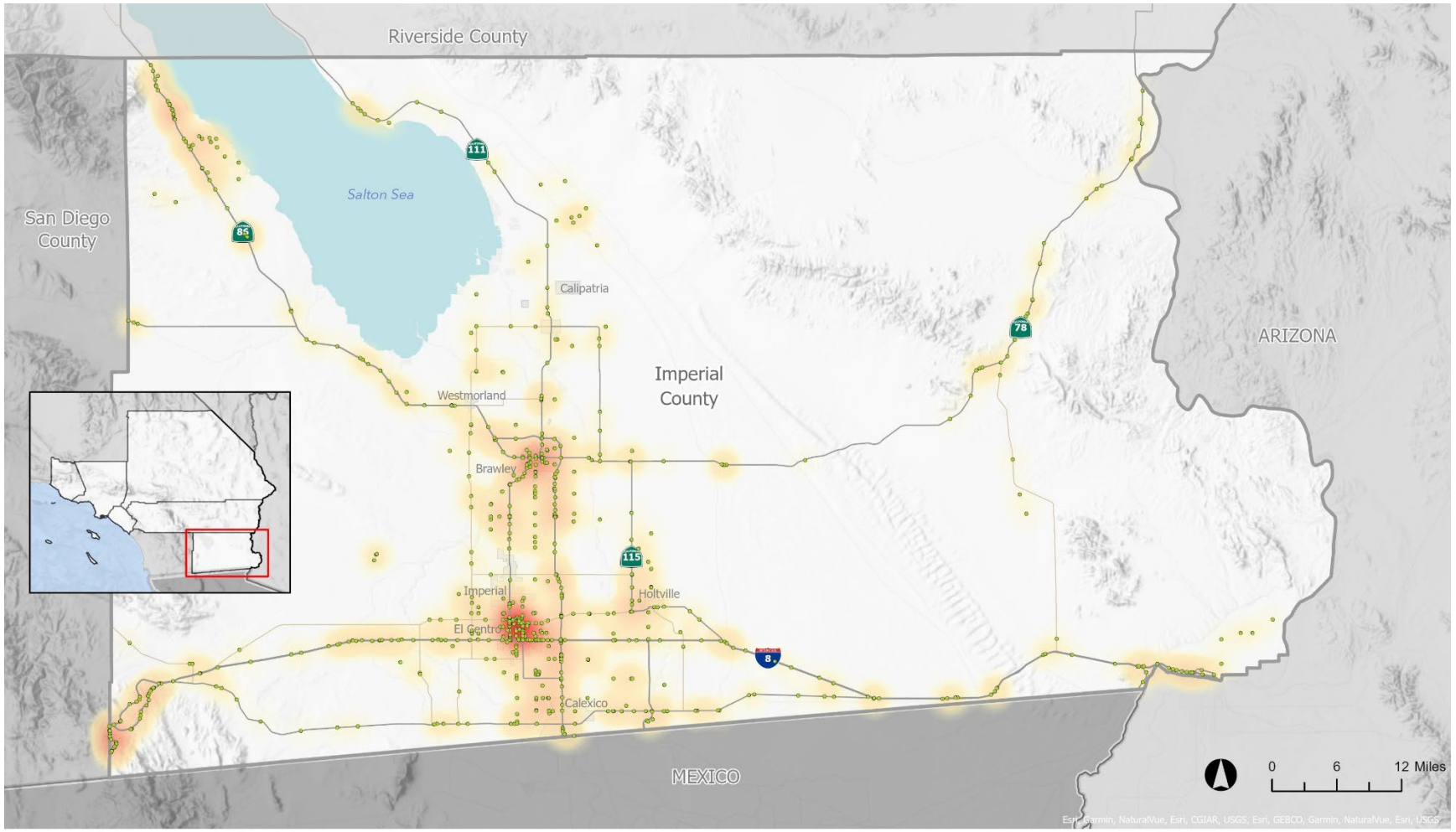


IMP Map 1: Imperial County Fatal Collisions (2014-2024)



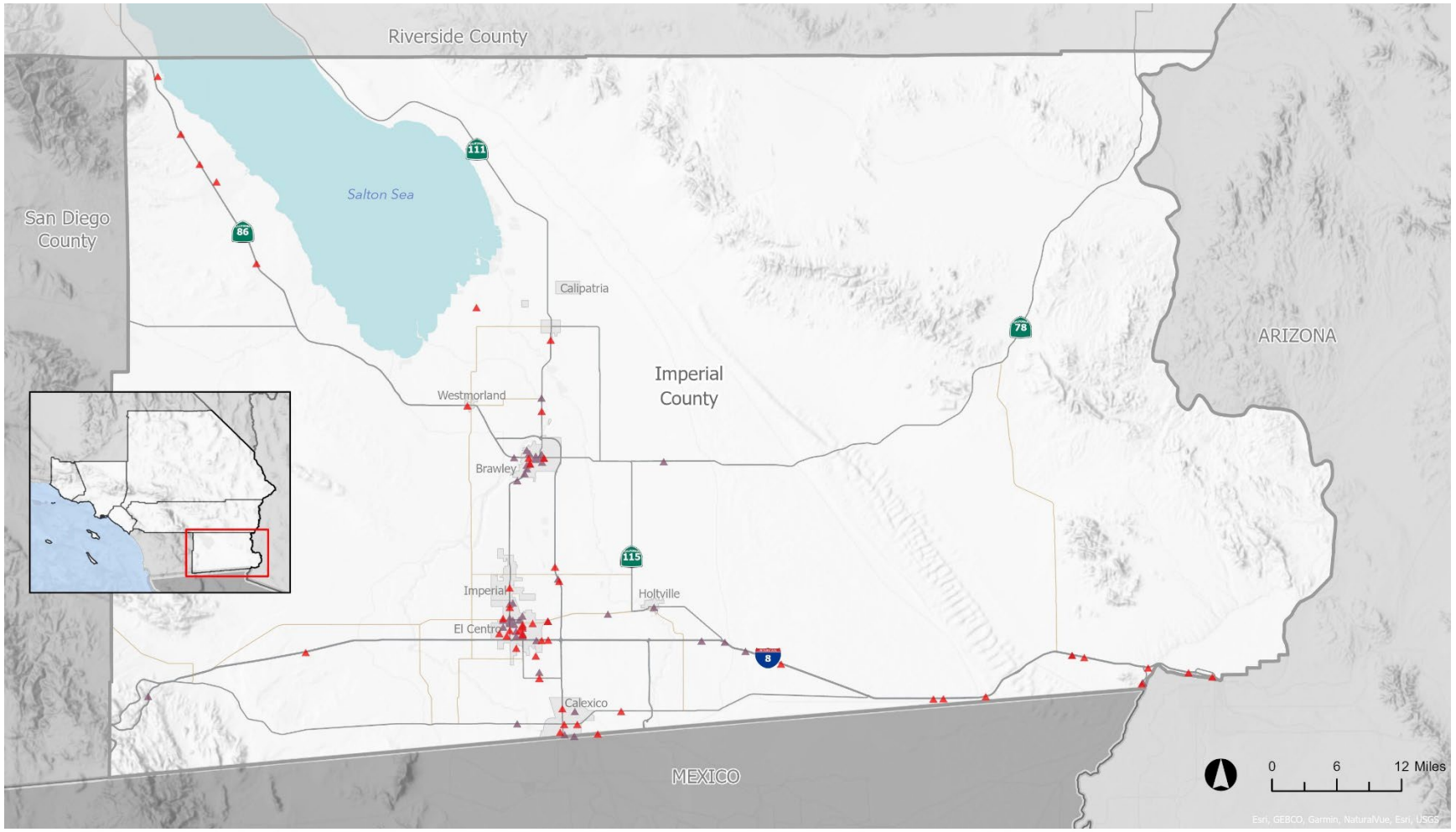
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

IMP Map 2: Imperial County Serious Injury Collisions (2014-2024)



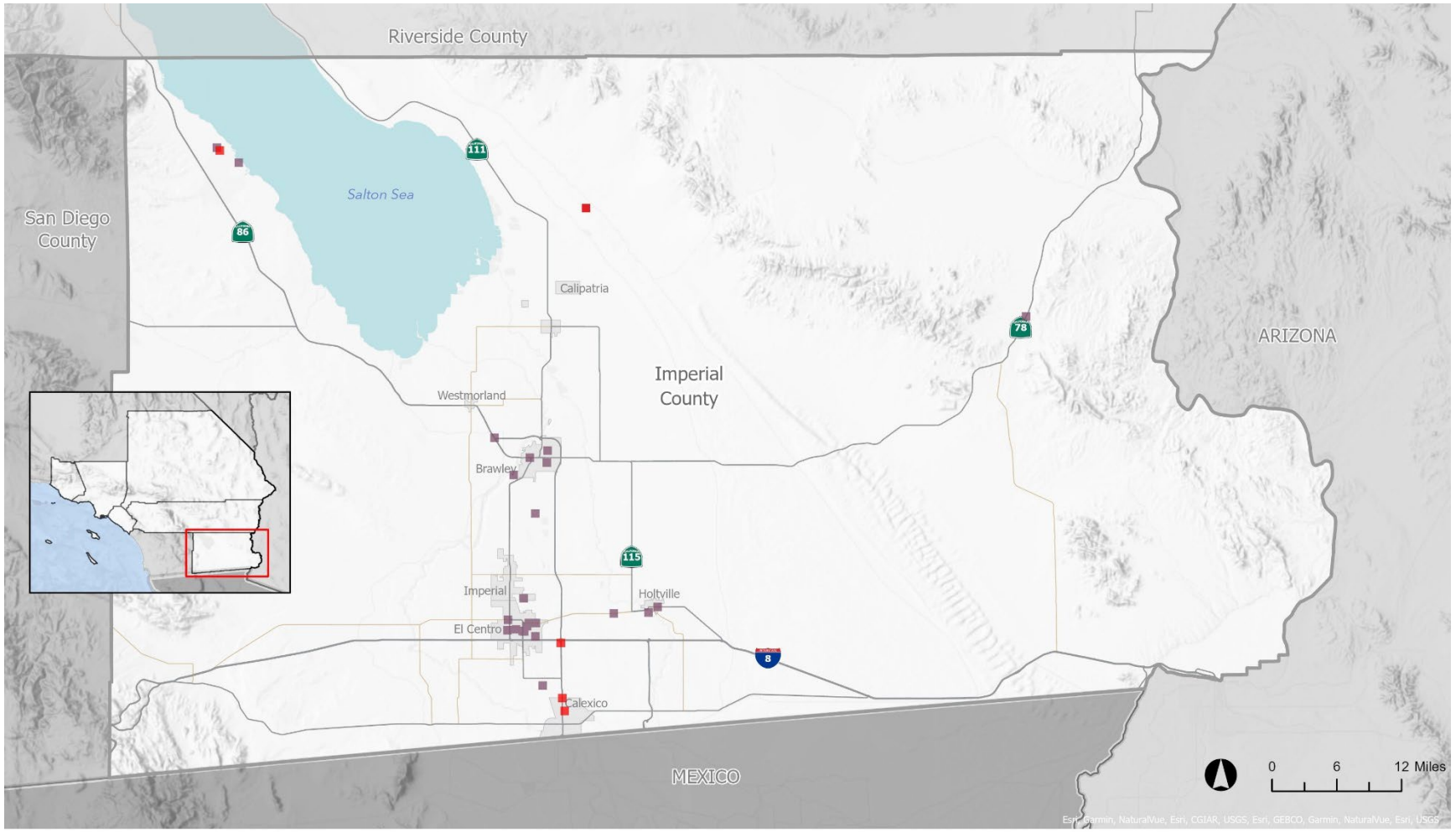
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

IMP Map 3: Imperial County Pedestrian-Involved Serious Injury Collisions (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

IMP Map 4: Imperial County Bicyclist-Involved Serious Injury Collisions (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

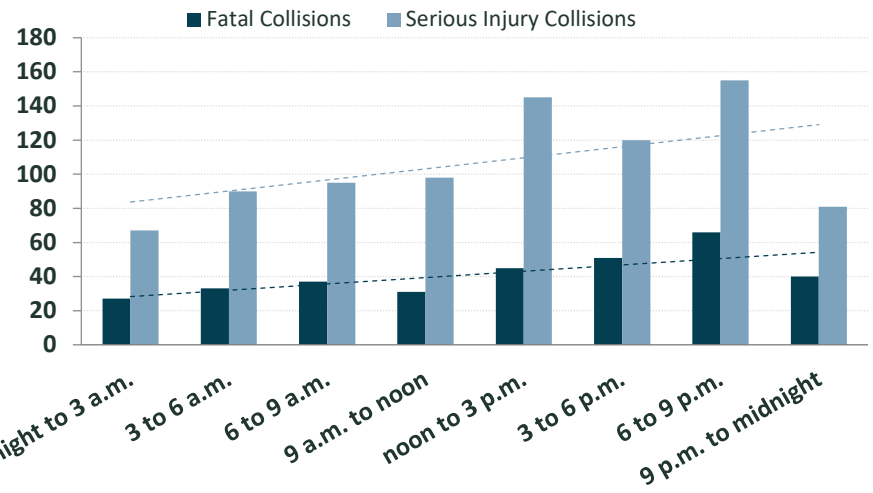
IMP Figures 11 through 19 examine collision trends across several time periods, including time of day, day of week, and month between 2014 and 2024 in Imperial County.

IMP Figure 11 shows that most collisions resulting in a fatal or serious injury occurred in the afternoon and late at night. The largest number of fatal collisions (66 collisions) and serious injury collisions (155 collisions) occurred in the evening between 6 p.m. and 9 p.m. **IMP Figure 12** shows trends by time of day for pedestrian-involved fatal and serious injury collisions, which were concentrated between 6 p.m. and midnight. **IMP Figure 13** shows trends by time of day for bicyclist-involved fatal and serious injury collisions. Given the small number of reported collisions, distinct trends did not emerge but bicyclist-involved serious injury collisions were clustered in the morning peak hour (6 a.m. to 9 a.m.) and afternoon/early evening (noon to 9 p.m.).

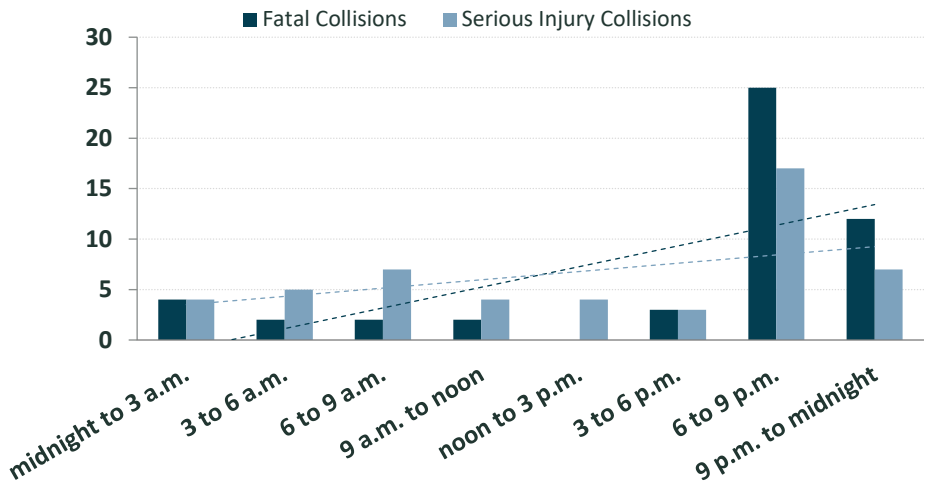
By day of week, fatal and serious injury collisions generally started high at the beginning of the week (Monday and Tuesday), slightly dipped in the middle of the week (Wednesday and Thursday), and increased again at the end of the week and on weekends (Friday through Sunday) between 2014 and 2024, as shown in **IMP Figure 14**. Collisions that resulted in fatalities peaked on Tuesdays (63 collisions), closely followed by Saturdays (62 collisions), while collisions that resulted in serious injuries peaked on Fridays (152 collisions). As highlighted by **IMP Figure 15**, pedestrian-involved fatal collisions were least likely to have occurred on Thursdays (three collisions) and most likely to have occurred on Fridays (12 collisions). **IMP Figure 16** shows a less distinctive pattern for bicyclist-involved collisions by day of week, with the greatest number of fatal collisions to have occurred on Tuesdays (two collisions), and the greatest number of serious injury collisions to have occurred on Wednesdays (eight collisions).

When examining Imperial County collisions by month between 2014 and 2024, **IMP Figure 17** shows some elevation of fatal collisions during the fall (November), winter (December through February), and spring (March) months with a peak of both fatal and serious injury collisions occurring during the month of March. **IMP Figure 18** shows that pedestrian-involved collisions were relatively consistent throughout the year, fluctuating between two and six fatal collisions and between one and seven serious injury collisions during each month. Due to the small number of reported collisions, **IMP Figure 19** reveals a less distinctive pattern for bicyclist-involved fatal and serious injury collisions by month, though four of the five fatal collisions occurred in December and January.

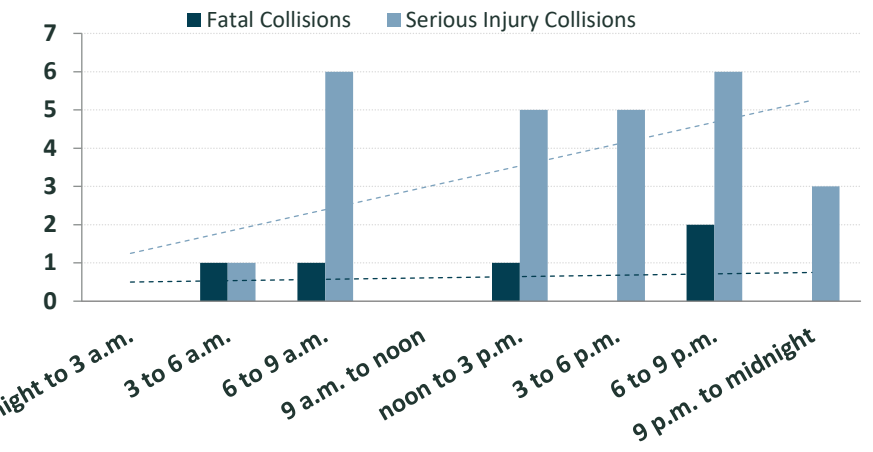
IMP Figure 11: Imperial County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



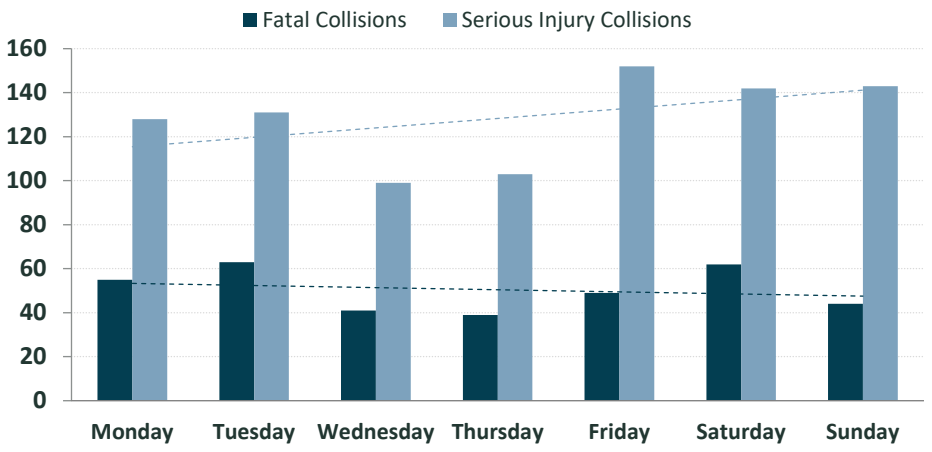
IMP Figure 12: Imperial County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



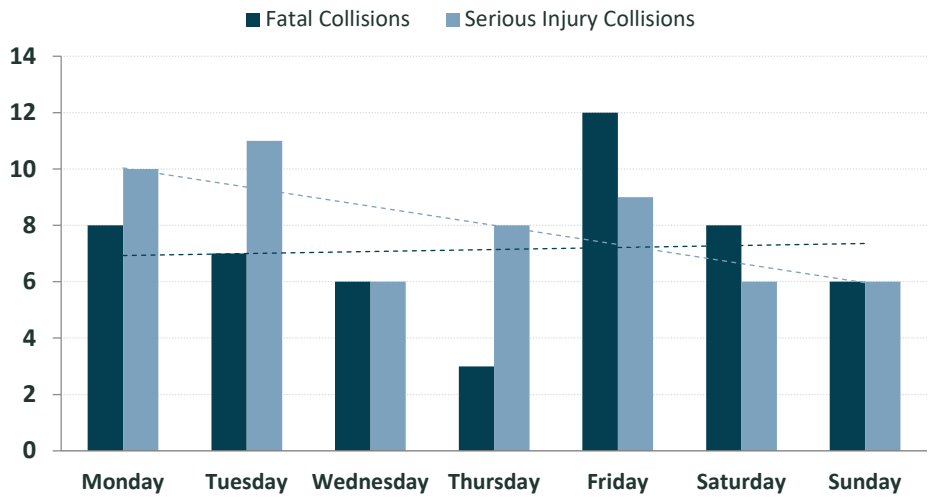
IMP Figure 13: Imperial County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



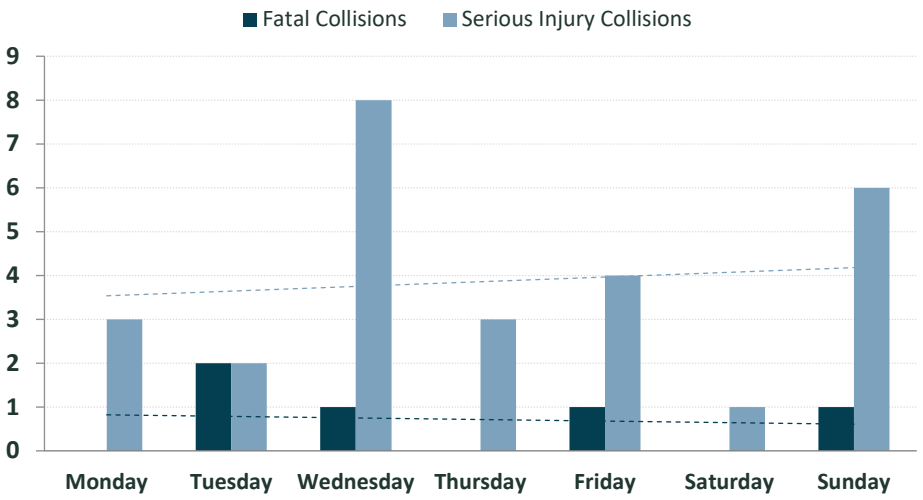
IMP Figure 14: Imperial County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



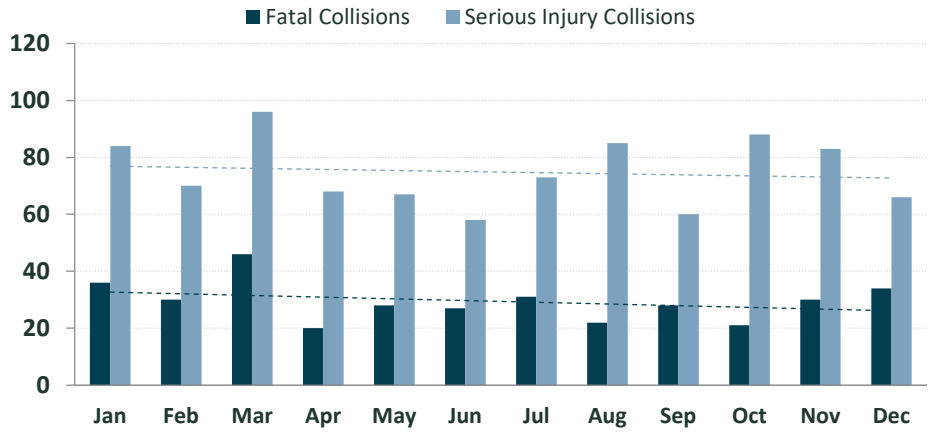
IMP Figure 15: Imperial County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



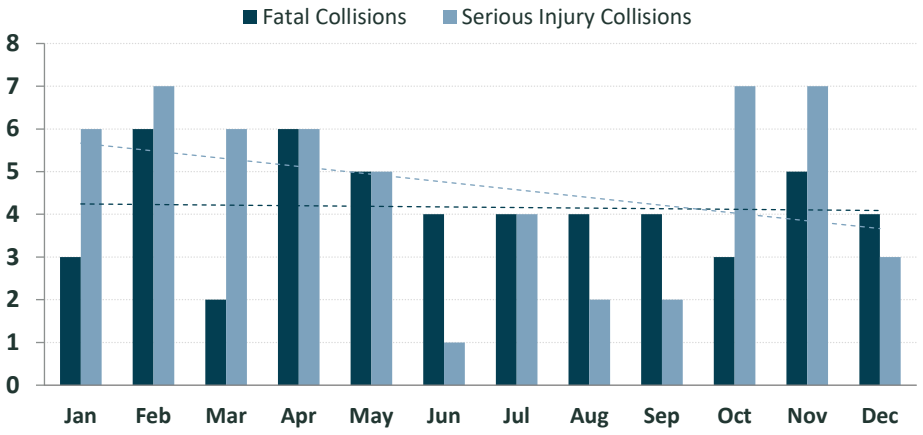
IMP Figure 16: Imperial County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



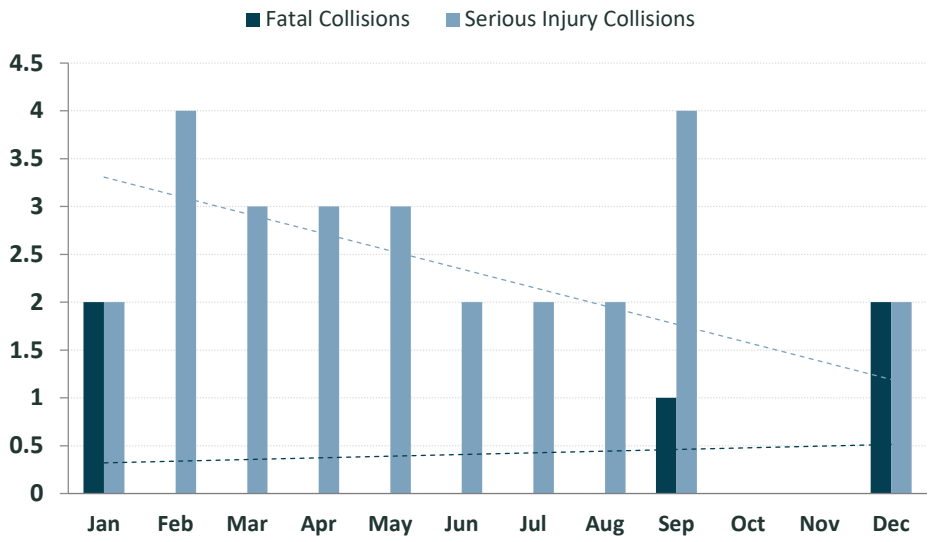
IMP Figure 17: Imperial County, Fatal and Serious Injury Collisions by Month (2014-2024)



IMP Figure 18: Imperial County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



IMP Figure 19: Imperial County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In Imperial County, pedestrians and bicyclists accounted for about 16 percent of all fatal collision victims reported from 2014 to 2024, disproportionately higher than the three percent of people who walk or bike to work (U.S. Census Bureau). While data for all trips made in Imperial County are not available, nearly 13 percent of all trips (work and non-work) in the SCAG region were taken via walking or biking, which is also lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

IMP Figures 20 through 24 explore collision trends across several demographic factors between 2014 and 2024. More men were killed or sustained serious injuries in Imperial County collisions compared to women; men experienced nearly twice as many fatalities (229 victims) as women (119 victims). A similar trend is observed with serious injuries where 850 men and 590 women were seriously injured between 2014 and 2024. These trends are consistent with regional and national trends where a higher number of men are involved in fatal and serious injury collisions.

As observed in **IMP Figure 20**, when victims of fatal collisions were stratified by age group, the largest number of fatalities occurred among those aged 25 to 34 (64 victims), representing over 18 percent of reported fatalities reported in Imperial County between 2014 and 2024. Fatalities occurred more often in men than women in every age group except for infants aged zero to four and teens aged 15 to 17. Similarly, **IMP Figure 21** shows that the largest number of serious injuries occurred in those aged 25 to 34 (310 victims), representing over 21 percent of reported serious injuries. Although men aged 18 and older were consistently more involved in serious injury collisions, women aged five to 17 were more involved in serious injury collisions.

When analyzing trends by victim role (i.e., driver, passenger, bicyclist, or pedestrian), additional patterns emerge. Drivers experienced the largest number of fatalities (186 victims), followed by passengers (111 victims), pedestrians (48 victims), and bicyclists (five victims). **IMP Figure 22** shows that significantly more drivers killed in collisions were men (147 victims) than women (38 victims), while more passengers killed in collisions were women (63 victims) than men (48 victims). There were more pedestrian fatalities among men (29 victims) compared to women (18 victims), and all bicyclist fatalities were men (five victims). **IMP Figure 23** shows a similar pattern for serious injury victims, though more women who were driving experienced more serious injuries (290 victims) than women who were passengers (269 victims). Men driving still experienced the greatest number of serious injuries (559 victims), and more men who were walking (45 victims) and bicycling (31 victims) suffered a serious injury compared to women who were walking (27 victims) and bicycling (three victims).

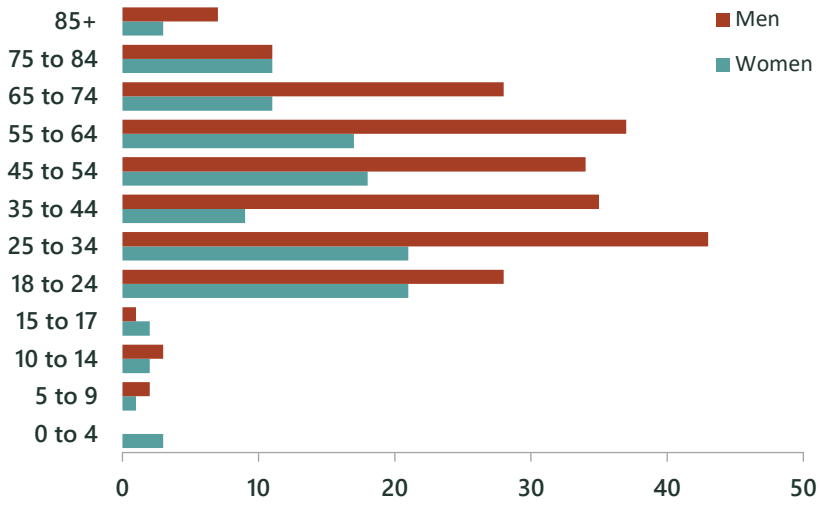
Overall, men who were driving constituted over 42 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (34 victims) in Imperial County between 2014 and 2024.

IMP Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county's population in 2024, the most recent year of available data. Hispanic/Latino individuals represent the largest proportion of Imperial County's population (86 percent) and constituted the largest proportion of all collision victims (78 percent), fatalities (57 percent), and serious injury victims (67 percent). Black individuals make up about two percent of the county's population but disproportionately constituted over seven percent of all fatalities. Additionally, individuals of the "Other Ethnicity" category (aligned with the U.S. Census Bureau's definitions to include American Indian, Alaska Native, Native Hawaiian, Pacific Islander, some other race alone, and multiracial people) represent about two percent of the county's population but disproportionately account for nearly 29 percent of all fatalities. Non-Hispanic White individuals were also overrepresented among serious injury victims as they represent only about nine percent of the county's population but 16 percent of all collision victims and nearly 31 percent of serious injury victims. Asian individuals did not experience any reported fatalities in 2024 but were overrepresented with three percent of serious injury victims as they represent just over one percent of the county's population.

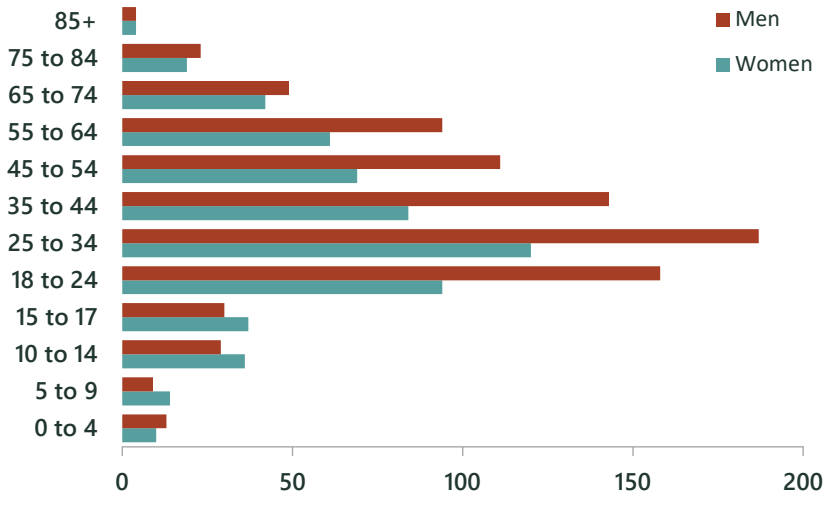
IMP Maps 5 and **6** illustrate the location of fatal and serious injury collisions relative to Priority Equity Communities in Imperial County between 2014 and 2024. As illustrated in the maps, more fatal and serious injury collisions occur in

and around Priority Equity Communities compared to collisions that occur elsewhere. It should be noted that collisions are not exclusive to these designated areas, which further emphasizes the need to focus safety improvements and mitigation strategies on the vulnerabilities of people rather than on generalized geographies.

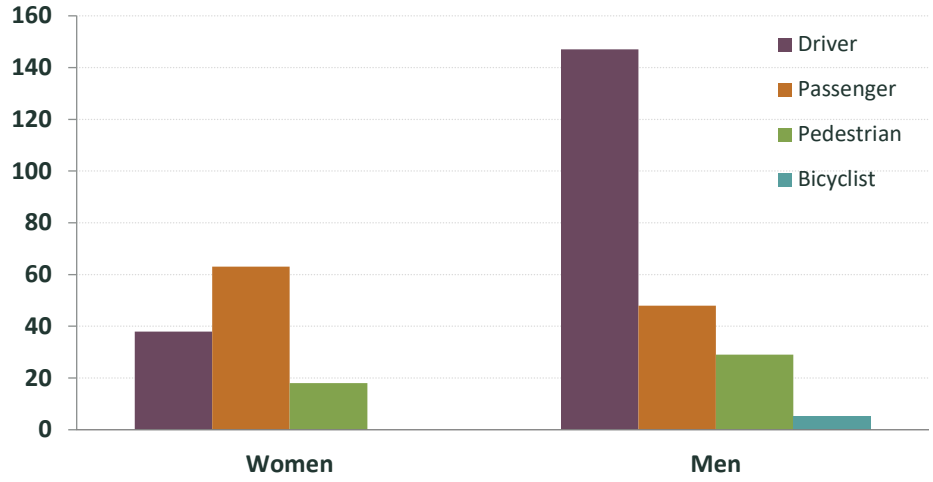
IMP Figure 20: Imperial County, Fatal Victims by Age and Gender (2014-2024)



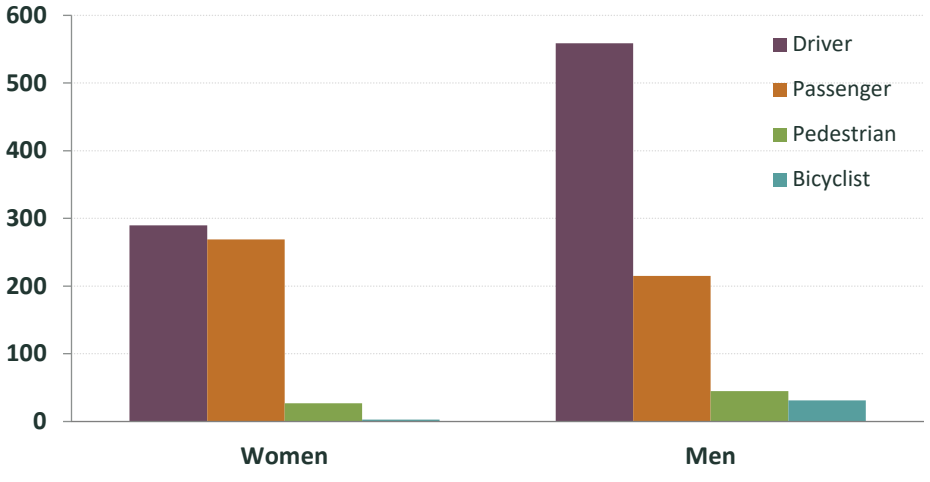
IMP Figure 21: Imperial County, Serious Injury Victims by Age and Gender (2014-2024)



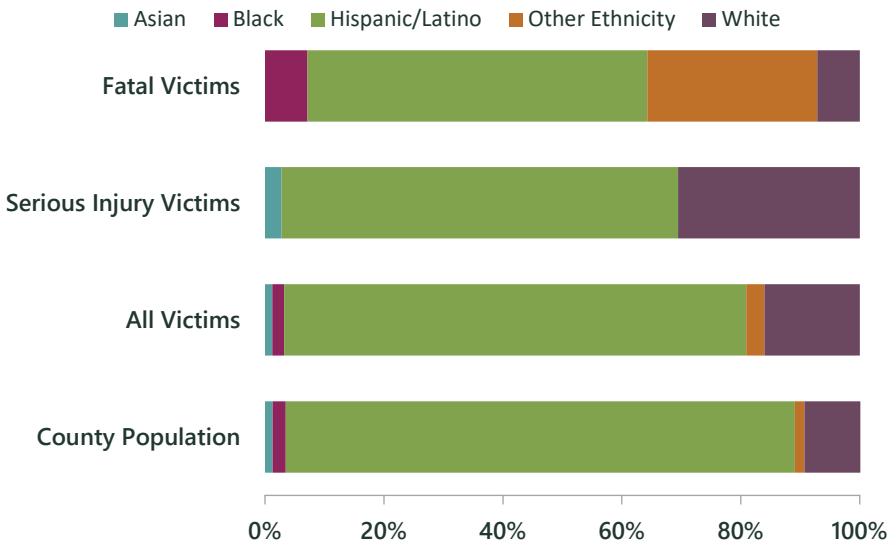
IMP Figure 22: Imperial County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



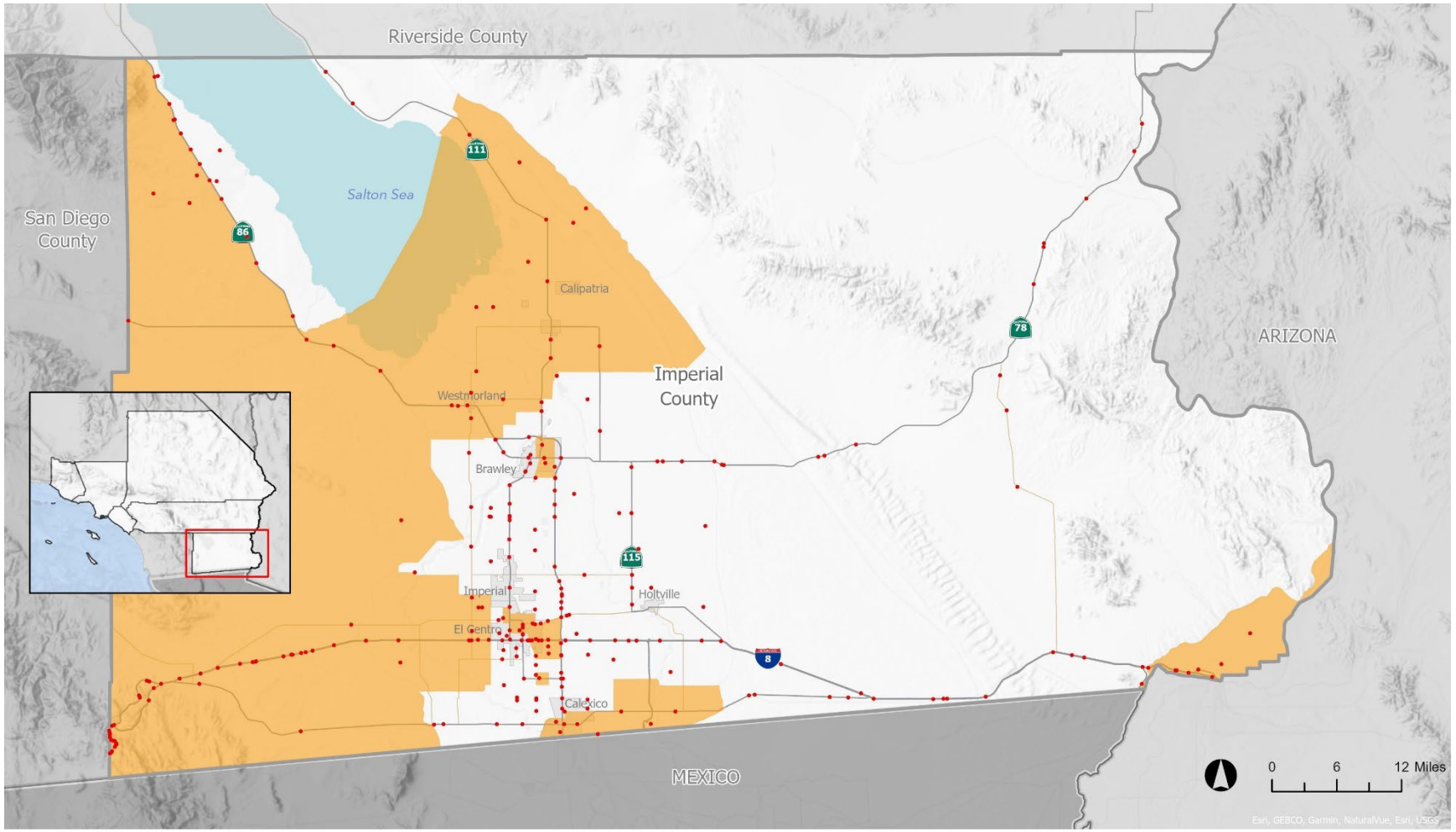
IMP Figure 23: Imperial County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



IMP Figure 24: Imperial County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)

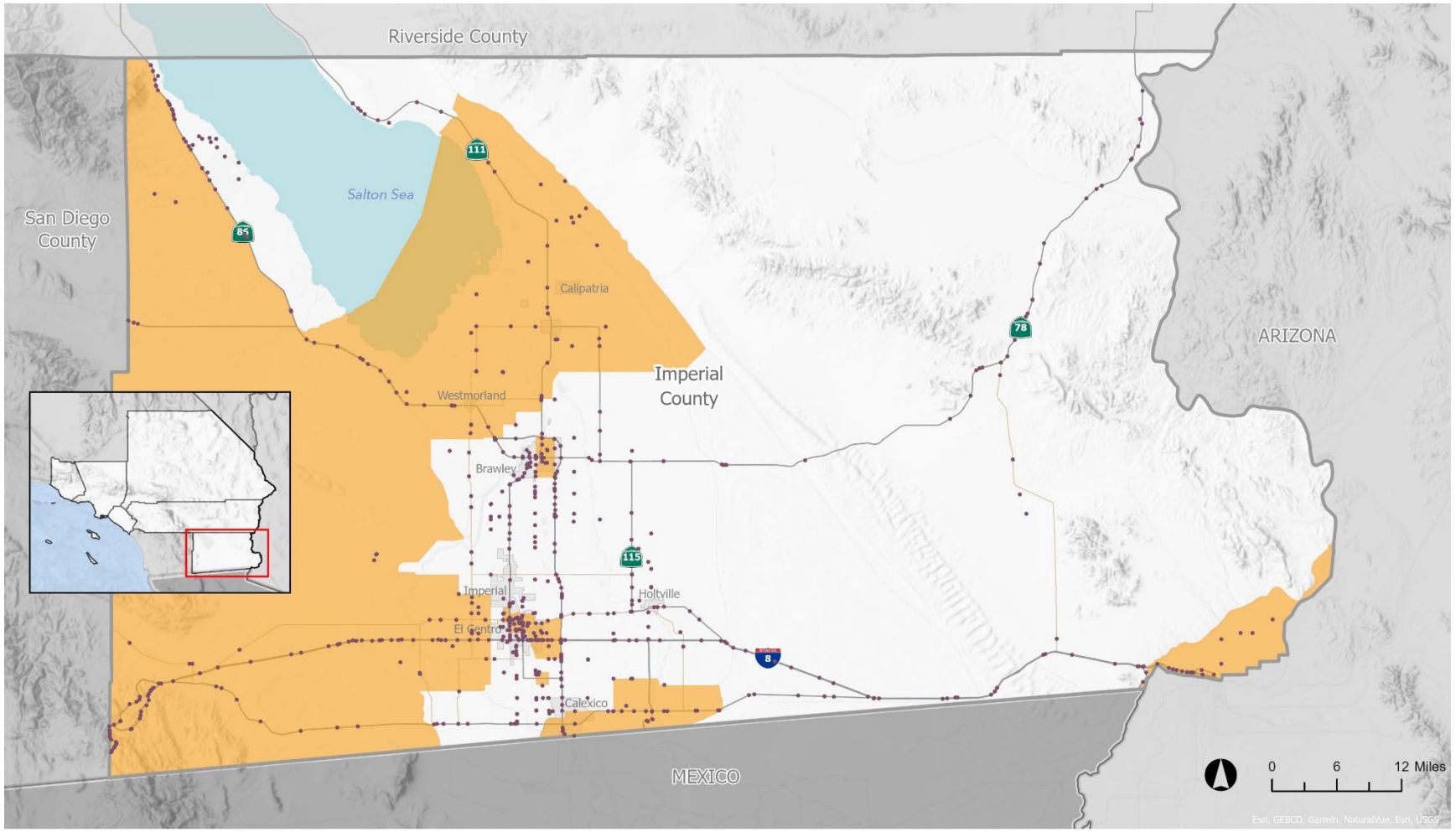


IMP Map 5: Imperial County Fatal Collisions in Priority Equity Communities (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

IMP Map 6: Imperial County Serious Injury Collisions in Priority Equity Communities (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

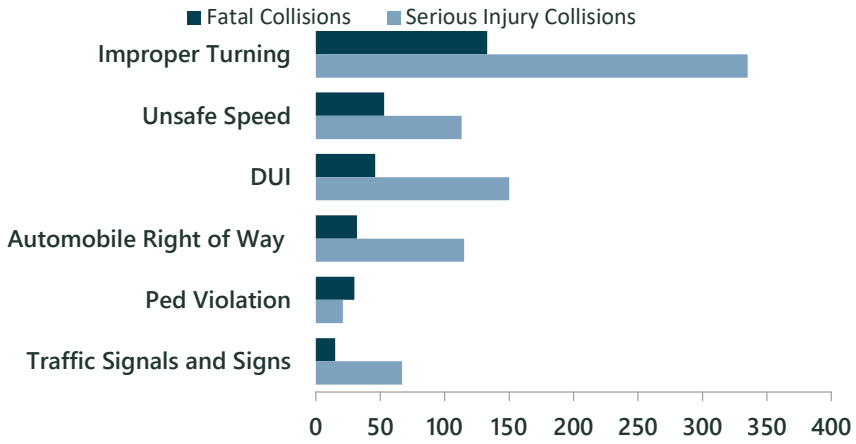
Why Collisions are Occurring

IMP Figures 25 through 27 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions as reported in Imperial County between 2014 and 2024. The PCF is the main cause of the collision as determined by the officer at the collision scene and there may be other factors which the officer notes as “other associated factors” on the collision report. As shown in **IMP Figure 25**, the top three PCFs for fatal collisions were improper turning (37 percent), unsafe speed (15 percent), and driving under the influence (13 percent). The top three PCFs for serious injury collisions were improper turning (36 percent), driving under the influence (16 percent), and automobile right of way (12 percent). These PCFs are generally consistent with regional trends, with the exception of improper turning being the top PCF for both fatal and serious injury collisions in Imperial County. This may be due to contextual factors such as lighting, time of day, land use, and infrastructure. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

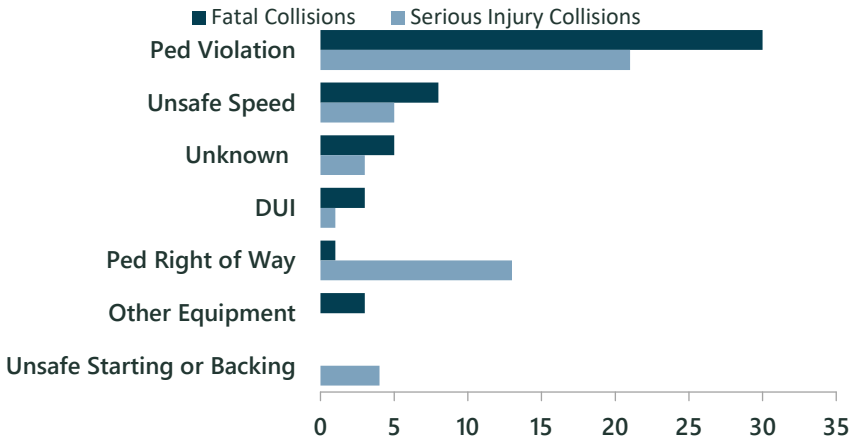
IMP Figure 26 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions. Consistent with regional trends, the top PCFs for fatal pedestrian-involved collisions in Imperial County included pedestrian violation (56 percent), unsafe speed (15 percent), and unknown (nine percent). Although the listed PCFs and their order differed from regional trends, pedestrian violation remained the top and was the only one directly related to pedestrians. For serious injury pedestrian-involved collisions, pedestrian violation and pedestrian right of way (40 percent and 25 percent, respectively) were more consistent with regional trends. These PCFs were also specifically related to pedestrians, indicating the need for further analysis that considered the “other associated factors“ noted in the collision data and contextual factors, such as time of day, surrounding land use, and existing infrastructures, that may provide more detailed insights on how to reduce the risk of these types of collisions.

IMP Figure 27 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions in Imperial County. The top PCF for fatal bicyclist-involved collisions was unsafe speed (40 percent), while wrong side of road, improper turning, and unsafe lane change each accounted for 20 percent. For serious injury collisions, unsafe speed, improper turning, improper passing, and automobile right of way each accounted for 17 percent of collisions. These PCFs were generally consistent with SCAG regional trends with unsafe speed, improper turning, and wrong side of road also being among the top regional PCFs. However, unsafe lane change and improper passing were not included among the top regional PCFs, suggesting the possible impact of local driver behavior or roadway conditions that may be unique to Imperial County.

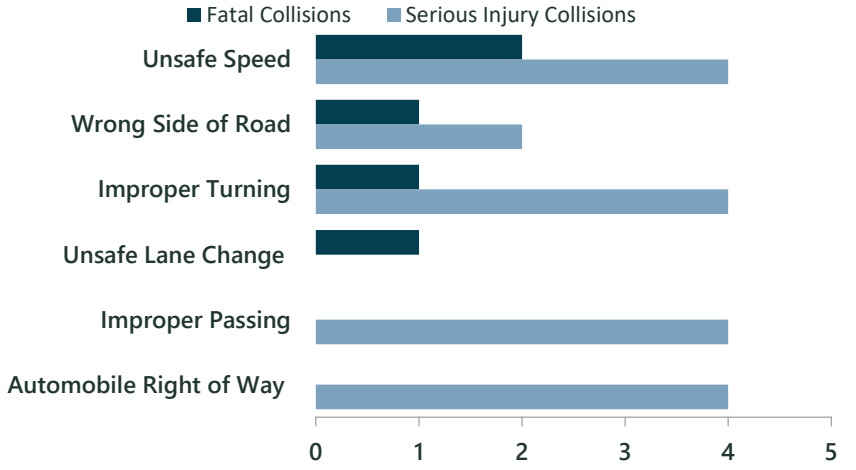
IMP Figure 25: Imperial County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



IMP Figure 26: Imperial County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



IMP Figure 27: Imperial County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



Imperial County Conclusion

Overall, between 2014 and 2024, Imperial County experienced an average of 32 traffic fatalities and 82 serious injuries annually, with most incidents involving vehicle occupants or motorcyclists. While there was a general downward trend in fatalities, reaching a low in 2024, the county saw year-to-year fluctuations likely influenced by its small population and changes in travel patterns and behavior during the COVID-19 pandemic. Collisions were concentrated in urban areas such as El Centro and along key highways, though rural areas experienced a disproportionate share of fatal and serious injury crashes. Pedestrian and bicyclist-involved collisions, while less frequent, often occurred in urban centers and contributed significantly to the county's fatality and injury rates. Most collisions resulting in fatalities and serious injuries occurred in rural areas and arterial roads. Imperial County consistently had higher fatality and serious injury collision victims per 100,000 people compared to the SCAG region until rates aligned more closely in 2023 and 2024. Demographic data highlighted young adults, especially men aged between 25-34, and Black, Hispanic/Latino, and individuals in the "Other Ethnicity" category appear to be disproportionately represented in collisions resulting fatalities and serious injuries.

When examining temporal patterns, fatal and serious injury collisions were more common in the late afternoon and evening. Fatal collisions peaked on Tuesdays and were most frequent in March. A large share of fatal and serious injury collisions occurred within or near Priority Equity Communities, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Improper turning, unsafe speeds, and impaired driving were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. Imperial County changes in travel patterns and behavior during similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black and Hispanic/Latino individuals, and those in the "Other Ethnicity" category; time-of-day and seasonal peaks in collisions; and the concentration of fatal and serious injury collisions within Priority Equity Communities.

Los Angeles County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

7,600
annual/per capita

Injuiries from Collisions

69,455
people sustain injuries every year from collisions

3,584
people sustain serious injuries every year from collisions

42%
of all traffic collision victims are people 18-34

72,042
collisions occur per year on the streets—that's roughly

197
collisions per day

Where Collisions Occur

99%
in urban areas

71%
on local roads

22%
on highways

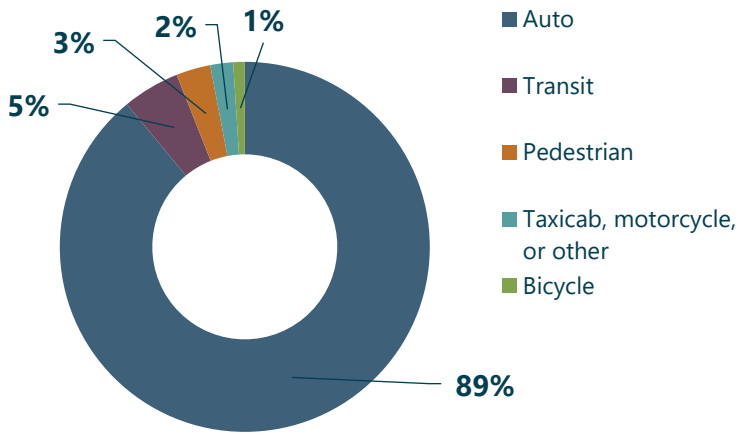
Fatalities from Collisions

735
people die every year from collisions

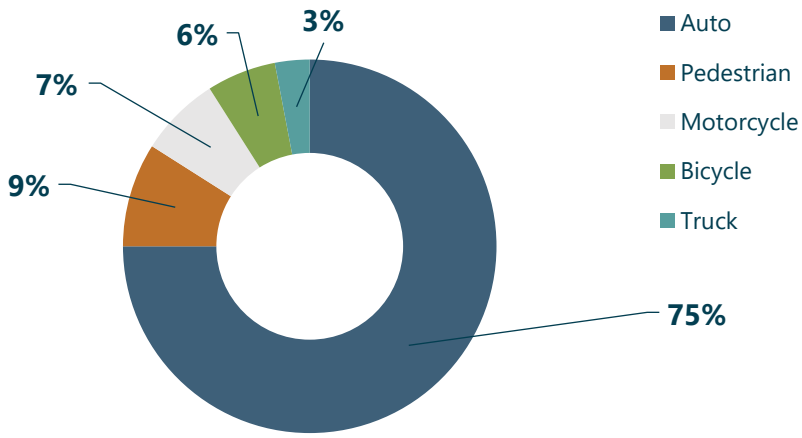
40%
of all deaths involve people walking or bicycling

25%
of all pedestrian fatal victims are 65 and older

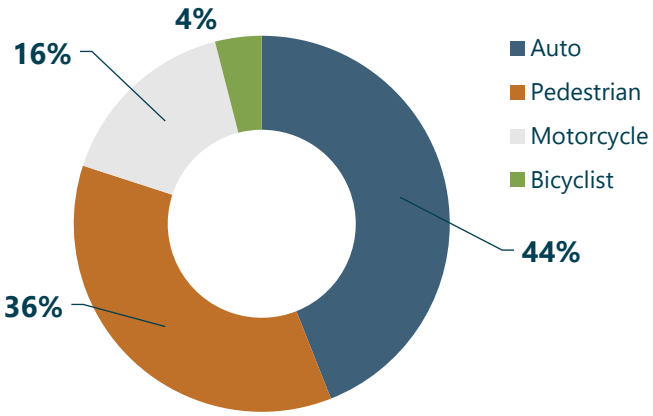
Los Angeles County, Daily Commute Trips (By Mode 2014-2024)



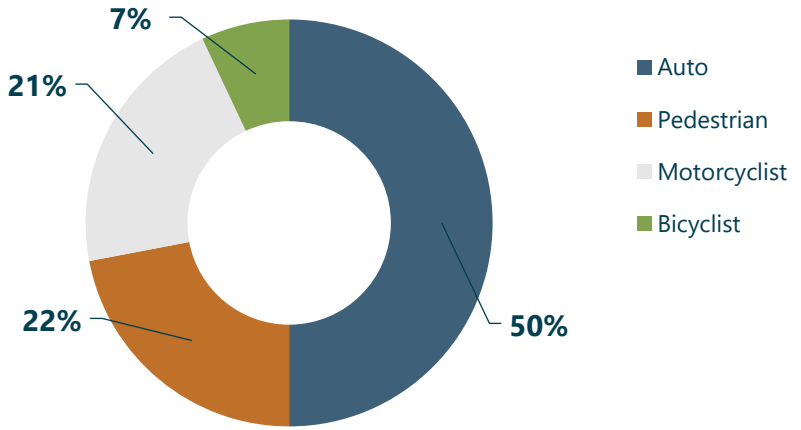
Los Angeles County, Total Collisions (By Mode at Fault 2014-2024)



Los Angeles County, Fatal Collisions Victims (By Mode 2014-2024)



Los Angeles County, Serious Injury Collisions Victims (By Mode 2014-2024)



Los Angeles County

Los Angeles County borders the counties of Kern (north), Orange (southeast), San Bernardino (east), and Ventura (northwest). To the west, Los Angeles County borders 70 miles of the Pacific Ocean. The county contains 4,057 square miles of land and, with nearly ten million residents, ranks as the most populous county in the United States. Residents of Los Angeles County drove an average of 7,600 miles per capita each year from 2014 to 2024, less than any other county in the region (Caltrans and California Department of Finance, 2024). This may be due to the density of land uses and the availability of multimodal transportation options and infrastructure (e.g. commuter rail, light rail, bus rapid transit, and active transportation).

Overall Safety Trends

Between 2014 and 2024, an average of 735 people died, 3,584 people were seriously injured, and 69,455 people sustained other visible injuries in traffic collisions each year in Los Angeles County. Over the past decade, the total number of fatalities peaked twice, first in 2016 with 847 victims, and then in 2022 with 857 victims, as shown in **LA Figure 1**. In contrast, the number of serious injury victims has steadily increased over the decade, with a peak of 4,328 victims in 2021, followed by a slow decline in more recent years (**LA Figure 2**). **LA Maps 1** and **2** reflect the locations of reported collisions resulting in fatalities or serious injuries in Los Angeles County in 2024. **LA Map 1** illustrates the density of collisions resulting in fatalities, with concentrations in south Los Angeles in neighborhoods adjacent to Interstates 110 and 10, in downtown Long Beach, in the San Fernando Valley, and in the city of Lancaster. Areas with a high density or concentration of collisions are referred to as collision hot spots. **LA Map 2** illustrates the density of serious injury collisions in Los Angeles County, with serious injury collision hot spots including entire neighborhoods in central and south Los Angeles, Long Beach, San Pedro, Santa Monica, Downey, and Pasadena.

From 2014 to 2024, about 60 percent of people killed in traffic collisions were in vehicles or on motorcycles while the other 40 percent of fatal victims were walking or bicycling. Of the 735 fatalities that occurred on average each year in Los Angeles County, an average of 297 victims were walking or bicycling. **LA Figure 3** reflects the number of people killed or seriously injured while walking in Los Angeles County between 2014 and 2024. Pedestrian fatalities peaked in 2016 (286 victims) and again in 2022 (310 victims), before gradually declining in more recent years to a slightly lower number in 2024 (213 victims) than the beginning of the analysis period in 2014 (222 victims). Conversely, the number of pedestrian serious injury victims has generally increased since 2014, with the exception of the COVID-19 pandemic-related decrease observed in 2020, reaching a peak of 941 victims in 2023. **LA Map 3** illustrates pedestrian-involved collisions that resulted in a fatality or serious injury that occurred in Los Angeles County in 2024. Similar to patterns observed for total collisions, pedestrian-involved collisions are primarily concentrated in central and south Los Angeles with a relatively even spread throughout the urbanized areas of the county.

LA Figure 4 illustrates the reported number of people killed or seriously injured while biking in Los Angeles County between 2014 and 2024. These trends deviated slightly from pedestrian trends. Bicyclist fatalities were at a steady 38 to 40 victims per year between 2016 and 2019 and have been decreasing in more recent years. Although the dip in 2020 to 27 victims was likely due to changing travel patterns, including stay-at-home orders, during the COVID-19 pandemic, the number of fatalities in the following years were slightly lower than pre-pandemic years. On the other hand, the number of bicyclists sustaining serious injuries from collisions generally increased and peaked in 2024 (304 victims). **LA Map 4** illustrates the reported bicyclist-involved collisions resulting in a fatality or serious injury that occurred in Los Angeles County in 2024. Similar to patterns observed for total collisions and pedestrian-involved collisions, bicyclist-involved collisions are primarily concentrated in central and south Los Angeles with a relatively even spread throughout the urbanized areas of the county.

LA Figure 5 shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Similar to the SCAG region, Los Angeles County reached a peak for fatalities per 100,000 people in 2022 and for serious injuries per 100,000 people in 2021, followed by a slight decrease over subsequent years. Overall, the county trends closely with the region as its population accounts for approximately half of the SCAG regional population. However, the fatality rate was slightly lower than the region with Los Angeles County reporting six to eight fatalities per 100,000 people compared to the region's eight to 11 fatalities per 100,000 people. **LA Figure 6** demonstrates that

when normalizing by vehicle miles traveled (VMT), trends in fatality and serious injury rates were generally consistent with non-normalized trends, where the fatality rate peaked in 2016 and 2022, and the serious injury rate increased through 2021 followed by a decrease in subsequent years. The consistency between the patterns of the absolute number and rate of fatalities and serious injuries suggested that factors other than population growth and VMT may have contributed to the collision trends.

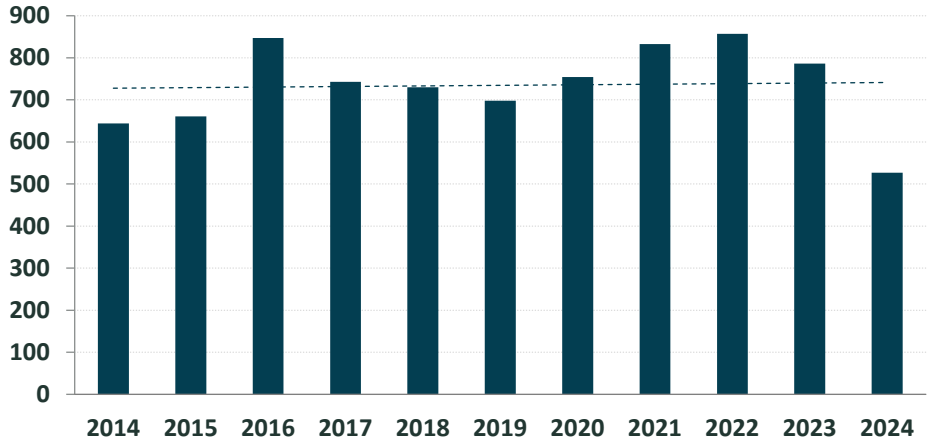
Where Collisions are Occurring

In Los Angeles County, a majority of fatal and serious injury collisions (91 percent) occurred in urbanized areas between 2014 and 2024 across all modes of transportation. Nearly all pedestrian-involved fatal collisions (97 percent) and bicyclist-involved fatal collisions (98 percent) occurred in urbanized areas. In total, over 98 percent of the Los Angeles County population live in urbanized areas, while less than two percent live in rural areas (U.S. Census Bureau and Caltrans). **LA Maps 1-4** displays collisions resulting in a fatality or serious injury by mode in Los Angeles County in 2024.

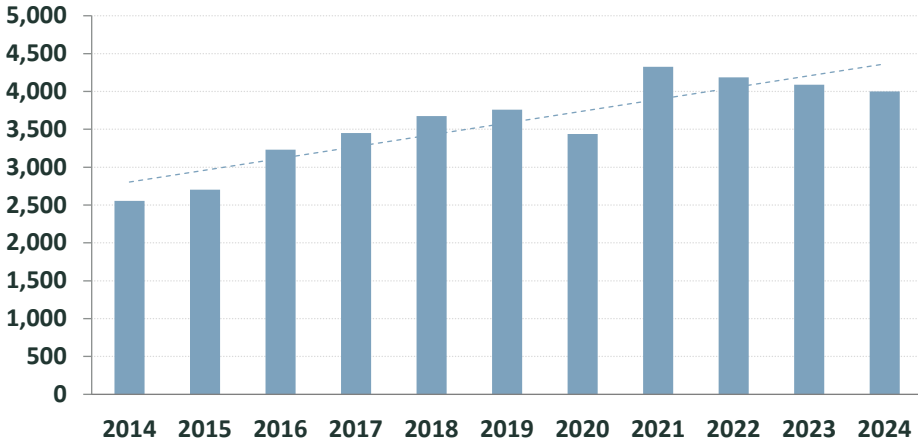
LA Figure 7 shows the vast roadway network in Los Angeles County, with 513 highway centerline miles (two percent), 4,487 arterial centerline miles (20 percent), 3,394 collector centerline miles (15 percent), and 13,674 local road centerline miles (62 percent) (Caltrans, 2024). **LA Figure 8** shows the miles of bikeway classifications in Los Angeles County with 356 miles of Class I bikeways (15 percent of total bicycle facility mileage), 1,258 Class II bikeways (53 percent), 714 Class III bikeways (30 percent), and 40 miles of Class IV bikeways (two percent) (SCAG, 2024).

Between 2014 and 2024, about 71 percent of fatalities in Los Angeles County occurred on local roads, seven percent on arterials, and 22 percent on highways as shown in **LA Figure 9**. Approximately 75 percent of serious injuries occurred on local roads, six percent on arterials, and 19 percent on highways as shown in **LA Figure 10**. During the same period, about 76 percent of pedestrian fatalities occurred on local roads, eight percent on arterials, and 17 percent on highways. For bicyclist fatalities, about 86 percent occurred on local roads, nine percent on arterials, and five percent on highways. For pedestrian serious injuries collisions, 89 percent occurred on local roads, five percent on arterials, and six percent on highways. For bicyclist serious injuries, 93 percent occurred on local roads, five percent on arterials, and two percent on highways. Overall, fatalities and serious injuries collisions disproportionately occurred on local roads, which highlights the importance for local jurisdictions to continue prioritizing safety improvements and to engage in regional coordination efforts to advance safety.

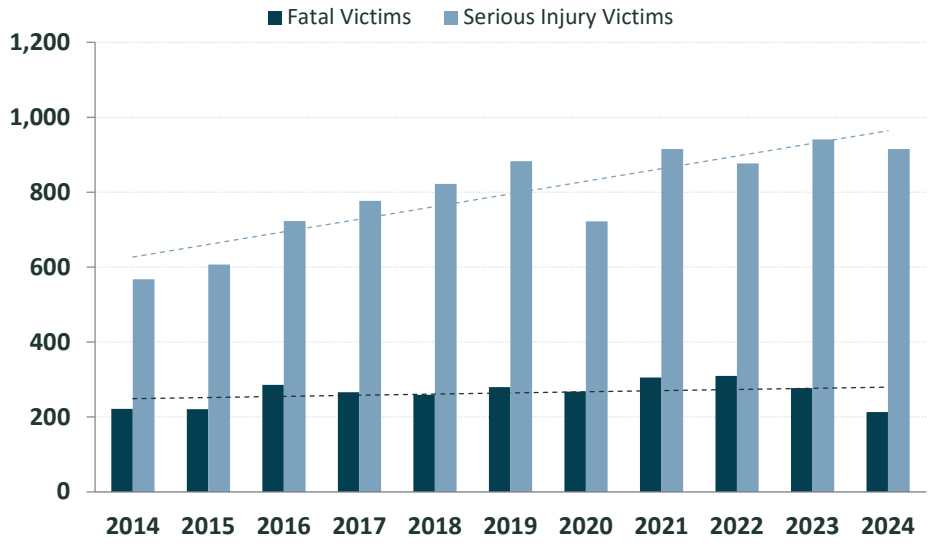
LA Figure 1: Los Angeles County, Total Number of Fatal Victims (2014-2024)



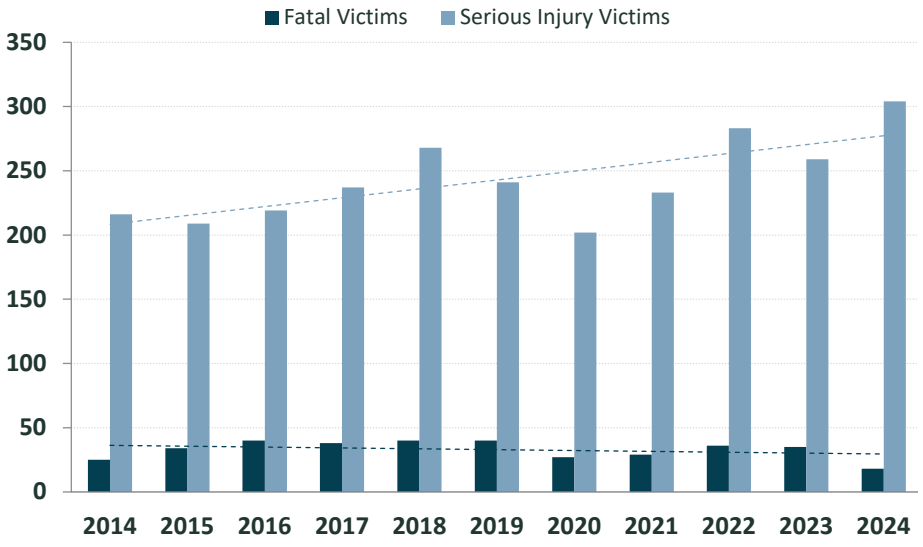
LA Figure 2: Los Angeles County, Total Number of Serious Injury Victims (2014-2024)



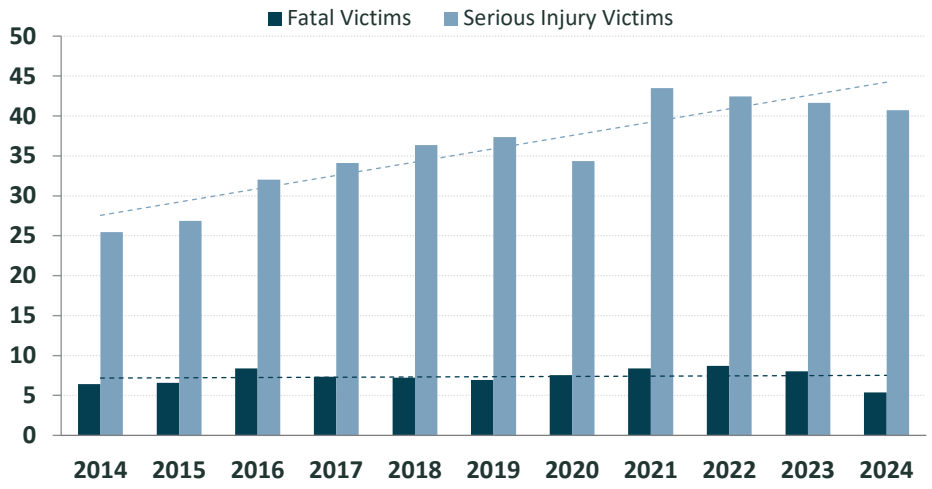
LA Figure 3: Los Angeles County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



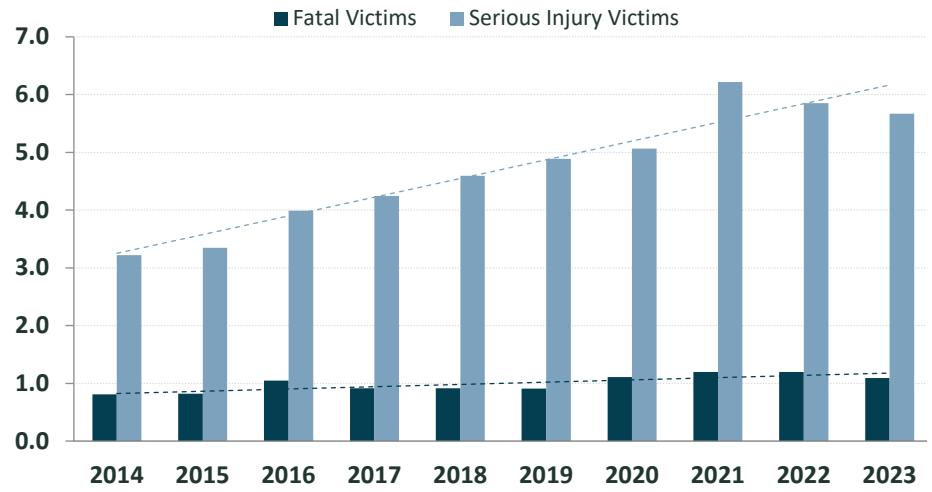
LA Figure 4: Los Angeles County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



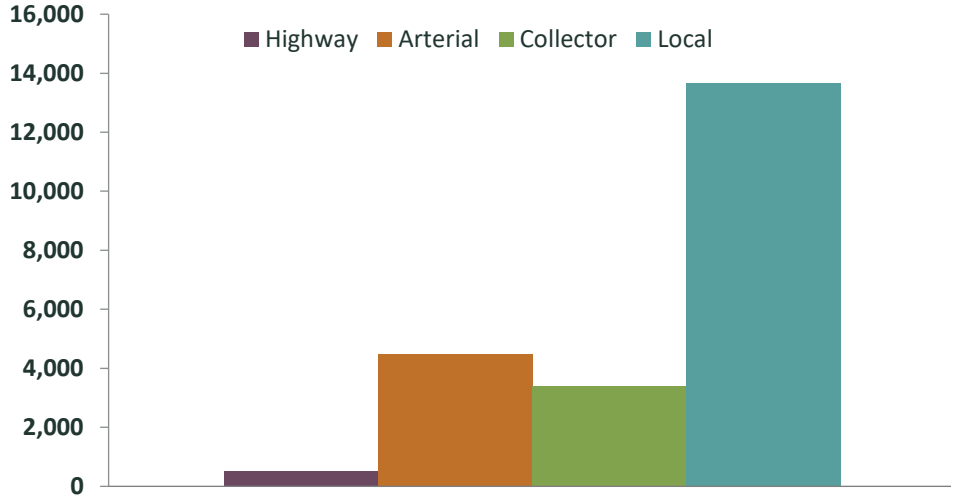
LA Figure 5: Los Angeles County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)



LA Figure 6: Los Angeles County, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)

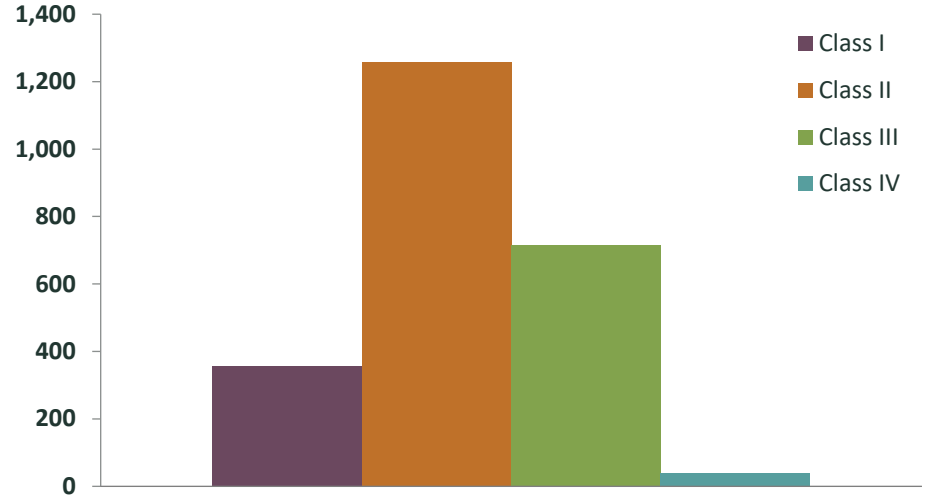


LA Figure 7: Los Angeles County, Centerline Miles by Roadway Classification (2024)



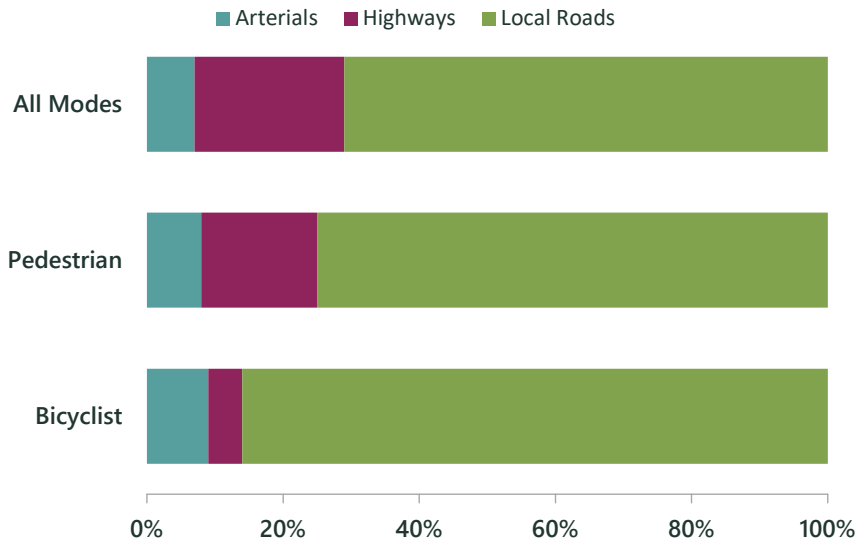
Source: Caltrans, 2024

LA Figure 8: Los Angeles County, Bikeway Miles by Classification (2014-2024)

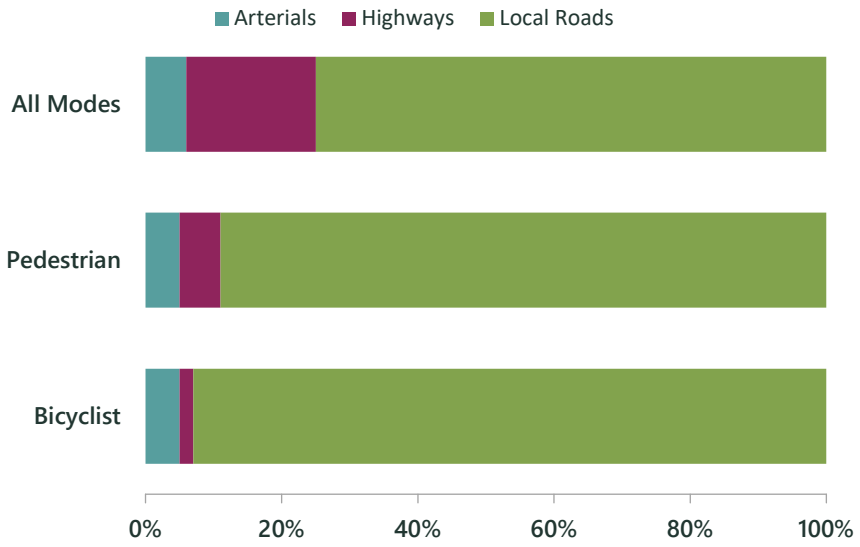


Source: SCAG, 2024

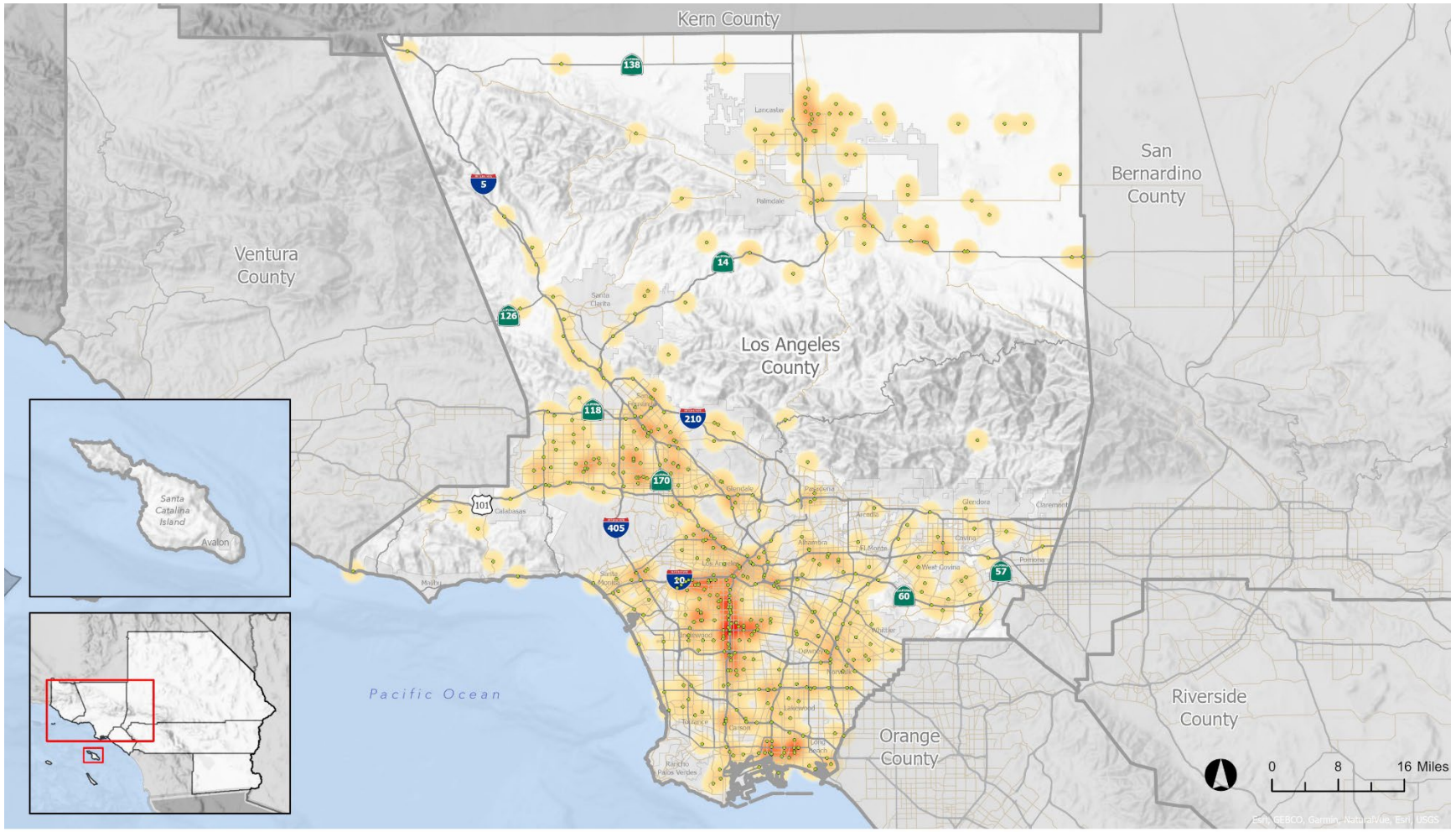
LA Figure 9: Los Angeles County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



LA Figure 10: Los Angeles County, Distribution of Serious Injury Victims by Mode and Roadway Classification (2014-2024)

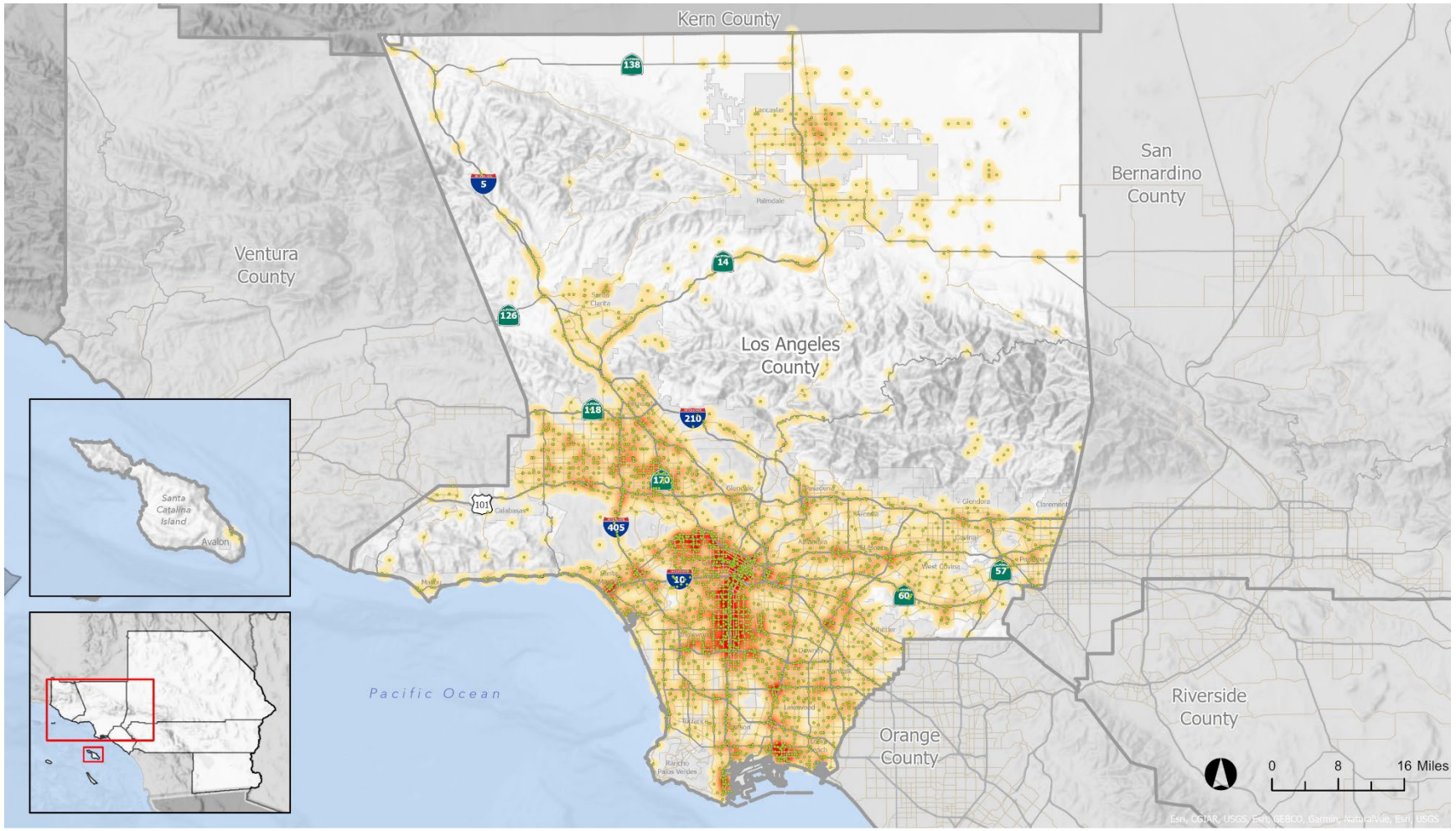


LA Map 1: Los Angeles County Fatal Collisions (2024)



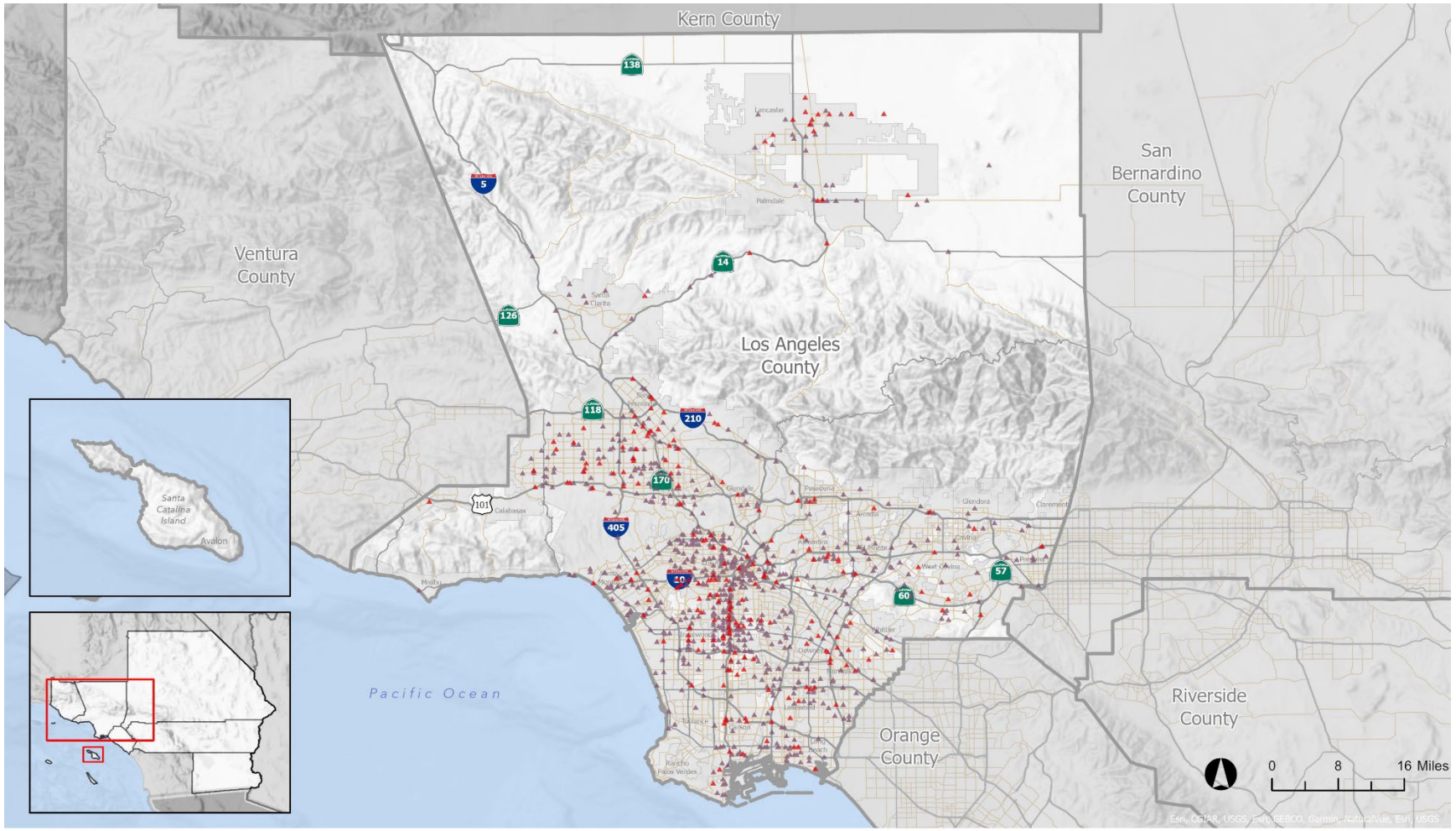
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

LA Map 2: Los Angeles County Serious Injury Collisions (2024)



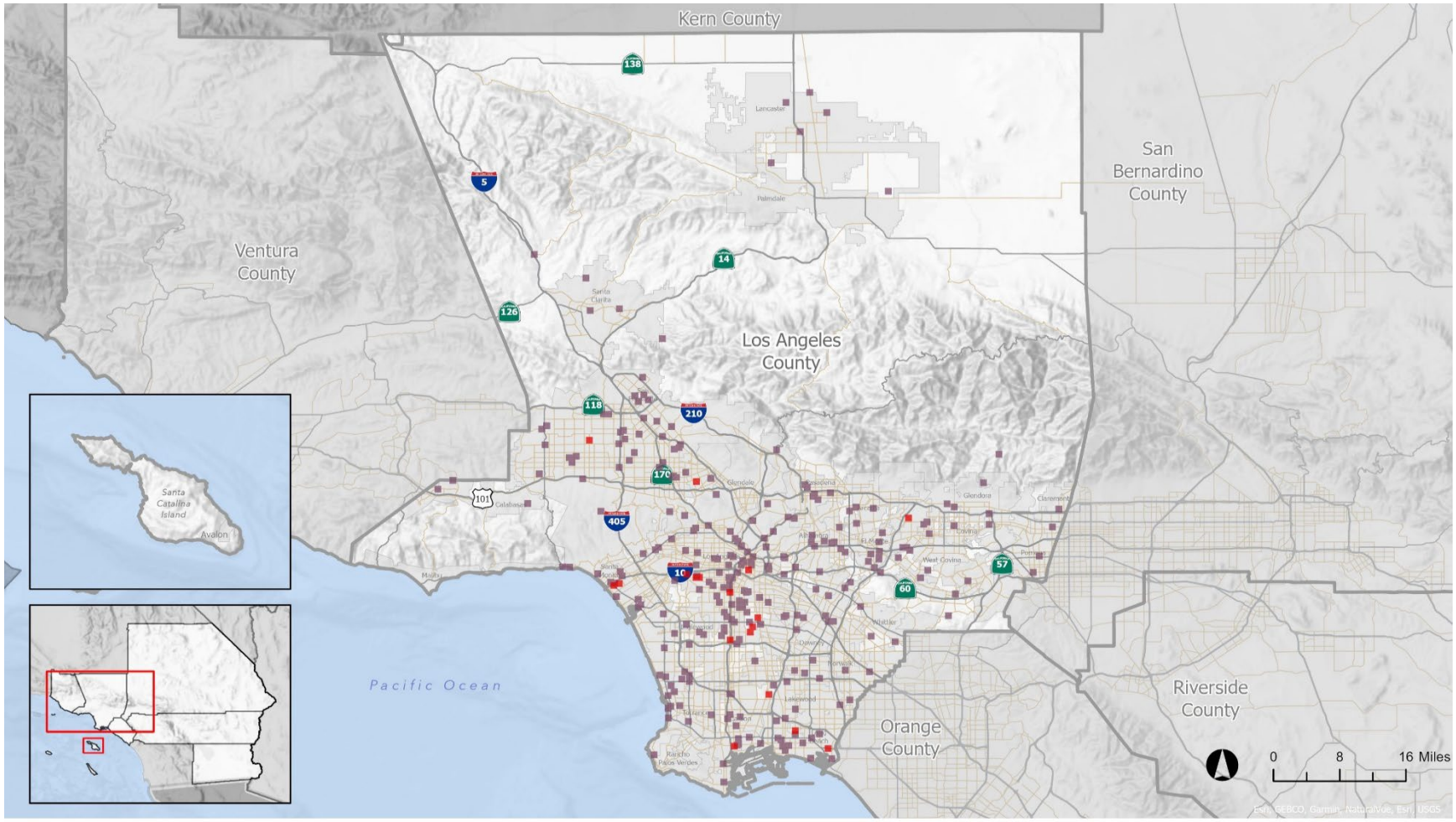
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

LA Map 3: Los Angeles County Pedestrian-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

LA Map 4: Los Angeles County Bicyclist-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

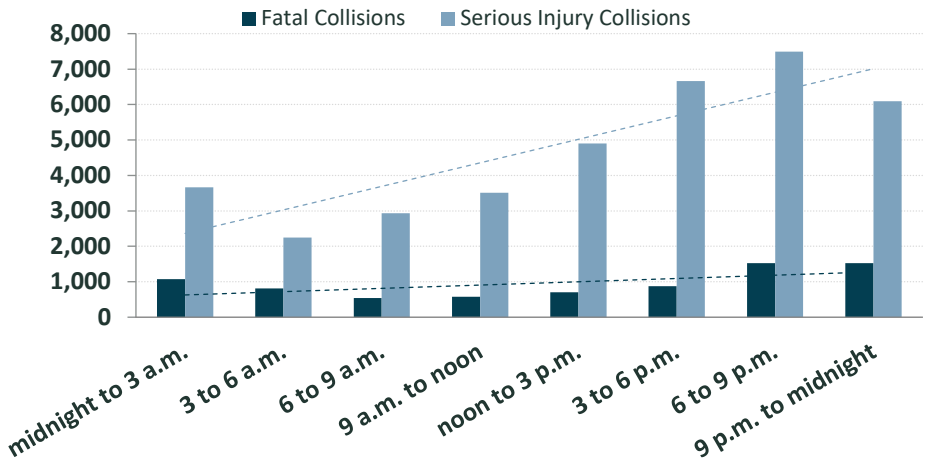
LA Figures 11 through 19 examine collision trends across several time periods, including time of day, day of week, and month between 2014 and 2024 in Los Angeles County.

LA Figure 11 shows that most fatal collisions in Los Angeles County occurred in the evening between 6 p.m. and midnight, and most collisions resulting in a serious injury occurred during the evening peak period (starting at 3 p.m.) through midnight. **LA Figure 12** shows trends by time of day for pedestrian-involved collisions where, similar to total collisions, most fatal (723 collisions) and serious injury collisions (2,291 collisions) also occurred in the evening (primarily between 6 p.m. and 9 p.m.). **LA Figure 13** shows that bicyclist fatal collisions were concentrated between 6 p.m. and midnight, while bicyclist-involved serious injury collisions were concentrated between 3 p.m. and 9 p.m. Given that most fatal and serious injury collisions occurred during the evening peak period and the evening, when there is a high concentration of activity and relatively less visibility, factors such as insufficient walking and bicycling infrastructure and inadequate lighting may be collision risk factors.

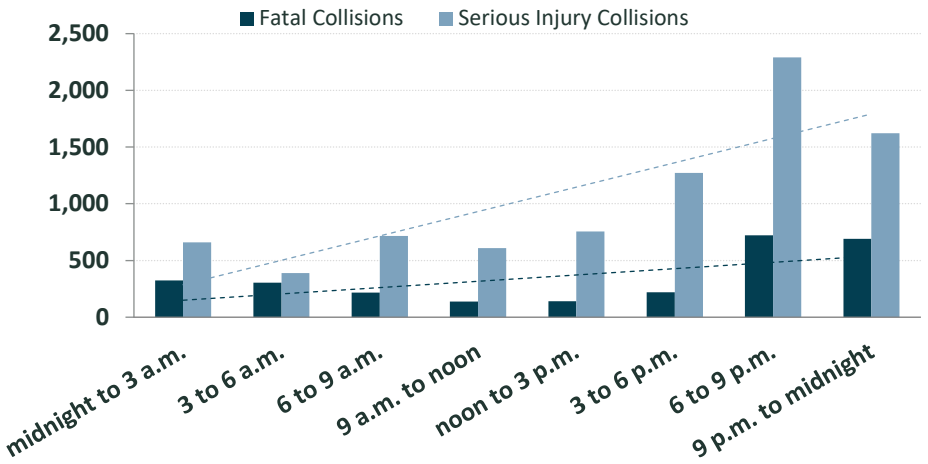
By day of week, fatal and serious injury collisions across all modes generally increased over the course of the week between 2014 and 2024, as shown in **LA Figure 14**. Fatalities and serious injuries peaked on Sundays (1,411 fatal collisions and 6,771 serious injury collisions). **LA Figure 15** shows similar, but less defined, trends for pedestrian-involved collisions rising over the course of the week. Pedestrian-involved collisions resulting in fatalities peaked on Fridays (449 collisions), while serious injury collisions peaked on Saturdays (1,379 collisions). **LA Figure 16** shows that bicyclist-involved fatal and serious injury collisions were roughly consistent throughout the week, with a slight peak in bicyclist fatal collisions on Tuesdays (61 collisions) and serious injury collisions on Thursdays (404 collisions).

When examining Los Angeles County collisions by month between 2014 and 2024, **LA Figure 17** shows that fatal collisions were relatively consistent over the course of the year with an average of 673 collisions each month. Serious injury collisions had a more visible trend of increasing collisions over the course of the year, with a clear spike during October (3,849 collisions). **LA Figure 18** displays fatal and serious injury trends for pedestrian-involved collisions by month, which showed that more collisions occurred during the fall (October through November) and winter months (December through March) compared to the spring (April through May) and summer months (June through September), which corresponds with seasonal variations in daylight hours. Pedestrian-involved fatal and serious injury collisions peaked in October (296 fatal collisions and 927 serious injury collisions). On the other hand, bicyclist-involved collisions were more frequent during the warmer, sunnier months of the year (April through October) and less frequent during the darker and generally rainier months (November through February), as shown in **LA Figure 19**. Bicyclist-involved fatal collisions reached a peak in September (44 collisions), while bicyclist-involved collisions resulting in serious injuries peaked in August (272 collisions).

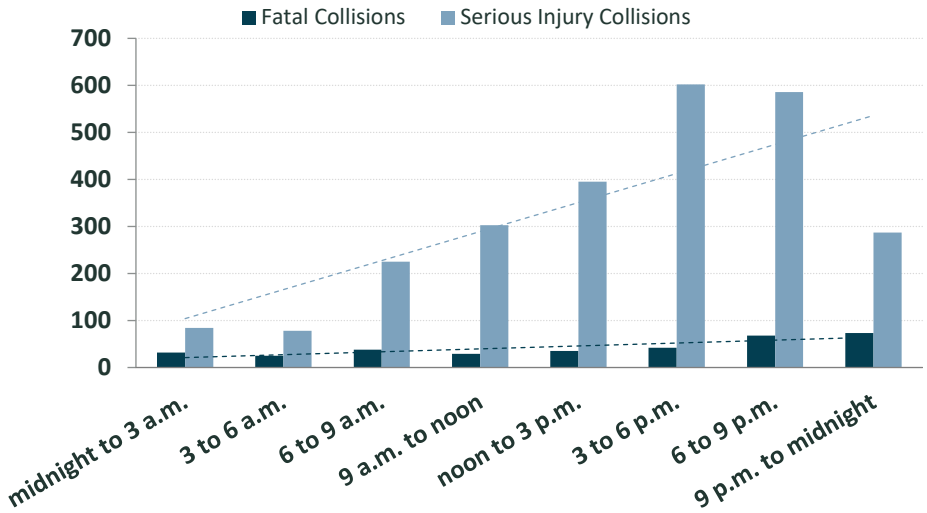
LA Figure 11: Los Angeles County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



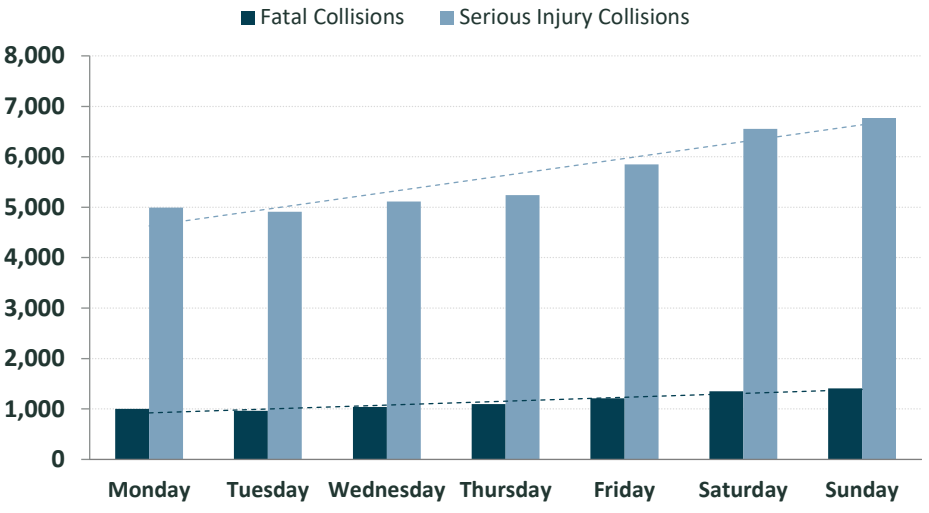
LA Figure 12: Los Angeles County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



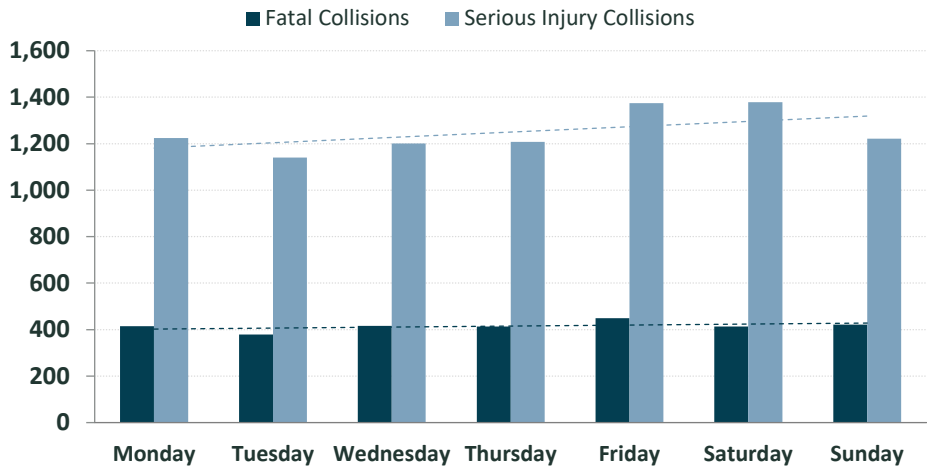
LA Figure 13: Los Angeles County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



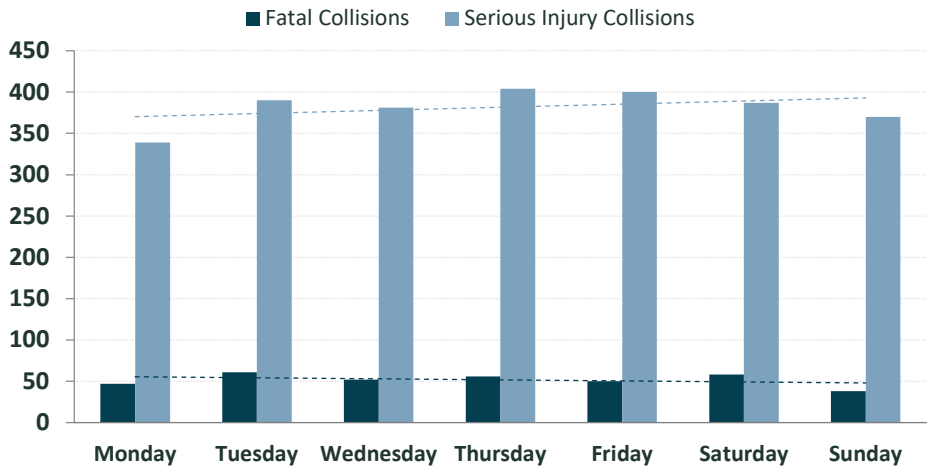
LA Figure 14: Los Angeles County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



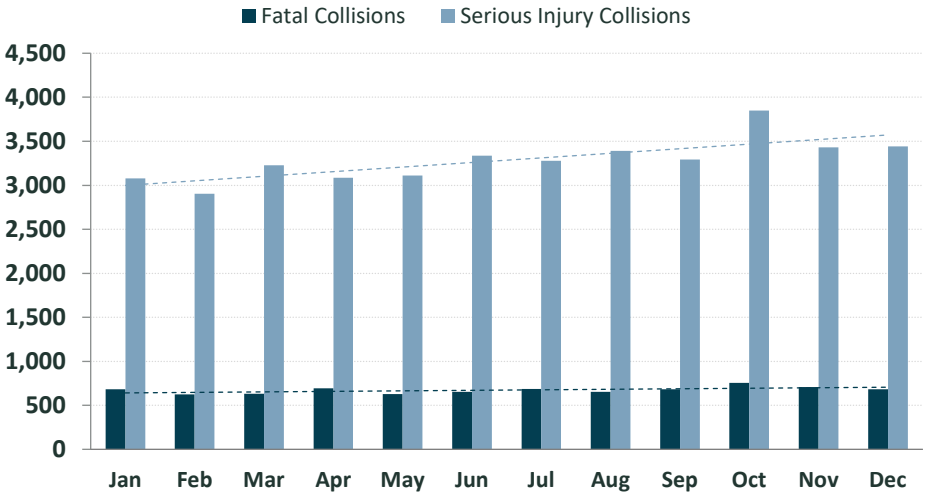
LA Figure 15: Los Angeles County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



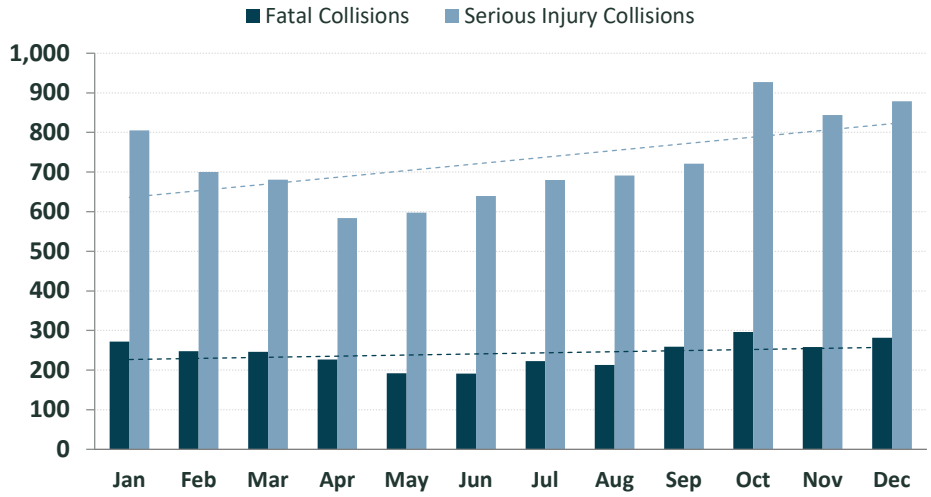
LA Figure 16: Los Angeles County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



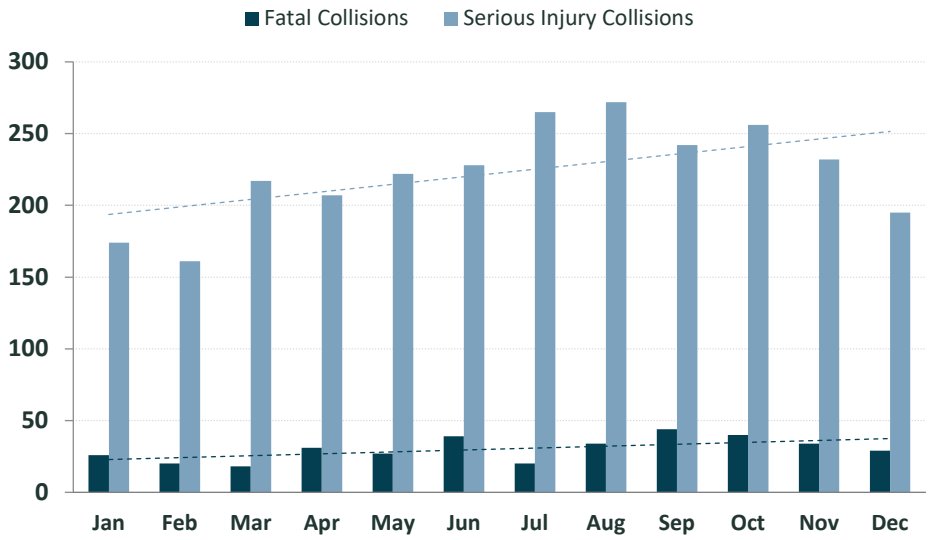
LA Figure 17: Los Angeles County, Fatal and Serious Injury Collisions by Month (2014-2024)



LA Figure 18: Los Angeles County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



LA Figure 19: Los Angeles County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In Los Angeles County, pedestrians and bicyclists accounted for about 40 percent of all fatal collision victims reported from 2014 to 2024, disproportionately higher than the three and a half percent of county residents who walk or bike to work (U.S. Census Bureau, 2023). Nearly 13 percent of all trips (work and non-work) in the region were taken via walking or biking, which is also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

LA Figures 20 through 23 explore collision trends across several demographic factors between 2014 and 2024. During this period, more men were killed or sustained serious injuries in collisions compared to women, with men accounting for nearly three times as many fatalities (5,954 victims) as women (2,029 victims). A similar trend is observed with serious injuries where 26,660 men and 11,456 women were seriously injured. These trends are consistent with regional and national trends where a higher number of fatalities and serious injuries occur among men. Additionally, between 2019, when data collection on non-binary persons began, and 2024, there was one reported pedestrian fatality and two reported serious injury victims (one driver and one bicyclist) among non-binary people in Los Angeles County.

LA Figure 20 depicts victims of fatal collisions stratified by age group. The largest number of fatalities occurred among the 25-34 age group (1,741 victims), representing nearly 22 percent of reported fatalities in Los Angeles County. Fatalities occurred more often among men than women in every age group, except for infants and toddlers (age 0-4). Similarly, **LA Figure 21** shows that the largest number of serious injuries occurred among the 25-34 age group (10,071 victims), representing 26 percent of reported serious injuries. The number of serious injury victims increased with age until reaching a peak for 25- to 34-year-olds then steadily decreased with increasing age. Men were consistently more likely to be seriously injured in collisions compared to women for all age groups.

When analyzing trends by victim role (i.e., driver, passenger, bicyclist, or pedestrian), additional patterns emerge. Drivers comprised the largest number of fatalities (3,673 victims), followed by pedestrians (2,880 victims), passengers (1,070 victims), and bicyclists (352 victims). **LA Figure 22** shows that significantly more drivers killed in collisions were men (3,084 victims) than women (577 victims), while slightly more passengers killed in collisions were women (539 victims) than men (529 victims). There were twice as many fatalities among men who were walking (1,994 victims) compared to women who were walking (874 victims), and over ten times as many fatalities occurred among men who were biking (320 victims) compared to women who were biking (30 victims). One notable difference between Los Angeles County and the region is in the number of fatalities among women who were walking, which is approximately one and a half times higher than the number of fatalities for women who were driving in Los Angeles County, while in the SCAG region overall the number of fatalities among women who were walking and driving were about the same. **LA Figure 23** shows a similar pattern for serious injury victims, though more women who were driving experienced serious injuries (4,991 victims) than women who were passengers (3,113 victims). Men who were driving still experienced the greatest number of serious injuries (16,319 victims), and more men who were walking (5,295 victims) and biking (2,244 victims) suffered a serious injury compared to women who were walking (2,995 victims) and biking (303 victims).

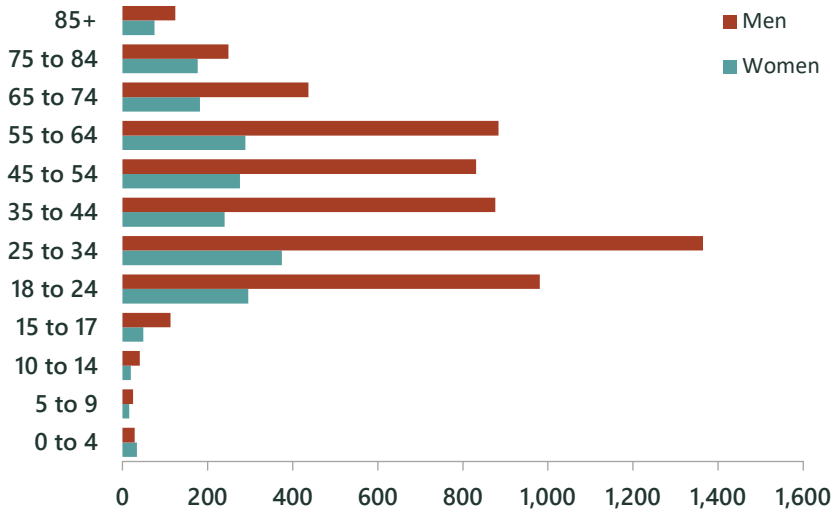
Overall, men who were driving constituted over 38 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (860 victims) in Los Angeles County between 2014 and 2024.

LA Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county's population in 2024. Black individuals were overrepresented among fatal and serious injury victims compared to their proportion of the population. While they represent under eight percent of the county's population, Black individuals constituted over 12 percent of all fatalities and serious injury victims and nearly 12 percent of all collision victims. Hispanic/Latino individuals represented 48 percent of the county's population but disproportionately constituted over 61 percent of fatalities, 53 percent of serious injury victims, and 52 percent of all collision victims. Additionally, individuals of the "Other Ethnicity" category (aligned with the U.S. Census Bureau definition to include American Indian, Alaska Native, Native Hawaiian, Pacific Islander, some other race alone, and

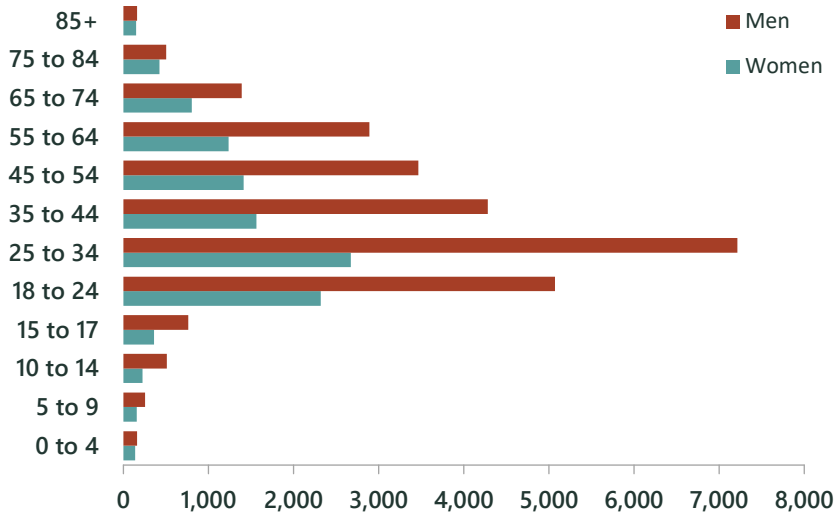
multiracial people) represented only four percent of the county's population but constituted nearly seven percent of serious injury victims and over eight percent of all collision victims.

LA Maps 5 and **6** highlight the concentration of fatalities and serious injuries that occurred within Priority Equity Communities in Los Angeles County in 2024. These maps illustrate that the highest concentrations of collisions tend to be in and around Priority Equity Communities.

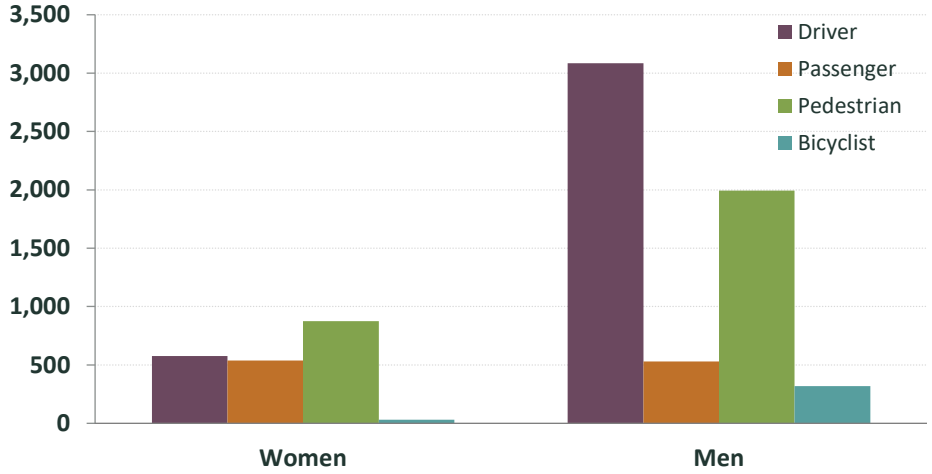
LA Figure 20: Los Angeles County, Fatal Victims by Age and Gender (2014-2024)



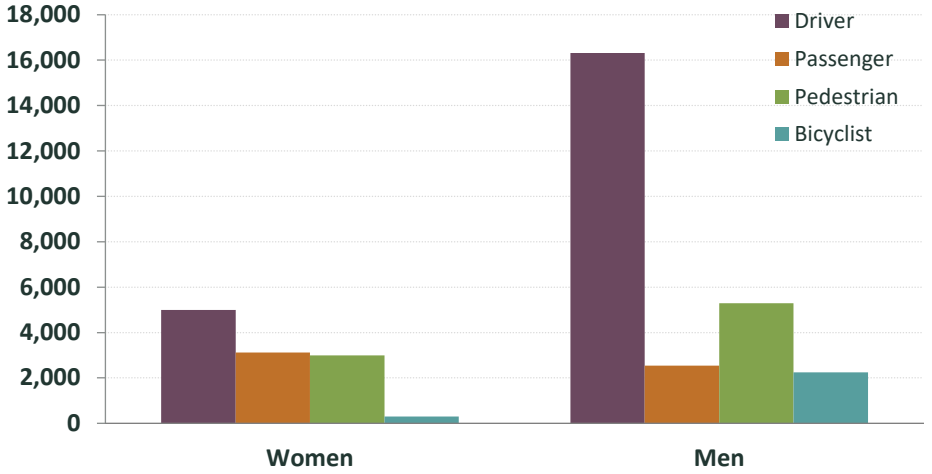
LA Figure 21: Los Angeles County, Serious Injury Victims by Age and Gender (2014-2024)



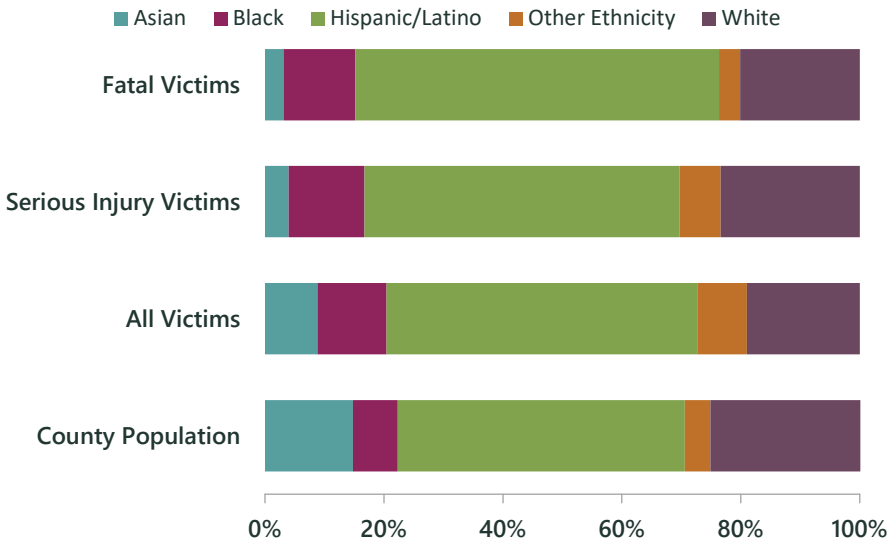
LA Figure 22: Los Angeles County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



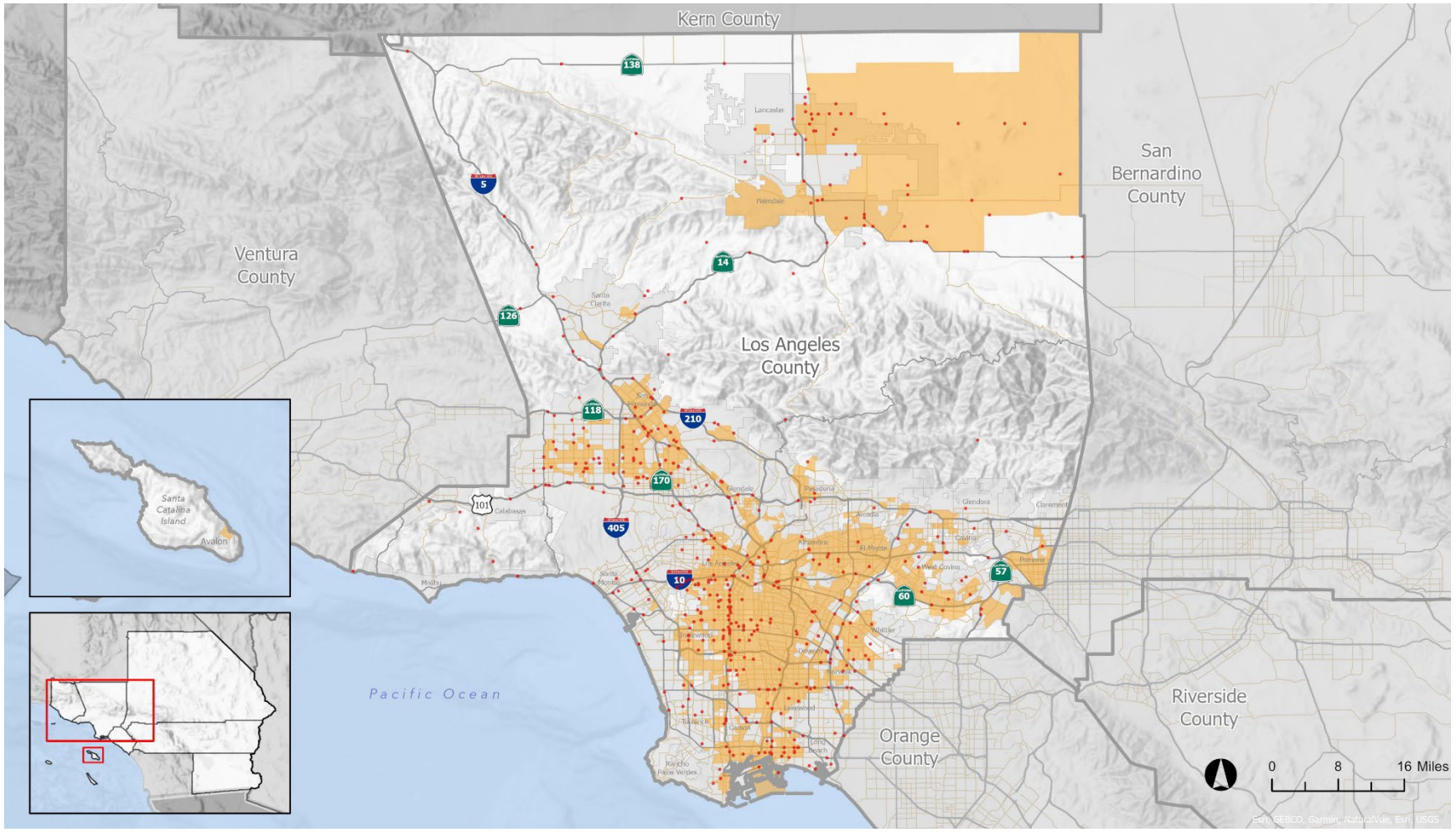
LA Figure 23: Los Angeles County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



LA Figure 24: Los Angeles County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)

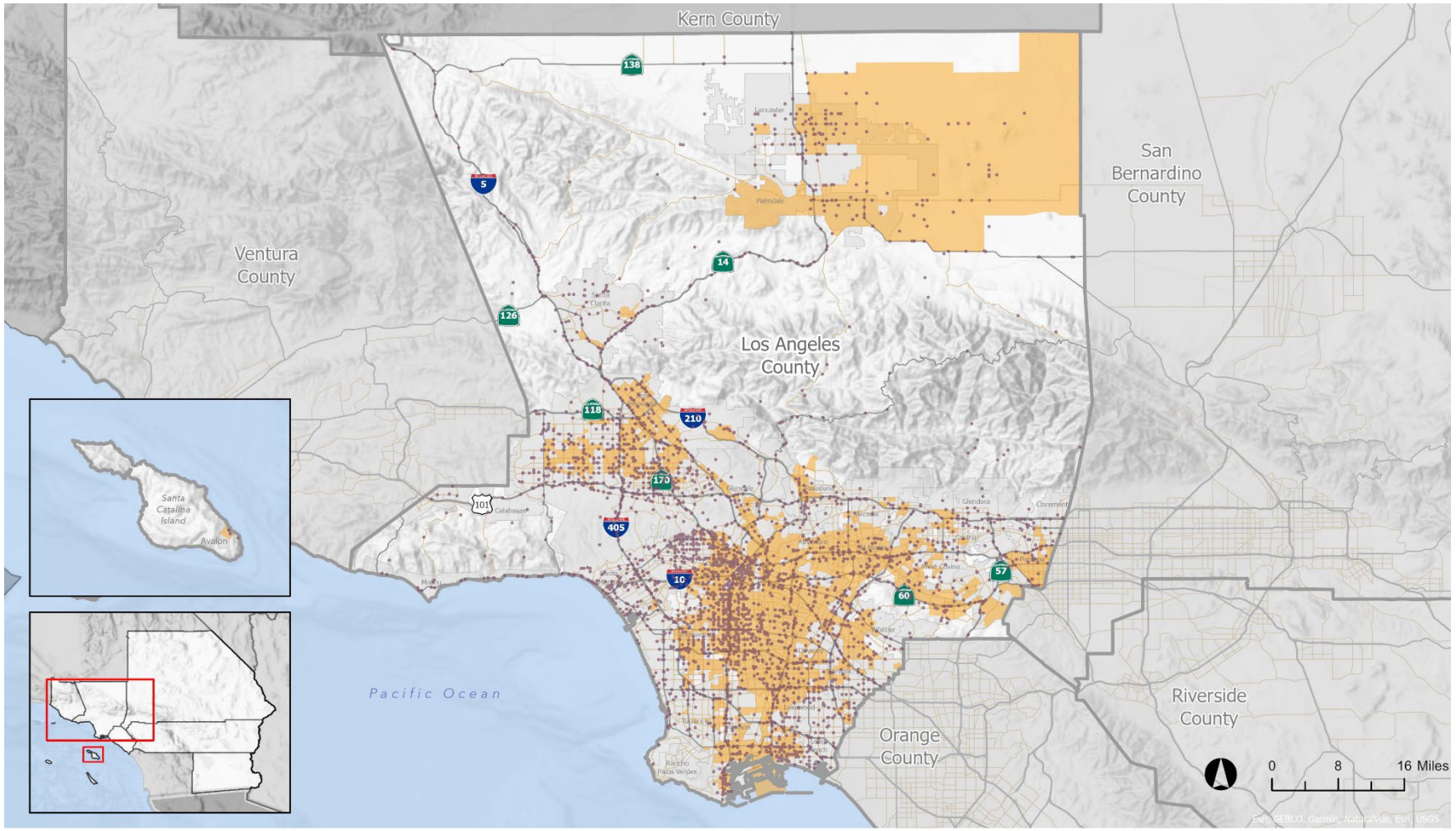


LA Map 5: Los Angeles County Fatal Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

LA Map 6: Los Angeles County Serious Injury Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

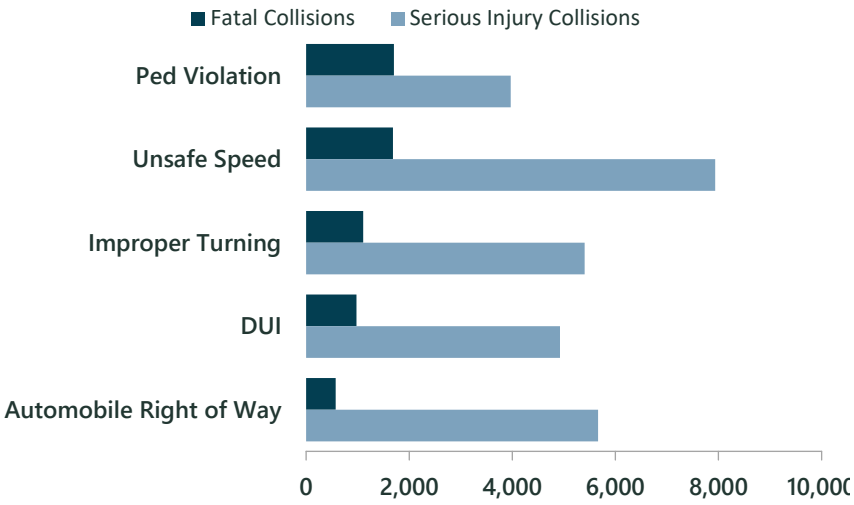
Why Collisions are Occurring

LA Figures 25 through 27 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions reported in Los Angeles County between 2014 and 2024. The PCF is the main cause of the collision as determined by the officer at the collision scene and there may be other factors which the officer notes as "other associated factors" on the collision report. As shown in **LA Figure 25**, the top three PCFs for fatal collisions in the county were pedestrian violations (21 percent), unsafe speed (21 percent), and improper turning (14 percent). The top three PCFs for serious injury collisions were unsafe speed (20 percent), automobile right of way (14 percent), and improper turning (13 percent). These PCFs are generally consistent with regional trends with the exception of driving under the influence (DUI), which was one of the top PCFs for the SCAG region overall, but not for Los Angeles County. DUI is still a top factor for collisions in Los Angeles County but is not as significantly represented as across the region. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

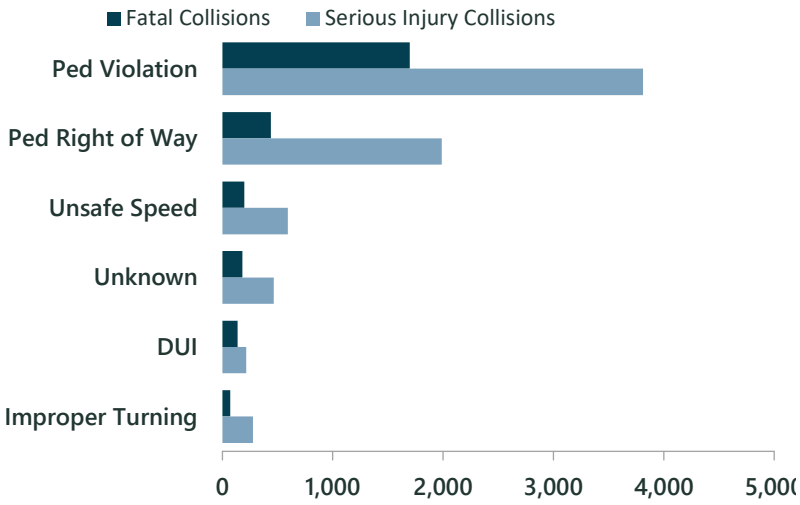
LA Figure 26 illustrates the top PCFs for pedestrian-involved fatal and serious injury collisions in Los Angeles County. Consistent with regional trends, the top two PCFs for fatal and serious injury pedestrian-involved collisions were pedestrian violation (58 percent and 46 percent) and pedestrian right of way (15 percent and 24 percent). These were the two PCFs specifically related to pedestrians so further analysis that considers the "other associated factors" noted in the collision data and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide useful insights on how to reduce the risk of pedestrian collisions.

LA Figure 27 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions. Consistent with regional trends, the top PCF for fatal bicyclist-involved collisions was a tie between wrong side of road and automobile right of way (15 percent each), and the top PCF for serious injury bicyclist-involved collisions was automobile right of way (21 percent). The other top PCFs for fatal and serious injury bicyclist-involved collisions were in a slightly different order for Los Angeles County than for the region, but overall, the top PCFs were consistent. The other top PCFs for fatal bicyclist-involved collisions were traffic signals and signs (15 percent) and unsafe speed (14 percent). The other top PCFs for serious injury bicyclist-involved collisions were traffic signals and signs (16 percent) and wrong side of road (14 percent).

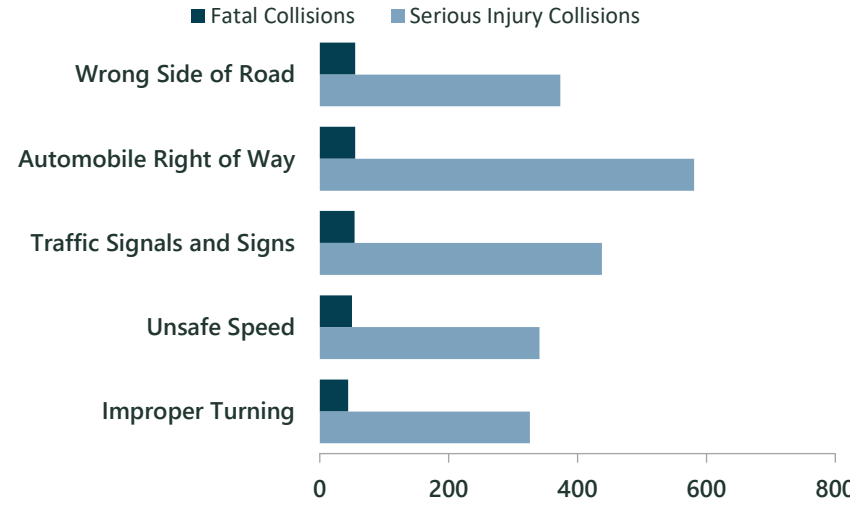
LA Figure 25: Los Angeles County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



LA Figure 26: Los Angeles County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



LA Figure 27: Los Angeles County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



Los Angeles County Conclusion

Overall, between 2014 and 2024, Los Angeles County experienced an average of 735 traffic fatalities and 3,584 serious injuries annually, with most incidents involving vehicle occupants or motorcyclists. Over the past decade, fatalities peaked twice, in 2016 and in 2022, while serious injuries steadily increased, reaching a peak in 2021, before gradually declining in more recent years. Collisions were concentrated in urban areas and along key highways. Pedestrian and bicyclist-involved collisions were also concentrated in urban centers and contributed significantly to the county's fatality and injury rates. Fatal collision victims per 100,000 population over the last decade peaked in 2022, while serious injury collision victims peaked in 2021. Compared to the region, Los Angeles County reported slightly lower fatalities per 100,000 people, with six to eight fatalities per 100,000 people, while the region reported eight to eleven.

When examining temporal patterns, fatal and serious injury collisions were more common in the evening and generally increasing throughout the week, peaking on Sundays. Fatal collisions remained relatively consistent throughout the year, while serious injury collisions peaked in October. Demographic data highlighted that young adults, especially men aged between 25-34 were overrepresented in fatal collisions across nearly all age groups, except for infants and toddlers aged zero to four. One notable difference between Los Angeles County and the region is in the number of fatalities among women who were walking, which is approximately one and a half times higher than the number of fatalities for women who were driving in Los Angeles County, while in the SCAG region overall the number of fatalities among women who were walking and driving were about the same. Additional demographic data showed that Black, Hispanic/Latino, and individuals in the "Other Ethnicity" category were disproportionately represented in collisions resulting fatalities and serious injuries. Fatal and serious injury collisions occurred within or near Priority Equity Communities, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Pedestrian violation, unsafe speed, and improper turning were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. Los Angeles County had many similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black and Hispanic/Latino individuals, and those in the "Other Ethnicity" category. Fatal and serious injury collisions were also concentrated within Priority Equity Communities.

Orange County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

8,200
annual/per capita

Injuiries from Collisions

17,600
people sustain injuries every year from collisions

788
people sustain serious injuries every year from collisions

39%
of all traffic collision victims are people 18-34

18,325
collisions occur per year on the streets—*that's roughly*

50
collisions per day

Where Collisions Occur

99%
in urban areas

66%
on local roads

23%
on highways

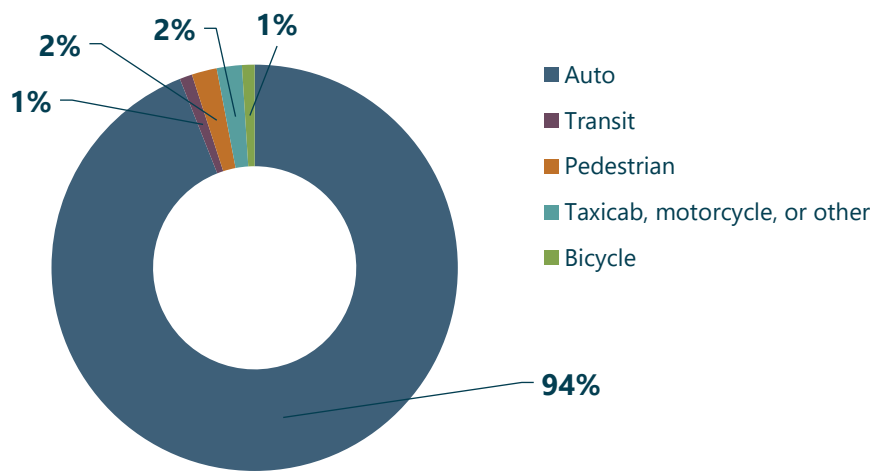
Fatalities from Collisions

191
people die every year from collisions

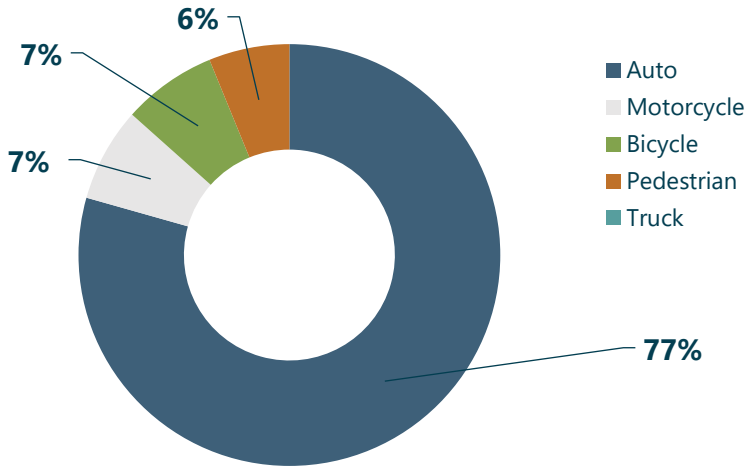
41%
of all deaths involve people walking or bicycling

22%
of all pedestrian fatal victims are 65 and older

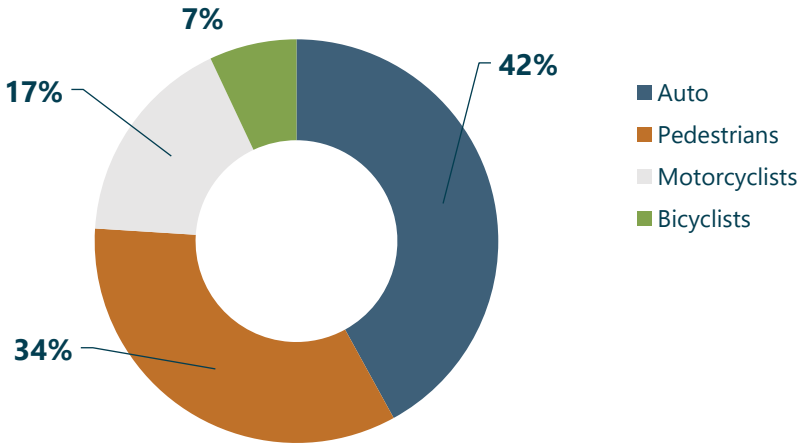
Orange County, Daily Commute Trips (By Mode 2014-2024)



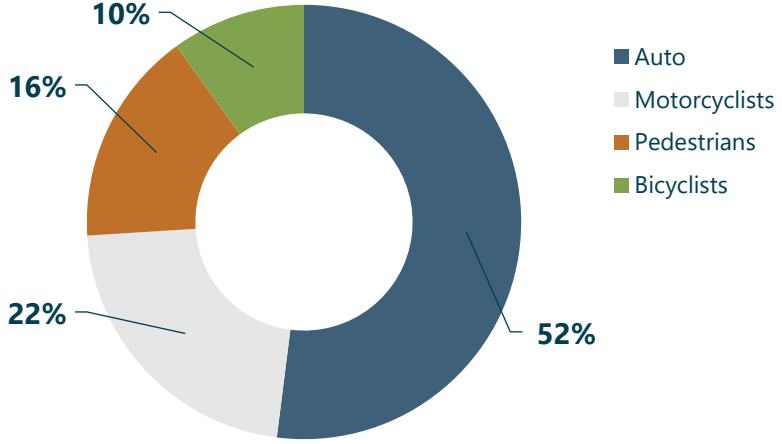
Orange County, Total Collisions (By Mode at Fault 2014-2024)



Orange County, Fatal Collisions Victims (By Mode 2014-2014)



Orange County, Serious Injury Collisions Victims (By Mode 2014-2024)



Orange County

Orange County borders the counties of Los Angeles (northwest), Riverside (east), San Bernardino (northeast), and San Diego (south). To the west, Orange County borders 42 miles of Pacific Ocean coastline. Orange County consists of 790 square miles and more than three million residents. Between 2014 and 2024, residents of Orange County drove an average of 8,200 miles per capita each year (Caltrans and California Department of Finance, 2024).

Overall Safety Trends

Between 2014 and 2024, an average of 191 people were killed, 788 people were seriously injured, and more than 17,600 people sustained other injuries each year in traffic collisions in Orange County. Over the past decade, the total number of fatal victims increased from a low in 2019 (171 victims) to a high in 2022 (247 victims), as shown in **OR Figure 1**. The number of serious injury victims increased from 2014 to 2024, reaching a high in 2022 (881 victims) and low in 2020 (629 victims), likely in part due to the COVID-19 pandemic (**OR Figure 2**). **OR Maps 1** and **2** show the locations of reported collisions that resulted in a fatality or serious injury in Orange County in 2024. **OR Map 1** illustrates the density of collisions resulting in fatalities was concentrated in several neighborhoods around west and central Orange County, including pockets within the cities of Anaheim, Orange, Stanton, Garden Grove, Santa Ana, Buena Park, La Palma, Tustin, Irvine, Mission Viejo, Newport Beach, Costa Mesa, and Huntington Beach. Areas with a high density (or concentration) of collisions are referred to as collision hot spots. **OR Map 2** illustrates the density of serious injury collisions in Orange County, with serious injury collision hot spots extending through much of the city of Costa Mesa, plus areas around the Balboa Peninsula in Newport Beach, several neighborhoods in the northern portion of Santa Ana, and the Platinum Triangle area of Anaheim.

From 2014 to 2024, about 59 percent of people killed in traffic collisions in Orange County were in vehicles or on motorcycles while the other 41 percent of fatal victims were walking or bicycling. Of the roughly 190 fatalities that occurred on average each year in Orange County, an average of 78 victims were walking or biking. **OR Figure 3** reflects the number of people killed or seriously injured while walking in Orange County between 2014 and 2024. The number of pedestrian fatal victims increased over the past decade, from a low of 49 reported in 2014 to a peak of 85 in 2021. Pedestrian serious injury victims, on the other hand, remained relatively stable between 2014 (107 victims) and 2024 (131 victims), though there was a significant dip in 2020 (86 victims), likely due to the COVID-19 pandemic, then dramatically increased to the ten-year peak of 151 victims in 2023. **OR Map 3** illustrates reported pedestrian-involved fatal or serious injury collisions that occurred in Orange County in 2024. Similar to all reported collisions, more pedestrian collisions occurred in north Orange County. There were several areas where multiple serious injury pedestrian collisions occurred in close proximity, including downtown Santa Ana, the Balboa Peninsula, and areas adjacent to Beach Boulevard in the cities of Garden Grove, Westminster, and Huntington Beach.

OR Figure 4 reflects the reported number of people killed or seriously injured while biking in Orange County between 2014 to 2024. Similar to total fatal victims, bicyclist fatal victims have trended downward, though there were notable jumps reported in 2020 (20 victims) and in 2022 (21 victims), before reaching a low of four victims in 2024. Bicyclist serious injury victims had been declining in the county from 2015 (80 victims) until returning to similar levels in 2019 (78 victims), then dipping to their lowest number in 2020 (54 victims), before increasing to a peak of 108 victims in 2024. **OR Map 4** illustrates reported bicyclist-involved collisions that resulted in a fatality or serious injury in Orange County in 2024. Unlike pedestrian-involved collisions which were more focused in the northern part of the county, more bicyclist-involved collisions were reported in south Orange County, with a concentration of collisions occurring closer to the coast near downtown Costa Mesa, Huntington Beach, and Newport Beach.

To provide a point of comparison across the region, **OR Figure 5** shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Similar to the SCAG region overall, Orange County reached a peak for both fatalities and serious injuries per 100,000 people in 2022, followed by a slight decrease over subsequent years. Overall, the county's collision rates were consistently lower than the regional rates with Orange County reporting three to eight fatalities per 100,000 people compared to the region's eight to 11 fatalities per 100,000 people. **OR Figure 6** demonstrate that, when controlling for vehicle miles traveled (VMT), the trends in fatal and serious injury rates were generally consistent with the non-normalized trends, where the fatality rate peaked in 2017

and 2022, and the serious injury rate decreased through 2020 followed by an increase in subsequent years. When normalized by VMT, the county's collisions rates were also below regional rates, with Orange County reporting 0.6 to one fatality per 100 million VMT compared to the region's 0.9 to 1.3 fatalities per 100 million VMT. The consistency between the patterns of the absolute numbers and rates of fatalities and serious injuries suggest that factors other than population growth and VMT may have contributed to the collision trends.

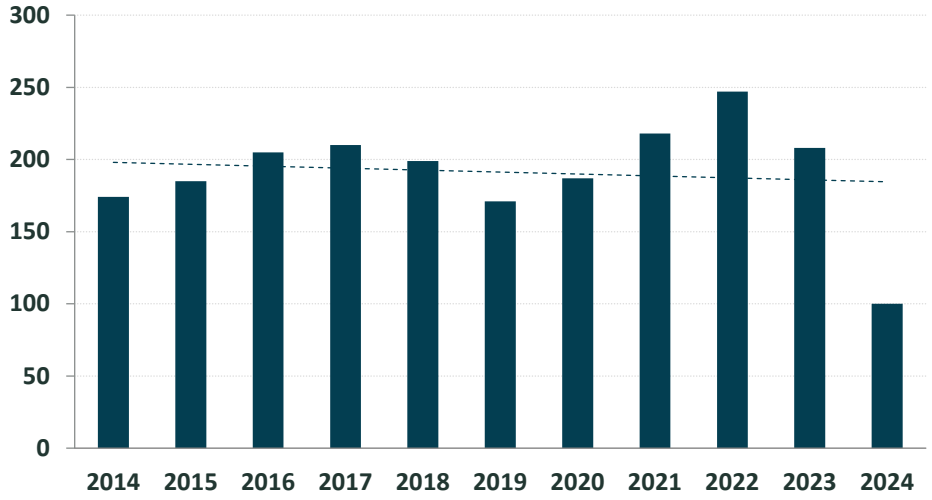
Where Collisions are Occurring

In Orange County, nearly all collisions reported between 2014 and 2024 occurred in urbanized areas, which aligned with nearly the 100 percent of the county population that lives in urbanized areas (U.S. Census Bureau and Caltrans). All reported pedestrian- and bicyclist-involved collisions also occurred in urbanized areas of the county. **OR Maps 1-4** display the total fatal and serious injury collisions by mode that occurred in 2024, highlighting their concentrations in the urban areas of Orange County.

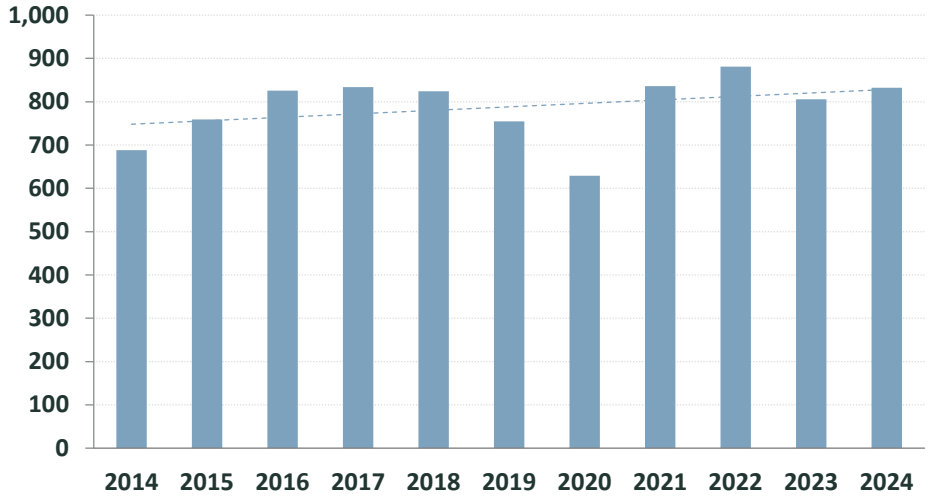
OR Figure 7 shows the extensive roadway network in Orange County, consisting of about 190 highway centerline miles (three percent), 1,416 arterial centerline miles (22 percent), 381 collector centerline miles (six percent), and 4,454 local road centerline miles (69 percent) (Caltrans, 2024). In **OR Figure 8,** Orange County includes approximately 268 miles of Class I bikeways (22.5 percent of total county bike facilities), 795 miles of Class II bikeways (67 percent), 115 miles of Class III bikeways (ten percent), and six miles of Class IV bikeways (0.5 percent) (SCAG, 2024).

Between 2014 and 2024, about 66 percent of fatalities across all modes in Orange County occurred on local roads, while 12 percent occurred on arterials, and 23 percent on highways as shown in **OR Figure 9**. **OR Figure 10** shows 66 percent of serious injuries occurred on local roads, ten percent on arterials, and 24 percent on highways. During the same period, about 72 percent of pedestrian serious injuries occurred on local roads, 15 percent on arterials, and 13 percent on highways. For bicyclist fatalities, about 85 percent occurred on local roads, 11 percent on arterials, and three percent on highways. For pedestrian fatalities, 82 percent occurred on local roads, ten percent on arterials, and seven percent on highways. For bicyclist serious injuries, 86 percent occurred on local roads, 12 percent on arterials, and two percent on highways. Overall, fatal and serious injury collisions disproportionately occurred on highways, while pedestrian- and bicyclist-involved collisions disproportionately occurred on local roads, which highlights the importance for local jurisdictions to continue prioritizing safety improvements and to engage in regional coordination efforts to advance safety.

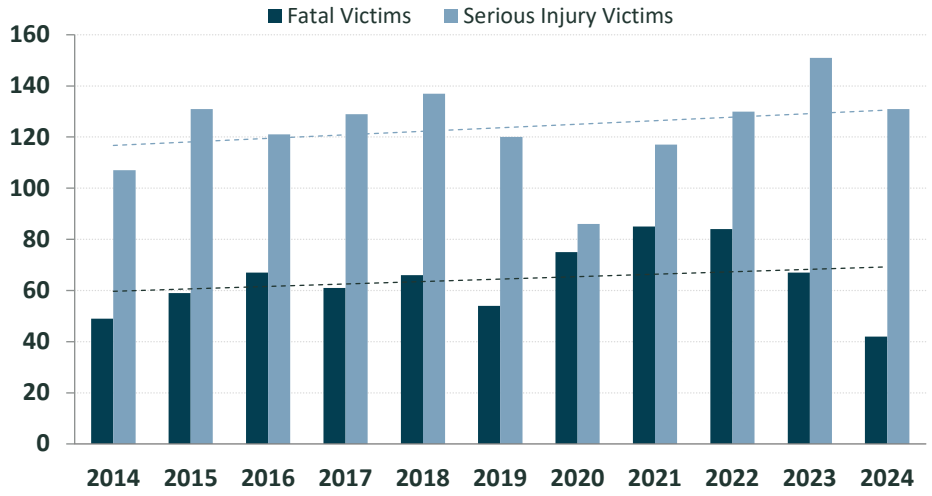
OR Figure 1: Orange County, Total Number of Fatal Victims (2014-2024)



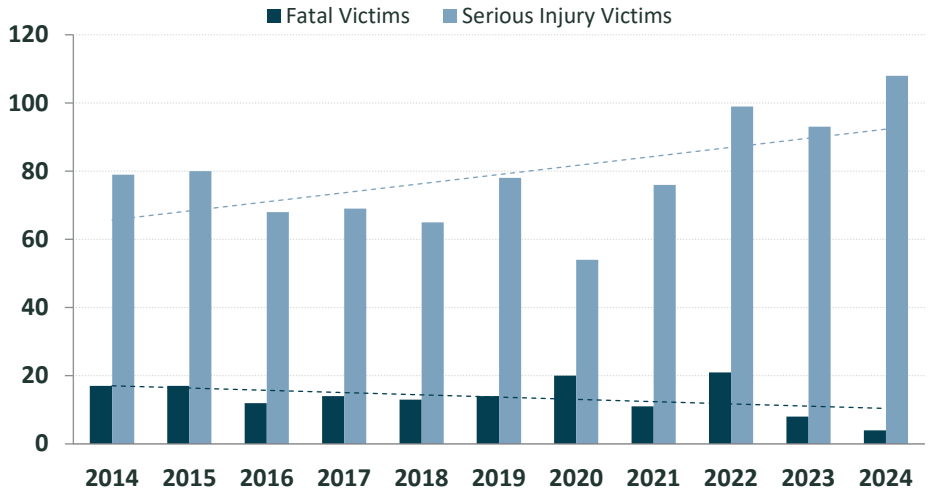
OR Figure 2: Orange County, Total Number of Serious Injury Victims (2014-2024)



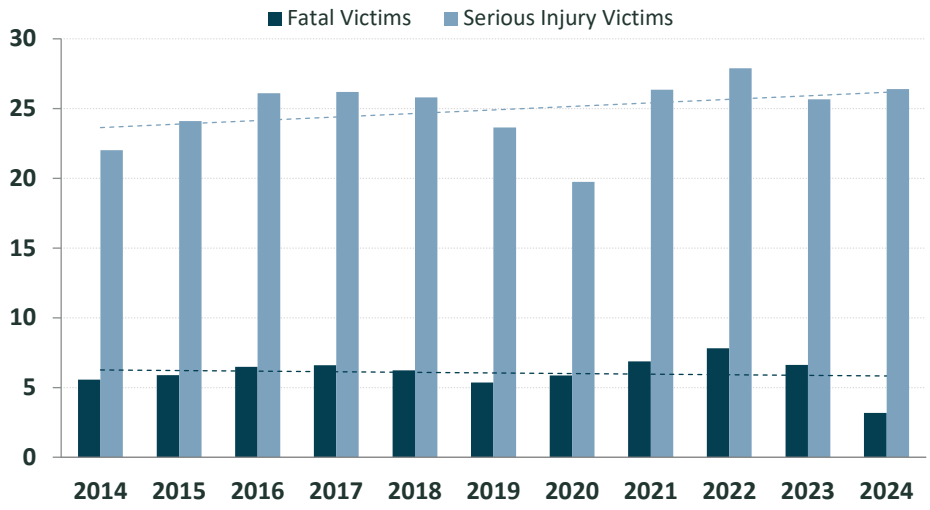
OR Figure 3: Orange County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



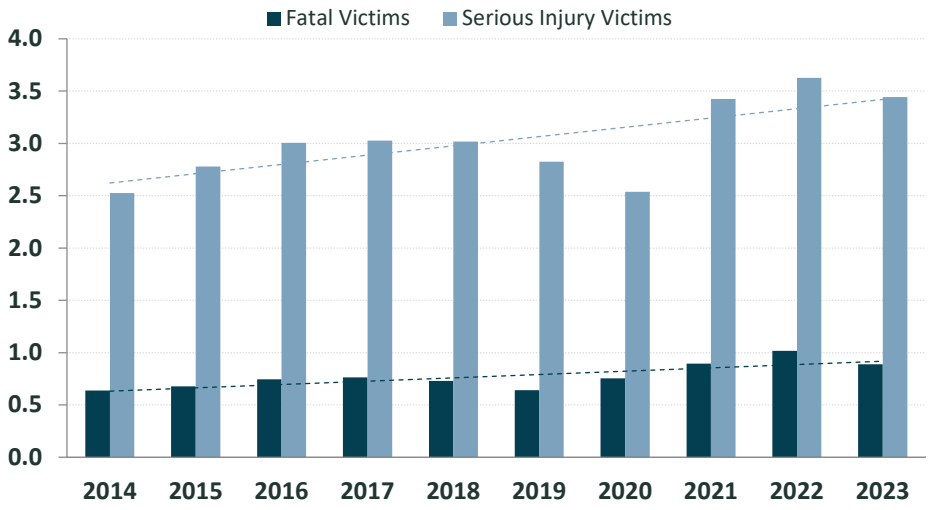
OR Figure 4: Orange County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



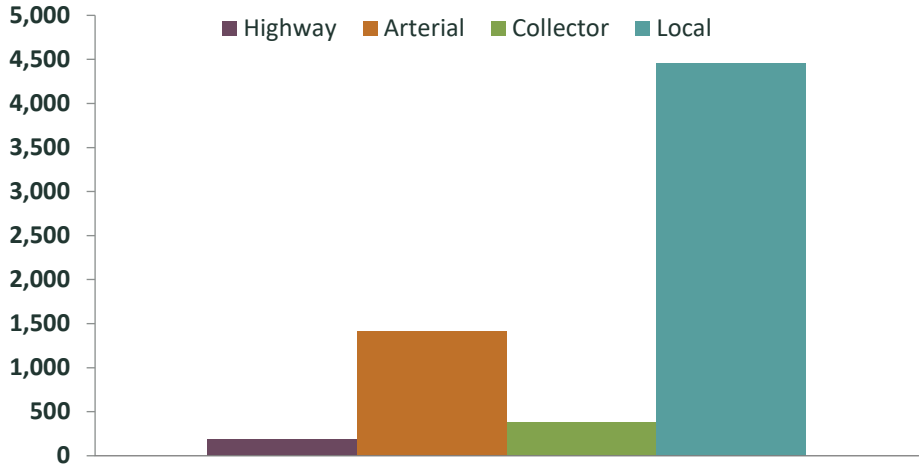
OR Figure 5: Orange County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)



OR Figure 6: Orange County, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)

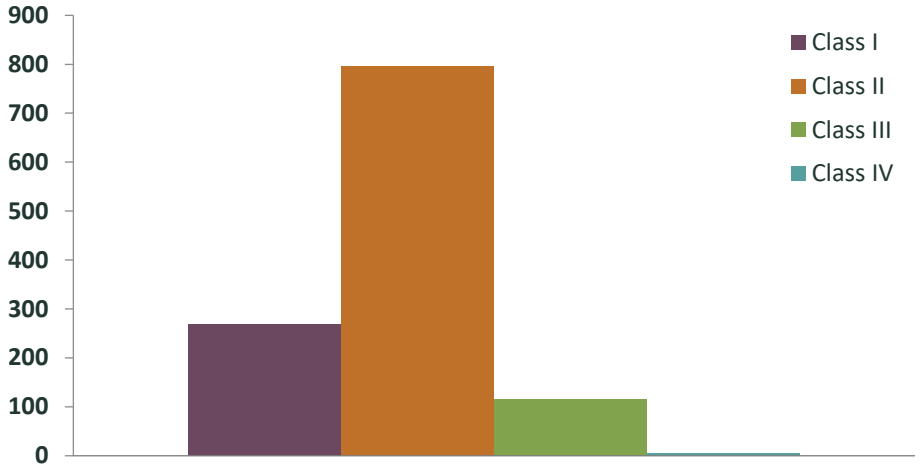


OR Figure 7: Orange County, Centerline Miles by Roadway Classification (2024)



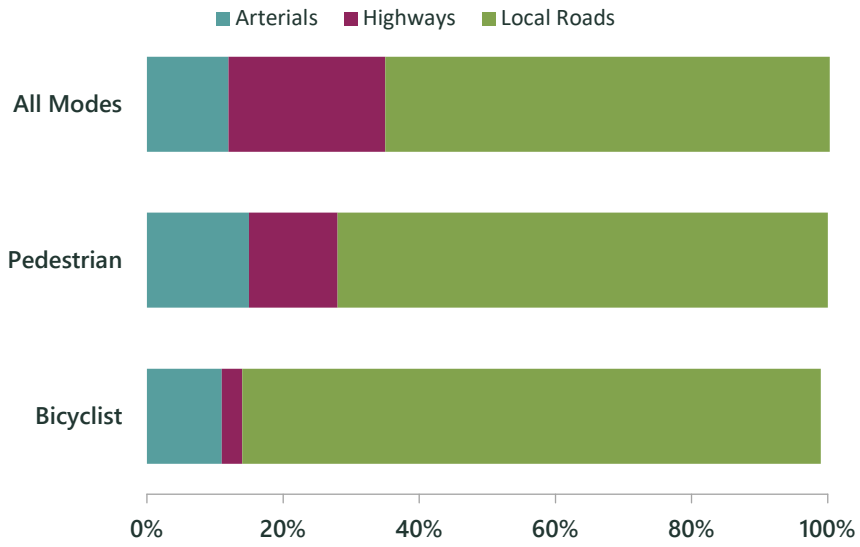
Source: Caltrans, 2024

OR Figure 8: Orange County, Bikeway Miles by Classification (2024)

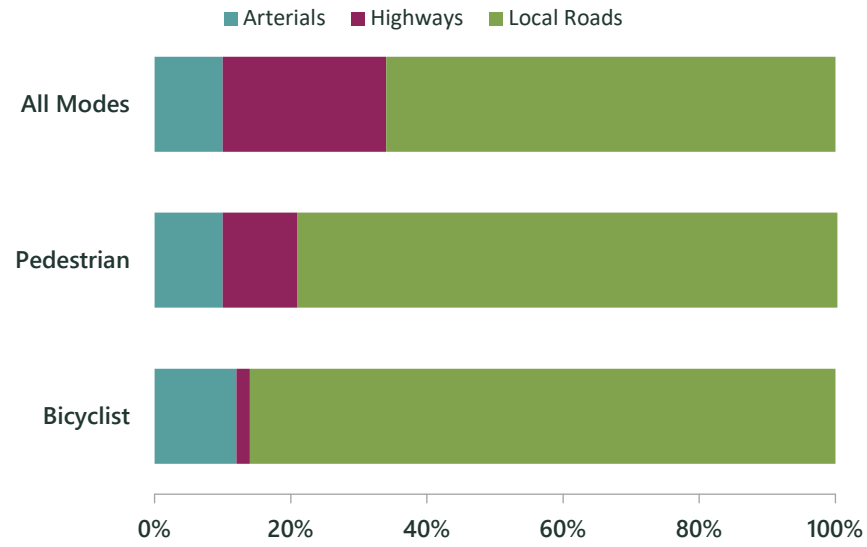


Source: SCAG, 2024

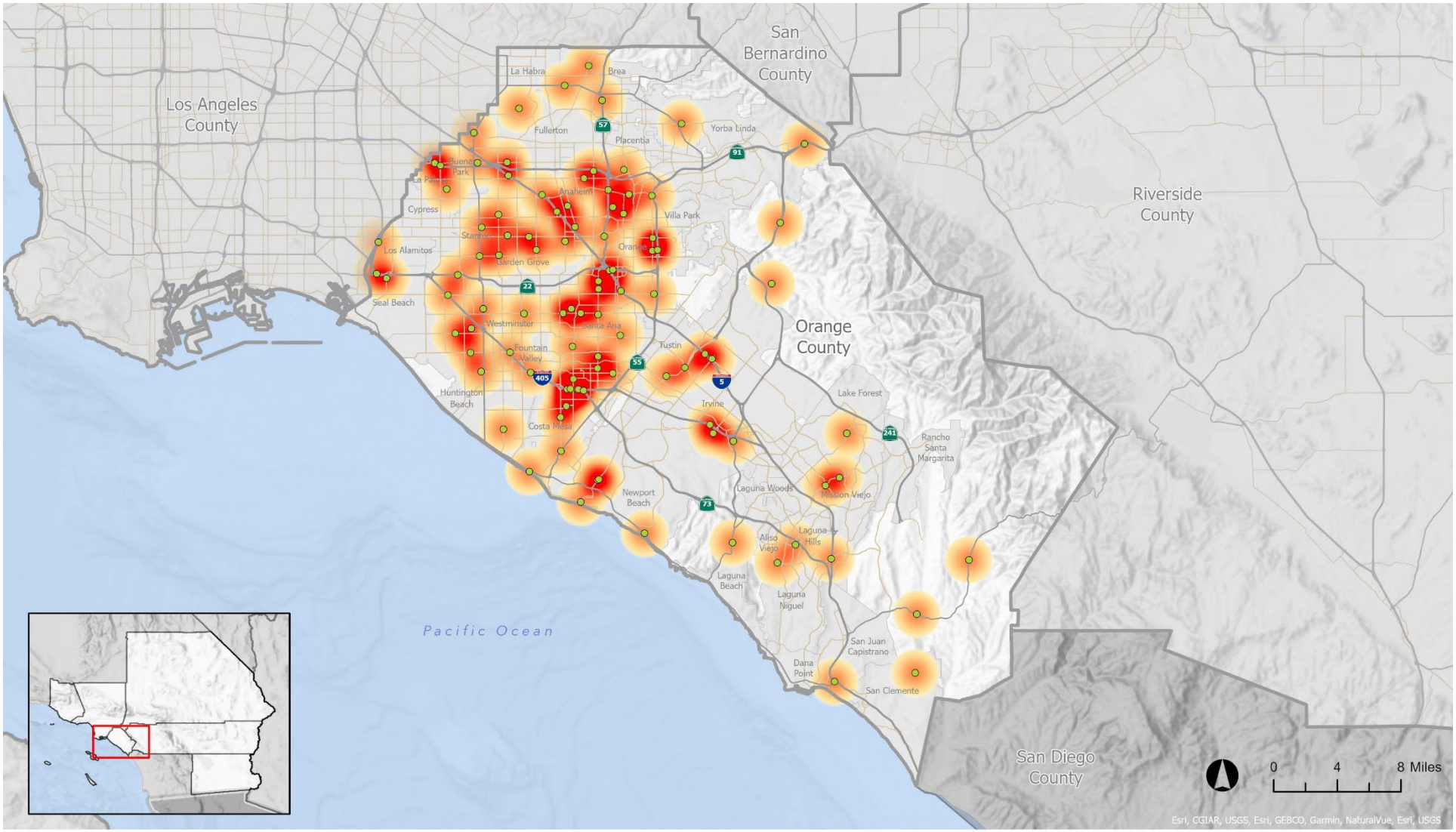
OR Figure 9: Orange County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



OR Figure 10 Orange County, Distribution of Serious Injury Victims by Mode and Roadway Classification (2014-2024)



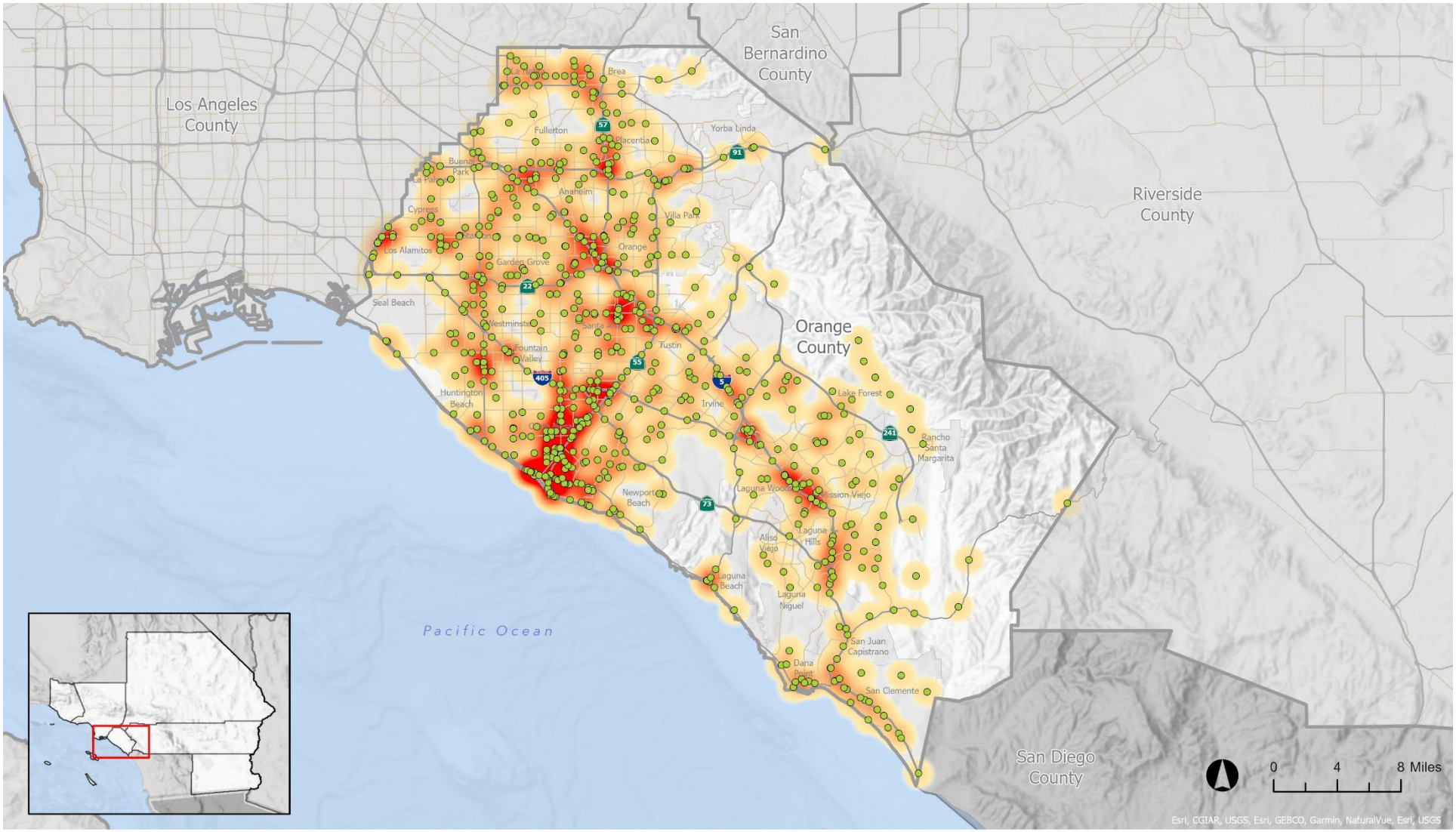
OR Map 1: Orange County Fatal Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Fatal Collision
Fatal Collision Density
Sparse
Dense

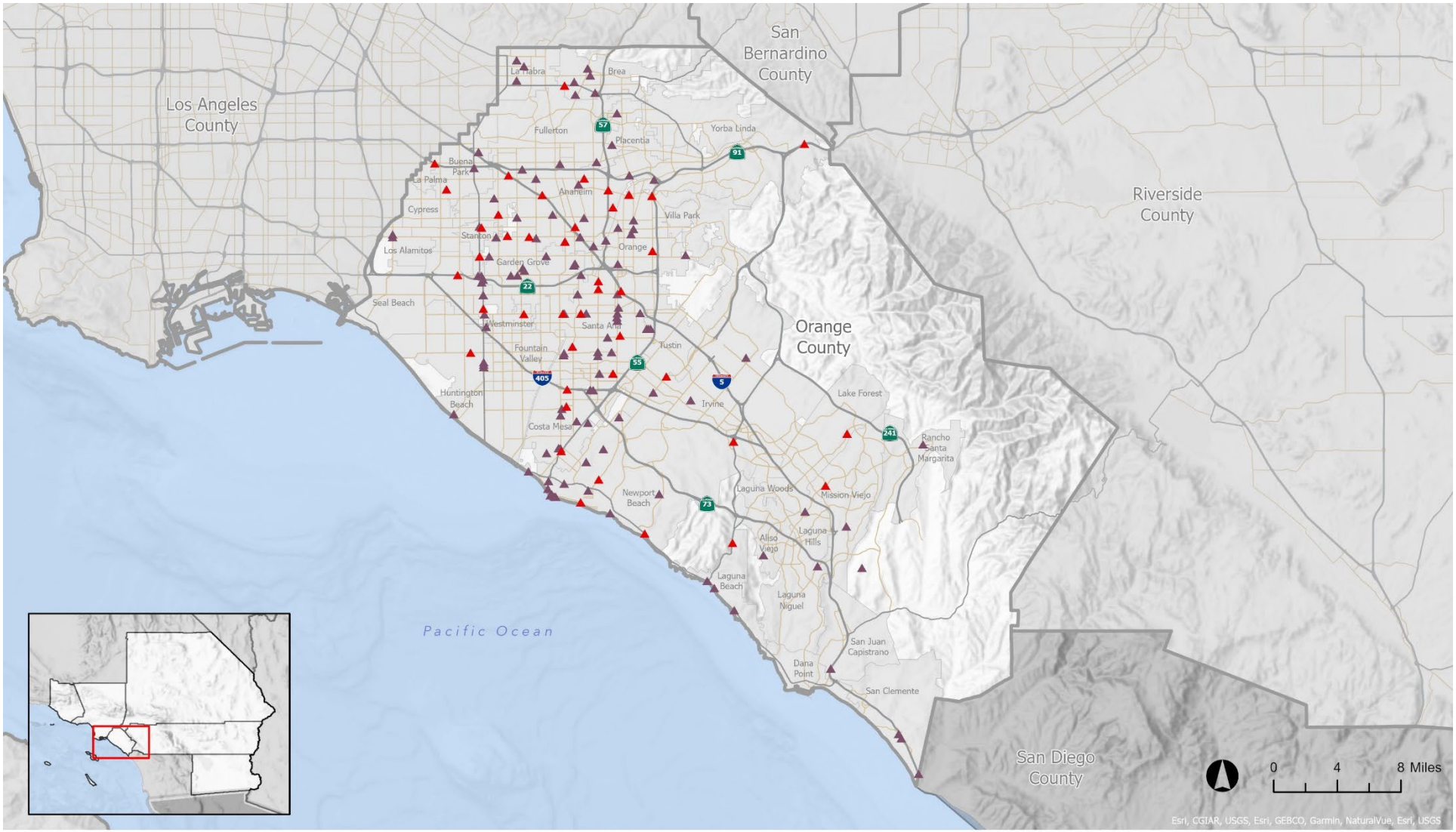
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

OR Map 2: Orange County Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

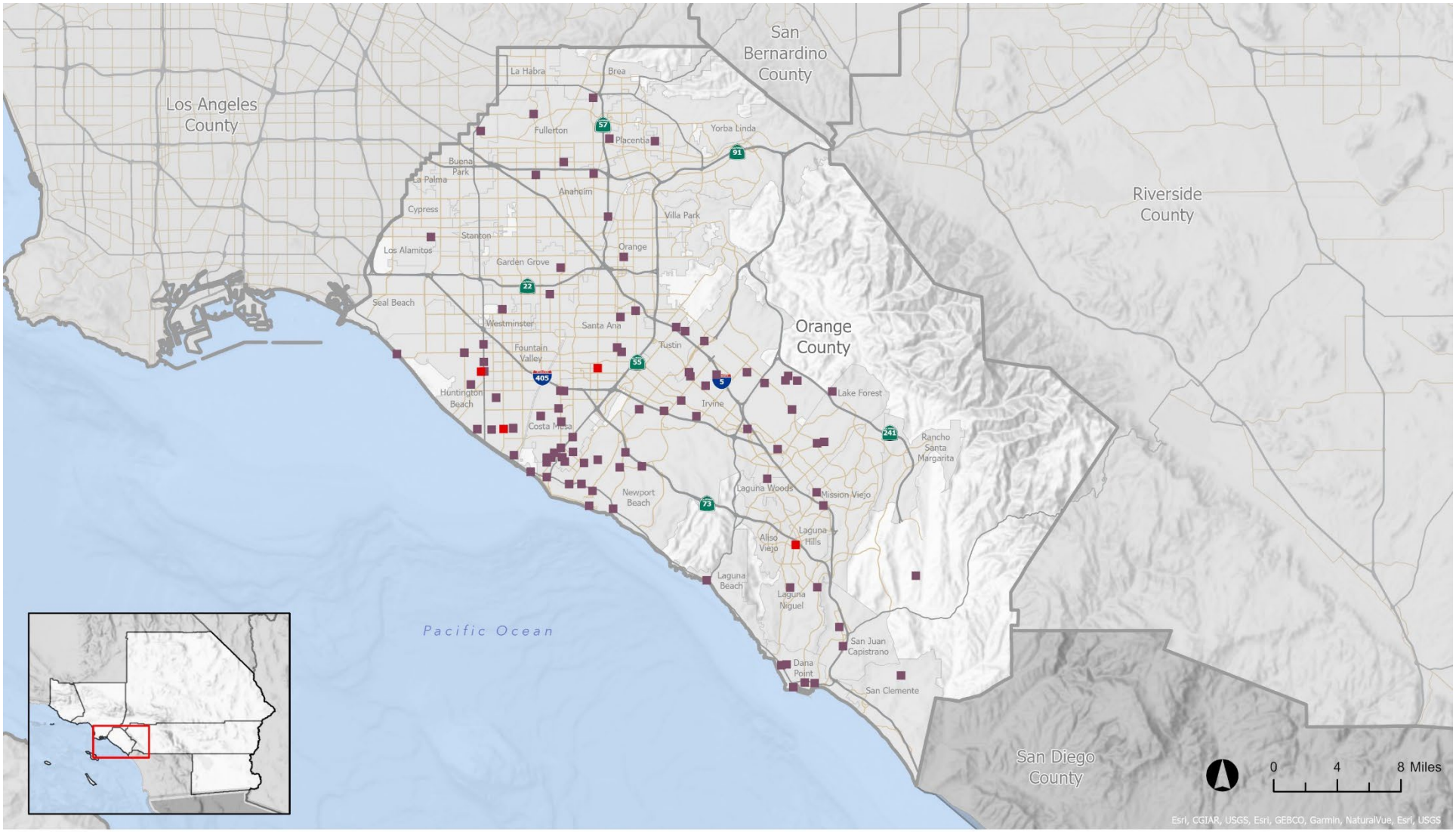
OR Map 3: Orange County Pedestrian-Involved Fatal and Serious Injury Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Pedestrian-Involved Fatal Collision
Pedestrian-Involved Serious Injury Collision

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

OR Map 4: Orange County Bicyclist-Involved Fatal and Serious Injury Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Bicyclist-Involved Fatal Collision
Bicyclist-Involved Serious Injury Collision

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

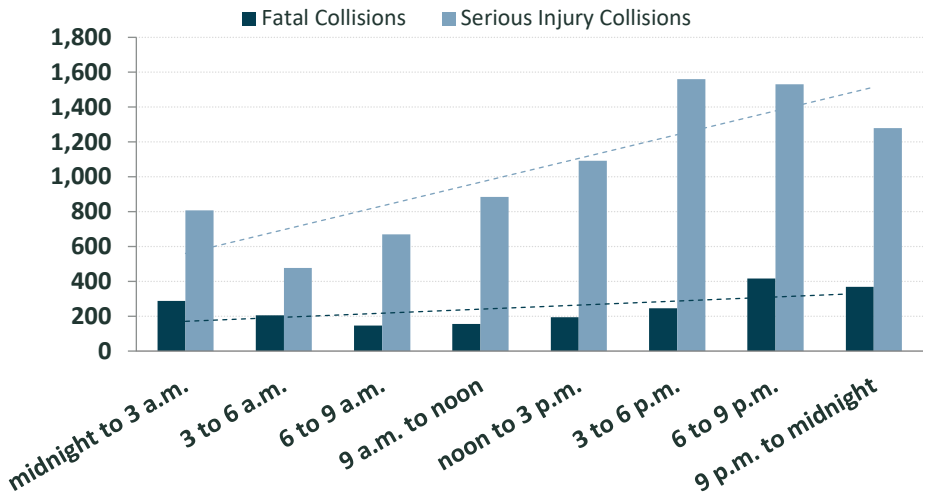
OR Figures 11 through 19 examine collision trends in Orange County over several time periods, including time of day, day of week, and month between 2014-2024.

OR Figure 11 shows that most collisions that resulted in a fatal or serious injury occurred in the afternoon and late at night. The largest number of fatal collisions (416 collisions) and serious injury collisions (1,560 collisions) occurred between 6 p.m. and 9 p.m. **OR Figure 12** shows trends by time of day for Orange County pedestrian-involved fatal and serious injury collisions. Fatal collisions were concentrated between 6 p.m. and midnight, while serious injury collisions were concentrated between 3 p.m. and midnight. Both fatal and serious injury collisions peaked between 6 p.m. and 9 p.m. with 207 collisions and 364 collisions, respectively. **OR Figure 13** shows trends by time of day for bicyclist-involved fatal and serious injury collisions. Fatal collisions were concentrated between 3 p.m. and midnight, while serious injury collisions generally increased over the course of the day, reaching a peak between 3 p.m. and 6 p.m.

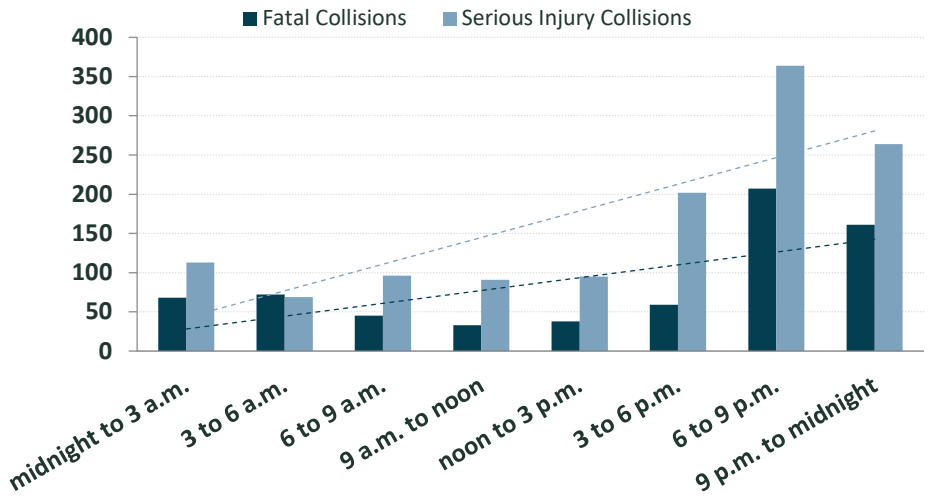
By day of the week, fatal and serious injury collisions across all modes reported between 2014 and 2024 generally increased over the course of the week with a small dip in fatal collisions on Wednesdays, as shown in **OR Figure 14**. Fatal and serious injury collisions peaked on Saturdays (384 fatal collisions and 1,497 serious injury collisions). **OR Figure 15** shows that pedestrian-involved fatal and serious injury collisions increased from Wednesday to Saturday, with fatal collisions peaking on Saturdays (117 collisions) and serious injury collisions peaking on Thursdays (217 collisions). **OR Figure 16** shows that the lowest number of bicyclist-involved fatal collisions were reported on Wednesdays, while fatal and serious injury collisions were highest on Saturdays (34 fatal collisions and 160 serious injury collisions).

When examining Orange County collisions by month between 2014 and 2024, **OR Figure 17** shows that fatal collisions decreased over the first four months of the year (January through April) and then generally increased through the spring and summer (April to August) and into fall (September to November), before peaking in November (216 collisions). Serious injury collisions generally increased between March and August, reaching a peak in August (819 collisions) before beginning a gradual decline over the fall (September to November) and winter months (December to February). **OR Figure 18** shows that pedestrian-involved collisions fluctuated throughout the year, with a spike in fatal collisions in January (83 collisions) and reaching a peak in serious injury collisions in December (147 collisions). **OR Figure 19** shows that bicyclist-involved fatal collisions rose toward the end of the year, particularly between September and November, reaching a peak in November (22 collisions). Bicyclist-involved serious injury collisions generally increased between March and October and were lower in the winter months (November to March) with a peak in September (100 collisions).

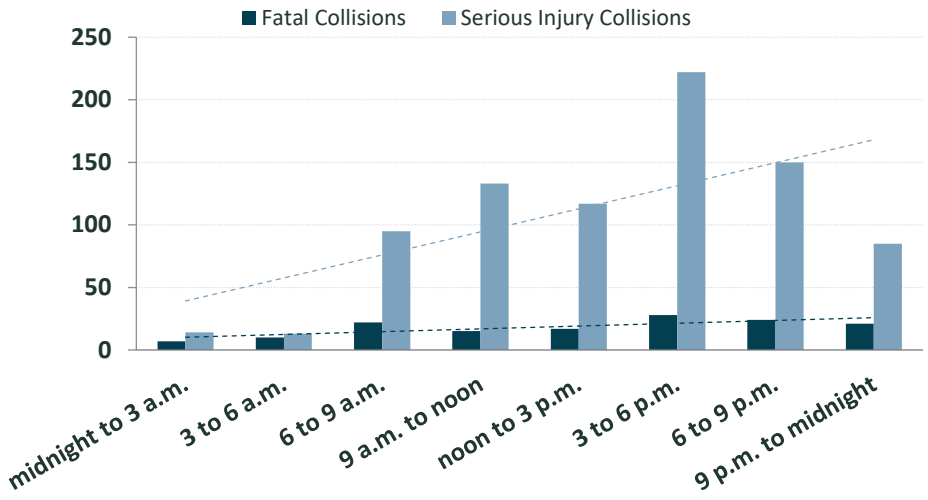
OR Figure 11: Orange County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



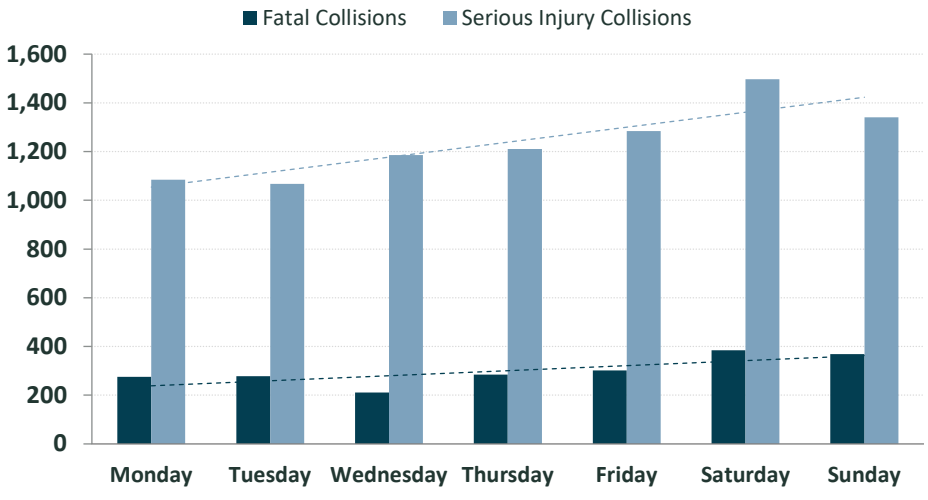
OR Figure 12: Orange County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



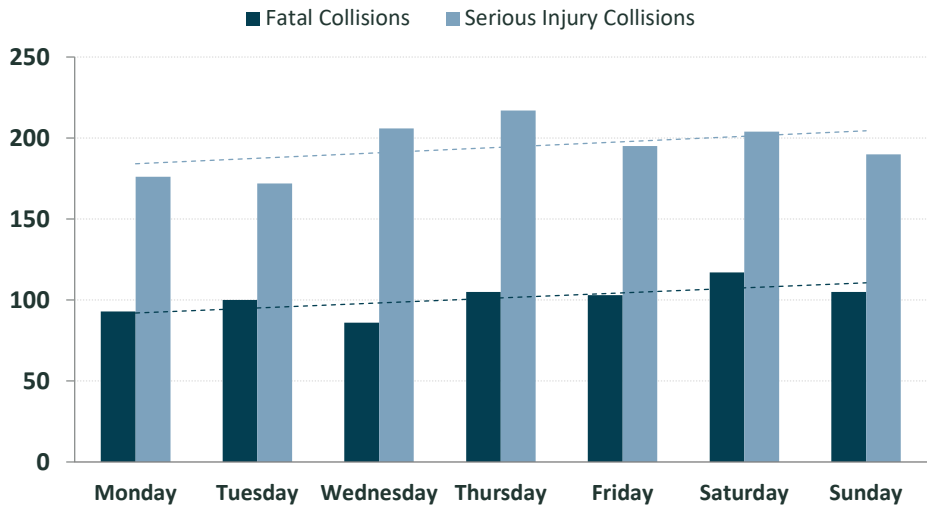
OR Figure 13: Orange County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



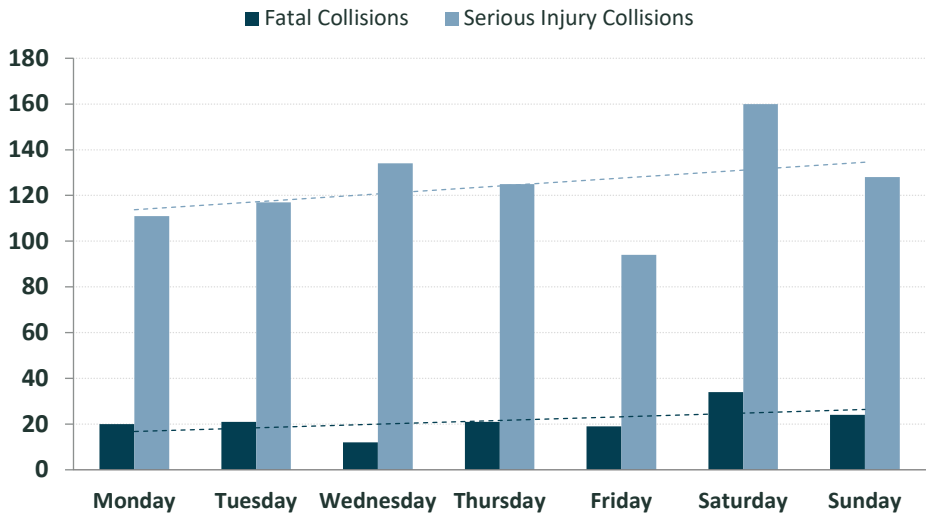
OR Figure 14: Orange County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



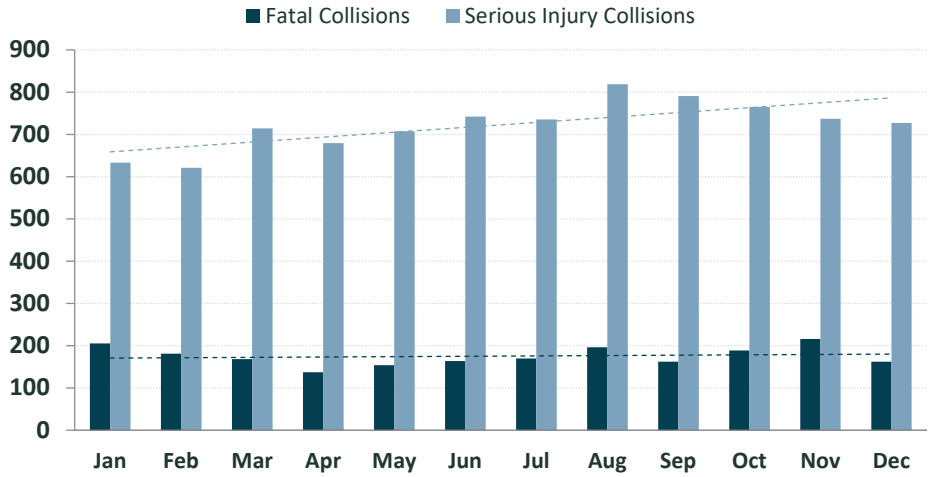
OR Figure 15: Orange County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



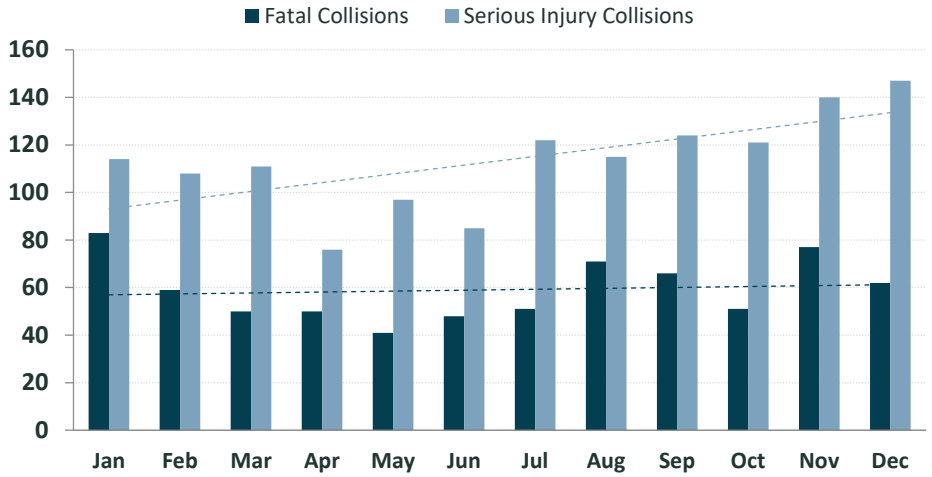
OR Figure 16: Orange County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



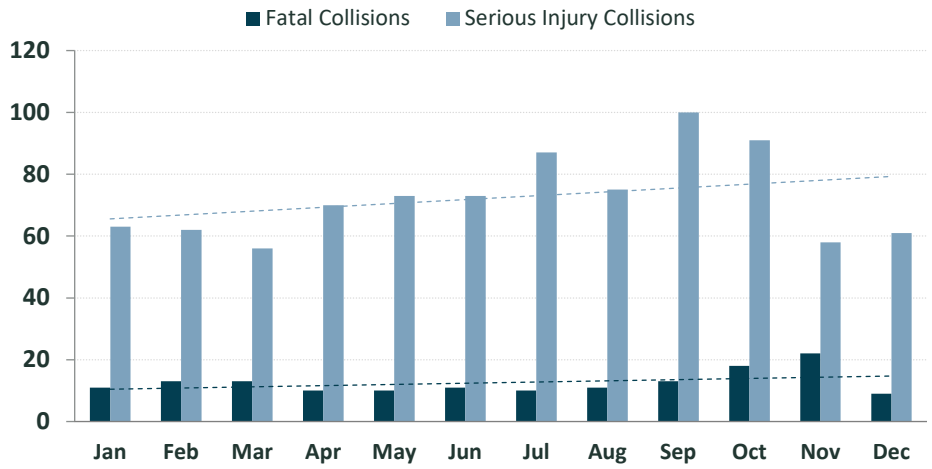
OR Figure 17: Orange County, Fatal and Serious Injury Collisions by Month (2014-2024)



OR Figure 18: Orange County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



OR Figure 19: Orange County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In Orange County, pedestrians and bicyclists accounted for about 41 percent of all fatal collision victims reported from 2014 to 2024, disproportionately higher than the less than three percent of people who walk or bike to work (U.S. Census Bureau). Nearly 13 percent of all trips (work and non-work) in the SCAG region were taken via walking or biking, which is also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

OR Figures 20 through 24 examine Orange County collision trends across several demographic factors between 2014 and 2024. Men experienced three times as many fatalities (1,553 victims) as women (553 victims). A similar trend is observed with serious injuries where 5,990 men and 2,531 women were seriously injured between 2014 and 2024. These trends are consistent with regional and national trends where a higher number of men are involved in fatal and serious injury collisions.

As observed in **OR Figure 20**, when victims of fatal collisions were stratified by age group, the largest number of fatalities occurred among the 25-34 age group (423 victims), representing over 20 percent of reported fatalities in Orange County. Fatalities occurred more often among men than women in every age group, except for children aged 10-14. Similarly, **OR Figure 21** shows that the largest number of serious injuries occurred among the 25-34 age group (1,940 victims), representing almost 26 percent of reported serious injuries. Men were consistently more likely to be seriously injured in collisions compared to women at all ages.

When analyzing trends by victim role (i.e., whether the victim is a driver, passenger, bicyclist, pedestrian or other), additional patterns emerge. Drivers experienced the largest number of fatalities (973 victims), followed by pedestrians (707 victims), passengers (257 victims), and bicyclists (151 victims). **OR Figure 22** shows that significantly more drivers killed in collisions were men (810 victims) than women (162 victims), while the gender-split between passenger victim fatalities was more equal (126 women and 127 men). There were over twice as many fatalities among men who were walking (481 victims) compared to women who were walking (223 victims), and over six times as many fatalities among men who were biking (131 victims) compared to women who were biking (20 victims). Compared to the region overall, Orange County experienced similar patterns relative to fatal and serious injury victim roles, though there was a larger proportion of fatalities among women who were walking. **OR Figure 23** shows a similar pattern for serious injury victims, though more women who were driving experienced serious injuries (1,255 victims) than women who were passengers (672 victims). Men who were driving still experienced the greatest number of serious injuries (3,823 victims), and more men who were walking (890 victims) and biking (693 victims) suffered a serious injury compared to women who were walking (436 victims) and biking (150 victims).

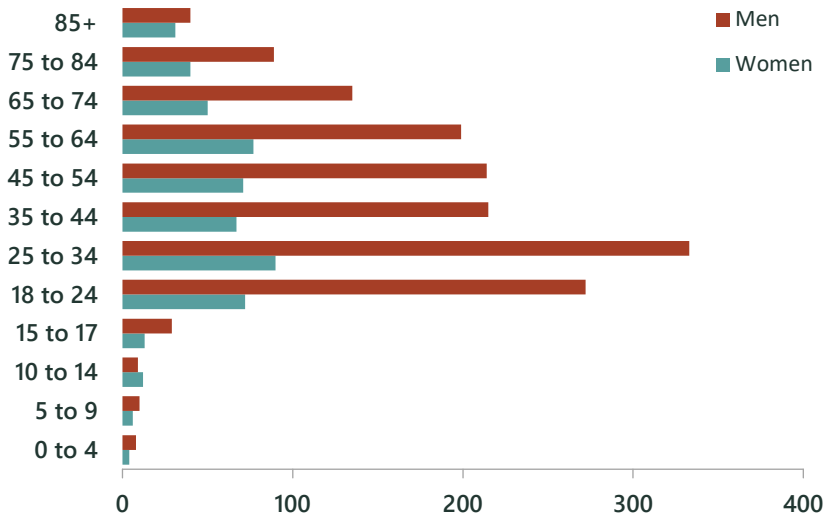
Overall, men who were driving constituted nearly 39 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (215 victims) in Orange County between 2014 and 2024.

OR Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county population in 2024. Black individuals were overrepresented among fatal and serious injury victims compared to their proportion of the county population. While Black individuals represented under two percent of the county population, Black individuals constituted about seven percent of all fatalities and three percent of serious injury victims. Individuals of the "Other Ethnicity" category (aligned with the U.S Census Bureau definition to include American Indian, Alaska Native, Native Hawaiian, Pacific Islander, some other race alone, and multiracial people) represented five percent of the county's population but accounted for 11 percent of fatalities, 19 percent of serious injury victims, and over 28 percent of all collision victims. Non-Hispanic White individuals were also overrepresented in both fatal and serious injury victims, as they represent under 38 percent of the county population but constituted 42 percent of fatalities and almost 39 percent of all serious injury victims.

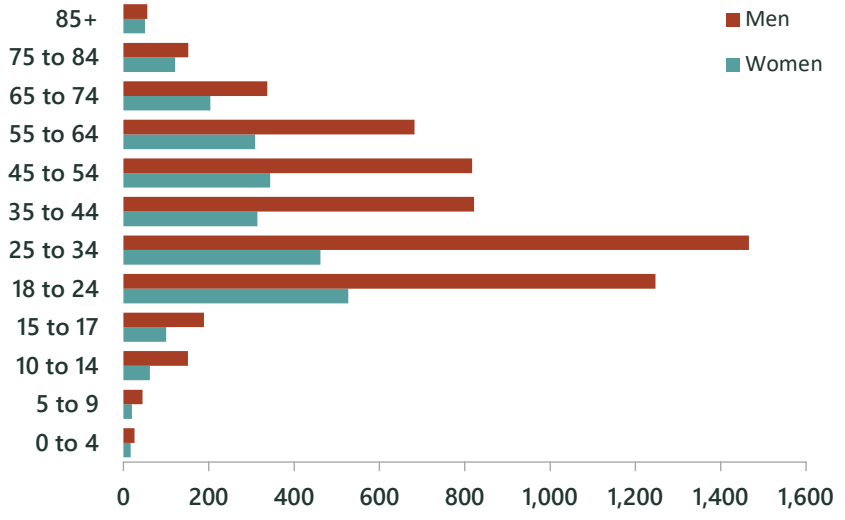
OR Maps 5 and **6** highlight the concentration of fatal and serious injury collisions that occurred in Orange County Priority Equity Communities in 2024. These maps illustrate that the highest concentrations of traffic collisions tend to occur in and around Priority Equity Communities, which were located predominantly in northern Orange County. It

should be noted that collisions are not exclusive to these designated areas, which suggested that safety improvements should remain focused on the vulnerabilities of people rather than generalized geographies.

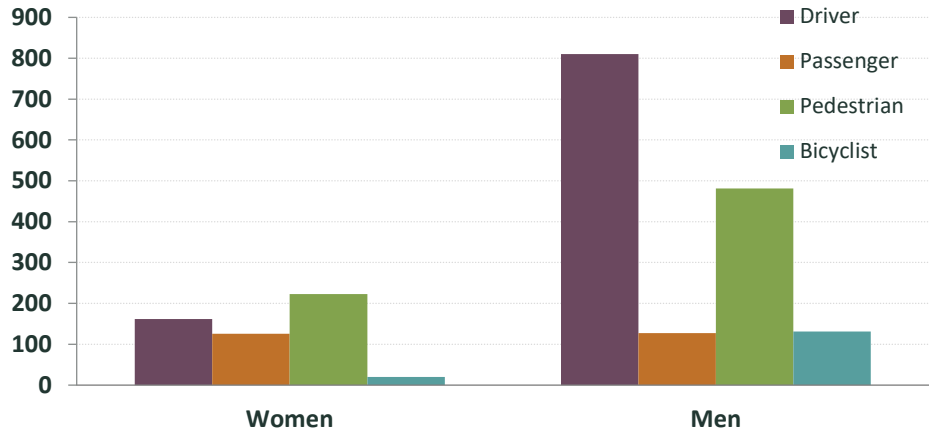
OR Figure 20: Orange County, Fatal Victims by Age and Gender (2014-2024)



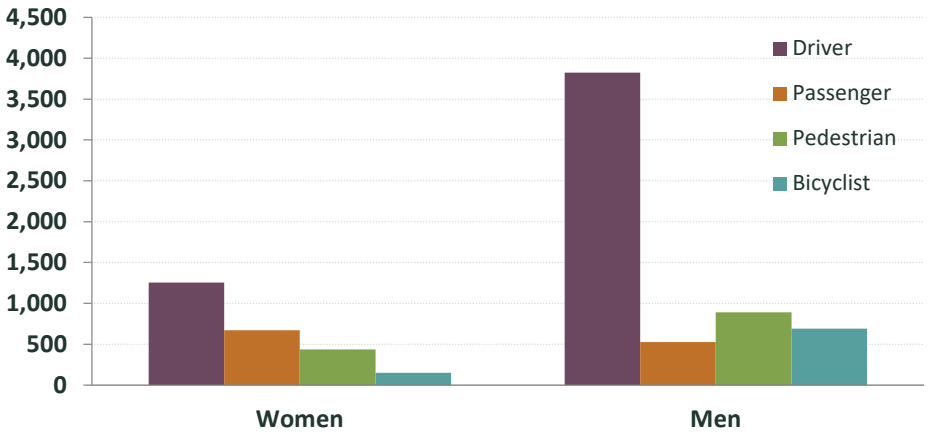
OR Figure 21: Orange County, Serious Injury Victims by Age and Gender (2014-2024)



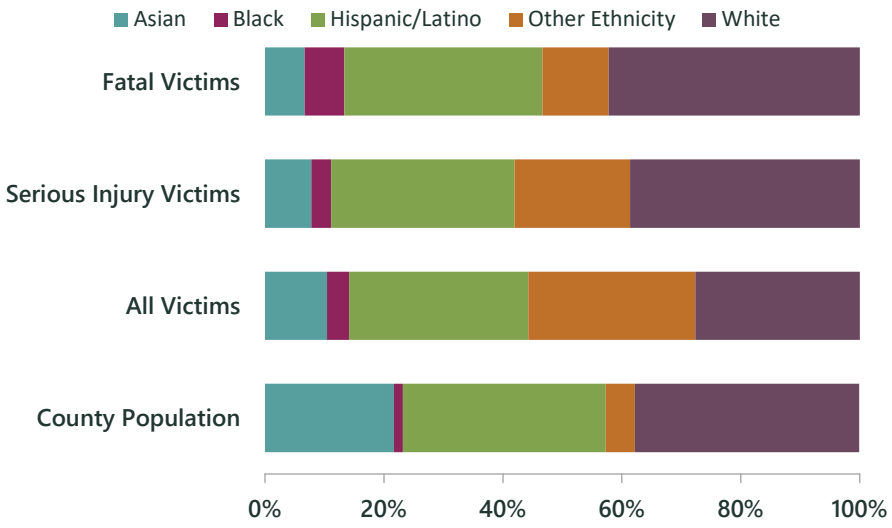
OR Figure 22: Orange County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



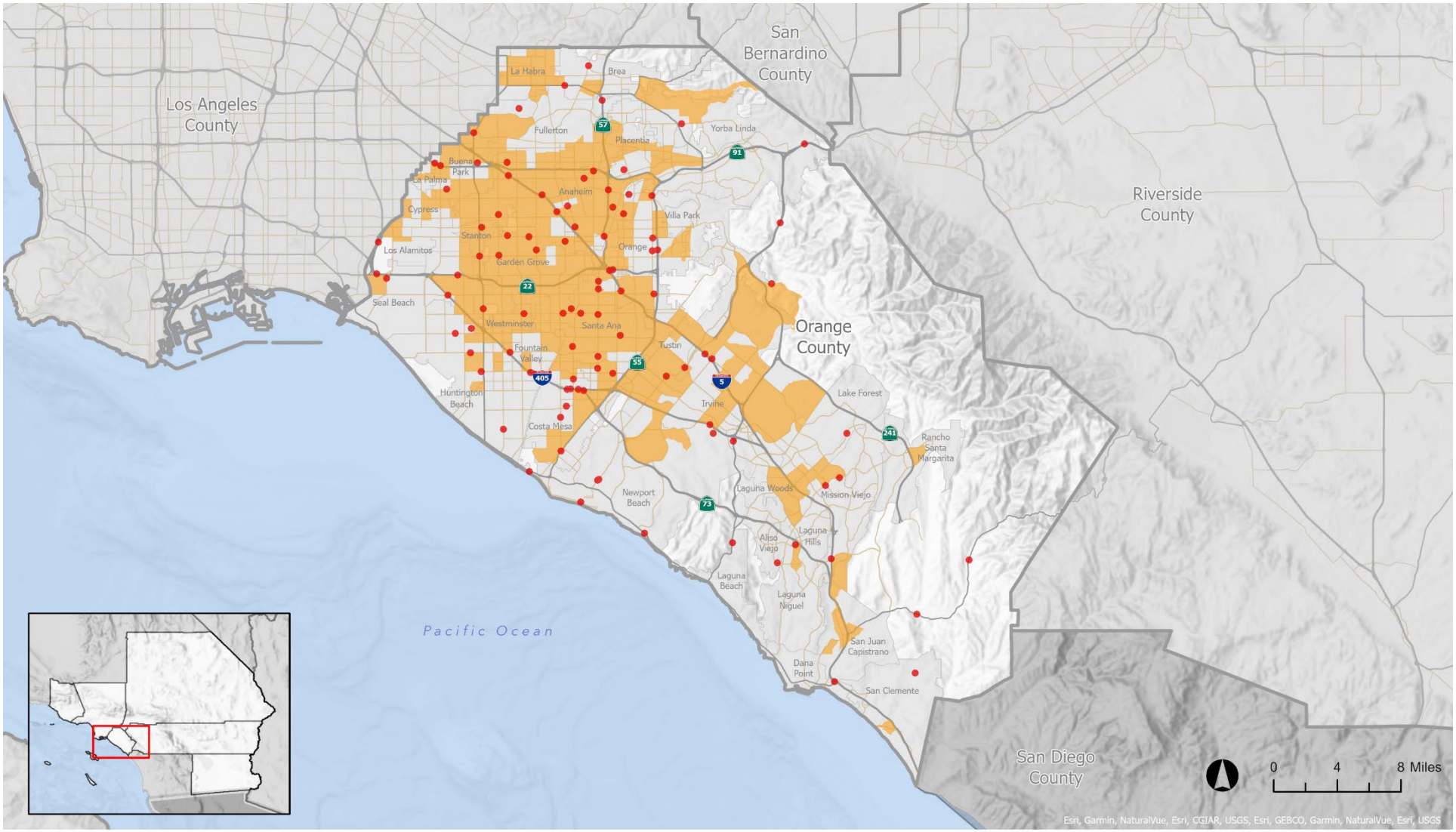
OR Figure 23: Orange County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



OR Figure 24: Orange County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)



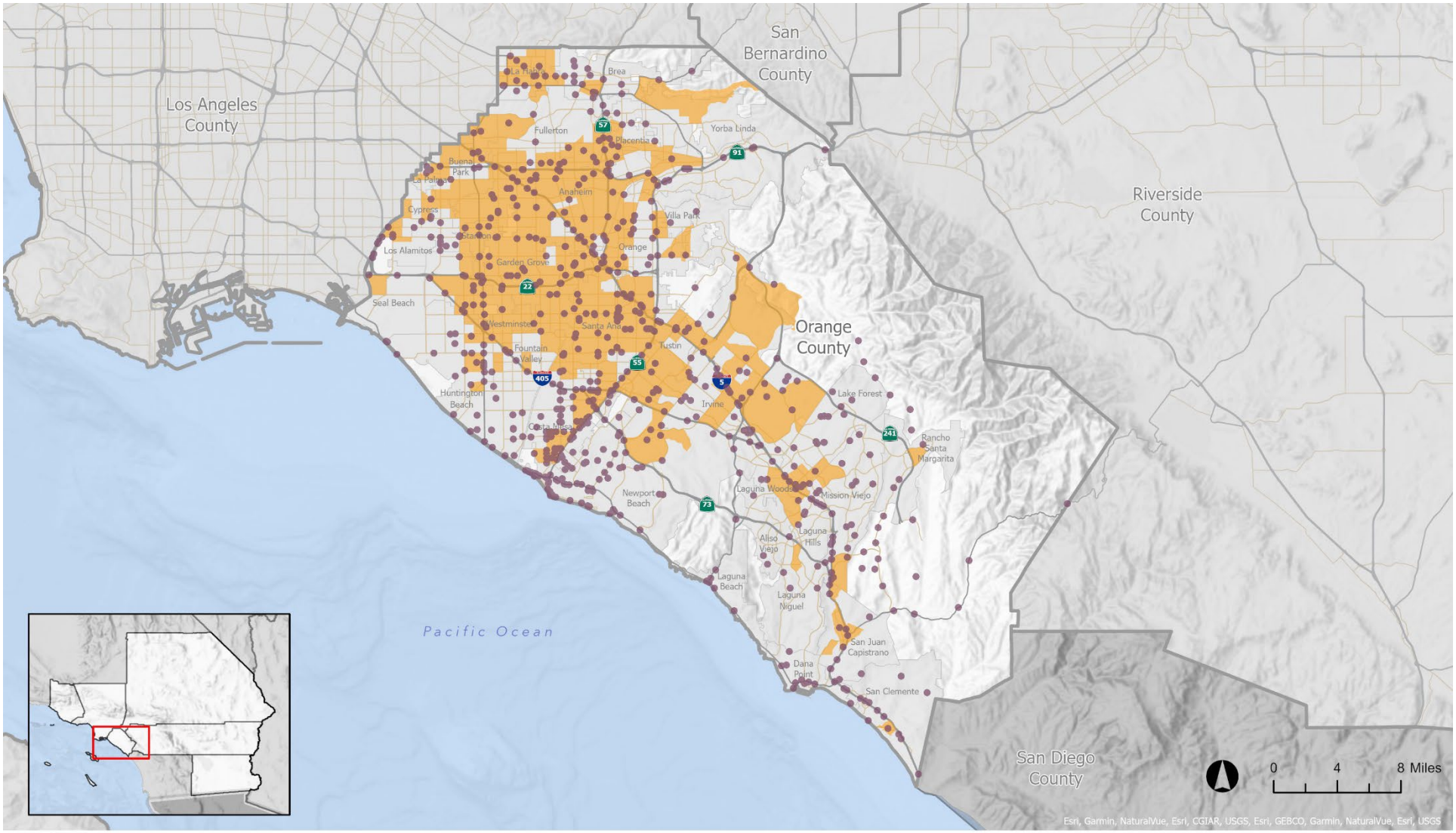
OR Map 5: Orange County Fatal Collisions in Priority Equity Communities (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Fatal Collision
Priority Equity Communities

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

OR Map 6: Orange County Serious Injury Collisions in Priority Equity Communities (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Serious Injury Collision
Priority Equity Communities

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

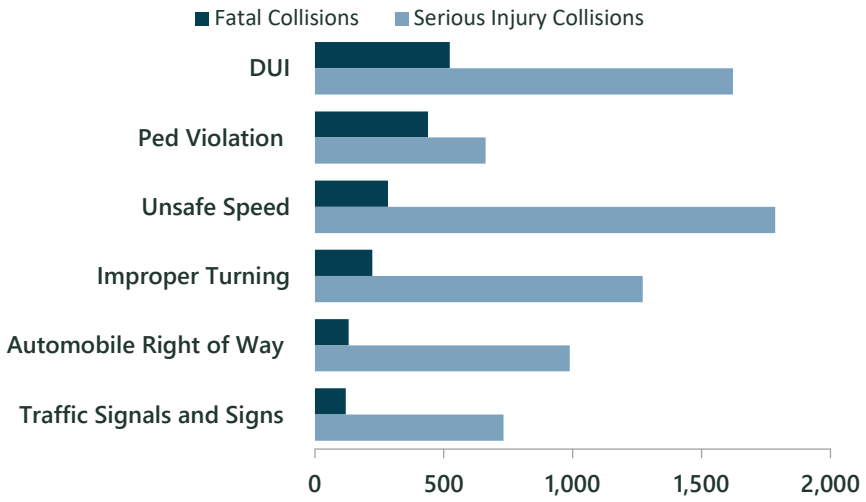
Why Collisions are Occurring

OR Figures 25 through 27 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions reported in Orange County between 2014 and 2024. The PCF is the main cause of the collision as determined by the officer at the collision scene and there may be other factors which the officer notes as "other associated factors" on the collision report. As shown in **OR Figure 25**, the top three PCFs for fatal collisions were driving under the influence (24 percent), pedestrian violations (20 percent), and unsafe speed (13 percent). The top three PCFs for serious injury collisions were unsafe speed (20 percent), driving under the influence (18 percent), and improper turning (14 percent). These PCFs are generally consistent with regional trends, though appearing in a different order. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

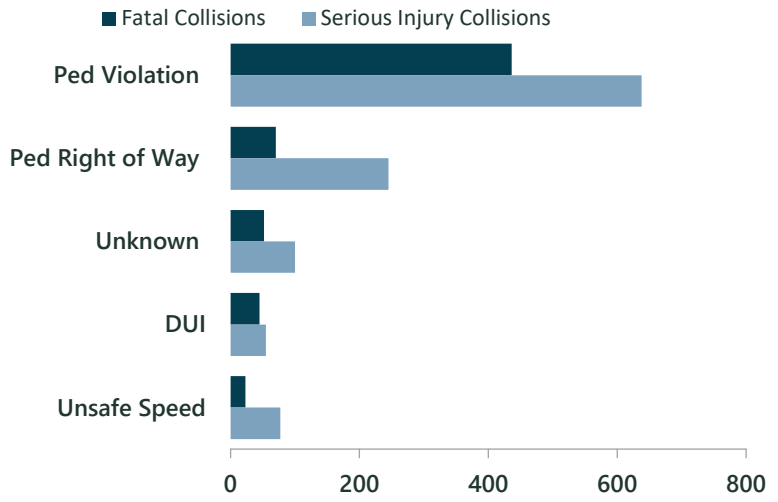
OR Figure 26 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions in Orange County. Consistent with regional trends, the top two PCFs for fatal and serious injury pedestrian-involved collisions were pedestrian violation (61 percent and 49 percent) and pedestrian right of way (ten percent and 19 percent). These were the two PCFs specifically related to pedestrians so further analysis that considers the "other associated factors" noted in the collision data and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide more detailed insights on how to reduce the risk of these types of collisions.

OR Figure 27 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions. The PCFs in Orange County do not fully align with regional trends. For fatal bicyclist-involved collisions, the top PCFs were driving under the influence (18 percent), unknown (14 percent), and wrong side of the road (13 percent), while wrong side of the road was the only PCF that showed up as a top PCF for the region, which suggests that the potential impact of local driving behavior patterns or roadway conditions may be unique to Orange County. More alignment with regional trends was evident for serious injury collisions, where the top PCFs were unsafe speed (18 percent), automobile right of way (17 percent), and improper turning (15 percent).

OR Figure 25: Orange County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



OR Figure 26: Orange County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



OR Figure 27: Orange County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)

Orange County Conclusion

Overall, between 2014 and 2024, Orange County experienced an average of 788 traffic fatalities and 17,600 serious injuries annually, with most incidents involving vehicle occupants or motorcyclists. Over the past decade, fatalities and serious injuries increased, peaking in 2022. Collisions were concentrated in urban areas and along key highways. Pedestrian and bicyclist collisions were also concentrated in urban centers and contributed significantly to the county's fatality and injury rates. A majority of fatalities and serious injuries across all modes in Orange County occurred on local roads. Fatal and serious injury collision victims per 100,000 people over the last decade peaked in 2022. Compared to the region, Orange County reported slightly lower fatalities per 100,000 people, with three to eight fatalities per 100,000 people, while the region reported eight to eleven.

When examining temporal patterns, fatal and serious injury collisions were more common in the late afternoon and the evening, while peaking on weekends such as Saturday. Fatal collisions generally increased from the spring through the winter and were most frequent in November, while serious injury collisions peaked in August. Demographic data highlighted that young adults, especially men aged between 25-34 were overrepresented in fatal collisions across nearly all age groups. Additional demographic data showed that Black individuals and individuals in the "Other Ethnicity" category were disproportionately represented in collisions resulting fatalities and serious injuries. Fatal and serious injury collisions occurred within or near Priority Equity Communities in northern Orange County, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Driving under the influence, pedestrian violations, and unsafe speed were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. Orange County had many similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black individuals, and those in the "Other Ethnicity" category. Fatal and serious injury collisions were also concentrated within Priority Equity Communities.

Riverside County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

8,800
annual/per capita

Injuiries from Collisions

12,918
people sustain injuries every year from collisions

887
people sustain serious injuries every year from collisions

40%
of all traffic collision victims are people 18-34

13,260
collisions occur per year on the streets—*that's roughly*

36
collisions per day

Where Collisions Occur

93%
in urban areas

60%
on local roads

22%
on highways

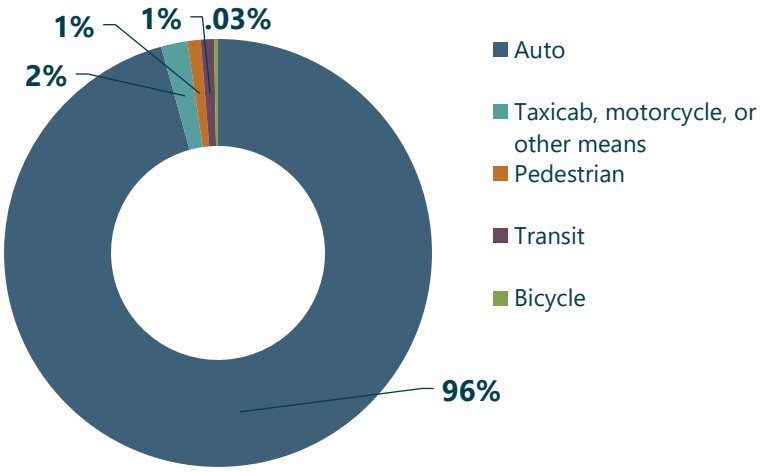
Fatalities from Collisions

284
people die every year from collisions

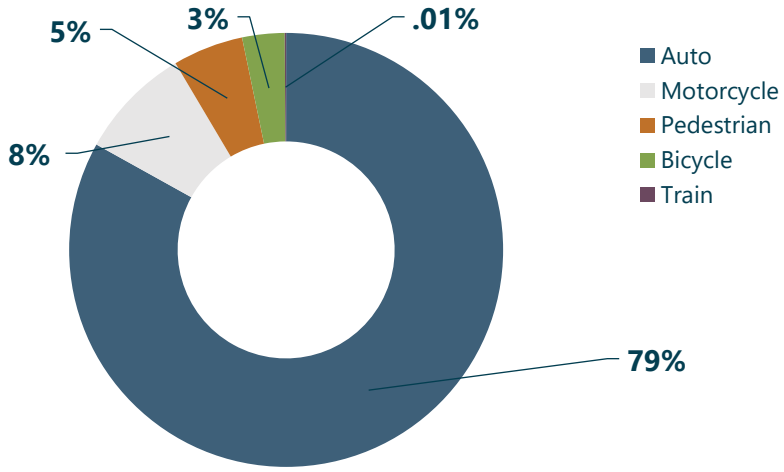
27%
of all deaths involve people walking or bicycling

18%
of all pedestrian fatal victims are 65 and older

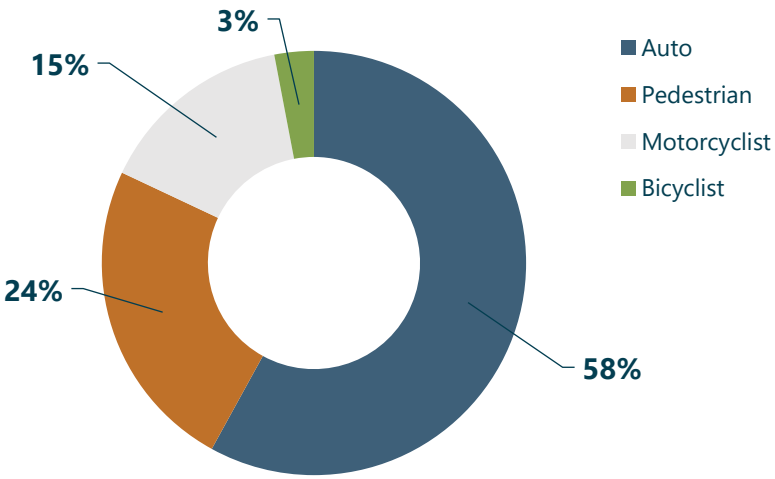
Riverside County, Daily Commute Trips (By Mode 2014-2024)



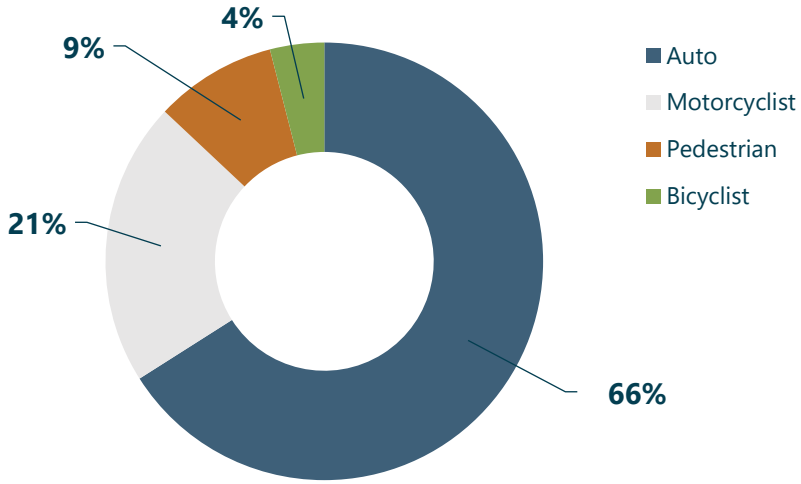
Riverside County, Total Collisions (By Mode at Fault 2014-2024)



Riverside County, Fatal Collisions Victims (By Mode)



Riverside County, Serious Injury Collisions Victims (By Mode)



Riverside County

Riverside County borders the counties of Imperial (south), Orange (west), San Bernardino (north) and San Diego (south). La Paz County in Arizona borders to the east across the Colorado River. Riverside County is the fourth largest county in California, with 7,206 square miles of land. More than 2.3 million people call it home, and residents of Riverside County drove an average of just under 8,800 miles per capita each year from 2014 to 2024 (Caltrans and California Department of Finance, 2024).

Overall Safety Trends

Between 2014 and 2024, an average of 284 people were killed, 887 people seriously injured, and 12,918 people sustained other injuries each year in traffic collisions in Riverside County. Over the past decade, fatalities have continued to increase from a low of 246 victims in 2014 to a decade high of 335 victims in 2022, as shown in **RV Figure 1**. Serious injuries experienced a more dramatic increase since 2014 (599 victims) to a high of 1,115 victims in 2022, as shown in **RV Figure 2**. **RV Maps 1** and **2** show the locations of reported Riverside County collisions resulting in a fatality or serious injury in 2024. Areas with a high density (or concentration) of traffic collisions are referred to as collision hot spots. **RV Map 1** illustrates the density of collisions resulting in fatalities in urban areas in western Riverside County, including along and adjacent to SR-91, I-15, I-10, neighborhoods in the cities of Jurupa Valley, Moreno Valley, Hemet, San Jacinto, Lake Elsinore, Wildomar, Temecula, and several cities in the Coachella Valley. There were also hot spots in eastern Riverside County along I-10 and in the City of Blythe. **RV Map 2** illustrates the density of serious injury collisions were more dispersed, with a major hot spot near I-215 in the University neighborhood in the City of Riverside.

From 2014 to 2024, about 73 percent of people killed in traffic collisions in Riverside County were in vehicles or on motorcycles while the other 27 percent of fatal victims were walking or biking. Of the roughly 284 fatalities that occurred on average each year in Riverside County, about 76 were people walking or biking. **RV Figure 3** reflects the number of people killed or seriously injured while walking in Riverside County between 2014 and 2024. Since 2014, the number of pedestrian fatal and serious injury victims has steadily increased. Pedestrian fatalities reached two peaks of 80 victims in both 2020 and 2023, nearly double the lowest reported number in 2014 (45 victims). Pedestrian serious injury victims followed a similar trend, from a low in 2014 (69 victims) to a peak in 2023 (107 victims). **RV Map 3** highlights the reported pedestrian-involved fatal and serious injury collisions that occurred in Riverside County in 2024. Most pedestrian-involved collisions occurred in urbanized and incorporated areas of the county, though several collisions occurred in the unincorporated areas of Temescal Valley, Woodcrest, Lakeland Village, Nuevo, Mead Valley, Homeland, Green Acres, Winchester, Valle Vista, Thousand Palms, Thermal, and Mecca.

RV Figure 4 shows the reported number of people killed or seriously injured while biking in Riverside County between 2014 and 2024. Although there was a small dataset of reported bicyclist-involved collisions, a decrease in the number of fatalities was observed between the peak of 13 victims reported in both 2014 and 2023, and the lowest that occurred in 2019 (six victims). Bicyclist-involved serious injuries decreased through 2021 until increasing to a peak of 54 victims in 2024. **RV Map 4** highlights reported bicyclist-involved collisions resulting in a fatality or serious injury that occurred in Riverside County in 2024. Bicyclist-involved collisions primarily occurred in urbanized areas of the county, with no collisions reported in the eastern, primarily rural, portion of the county.

To provide a point of comparison across the region, **RV Figure 5** shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Similar to the SCAG region overall, Riverside County reached a peak for both fatalities and serious injuries per 100,000 people in 2022 followed by a slight decrease over subsequent years. The county's collision rates were higher than the regional rates, with Riverside County reporting nine to 14 fatalities per 100,000 people compared to the region's eight to 11 fatalities per 100,000 people. Similarly, Riverside County had a higher serious injury rate per 100,000 people which was consistently higher than the regional serious injury rate until 2024. **RV Figure 6** demonstrates that normalizing for vehicle miles traveled (VMT), the trends in fatality and serious injury rates were generally consistent with the non-normalized trends. However, one noticeable difference was the reduced fatality rates per 100 million VMT reported in 2018 and 2022, which corresponded with years where the average annual daily VMT spiked more significantly compared to other years. Additionally, the

decline in serious injuries per 100 million VMT observed in 2020 was less pronounced compared to the pattens in the absolute number of serious injury victims, indicating potential impact from reduced travel demand during the COVID-19 pandemic.

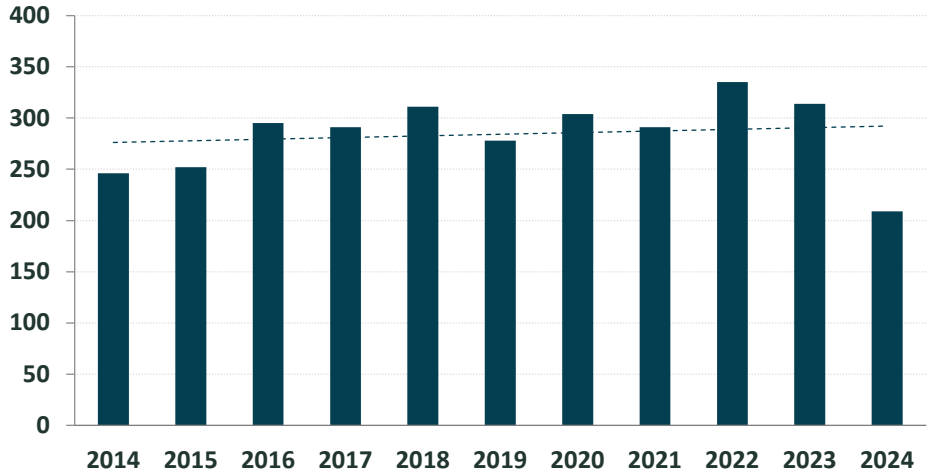
Where Collisions are Occurring

In Riverside County, about 87 percent of fatal collisions and 89 percent of serious injury collisions occurred in urbanized areas and small urban areas. Over 95 percent of pedestrian- and bicyclist-involved fatal and serious injury collisions occurred in urbanized and small urban areas. In total, 86 percent of the Riverside County population lives in urbanized areas, under three percent in small urban areas, and 12 percent in rural areas (U.S. Census Bureau and Caltrans). **RV Maps 1-4** displays the total fatal and serious injury collisions by mode that occurred in 2024, highlighting concentrations in the urban areas of Riverside County.

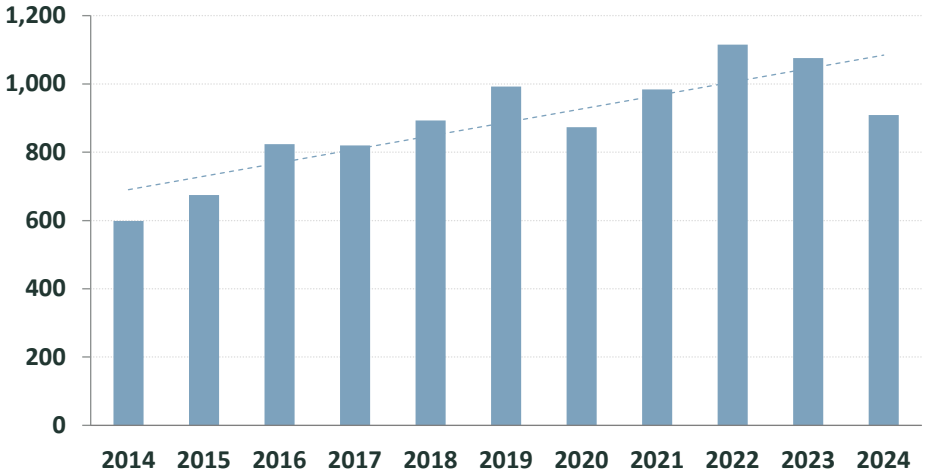
The Riverside County roadway network includes 291 highway centerline miles (three percent), 1,206 arterial centerline miles (13 percent), 1,423 collector centerline miles (15 percent), and 6,406 local road centerline miles (69 percent) as shown in **RV Figure 7** (Caltrans, 2024). **RV Figure 8** shows 58 miles of Class I bikeways (nine percent of total bikeway facilities), 455 miles of Class II bikeways (67 percent), and 163 miles of Class III bikeways (24 percent), and 1.4 miles of Class IV bikeways (<one percent) (SCAG, 2024).

Between 2014 and 2024, about 60 percent of Riverside County fatalities occurred on local roads, 18 percent on arterials, and 22 percent on highways as shown in **RV Figure 9**. **RV Figure 10** shows that approximately 60 percent of serious injuries occurred on local roads, 16 percent on arterials, and 24 percent on highways. During the same period, about 68 percent of pedestrian fatalities occurred on local roads, 18 percent on arterials, and 14 percent on highways. For bicyclist fatalities, about 89 percent occurred on local roads, ten percent on arterials, and one percent on highways. For pedestrian serious injuries, 77 percent occurred on local roads, 14 percent on arterials, and nine percent on highways. For bicyclist serious injuries, 83 percent occurred on local roads, 15 percent on arterials, and two percent on highways. Overall, fatal and serious injury collisions disproportionately occurred on highways, while pedestrian- and bicyclist-involved collisions disproportionately occurred on local roads, which highlighted the importance for local jurisdictions to continue prioritizing safety improvements and engage in regional coordination efforts to advance safety.

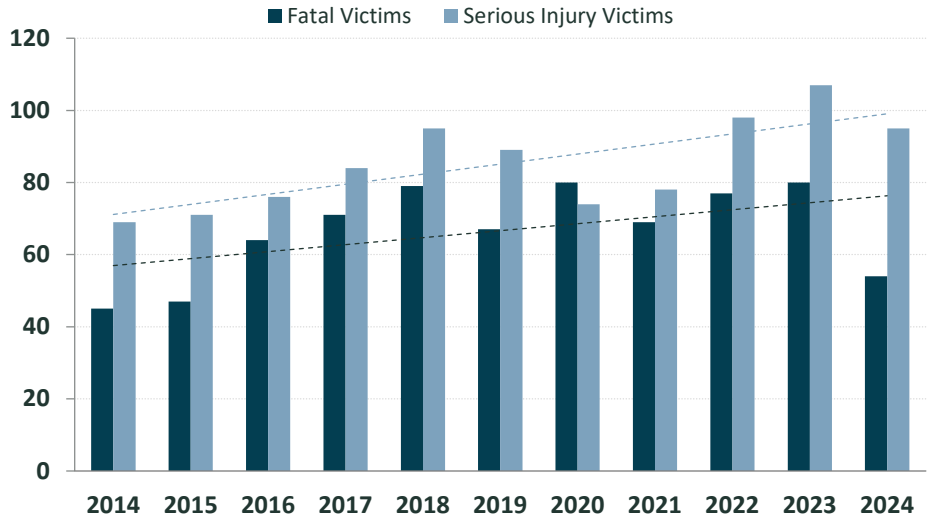
RV Figure 1: Riverside County, Total Number of Fatal Victims (2014-2024)



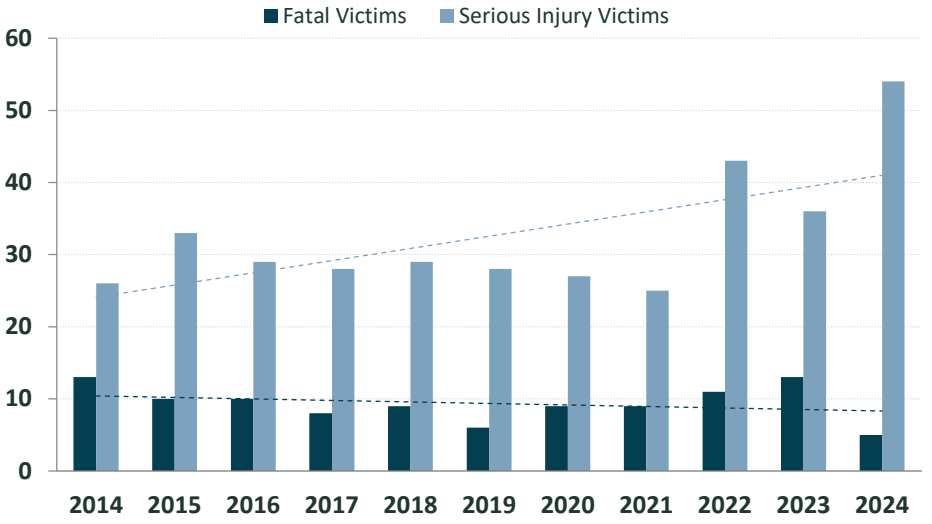
RV Figure 2: Riverside County, Total Number of Serious Injury Victims (2014-2024)



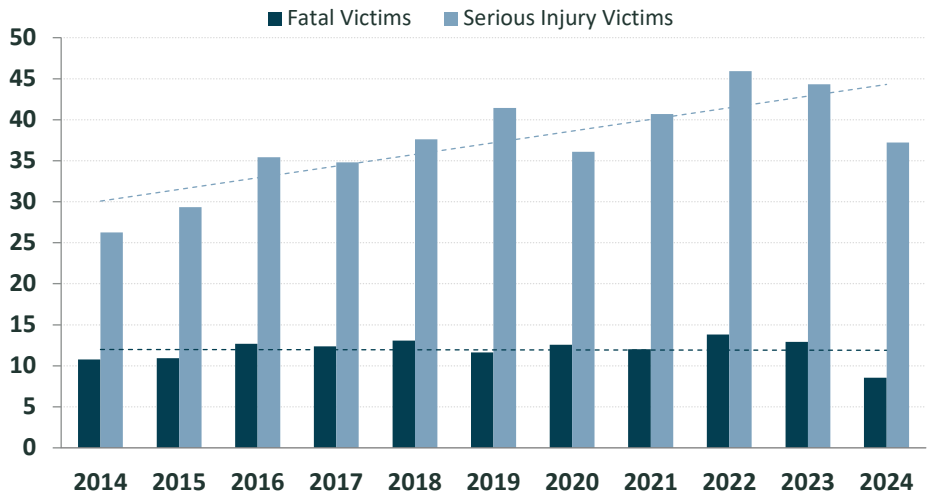
RV Figure 3: Riverside County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



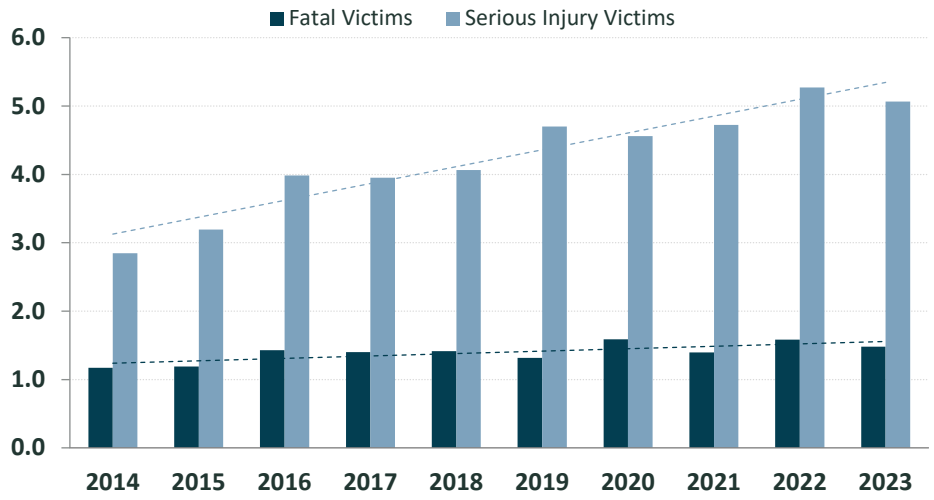
RV Figure 4: Riverside County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



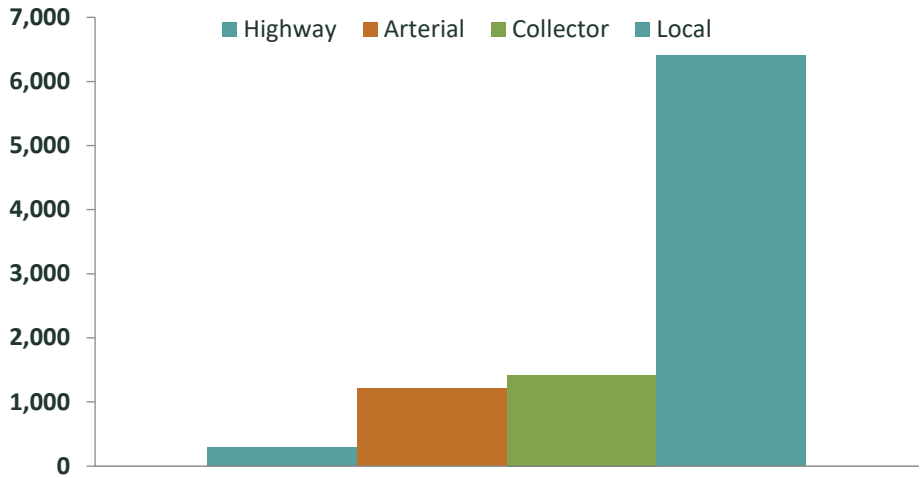
RV Figure 5: Riverside County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)



RV Figure 6: Riverside County, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)

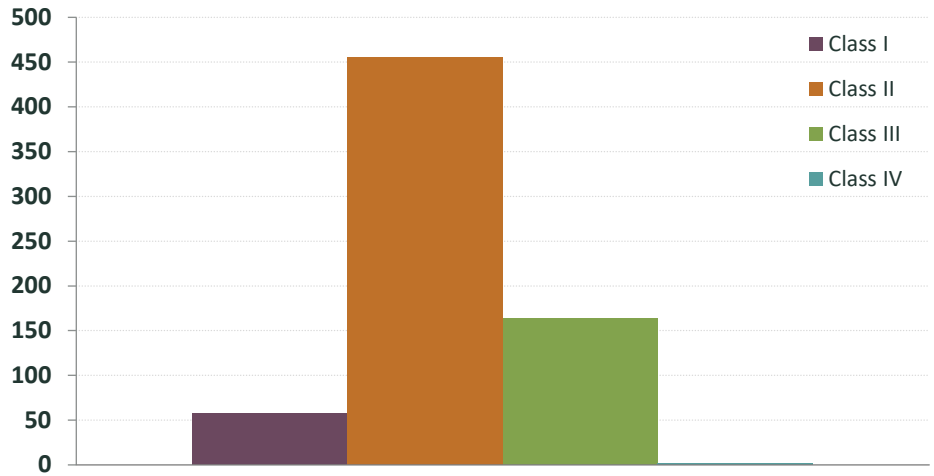


RV Figure 7: Riverside County, Centerline Miles by Roadway Classification (2024)



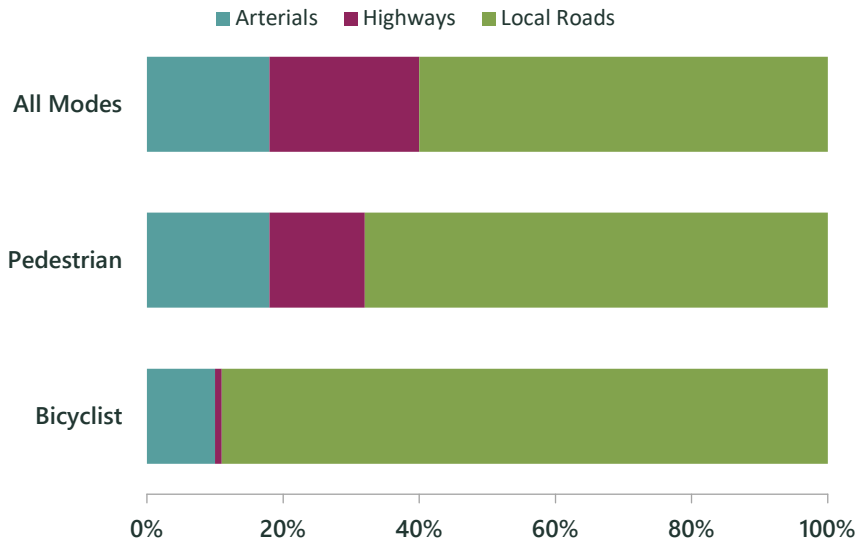
Source: Caltrans, 2024

RV Figure 8: Riverside County, Bikeway Miles by Classification (2024)

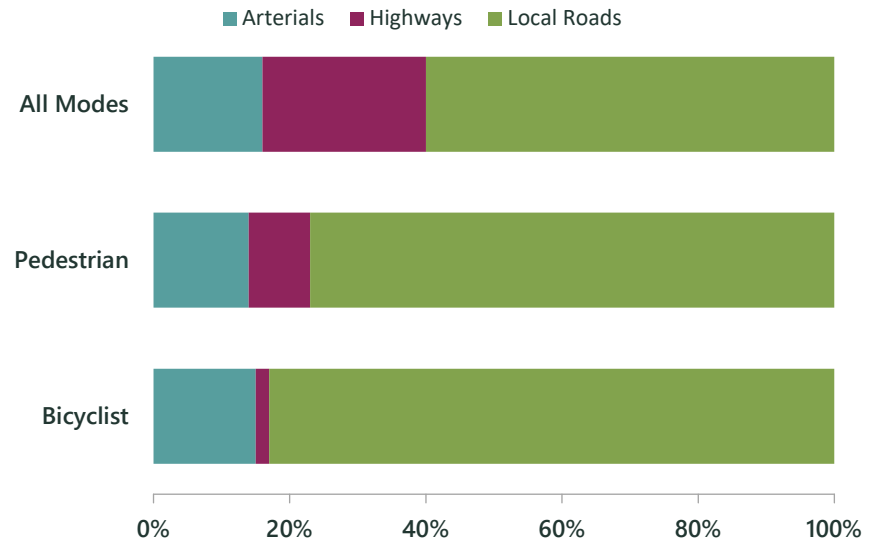


Source: SCAG, 2024

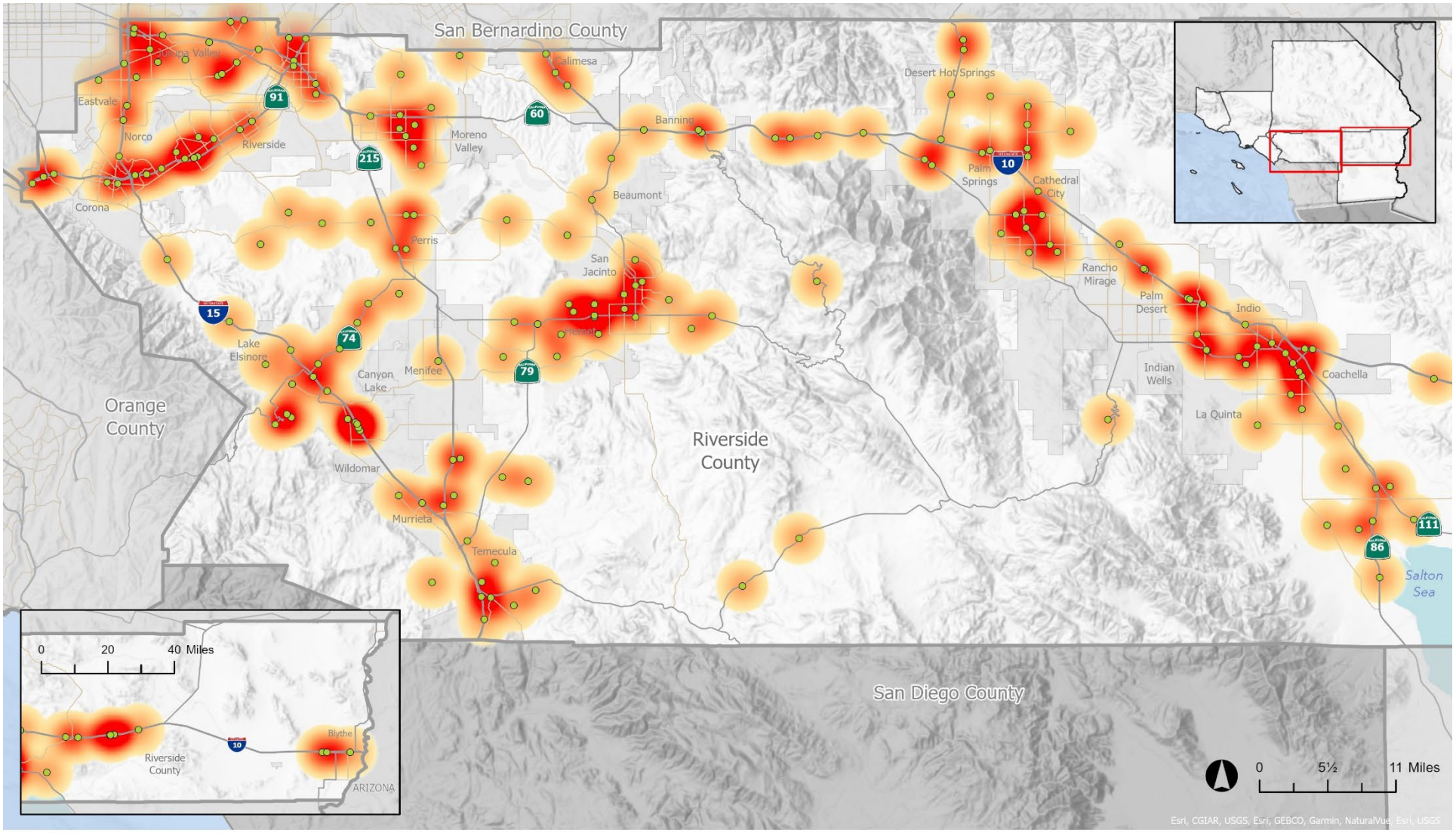
RV Figure 9: Riverside County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



RV Figure 10: Riverside County, Distribution of Serious Injury Victims by Mode and Roadway Classification (2014-2024)

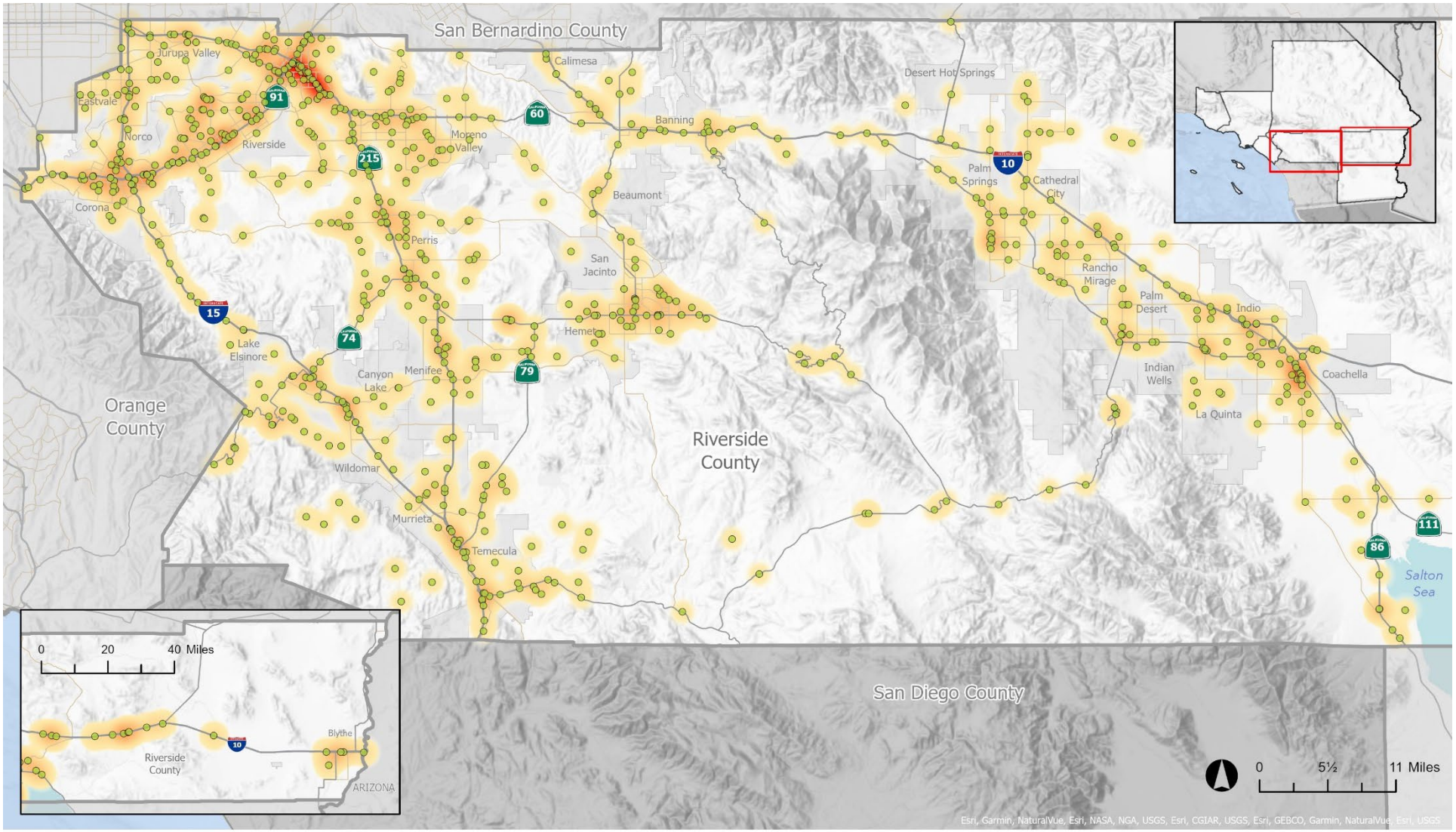


RV Map 1: Riverside County Fatal Collisions (2024)



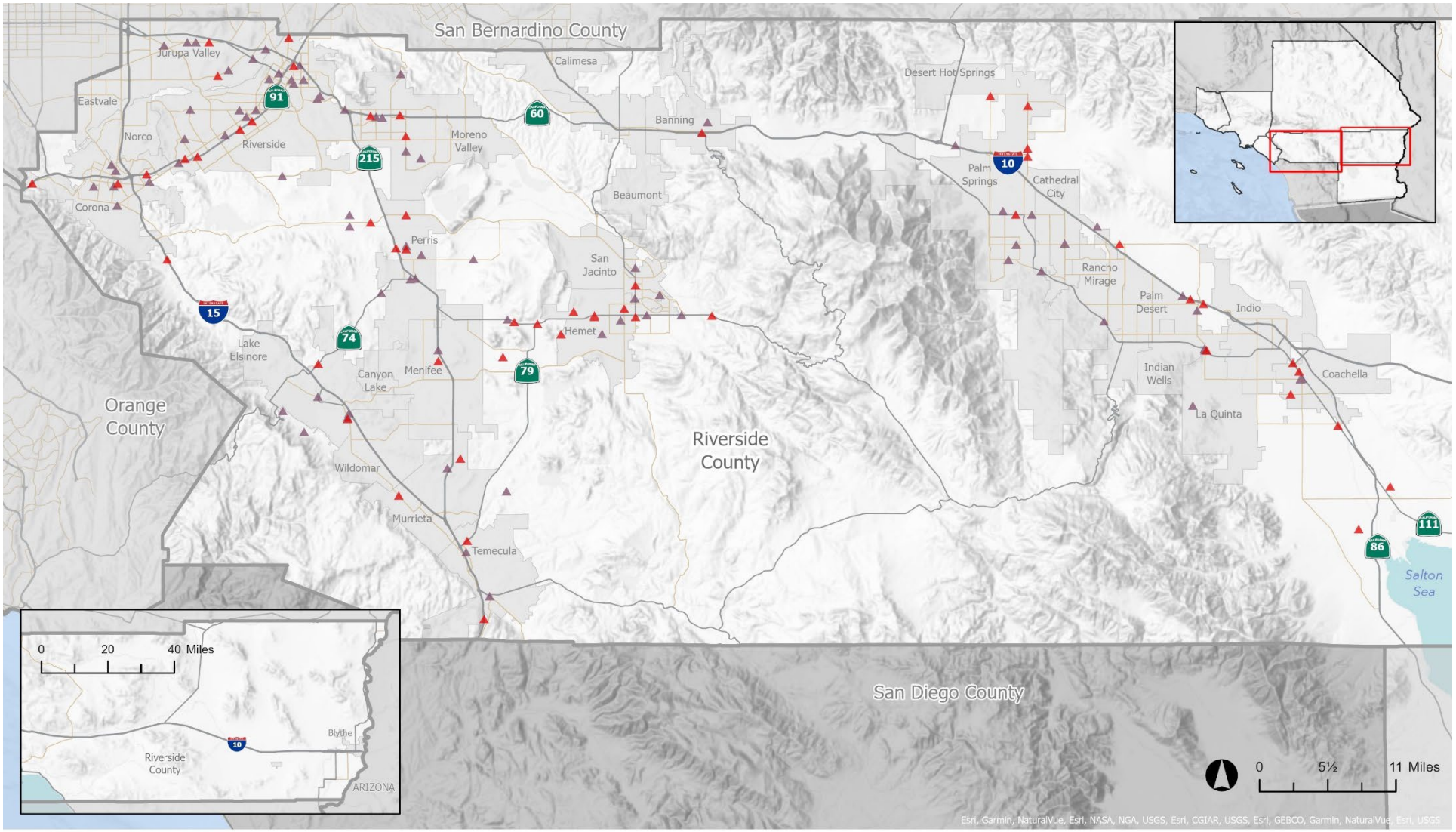
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

RV Map 2: Riverside County Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

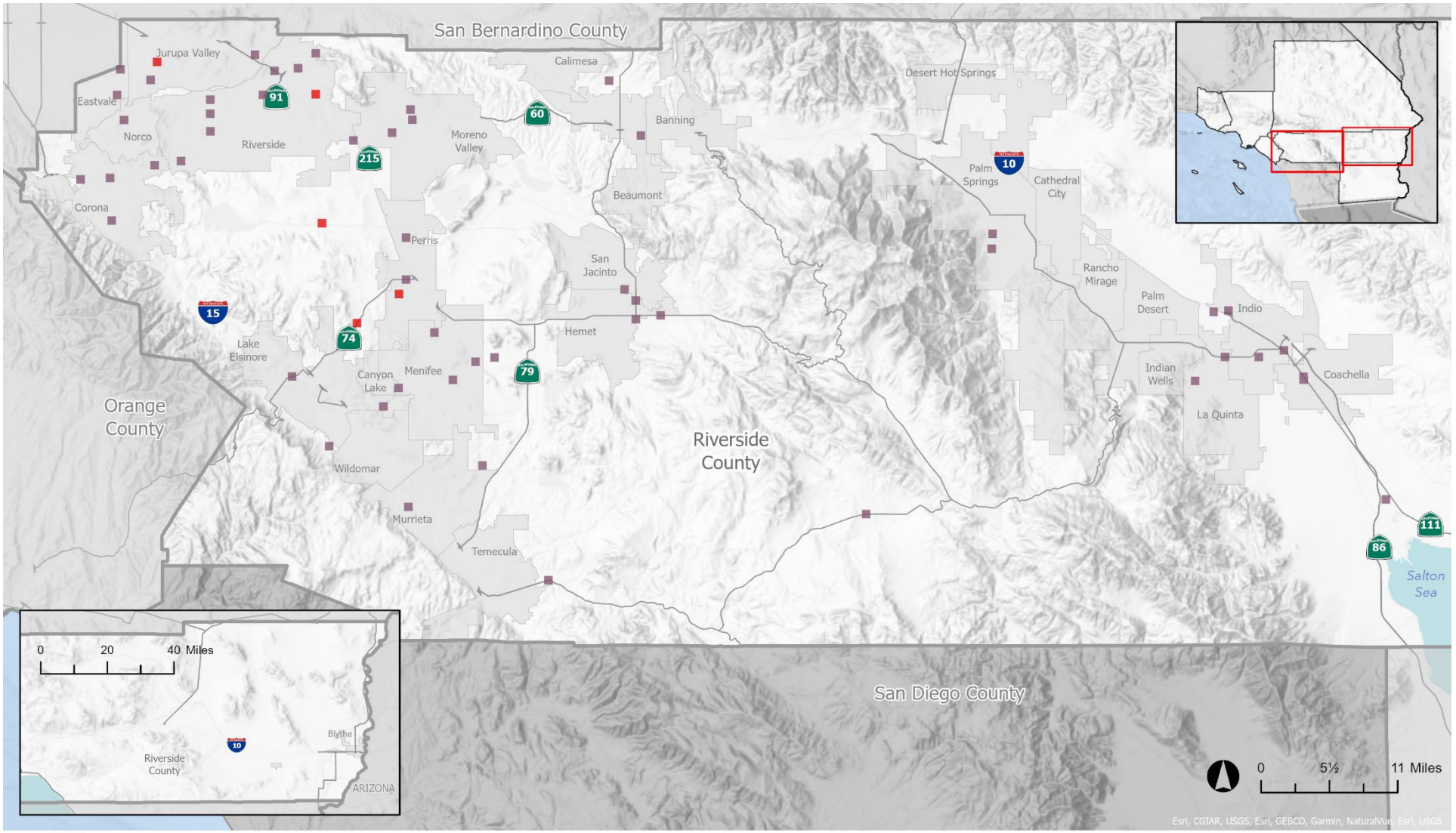
RV Map 3: Riverside County Pedestrian-Involved Fatal and Serious Injury Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Pedestrian-Involved Fatal Collision
Pedestrian-Involved Serious Injury Collision

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

RV Map 4: Riverside County Bicyclist-Involved Fatal and Serious Injury Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Bicyclist-Involved Fatal Collision
Bicyclist-Involved Serious Injury Collision

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

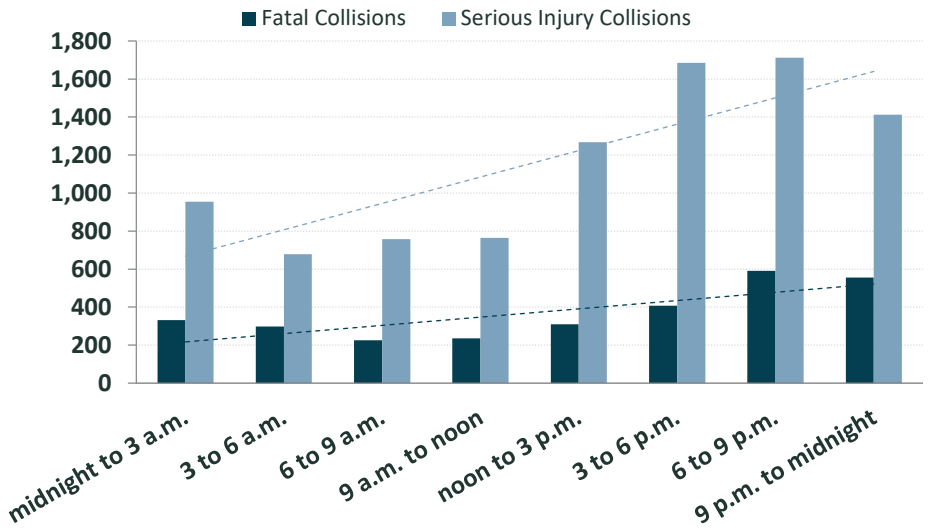
RV Figures 11 through 19 examine collisions across several time periods, including time of day, day of week, and month in Riverside County between 2014-2024.

RV Figure 11 shows that most collisions resulting in a fatality or serious injury occurred in the afternoon and late at night. The largest number of fatal collisions (590 collisions) and serious injury collisions (1,712 collisions) occurred in the evening between 6 p.m. and 9 p.m. **RV Figure 12** shows trends by time of day for pedestrian-involved fatal and serious injury collisions, which were concentrated between 6 p.m. and midnight. **RV Figure 13** shows trends by time of day for bicyclist-involved fatal and serious injury collisions, showing a peak of fatal collisions in the late afternoon through evening between 3 p.m. and midnight (16 collisions during each time block) with an increasing number of collisions resulting in serious injuries occurring over the course of the day, peaking between 6 p.m. and 9 p.m. (91 collisions).

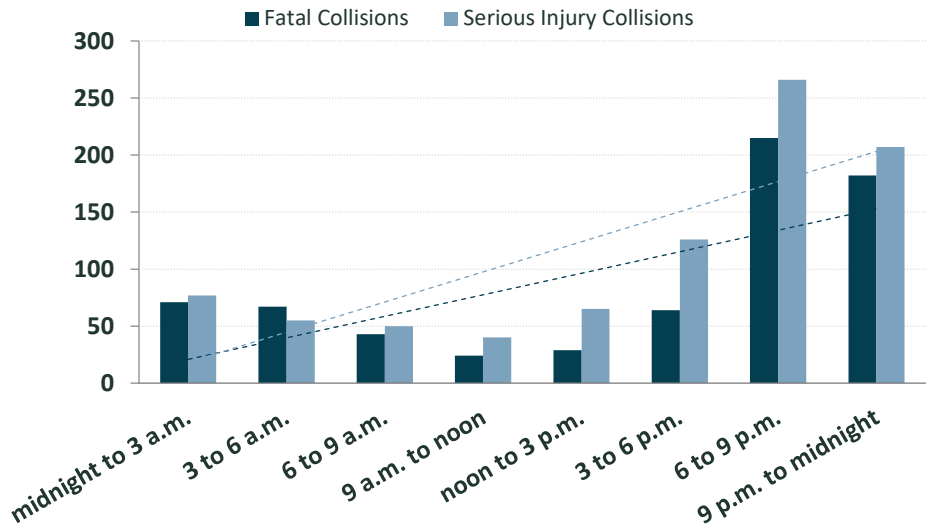
By day of the week, fatal and serious injury collisions across all modes between 2014 and 2024 generally declined between Sunday and Wednesday, before increasing to a peak on Saturdays, as shown in **RV Figure 14**. Fatal and serious injury collisions peaked on Saturdays (562 fatal collisions and 1,692 serious injury collisions). **RV Figure 15** shows pedestrian-involved fatal and serious injury collisions increased from Wednesday through Friday, with fatal and serious injury collisions peaking on Fridays (125 fatal collisions and 171 serious injury collisions). **RV Figure 16** shows the number of reported bicyclist-involved fatal and serious collisions were lowest on Wednesdays, while fatal collisions were highest on Fridays (18 collisions) and serious injury collisions were highest on Saturdays (62 collisions).

When examining Riverside County collisions by month between 2014 and 2024, **RV Figure 17** shows the number of fatal collisions increased between February and May, then decreased over the summer months through September before it reached a peak in October (316 collisions), then decreased in November through December. There was a less distinct pattern in serious injury collisions, though it was notable that there was also a peak in October (883 collisions). **RV Figure 18** shows pedestrian-involved collisions generally dipped during the spring (March to May) and summer months (June to August) before it reached a peak for fatal collisions in October (75 collisions) and for serious injury collisions in December (100 collisions). Due to the small number of reported collisions, **RV Figure 19** shows a less distinctive pattern for bicyclist-involved fatal and serious injury collisions by month, though the highest number of fatal collisions was reported in December (13 collisions), with the highest number of serious injury collisions reported in October (46 collisions). These monthly patterns align with seasonal variations in daylight hours and temperature.

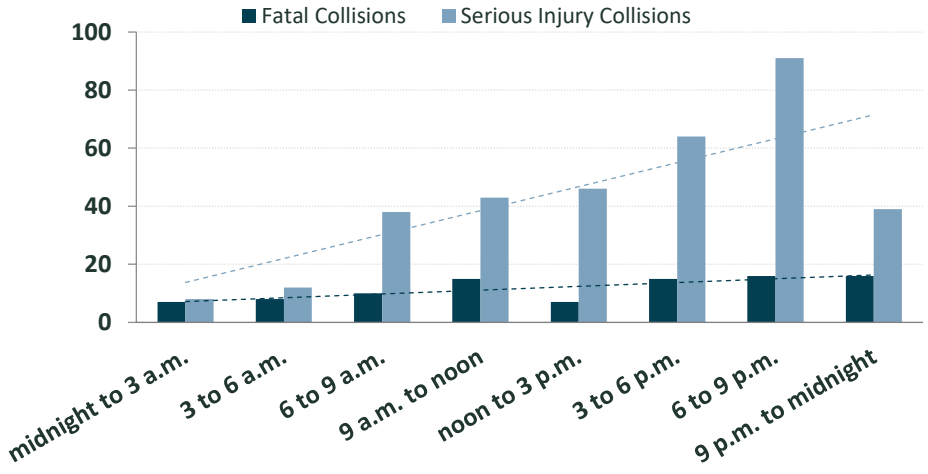
RV Figure 11: Riverside County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



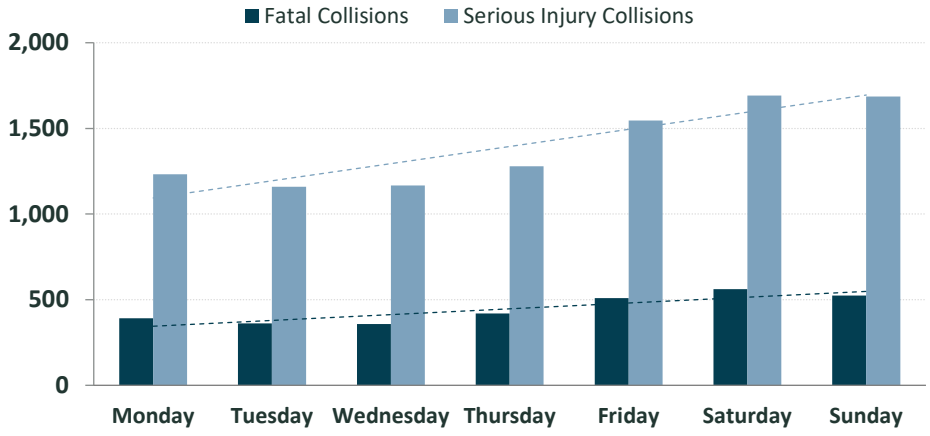
RV Figure 12: Riverside County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



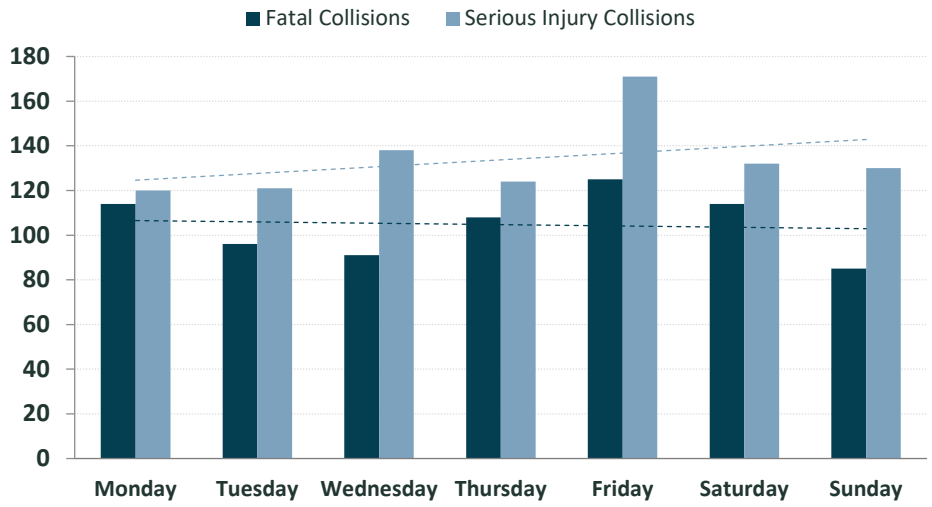
RV Figure 13: Riverside County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



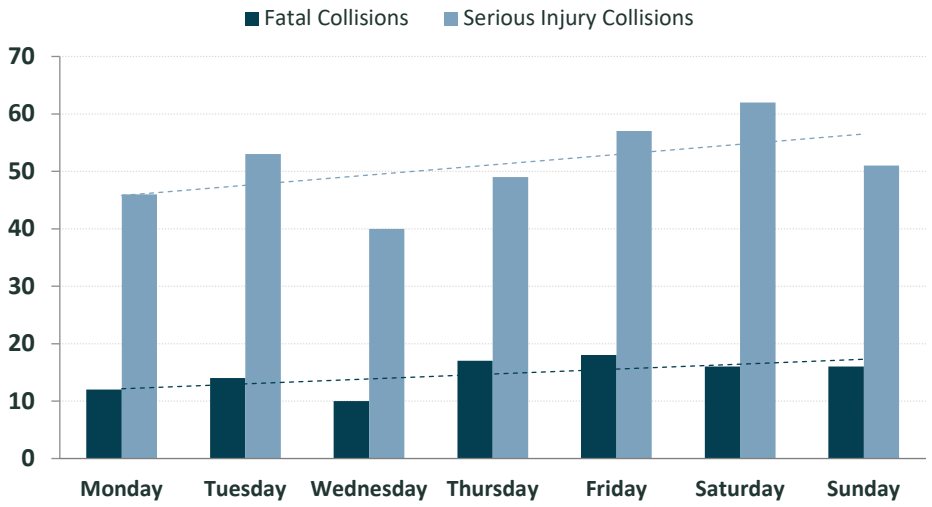
RV Figure 14: Riverside County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



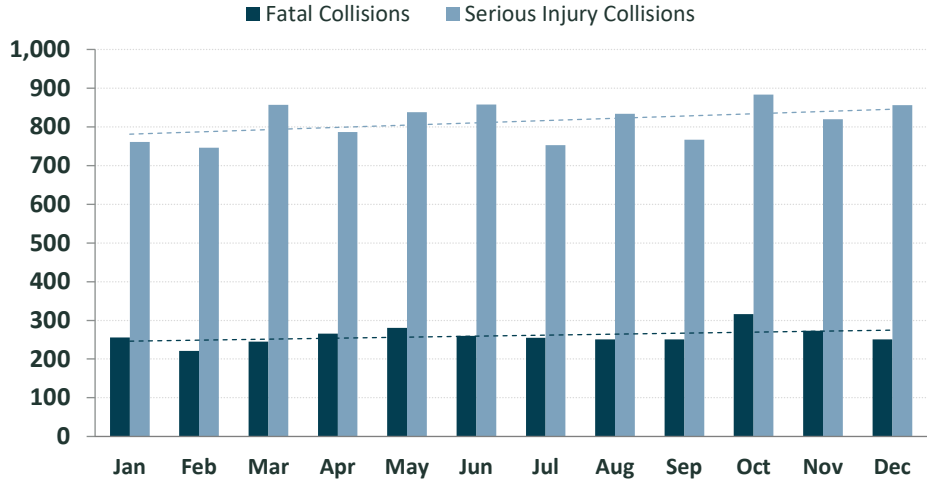
RV Figure 15: Riverside County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



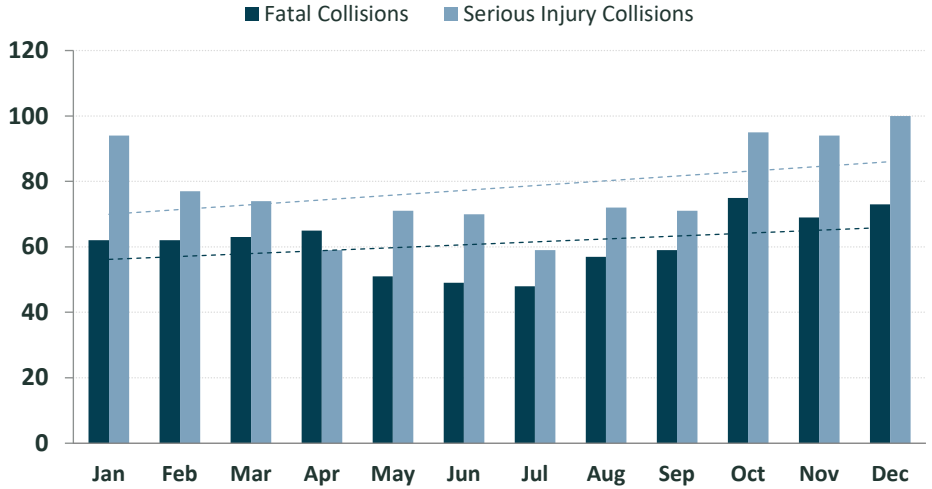
RV Figure 16: Riverside County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



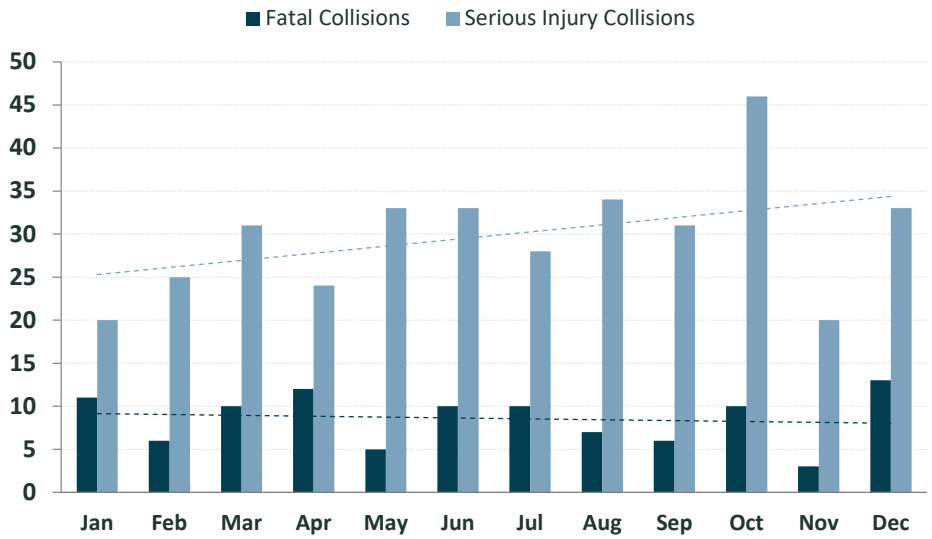
RV Figure 17: Riverside County, Fatal and Serious Injury Collisions by Month (2014-2024)



RV Figure 18: Riverside County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



RV Figure 19: Riverside County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In Riverside County, pedestrians and bicyclists accounted for about 27 percent of all fatal collision victims reported from 2014 to 2024, disproportionately higher than the one and a half percent of people in the county who walk or bike to work (U.S. Census Bureau). Nearly 13 percent of all trips (work and non-work) in the SCAG region were taken via walking or biking, which was also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

RV Figures 20 through 24 examined collision trends in Riverside County across several demographic factors between 2014 and 2024. Men experienced nearly three times as many fatalities (2,320 victims) as women (784 victims). A similar trend was observed with serious injuries where 6,583 men and 3,065 women were seriously injured between 2014 and 2024. These trends were consistent with regional and national trends where a higher number of men are involved in fatal and serious injury collisions.

As observed in **RV Figure 20**, when victims of fatal collisions are stratified by age group, the largest number of fatalities occurred among the 25 to 34 age group (691 victims), representing over 22 percent of reported fatalities reported in Riverside County between 2014 and 2024. Similarly, **RV Figure 21** shows that the largest number of serious injuries also occurred among the 25 to 34 age group (2,378 victims), which represented almost 25 percent of total reported serious injuries. Men were consistently more likely to experience fatal or serious injuries in collisions compared to women at all ages.

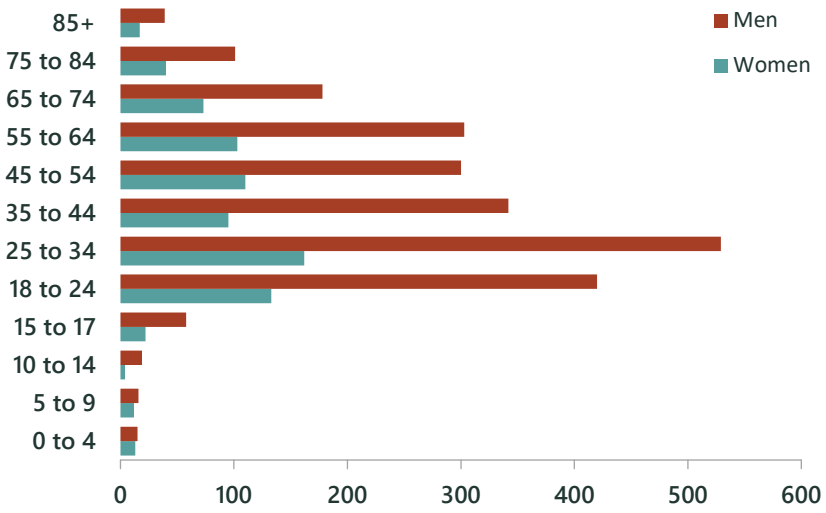
When analyzing trends by victim role (i.e., whether the victim is a driver, passenger, bicyclist, pedestrian or other), additional patterns emerged. Drivers experienced the largest number of fatalities (1,760 victims), followed by pedestrians (731 victims), passengers (507 victims), and bicyclists (102 victims). **RV Figure 22** shows that significantly more drivers killed in collisions were men (1,425 victims) than women (335 victims), while the gender-split between passenger victim fatalities was much less dramatic (246 women and 259 men). Nearly three times as many fatalities occurred among men who were walking (539 victims) compared to women who were walking (192 victims), and over nine times as many fatalities occurred among men who were biking (92 victims) compared to women who were biking (10 victims). **RV Figure 23** shows a similar pattern for serious injury victims, though more passengers experienced serious injuries (1,065 women and 812 men) than pedestrians (312 women and 609 men). Men driving still experienced the greatest number of serious injuries (4,840 victims) compared to women (1,692 victims), and more men who were walking (609 victims) and bicycling (297 victims) suffered a serious injury compared to women who were walking (312 victims) and bicycling (55 victims).

Overall, men who were driving constituted nearly 46 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (365 victims) in Riverside County between 2014 and 2024.

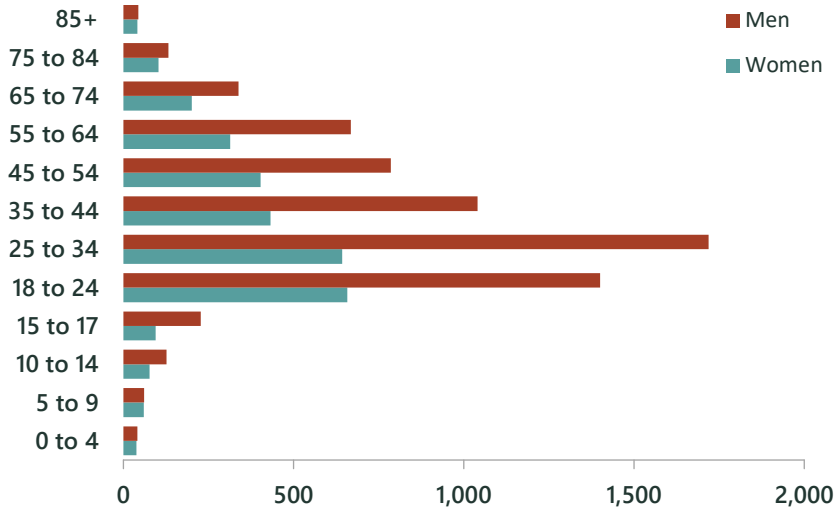
RV Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county population in 2024. Black individuals were overrepresented among collision victims compared to their proportion of the county population: although they make up just six percent of the county's population, Black individuals accounted for over nine percent of all fatalities, eight percent of serious injuries, and over ten percent of all collision victims. Hispanic/Latino individuals, who represented half of the county's population, were also disproportionately represented with 59 percent of fatalities and 52 percent of serious injury victims. Additionally, individuals of the "Other Ethnicity" category (aligned with the U.S. Census Bureau definition to include American Indian, Alaska Native, Native Hawaiian, Pacific Islander, some other race alone, and multiracial people) make up over four percent of the county's population but constituted over five percent of serious injury victims and over seven percent of all collision victims.

RV Maps 5 and **6** highlight the concentration of fatalities and serious injury collisions that occurred in Riverside County Priority Equity Communities in 2024. These maps illustrate that most collisions have occurred in and around Priority Equity Communities, though serious collisions were not exclusive to these designated areas. This suggests that safety improvements should remain focused on the vulnerabilities of people rather than generalized geographies.

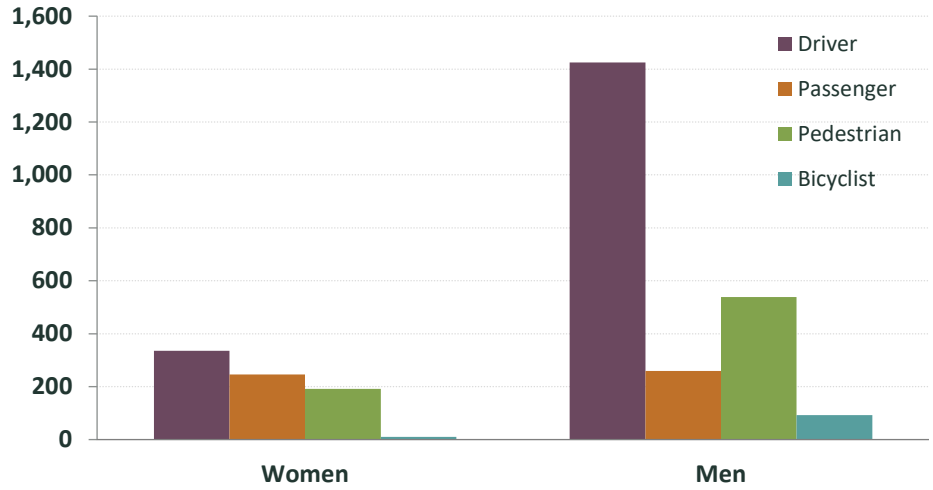
RV Figure 20: Riverside County, Fatal Victims by Age and Gender (2014-2024)



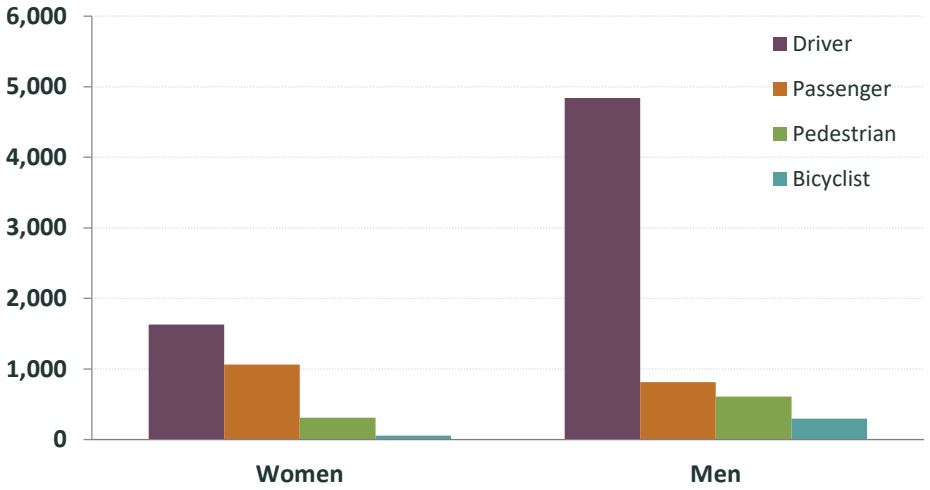
RV Figure 21: Riverside County, Serious Injury Victims by Age and Gender (2014-2024)



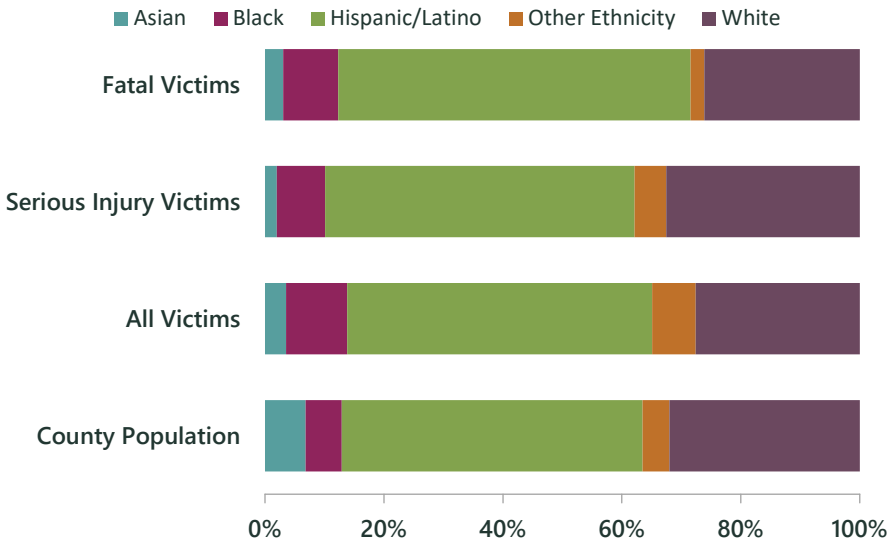
RV Figure 22: Riverside County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



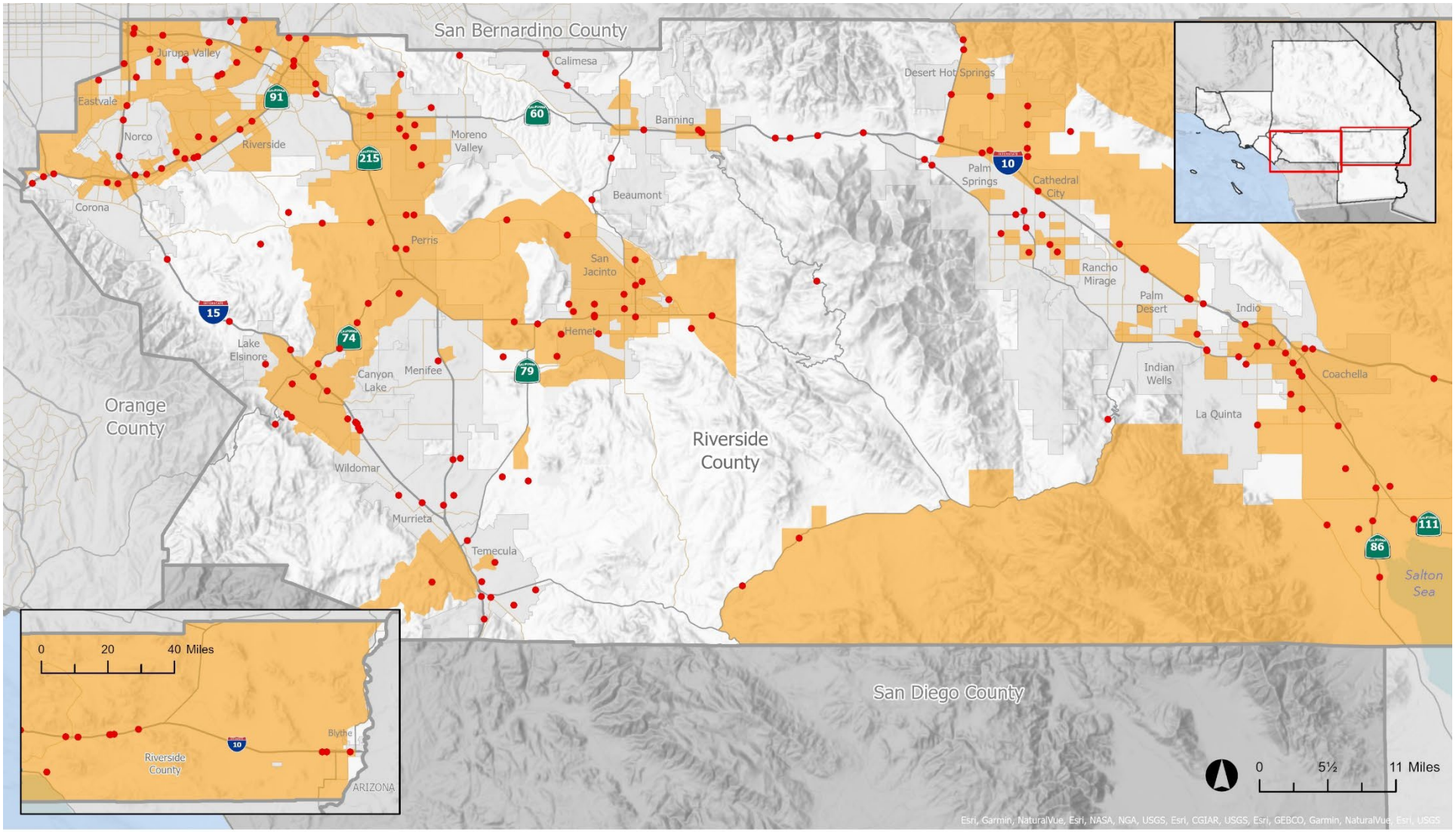
RV Figure 23: Riverside County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



RV Figure 24: Riverside County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)



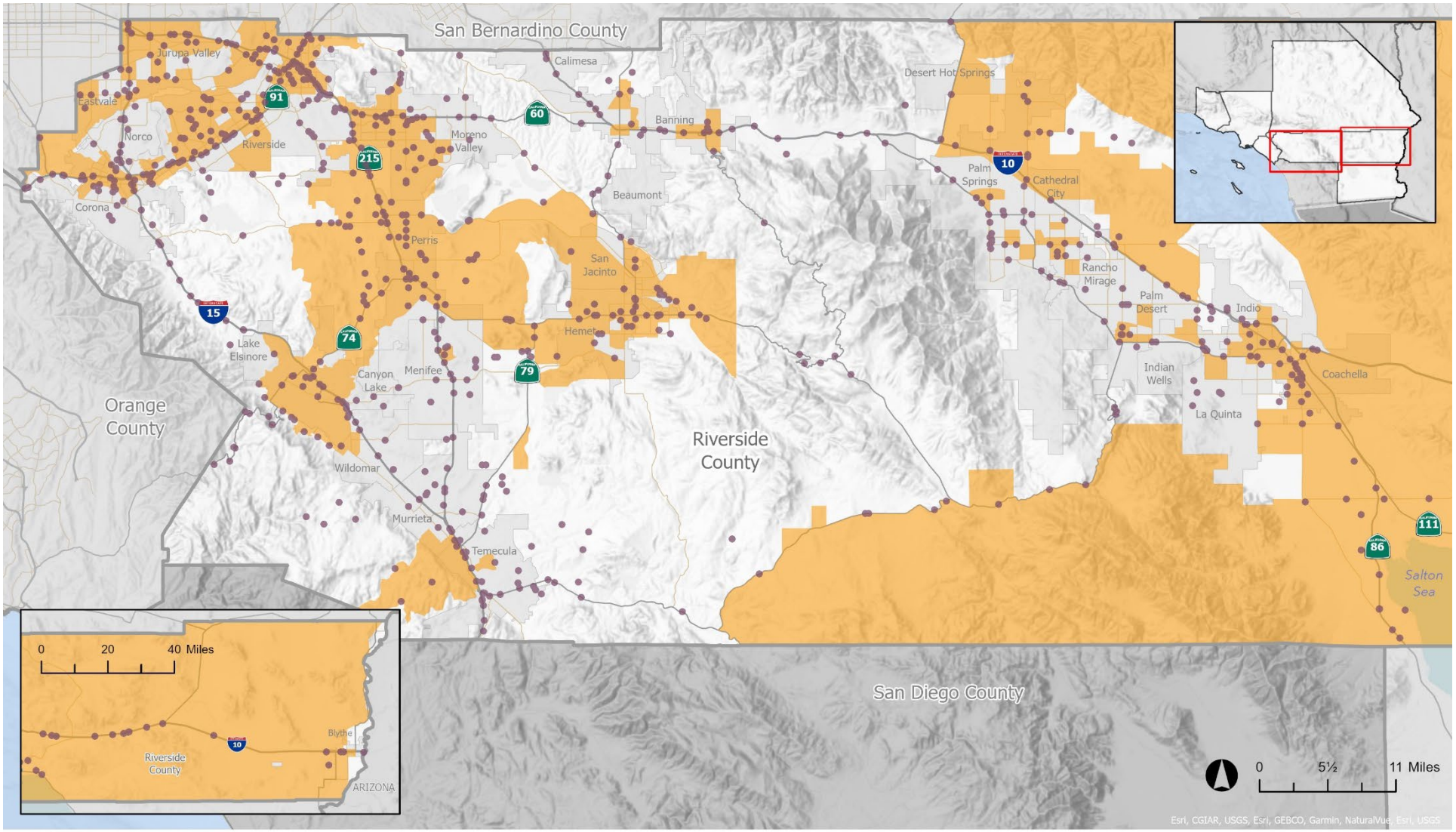
RV Map 5: Riverside County Fatal Collisions in Priority Equity Communities (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Fatal Collision
Priority Equity Communities

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

RV Map 6: Riverside County Serious Injury Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

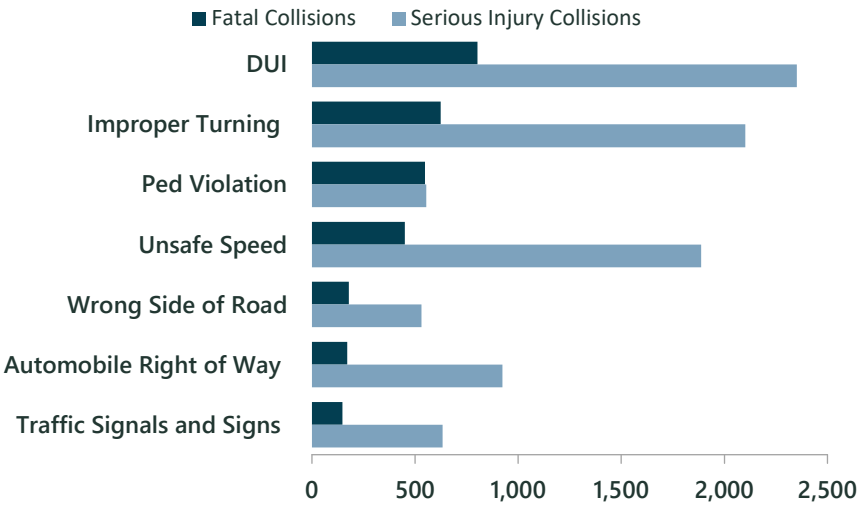
Why Collisions are Occurring

RV Figures 25 through 27 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions as reported in Riverside County between 2014 and 2024. The PCF is the main cause of the collision as determined by the officer at the collision scene and there may be other factors which the officer notes as “other associated factors” on the collision report. As shown in **RV Figure 25**, the top three PCFs for fatal collisions in the county were driving under the influence (25 percent), improper turning (19 percent), and pedestrian violation (17 percent). The top three PCFs for serious injury collisions were driving under the influence (23 percent), improper turning (21 percent), and unsafe speed (19 percent). These PCFs are generally consistent with regional trends, though they appear in a different order. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

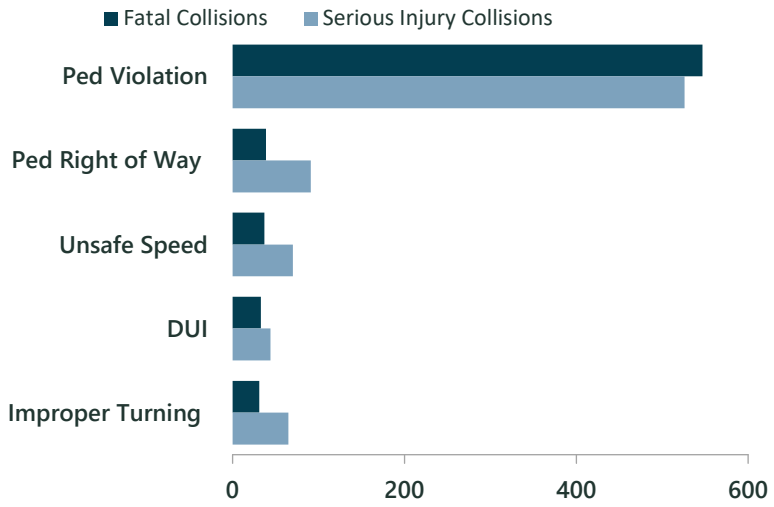
RV Figure 26 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions. Consistent with regional trends, the top two PCFs for fatal and serious injury pedestrian-involved collisions were pedestrian violation (73 percent and 58 percent) and pedestrian right of way (five percent and 10 percent). These are the two PCFs specifically related to pedestrians so further analysis that considers the “other associated factors” noted in the collision data and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide more detailed insights on how to reduce the risk of these types of collisions.

RV Figure 27 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions in Riverside County. The top PCF for fatal bicyclist-involved collisions was improper turning (20 percent), wrong side of road (15 percent), and unsafe speed (13 percent). For serious injury collisions, the top PCFs were improper turning (19 percent), wrong side of road (19 percent), and traffic signals and signs (17 percent). These PCFs are generally consistent with regional trends with unsafe speed, improper turning, and wrong side of road being top regional PCFs.

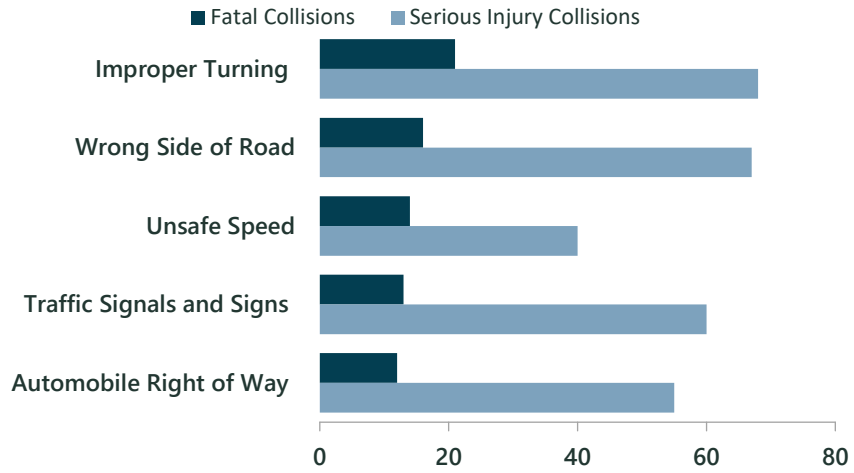
RV Figure 25: Riverside County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



RV Figure 26: Riverside County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



RV Figure 27: Riverside County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



Riverside County Conclusion

Overall, between 2014 and 2024, Riverside County experienced an average of 284 traffic fatalities and 12,918 serious injuries annually, with most incidents involving vehicles or motorcycles. Over the past decade, fatalities continued to increase, while serious injuries experienced a more dramatic increase. Collisions were concentrated in urban areas, such as western and eastern Riverside County, and along key highways. Pedestrian and bicyclist-involved collisions were also concentrated in urbanized and incorporated areas that contributed significantly to the county's fatality and injury rates. A majority of fatal and serious injury collisions across all modes in Riverside County occurred on local roads. Riverside County reached a peak for both fatalities and serious injuries per 100,000 people in 2022 followed by a slight decrease over subsequent years similar to the SCAG region. The county's collision rates were higher than the regional rates, with Riverside County reporting nine to 14 fatalities per 100,000 people compared to the region's eight to 11 fatalities per 100,000 people. Similarly, Riverside County had a higher serious injury rate per 100,000 people which was consistently higher than the regional serious injury rate until 2024.

When examining temporal patterns, fatal and serious injury collisions were more common in the afternoon and late at night, while peaking on weekends such as Saturdays. Fatal collisions generally increased from the spring through the early summer, and fatal and serious injury collisions were most frequent in October. Demographic data highlighted that young adults, especially men aged between 25-34 were overrepresented in fatal collisions across nearly all age groups. Additional demographic data showed that Black, Hispanic/Latino, and individuals in the "Other Ethnicity" category were disproportionately represented in collisions resulting fatalities and serious injuries. Fatal and serious injury collisions occurred within or near Priority Equity Communities in northern Riverside County, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Driving under the influence, improper turning, and pedestrian violation were identified as primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. Riverside County had many similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black, Hispanic/Latino, and individuals in the "Other Ethnicity" category. Fatal and serious injury collisions were also concentrated within Priority Equity Communities.

San Bernardino County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

10,238
annual/per capita

Injuiries from Collisions

13,544
people sustain injuries every year from collisions

910
people sustain serious injuries every year from collisions

41%
of all traffic collision victims are people 18-34

10,252
collisions occur per year on the streets—*that's roughly*

28
collisions per day

Where Collisions Occur

76%
in urban areas

51%
on local roads

31%
on highways

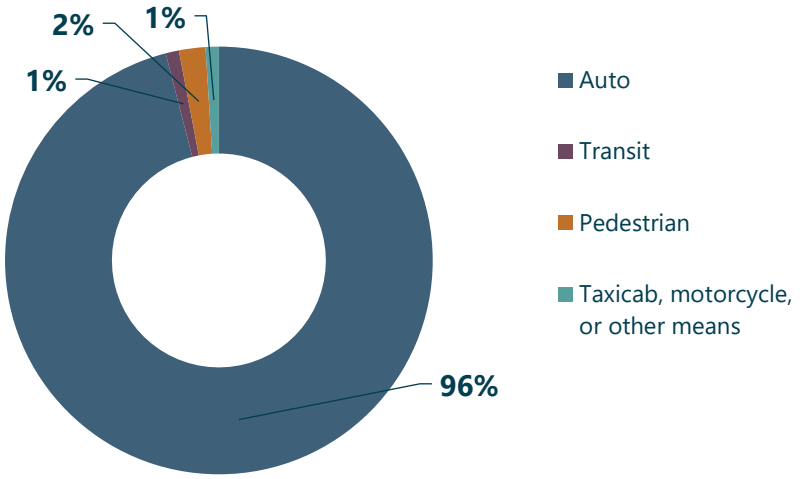
Fatalities from Collisions

321
people die every year from collisions

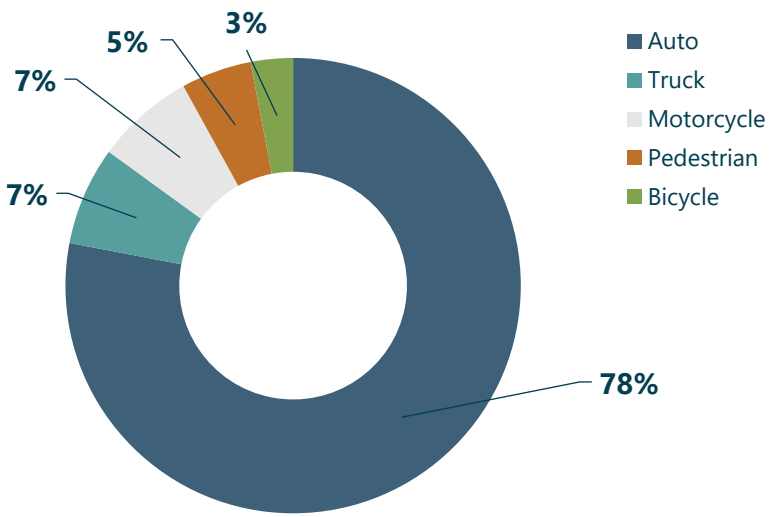
27%
of all deaths involve people walking or bicycling

13%
of all pedestrian fatal victims are 65 and older

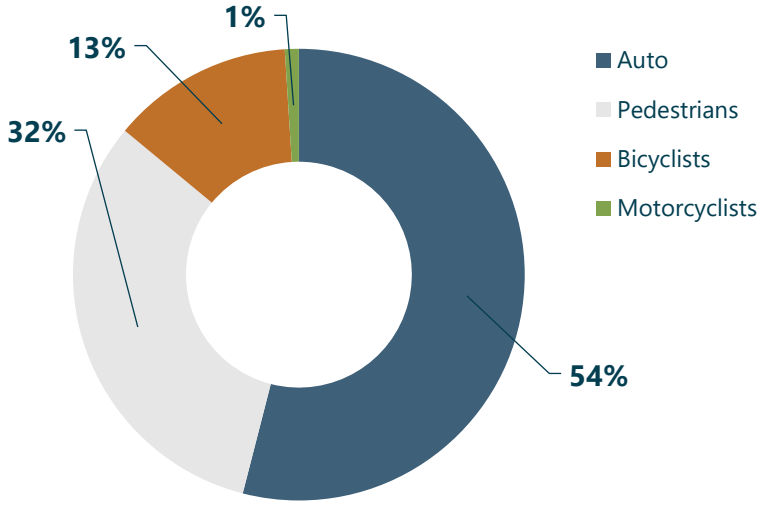
San Bernardino County, Daily Commute Trips (By Mode 2014-2024)



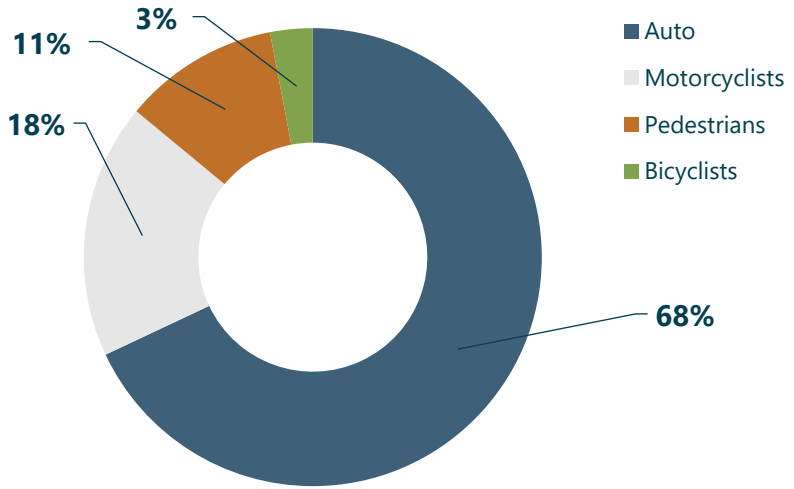
San Bernardino County, Total Collisions (By Mode at Fault 2014-2024)



San Bernardino County, Fatal Collisions Victims (By Mode 2014-2024)



San Bernardino County, Serious Injury Collisions Victims (By Mode 2014-2024)



San Bernardino County

San Bernardino County borders the counties of Inyo (north), Kern (northwest), Los Angeles (west), Orange (southwest), and Riverside (south). The Arizona counties of Mohave and La Paz lie to the east across the Colorado River. San Bernardino County contains 20,056 square miles of land, making it the largest county in the nation. With a population of about 2.2 million, San Bernardino County is the fifth most populous county in the state. Residents of San Bernardino County drove an average of 10,238 miles per capita each year from 2014 to 2024 (Caltrans and California Department of Finance, 2024).

Overall Safety Trends

Between 2014 and 2024, an average of 321 people were killed, 910 people seriously injured, and 13,544 people sustained other injuries each year in traffic collisions in San Bernardino County. Over the past decade, San Bernardino County experienced an increase in fatal injury victims with a small spike in 2017 (334 victims) before it reached a peak in 2022 (445 victims), as observed in **SB Figure 1**. The number of serious injury victims consistently increased from the lowest number reported in 2014 (605 victims) to a peak of 2021 (1,181 victims), as shown in **SB Figure 2**. **SB Maps 1** and **2** reflect the locations of reported collisions that resulted in a fatality or serious injury in San Bernardino County in 2024. Areas with a high density (or concentration) of collisions are referred to as collision hot spots. **SB Map 1** shows fatal collision hot spots in the cities of Upland, Rancho Cucamonga, Ontario, Chino, Fontana, San Bernardino, Colton, Loma Linda, Yucaipa, Hesperia, Victorville, and Apple Valley, and in unincorporated areas of San Bernardino County. **SB Map 2** shows hot spots of serious injury collisions in the cities of Upland, Montclair, Fontana, San Bernardino, Redlands, and Victorville, and in unincorporated San Bernardino County. Although they were not considered hot spots, several fatal and serious injury collisions occurred along Interstate 15 and other major routes in non-urban areas of the county.

From 2014 to 2024, about 73 percent of people killed in San Bernardino County traffic collisions were in vehicles or on motorcycles while the other 27 percent were walking or bicycling. Of the roughly 321 fatalities that occurred on average each year in San Bernardino County, an average of 88 victims were walking or biking. **SB Figure 3** reflects the number of people killed or seriously injured while walking in San Bernardino County between 2014 and 2024. Pedestrian fatalities followed a similar pattern to total victims, with a peak in 2023 (111 victims), while pedestrian serious injuries were more variable compared to total victims with spikes observed in 2017 (111 victims), 2019 (119 victims), and 2021 (135 victims). **SB Map 3** highlights pedestrian-involved fatal and serious injury collisions reported in San Bernardino County in 2024. Pedestrian-involved collisions primarily occurred in urbanized and incorporated areas of the county.

SB Figure 4 reflects the reported number of people killed or seriously injured while biking in San Bernardino County between 2014 to 2024. Bicyclist fatalities and serious injuries did not illustrate clear or distinct trends. Although there was a small dataset of reported bicyclist-involved collisions, there was a clear increase in reported fatalities in 2022 (19 victims) and 2023 (17 victims). Similarly, bicyclist serious injuries peaked in 2022 (55 victims), tripling from the lowest number in 2016 (18 victims). **SB Map 4** highlights reported bicyclist-involved collisions resulting in a fatality or serious injury that occurred in San Bernardino County in 2024. Bicyclist-involved collisions primarily occurred in urbanized and incorporated areas of the county.

To provide a point of comparison across the region, **SB Figure 5** shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Compared to the SCAG region, San Bernardino County generally had a higher fatality rate per 100,000 people, which was nearly two times the regional fatality rate in more recent years (2021 to 2024). Similarly, San Bernardino County consistently had a higher serious injury rate per 100,000 people until it declined more towards the regional serious injury rate in 2024. **SB Figure 6** demonstrates that normalizing vehicle miles traveled (VMT), fatal and serious injury rates in the county were generally consistent with non-normalized trends. The consistency between the patterns of the absolute number and rates for fatalities and serious injuries suggest that factors other than population growth and VMT may have contributed to the collision trends. Compared to the SCAG region, San Bernardino County generally had a higher fatality rate per 100 million VMT, but a similar or lower serious injury rate per 100 million VMT, which indicated that collisions in San Bernardino County tend

to be more dangerous and result in more fatalities per mile traveled. Additionally, an increase in serious injuries per 100 million VMT was observed in 2020 compared to the small decline in the absolute number of serious injury victims reported that year, which indicates a potential impact from reduced travel demand experienced during the COVID-19 pandemic.

Where Collisions are Occurring

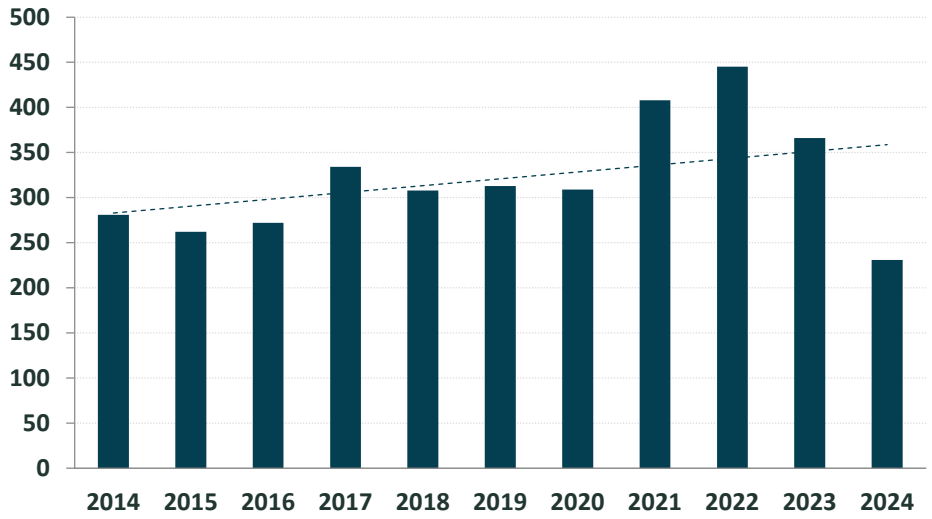
In San Bernardino County, collisions resulting in fatalities (18 percent) and serious injuries (16 percent) disproportionately occurred in rural areas between 2014 and 2024, where under seven percent of the county population lives (U.S. Census Bureau and Caltrans). However, the pattern differs for pedestrians where 94 percent of pedestrian-involved fatal collisions and 97 percent of pedestrian-involved serious injury collisions occurred in urbanized and small urban areas where 93 percent of the county population lives (88 percent in urbanized areas and five percent in small urban areas). Similarly, for bicyclist-involved collisions, about 97 percent of bicyclist-involved fatal collisions and 95 percent of bicyclist-involved serious injury collisions occurred in urbanized and small urban areas. **SB Maps 1-4** display the total fatal and serious injury collisions by mode that occurred in San Bernardino County in 2024.

SB Figure 7 shows San Bernardino County, the largest county in the nation, has an extensive roadway network consisting of 459 highway centerline miles (four percent), 1,904 arterial centerline miles (17 percent), 2,006 collector centerline miles (18 percent), and 7,032 local road centerline miles (62 percent) (Caltrans, 2024). San Bernardino County also has 146 miles of Class I bikeways (20 percent of total county bikeway facilities), 425 miles of Class II bikeways (57 percent), 150 miles of Class III bikeways (20 percent), and almost 26 miles of Class IV bikeways (three percent) as shown in **SB Figure 8** (SCAG, 2024).

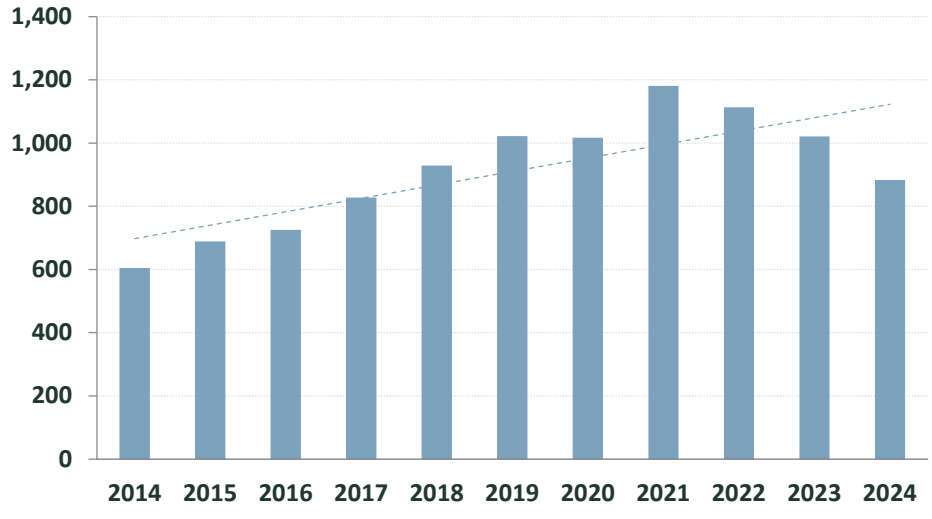
SB Figure 9 shows that between 2014 and 2024, about half of all reported fatalities (51 percent) occurred on local roads, while 18 percent occurred on arterials, and 31 percent on highways. As shown in **SB Figure 10**, approximately 52 percent of the serious injuries occurred on local roads, while 16 percent occurred on arterials, and 32 percent on highways. During the same period, about 56 percent of pedestrian fatalities occurred on local roads, 19 percent on arterials, and 25 percent on highways. For bicyclist fatalities, about 74 percent occurred on local roads, 20 percent on arterials, and six percent occurred on highways. For pedestrian serious injuries, 74 percent occurred on local roads (with 14 percent on arterials and 12 percent on highways), while 81 percent of bicyclist serious injuries occurred on local roads (15 percent on arterials and four percent on highways).

Overall, collisions in San Bernardino County disproportionately occurred on highways, while pedestrian-involved serious injury collisions and bicyclist-involved collisions disproportionately occurred on local roads, which highlight the importance for local jurisdictions to continue prioritizing safety improvements and engaging in regional coordination efforts to advance safety.

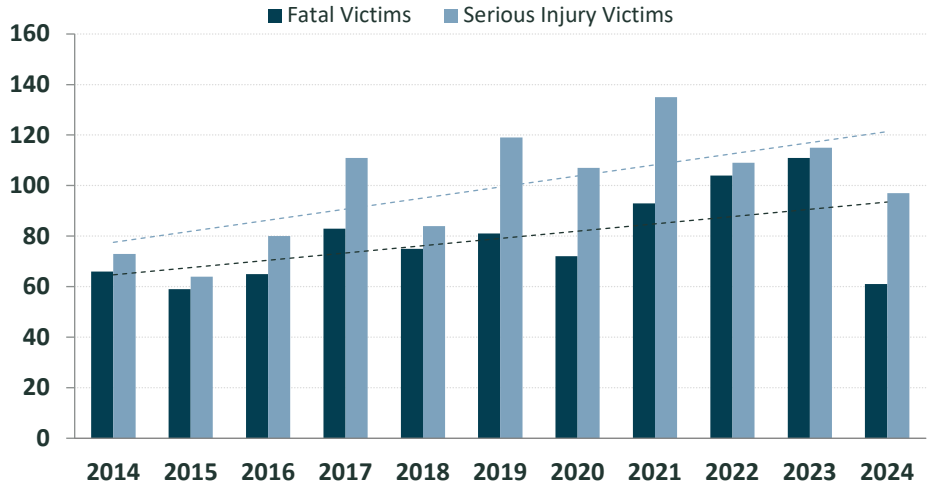
SB Figure 1: San Bernardino County, Total Number of Fatal Victims (2014-2024)



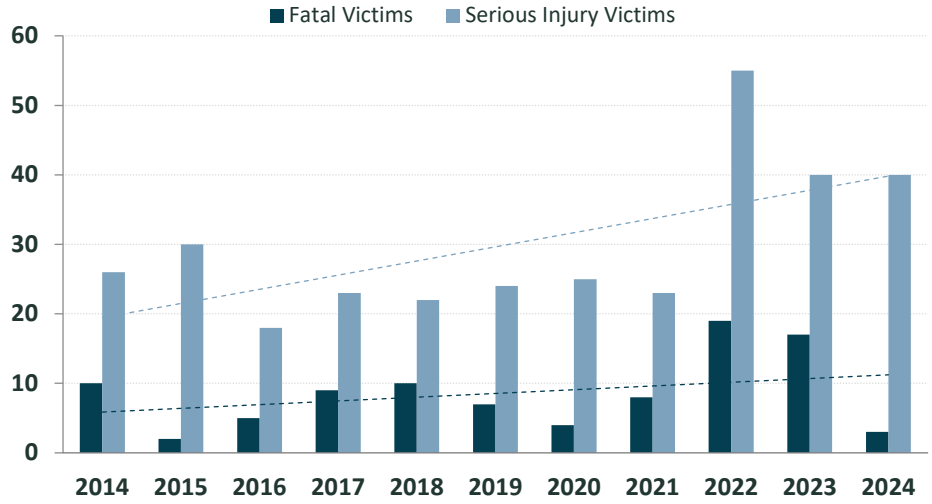
SB Figure 2: San Bernardino County, Total Number of Serious Injury Victims (2014-2024)



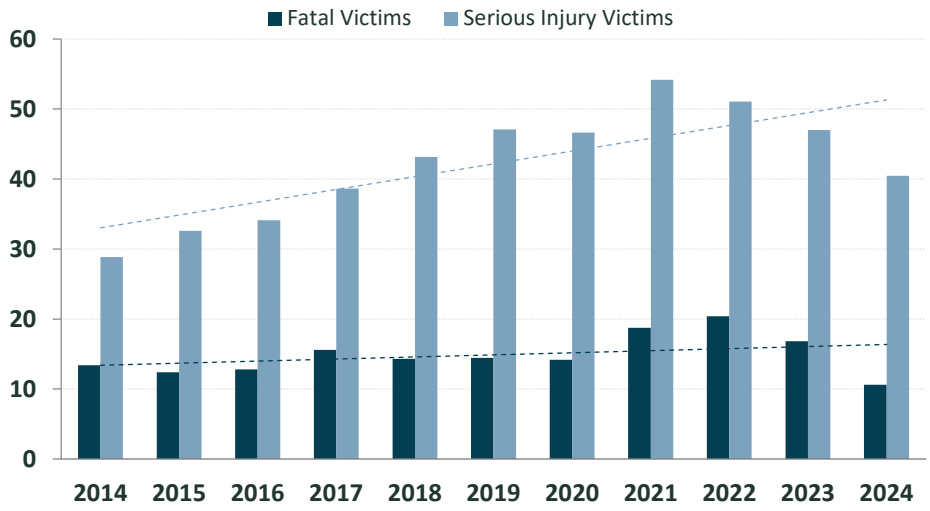
SB Figure 3: San Bernardino County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



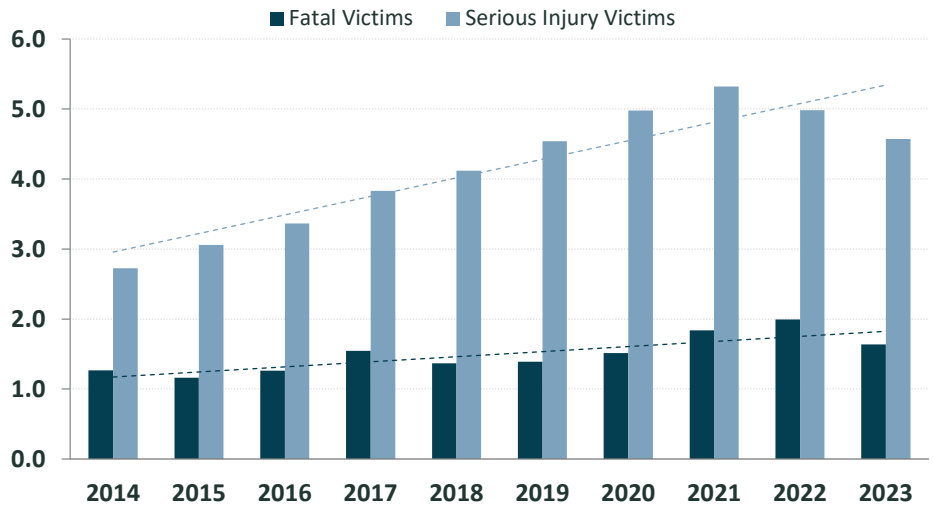
SB Figure 4: San Bernardino County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



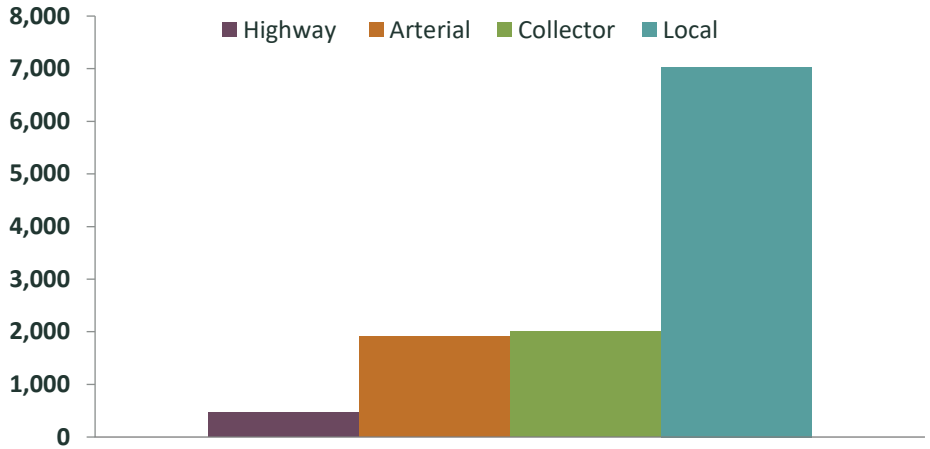
SB Figure 5: San Bernardino County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)



SB Figure 6: San Bernardino County, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)

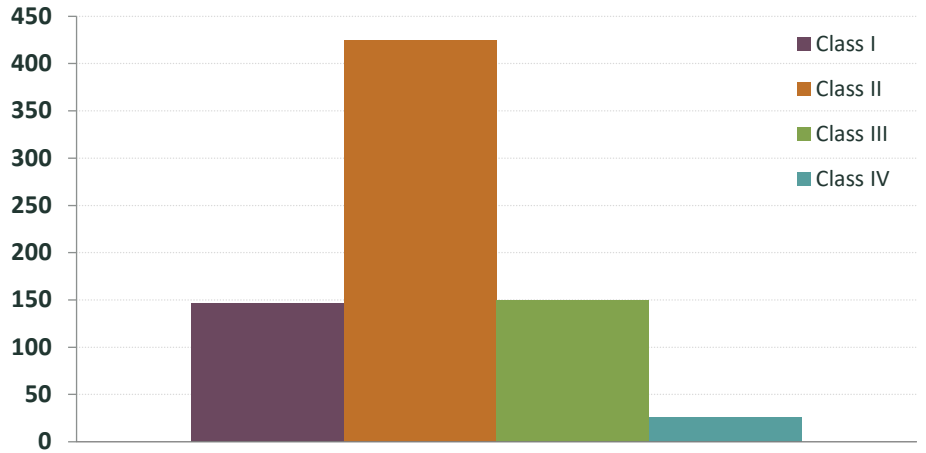


SB Figure 7: San Bernardino County, Centerline Miles by Roadway Classification (2024)



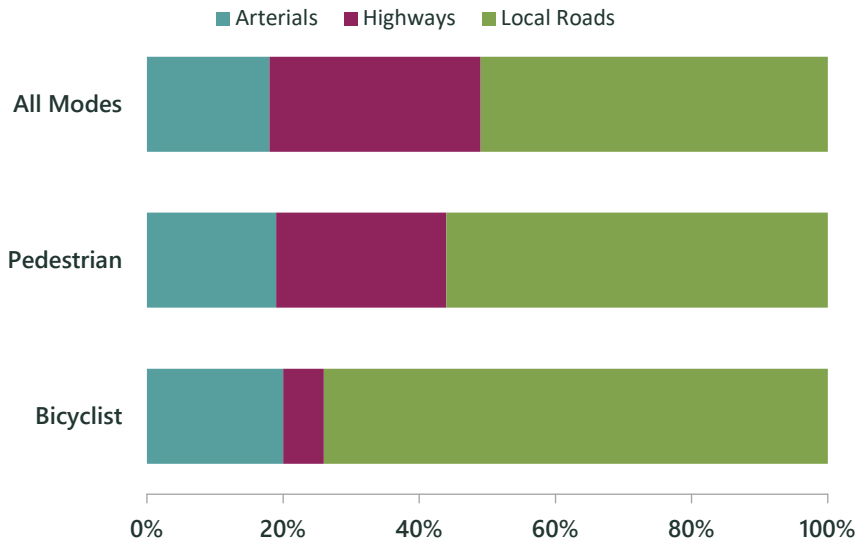
Source: Caltrans, 2024

SB Figure 8: San Bernardino County, Bikeway Miles by Classification (2024)

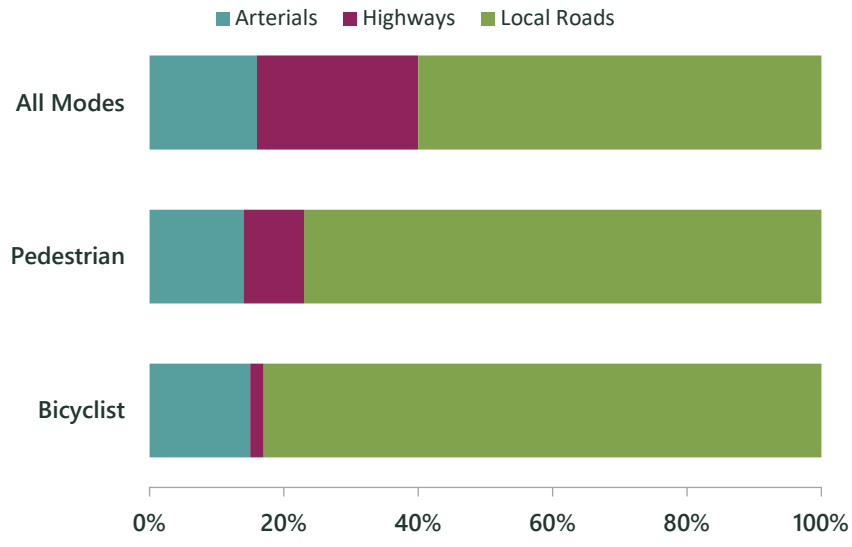


Source: SCAG, 2024

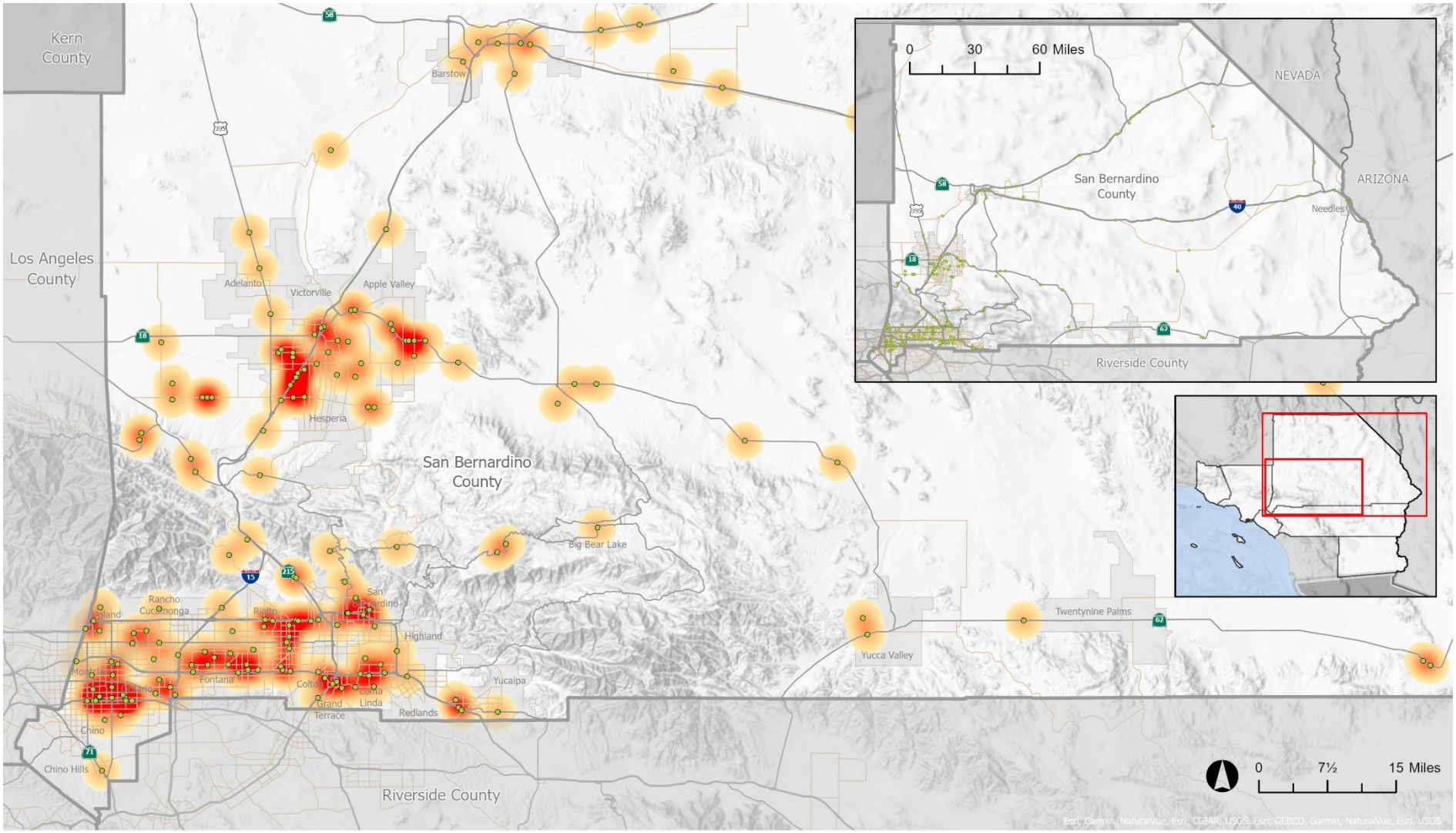
SB Figure 9: San Bernardino County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



SB Figure 10: San Bernardino County, Distribution of Serious Injury Victims by Mode and Roadway Classification (2014-2024)

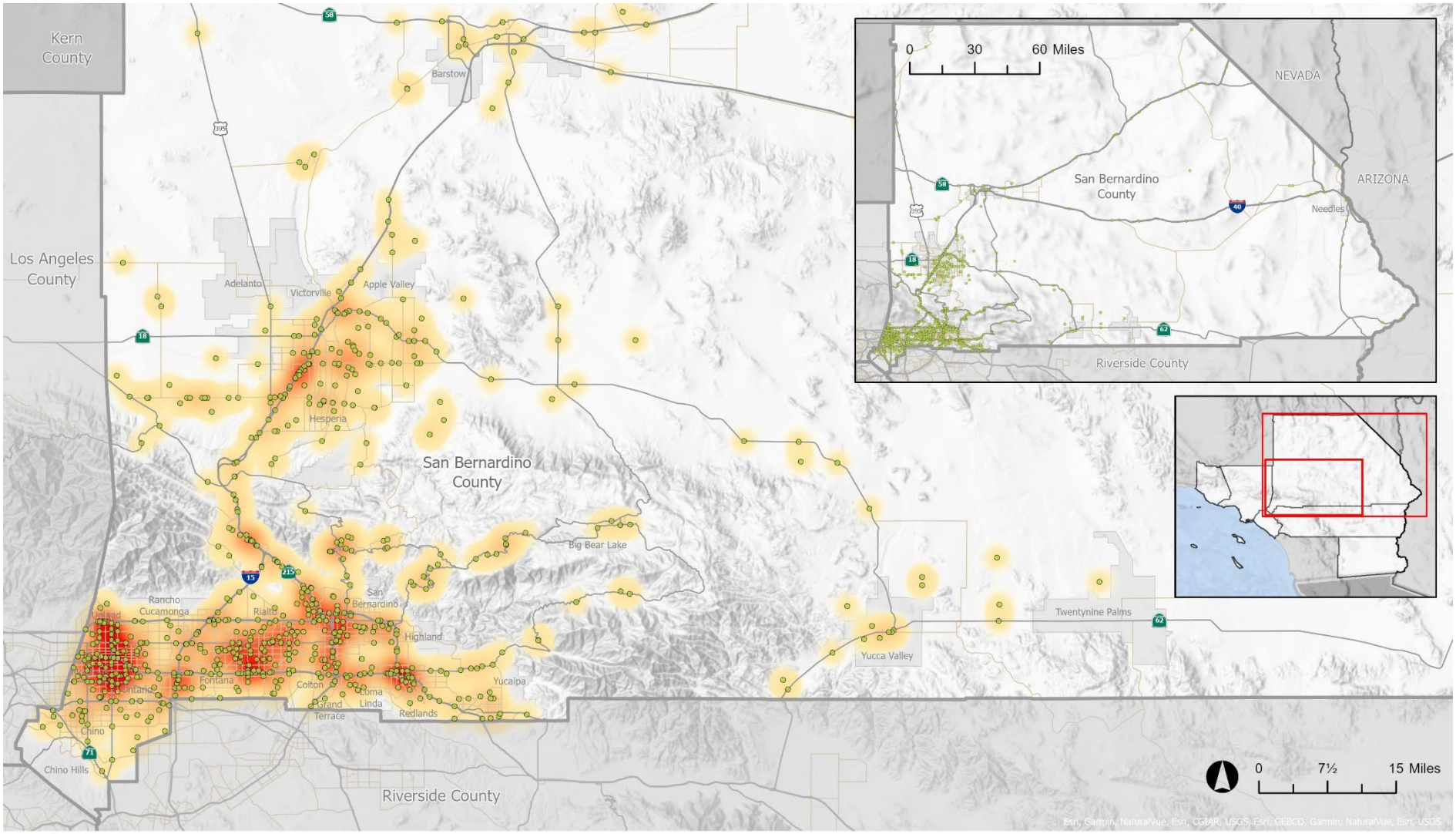


SB Map 1: San Bernardino County Fatal Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

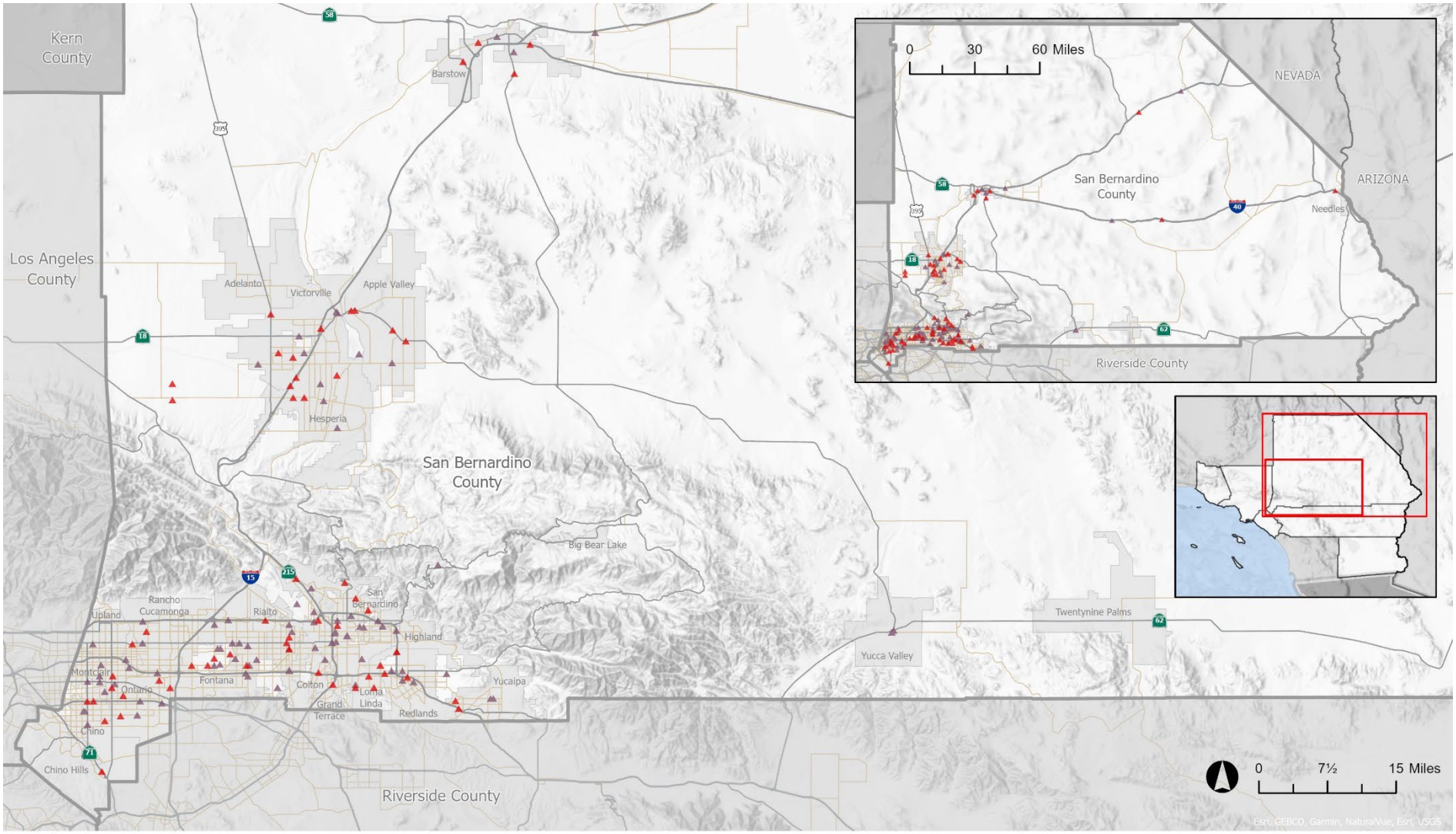
SB Map 2: San Bernardino County Serious Injury Collisions (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Serious Injury Collision
Serious Injury Collision Density
Sparse
Dense

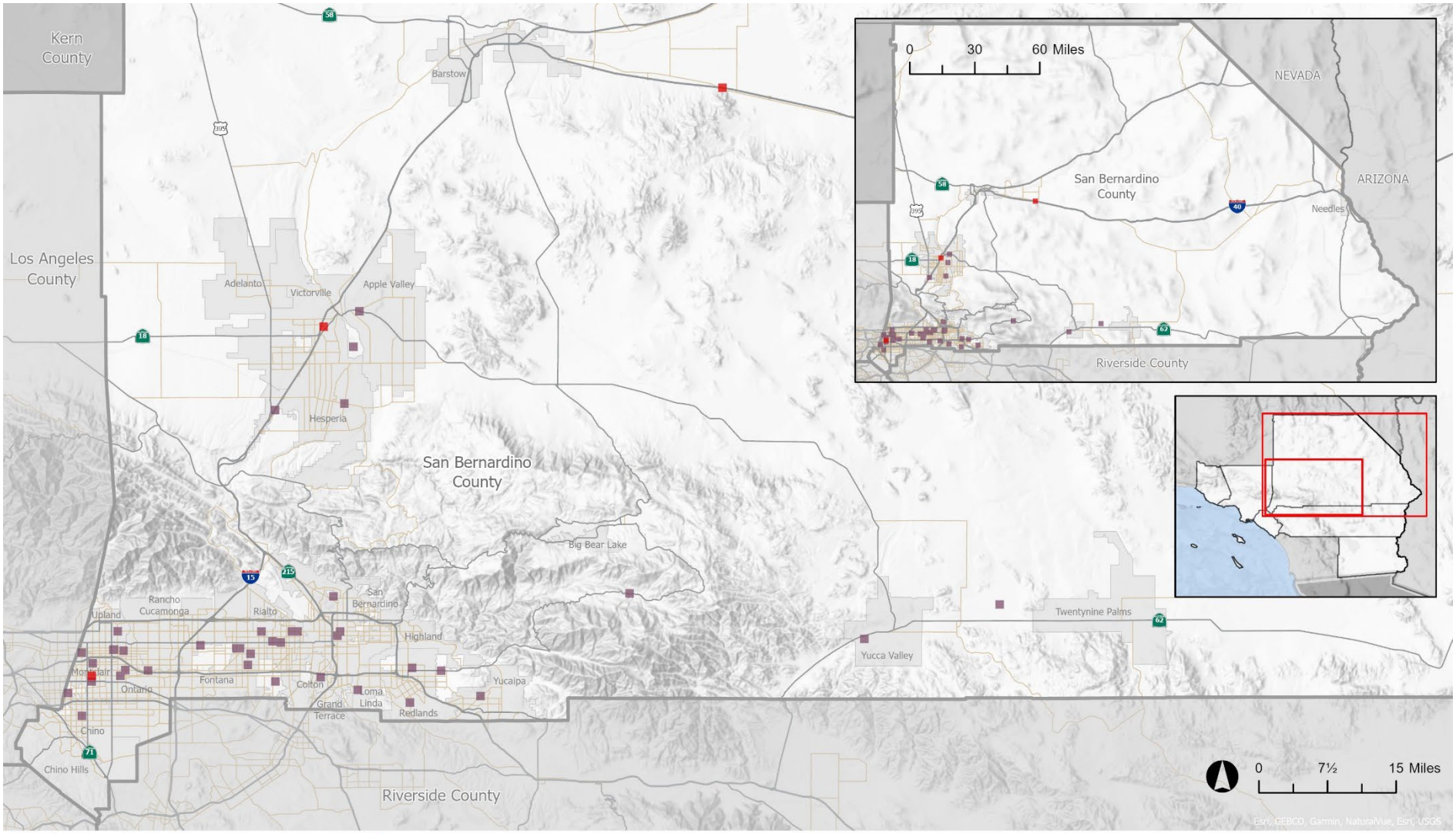
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

SB Map 3: San Bernardino County Pedestrian-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

SB Map 4: San Bernardino County Bicyclist-Involved Fatal and Serious Injury Collisions (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

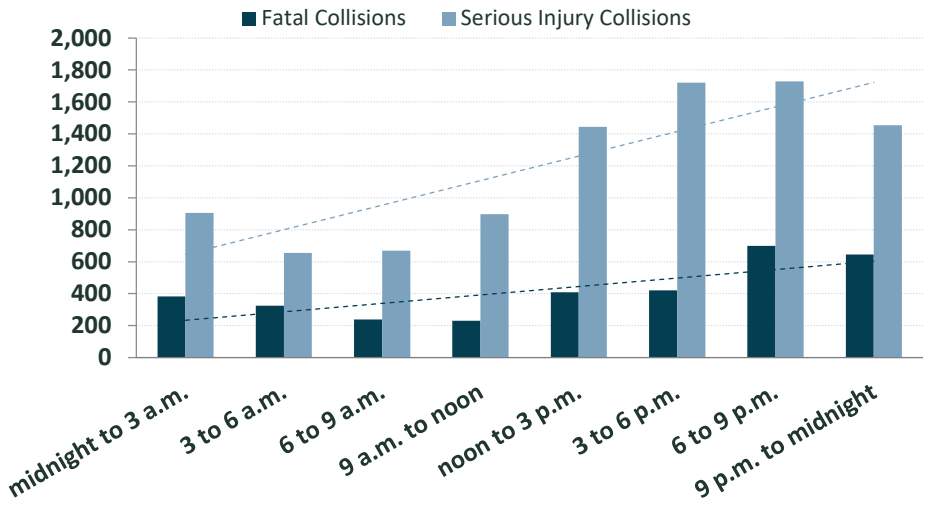
SB Figures 11 through 19 examine collision trends in San Bernardino County across several time periods, including time of day, day of week, and month of the year between 2014 and 2024.

SB Figure 11 shows that most collisions resulting in a fatal or serious injury occurred in the evening with the largest number of fatal collisions (699 collisions) and serious injury collisions (1,729 collisions) occurring in the evening between 6 p.m. and 9 p.m. **SB Figure 12** shows trends by time of day for pedestrian-involved fatal and serious injury collisions, which were also concentrated in the evening between 6 p.m. and midnight. Both pedestrian-involved fatal collisions and serious injury collisions peaked between 6 p.m. and 9 p.m., with 275 collisions and 321 collisions, respectively. **SB Figure 13** shows trends by time of day for bicyclist-involved fatal and serious injury collisions, where again, fatal collisions and serious injury collisions peaked between 6 p.m. and 9 p.m., with 29 collisions and 77 collisions, respectively.

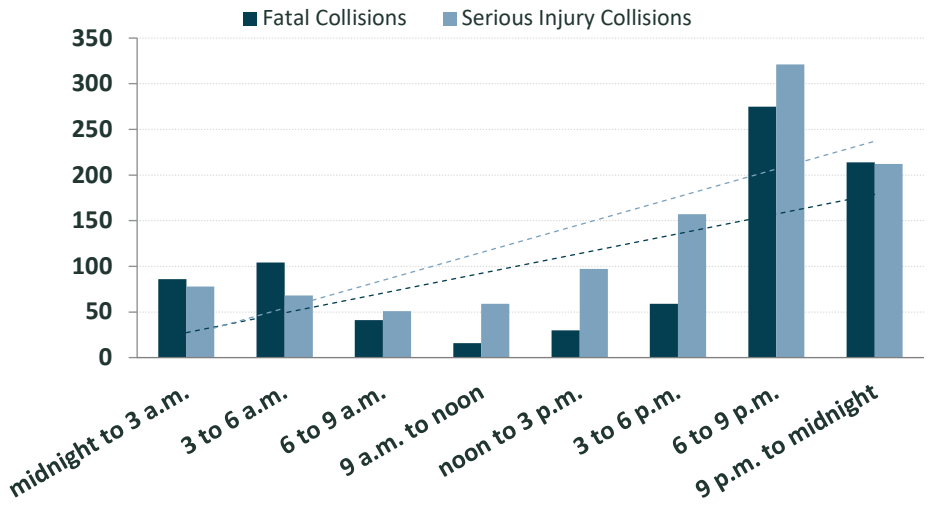
By day of the week, fatal and serious injury collisions across all modes generally decreased from Mondays to Tuesdays, then increased over the course of the week before it reached a peak on Sundays, as shown in **SB Figure 14**. Both collisions resulted in fatalities and serious injuries peaked on Sundays (616 fatal collisions and 1,786 serious injury collisions). **SB Figure 15** shows pedestrian-involved collisions dipped during the middle of the week (Tuesdays and Wednesdays) and were highest toward the end of the week (Fridays and Saturdays). Pedestrian-involved collisions resulted in fatalities that peaked on Saturdays (143 collisions), while serious injury collisions peaked on Fridays (190 collisions). **SB Figure 16** shows that bicyclist-involved fatal collisions were more frequent on weekdays (Monday through Thursday), with a peak in bicyclist fatal collisions on Tuesdays and Wednesdays (18 collisions each day), while serious injury collisions most frequently occurred on Fridays (56 collisions).

When examining San Bernardino County collisions by month between 2014 and 2024, **SB Figure 17** shows an increase in fatal and serious injury collisions over the spring (April through May), summer (June through September), and fall (October) months with a peak of fatal collisions in July (339 collisions) and serious injury collisions in October (899 collisions). **SB Figure 18** shows that pedestrian-involved collisions were more frequent during the fall (September through November) and winter (December to February) months with a peak of fatal collisions in January (96 collisions) and a peak of serious injury collisions in December (119 collisions). As shown in **SB Figure 19**, bicyclist-involved collisions had more variation throughout the year, with peaks for both fatal and serious injury collisions that occurred in August (13 fatal collisions and 42 serious injury collisions).

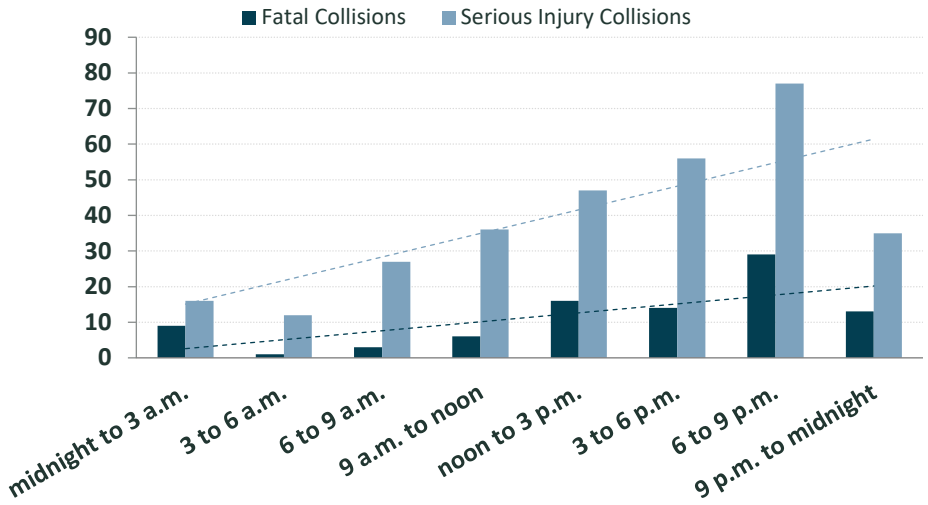
SB Figure 11: San Bernardino County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



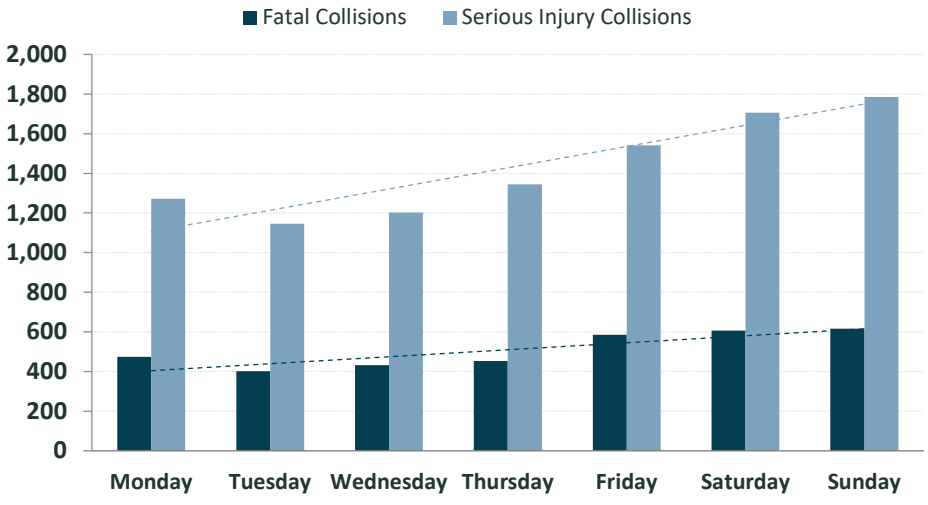
SB Figure 12: San Bernardino County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



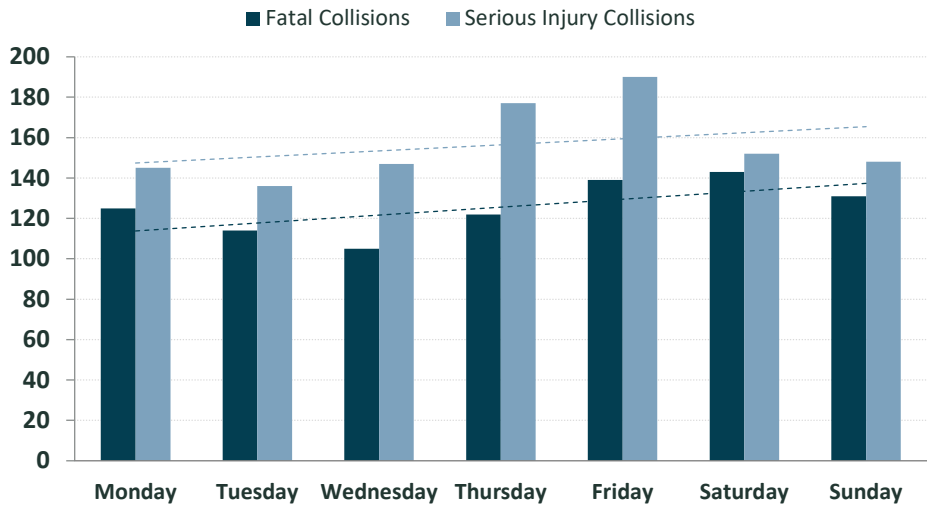
SB Figure 13: San Bernardino County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



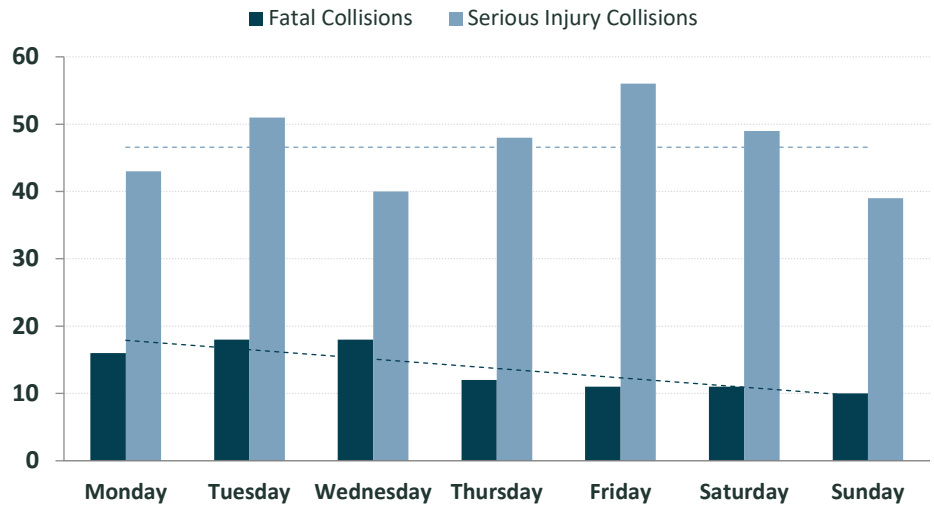
SB Figure 14: San Bernardino County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



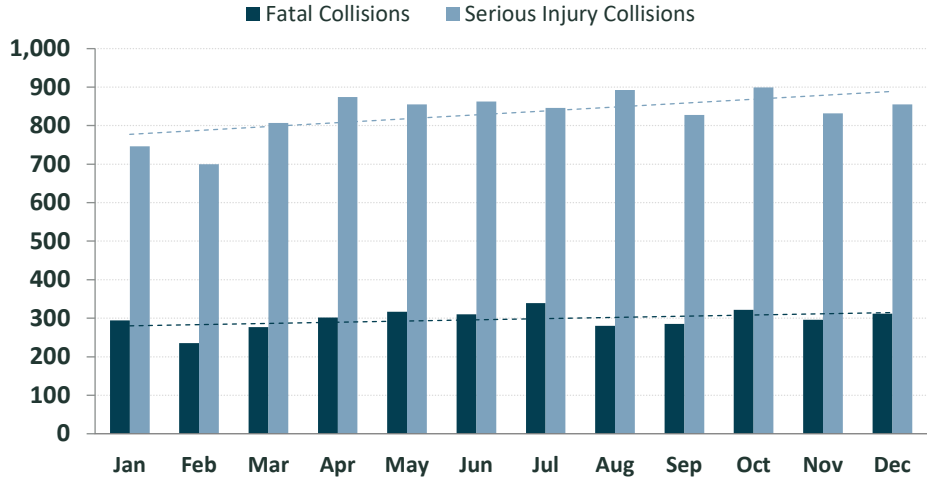
SB Figure 15: San Bernardino County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



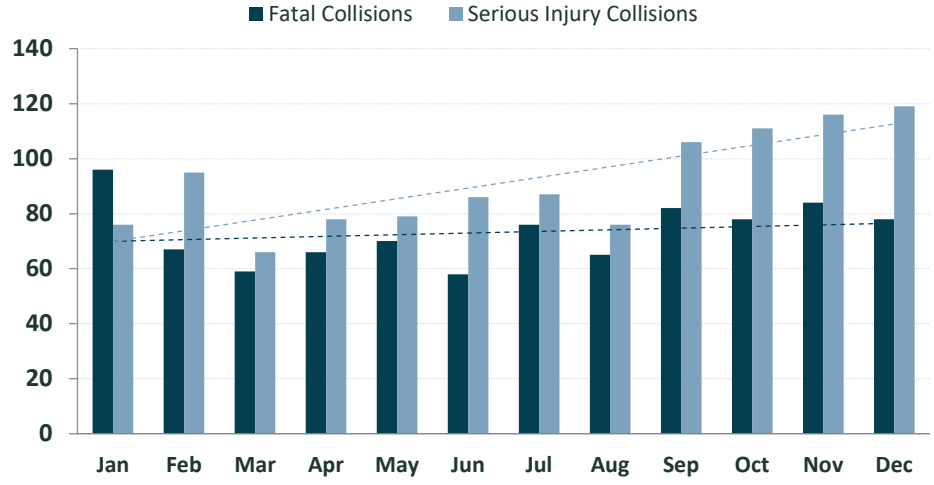
SB Figure 16: San Bernardino County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



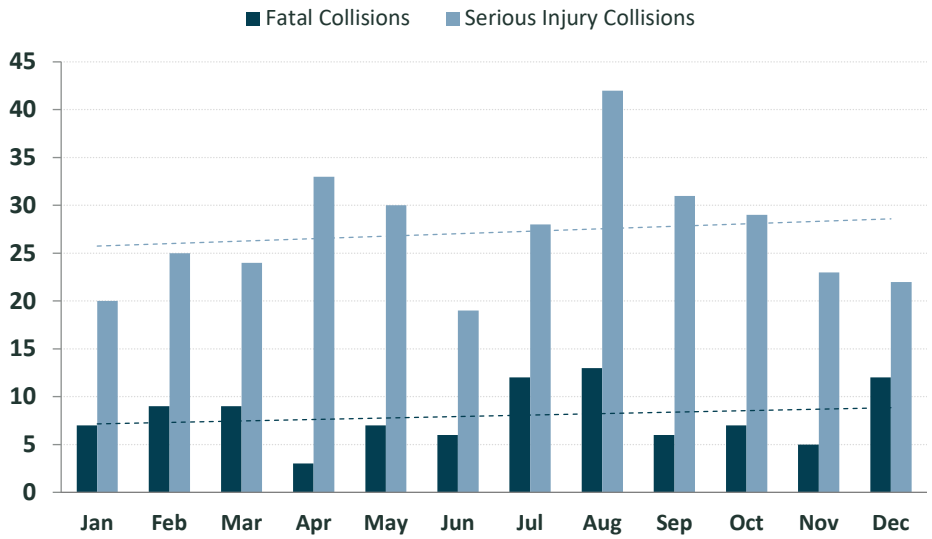
SB Figure 17: San Bernardino County, Fatal and Serious Injury Collisions by Month (2014-2024)



SB Figure 18: San Bernardino County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



SB Figure 19: San Bernardino County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In San Bernardino County, pedestrians and bicyclists accounted for about 27 percent of all fatal collision victims reported from 2014 to 2024, which is disproportionately higher than the approximately two percent of people in the county who walk or bike to work (U.S. Census Bureau). Nearly 13 percent of all trips (work and non-work) in the SCAG region were taken via walking or biking, which was also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

SB Figures 20 through 24 examine collision trends across several demographic factors between 2014 and 2024. Men experienced over two and a half times as many fatalities (2,559 victims) as women (969 victims). A similar trend was observed with serious injuries where 11,292 men and 8,179 women were seriously injured. These trends were consistent with regional and national trends where a higher number of men were involved in fatal and serious injury collisions. Additionally, between 2019, when data collection on non-binary persons began, and 2024, there were two reported serious injury victims (one passenger and one pedestrian) among non-binary people in San Bernardino County.

As observed in **SB Figure 20**, when victims of fatal collisions are stratified by age group, the largest number of fatalities occurred in those aged 25 to 34 (780 victims), representing 22 percent of all fatal victims in San Bernardino County between 2014 and 2024. Fatalities occurred more often in men than women in every age group except for women aged zero to four, 10 to14, and over 85. Similarly, **SB Figure 21** shows the largest number of serious injuries occurred among those aged 25 to 34 (4,785 victims), which represents over 24 percent of total reported serious injuries. Although men were consistently involved in more serious injury collisions, women aged five to nine were involved in more serious injury collisions.

When analyzing trends by victim role (i.e., driver, passenger, bicyclist, or pedestrian), additional patterns emerge. Drivers experienced the largest number of fatalities (1,959 victims), followed by pedestrians (877 victims), passengers (606 victims), and bicyclists (96 victims). **SB Figure 22** shows over three times as many drivers killed in collisions were men (1,543 victims) than women (406 victims), while more passengers killed in collisions were women (319 victims) than men (284 victims). There were more fatalities among men who were walking (644 victims) compared to women who were walking (229 victims), and over seven times as many fatalities among men who were biking (83 victims) compared to women who were biking (11 victims).

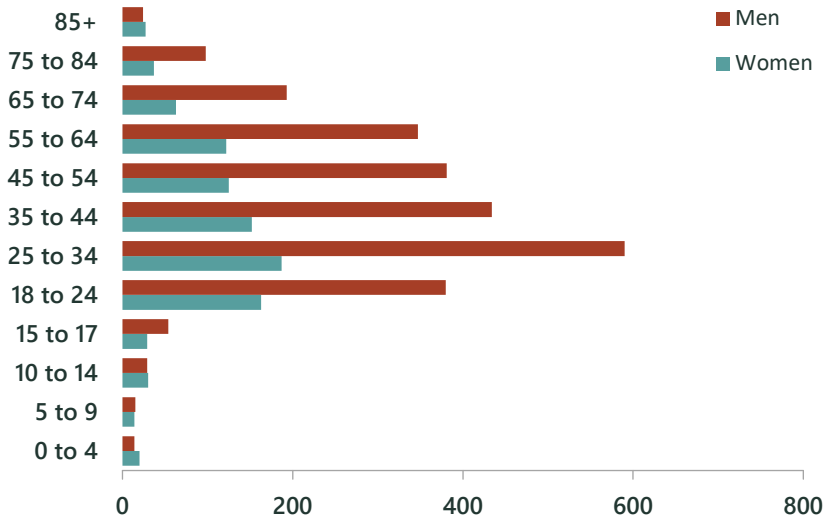
SB Figure 23 shows a similar pattern for serious injury victims, though more passengers experienced serious injuries (3,026 women and 2,035 men) than pedestrians (389 women and 828 men). Men who were driving still experienced the greatest number of serious injuries (7,968 victims) compared to women who were driving (4,661 victims), and more men who were walking (828 victims) and biking (404 victims) suffered a serious injury compared to women who were walking (389 victims) and biking (61 victims).

Overall, men who were driving constituted over 43 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (378 victims) in San Bernardino County between 2014 and 2024.

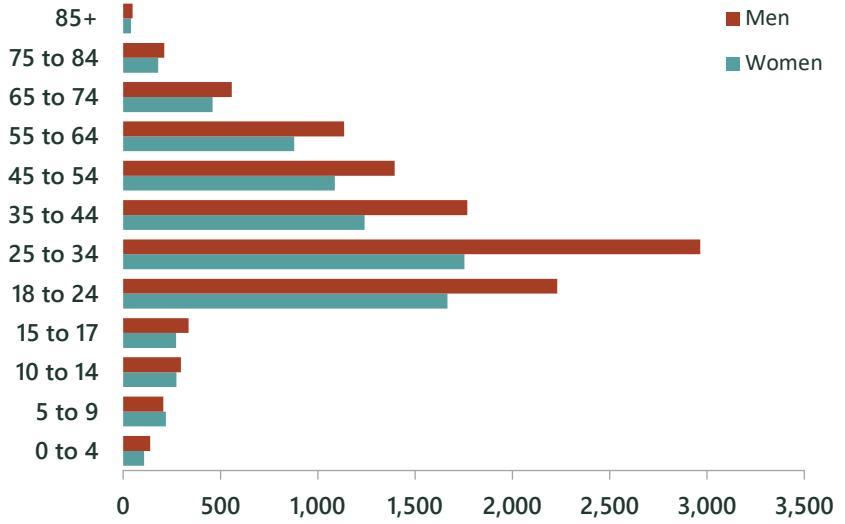
SB Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county population in 2024. Black individuals were overrepresented in collisions compared to their proportion of the county population. While Black individuals represent under eight percent of the county's population, Black individuals constituted over ten percent of serious injury victims and almost 12 percent of all collision victims. Non-Hispanic White individuals were also overrepresented among fatal and serious injury victims as they represent about 26 percent of the county population but constituted 39 percent of fatal victims and 34 percent serious injury victims.

SB Maps 5 and **6** illustrate the location of fatal and serious injury collisions relative to Priority Equity Communities in San Bernardino County in 2024. As illustrated on these maps, more fatal and serious injury collisions occurred in and around Priority Equity Communities compared to collisions that occurred outside those areas. It should be noted that serious collisions were not exclusive to these designated areas, which suggested that safety improvements should be focused on the vulnerabilities of people rather than generalized geographies.

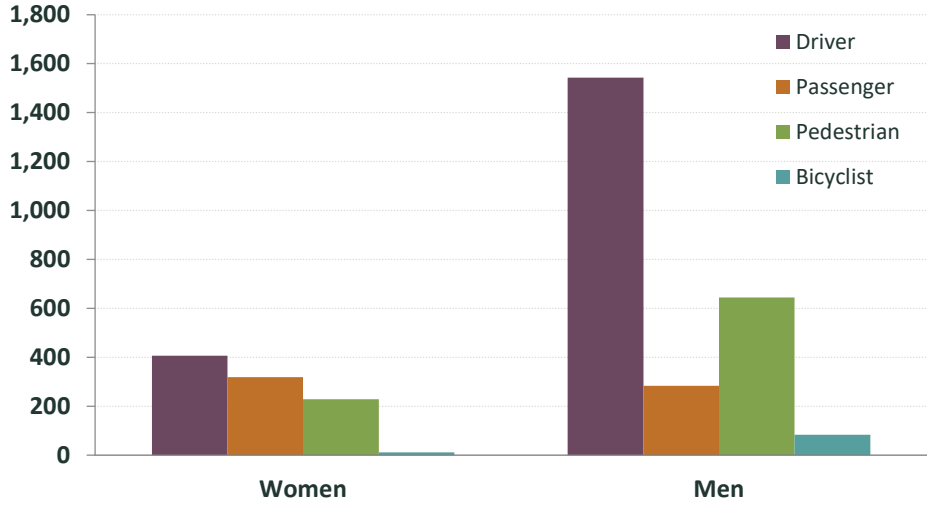
SB Figure 20: San Bernardino County, Fatal Victims by Age and Gender (2014-2024)



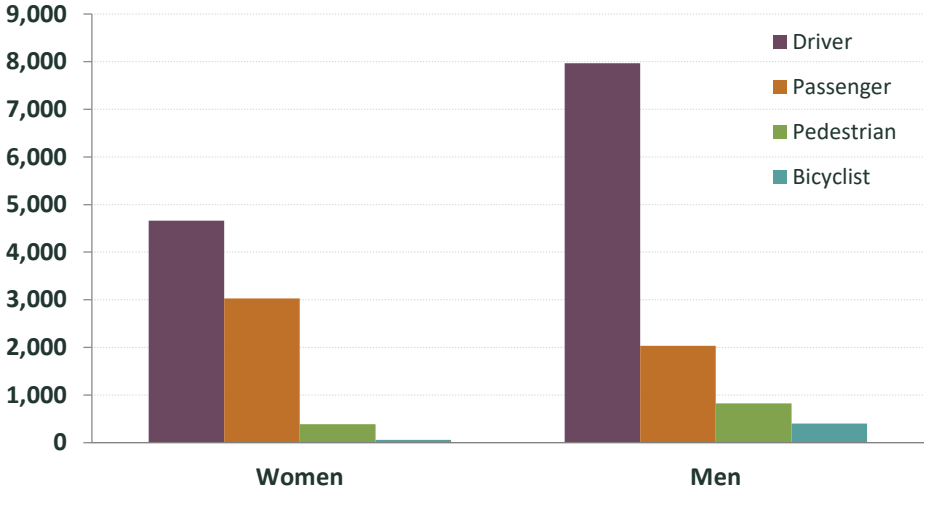
SB Figure 21: San Bernardino County, Serious Injury Victims by Age and Gender (2014-2024)



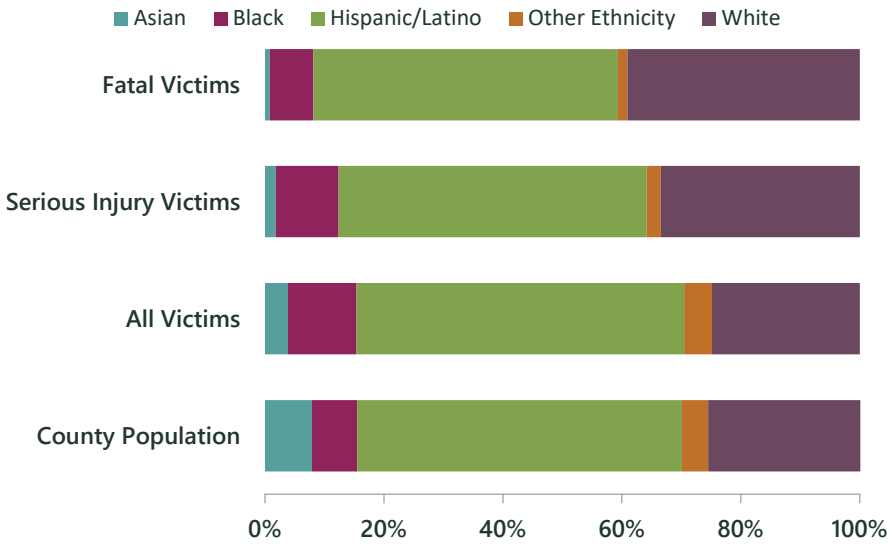
SB Figure 22: San Bernardino County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



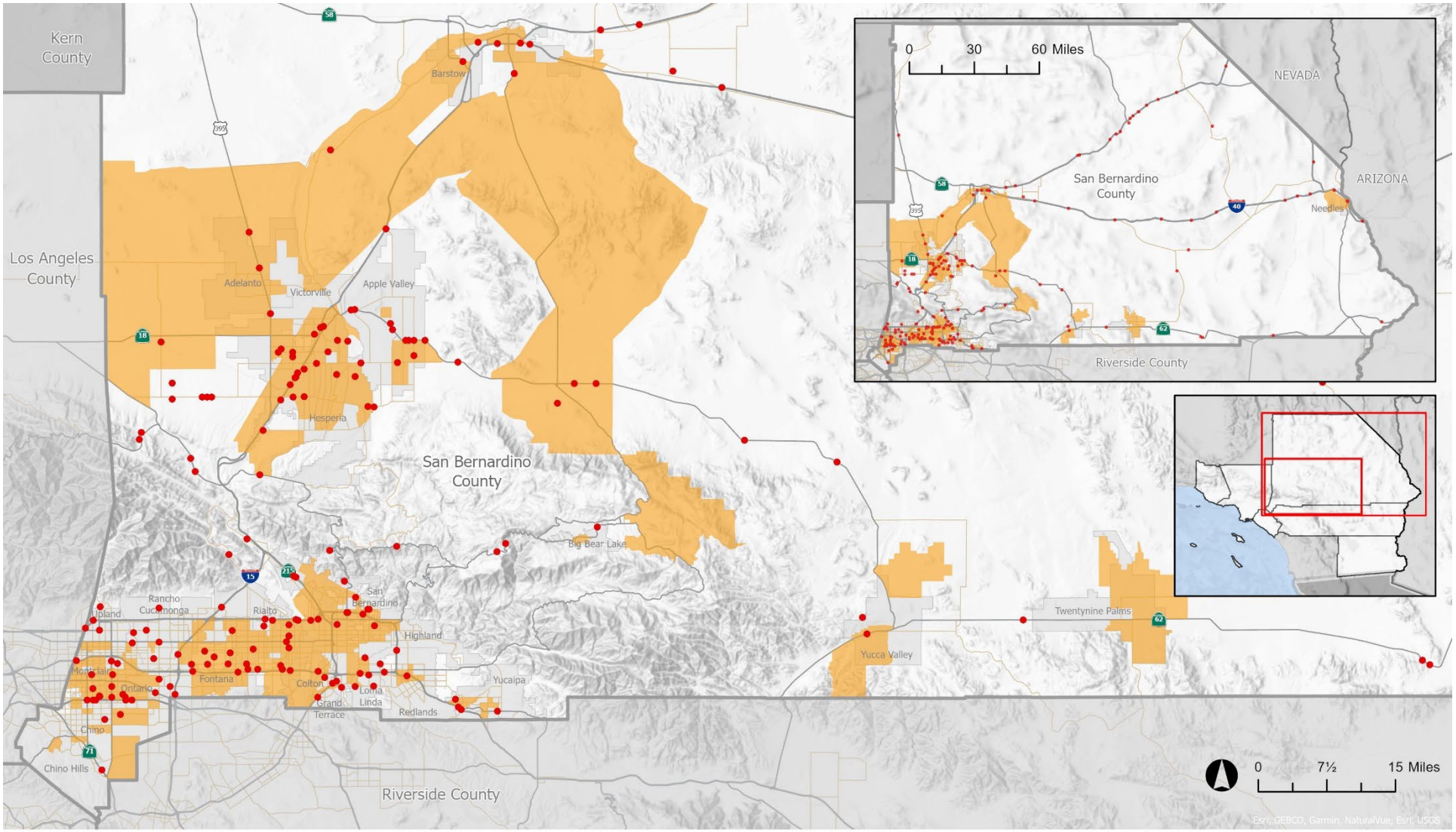
SB Figure 23: San Bernardino County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



SB Figure 24: San Bernardino County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)



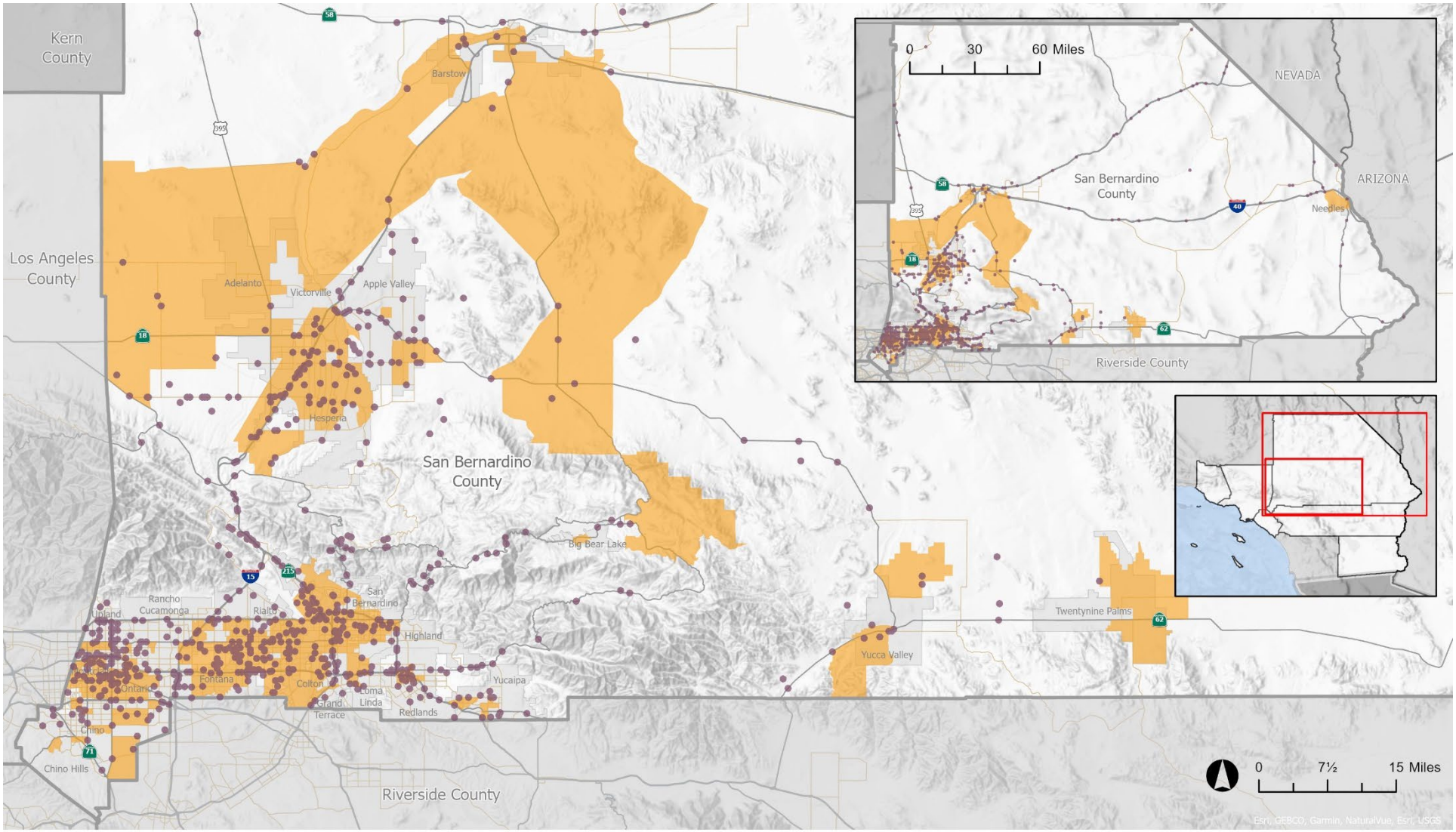
SB Map 5: San Bernardino County Fatal Collisions in Priority Equity Communities (2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Fatal Collision
Priority Equity Communities

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

SB Map 6: San Bernardino County Serious Injury Collisions in Priority Equity Communities (2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

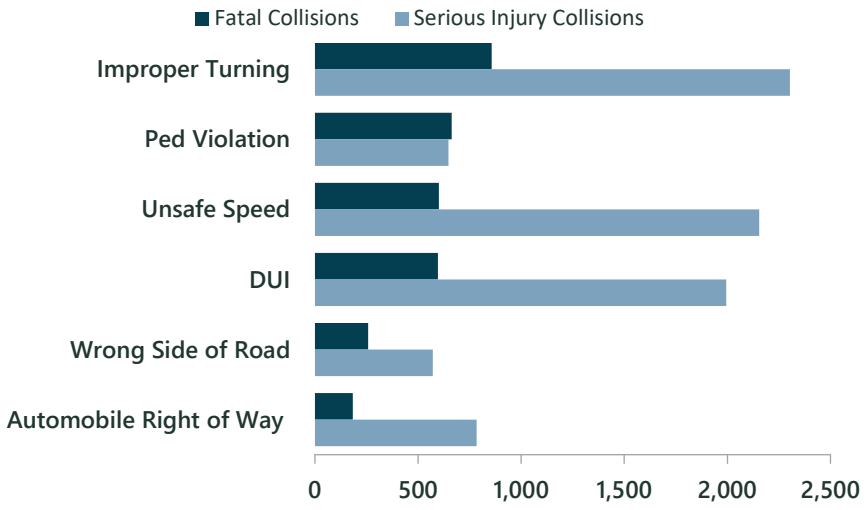
Why Collisions are Occurring

SB Figures 25 through 27 reflect the top primary collision factors (PCFs) for fatal and serious injury collisions for San Bernardino County between 2014 and 2024. The PCF is the main cause of the collision determined by the officer at the collision scene but there may be other contributing factors the officer notes as "other associated factors" on the collision report. As shown in **SB Figure 25**, the top three PCFs for fatal collisions were improper turning (23 percent), pedestrian violation (18 percent), and unsafe speed (16 percent). For serious injury collisions, the top PCFs were improper turning (23 percent), unsafe speed (21 percent), and driving under the influence (19 percent). Compared to the SCAG region, these PCFs were generally consistent with regional trends. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

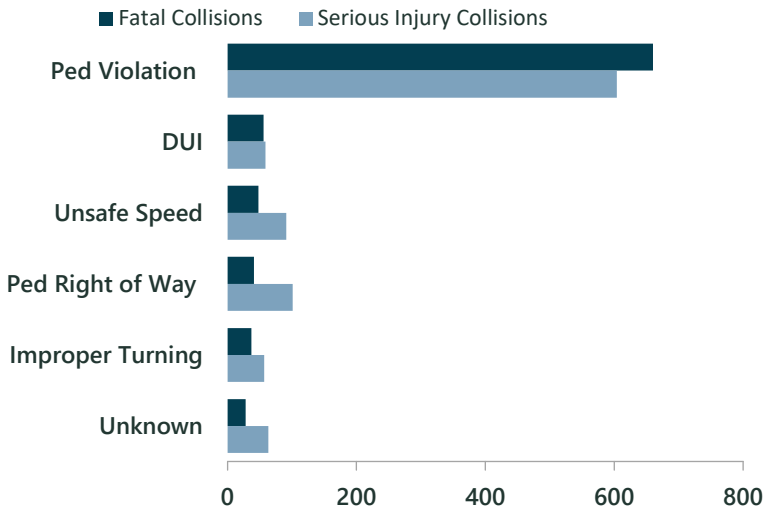
SB Figure 26 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions. Consistent with regional trends, the top PCF for fatal and serious injury pedestrian-involved collisions was pedestrian violation (72 percent and 57 percent). San Bernardino County deviated from the regional trend in that pedestrian right of way was significantly less prominent as a factor of collisions in the county. The other top PCFs for fatal pedestrian-involved collisions include driving under the influence (six percent) and unsafe speed (five percent). For serious injury collisions, the other top PCFs were pedestrian right of way (ten percent) and unsafe speed (nine percent). Additional analysis that considers "other associated factors" noted in the collision reports and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide more detailed insights into on how to reduce the risk of pedestrian collisions in the county.

SB Figure 27 reflects the top PCFs for bicyclist-involved fatal and serious injury collisions in San Bernardino County. Consistent with regional trends, the top PCFs for fatal bicyclist-involved collisions were wrong side of the road (18 percent), improper turning (18 percent), and traffic signals and signs (15 percent). For serious injury collisions, the top PCFs are traffic signals and signs (18 percent), improper turning (18 percent), and unsafe speed (17 percent), which are similar to regional trends, though improper turning was a more significant issue in the county compared to the region.

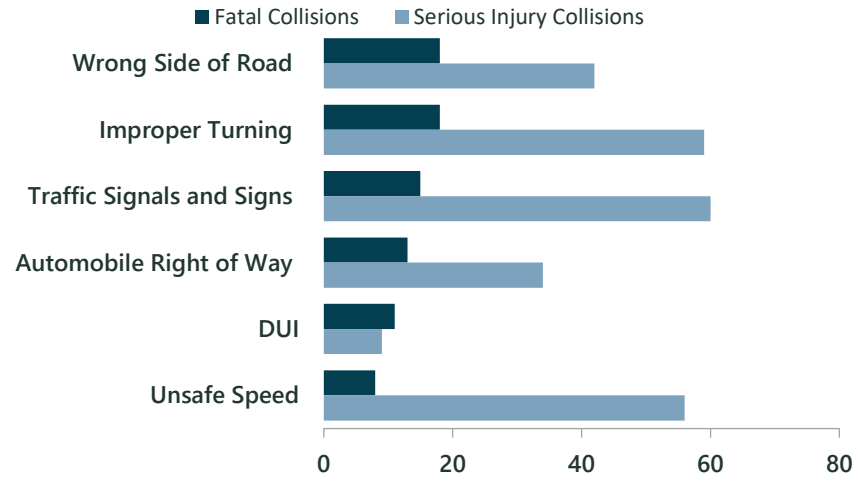
SB Figure 25: San Bernardino County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



SB Figure 26: San Bernardino County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



SB Figure 27: San Bernardino County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



San Bernardino County Conclusion

Overall, between 2014 and 2024, San Bernardino County experienced an average of 321 traffic fatalities and 910 serious injuries annually, with most incidents involving vehicles or motorcycles. Over the past decade, fatalities and serious injuries continued to increase, reaching a peak in 2022 and 2021, respectively. All collisions, including pedestrian and bicyclist-involved collisions, were concentrated in urban areas in San Bernardino County and along key highways. A majority of fatal and serious injury collisions across all modes in San Bernardino County occurred on local roads. Compared to the SCAG region, San Bernardino County generally had a higher fatality rate per 100,000 people, which was nearly two times the regional fatality rate in more recent years. Similarly, San Bernardino County consistently had a higher serious injury rate per 100,000 people until it declined towards the regional serious injury rate in 2024. The county also had a generally higher fatality rate per 100 million VMT, but a similar or lower serious injury rate per 100 million VMT, which indicates that collisions in San Bernardino County tend to be more dangerous and result in more fatalities per mile traveled.

When examining temporal patterns, fatal and serious injury collisions were more common in the evening and tended to peak on weekends, particularly Sundays. Fatal collisions generally increased through the spring and fall, peaking in July. Demographic data highlighted that young adults, especially men aged between 25-34 were overrepresented in fatal collisions across nearly all age groups. Additional demographic data showed that Black and Non-Hispanic White individuals were overrepresented among fatal and serious injury victims. Fatal and serious injury collisions occurred within or near Priority Equity Communities in northern San Bernardino County, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Improper turning, pedestrian violation, and unsafe speed were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. San Bernardino County had many similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black individuals. Fatal and serious injury collisions were also concentrated within Priority Equity Communities.

Ventura County

BY THE NUMBERS (2014-2024)

Vehicle Miles Traveled

7,700
annual/per capita

Injuiries from Collisions

4,613
people sustain injuries every year from collisions

266
people sustain serious injuries every year from collisions

38%
of all traffic collision victims are people 18-34

4,773
collisions occur per year on the streets—*that's roughly*

13
collisions per day

Where Collisions Occur

92%
in urban areas

49%
on local roads

23%
on highways

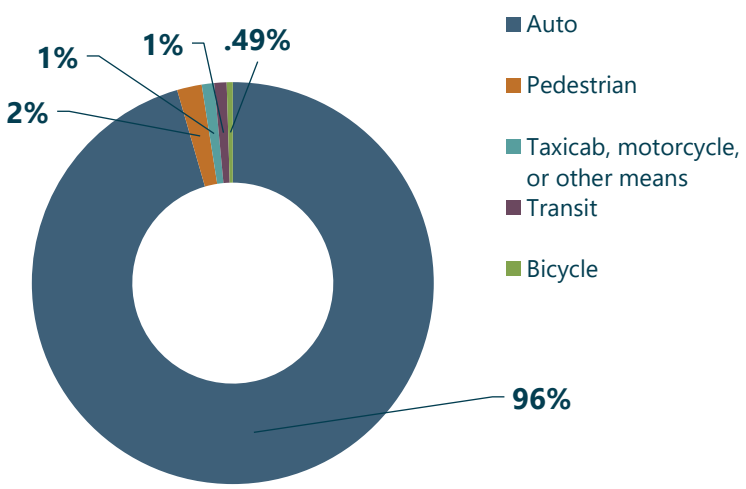
Fatalities from Collisions

53
people die every year from collisions

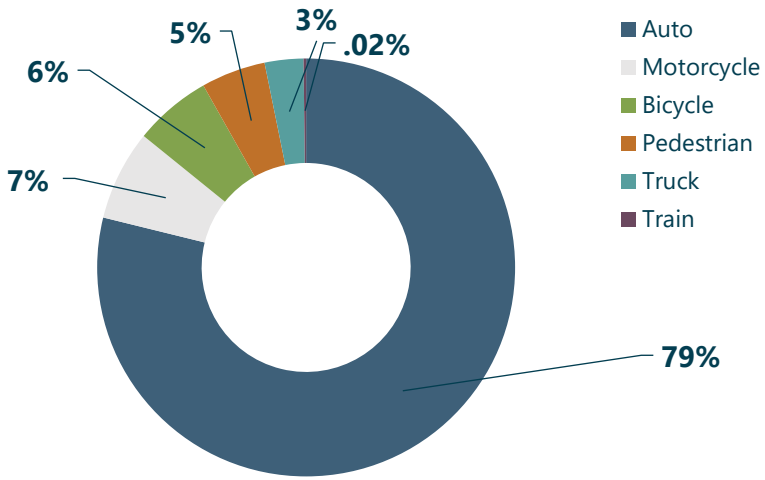
25%
of all deaths involve people walking or bicycling

31%
of all pedestrian fatal victims are 65 and older

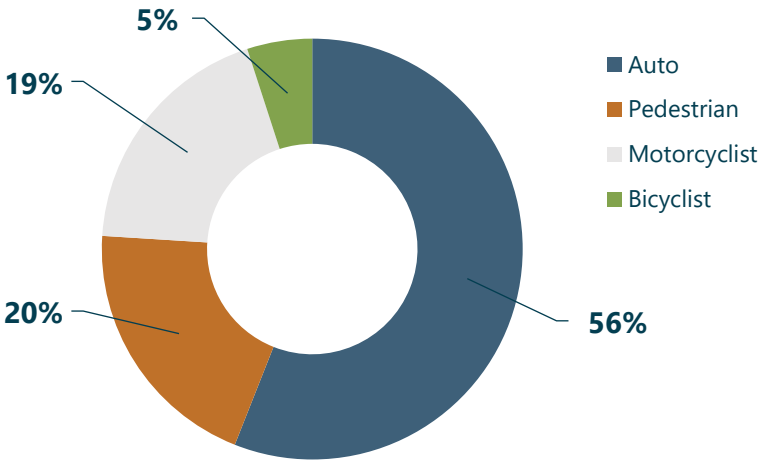
Ventura County, Daily Commute Trips (By Mode 2014-2024)



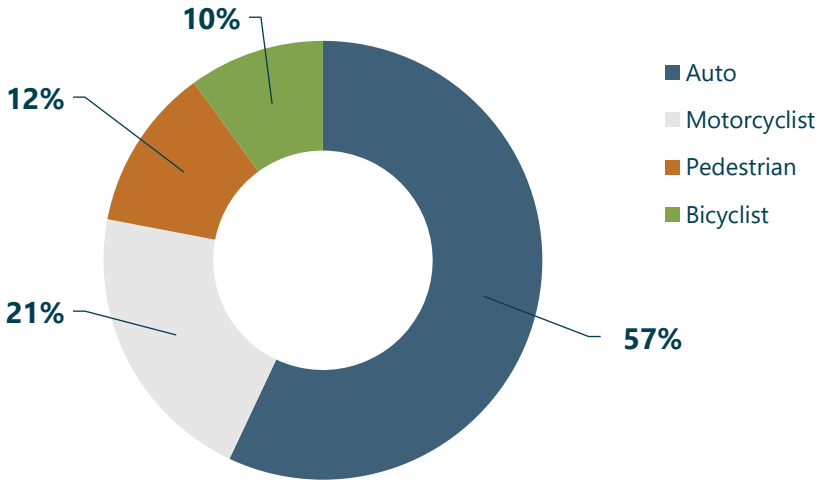
Ventura County, Total Collisions (By Mode at Fault 2014-2024)



Ventura County, Fatal Collisions Victims (By Mode)



Ventura County, Serious Injury Collisions Victims (By Mode)



Ventura County

Ventura County borders the counties of Kern (north), Los Angeles (southeast), and Santa Barbara (northwest). To the west, Ventura County borders about 42 miles of Pacific Ocean coastline. Ventura County contains 1,843 square miles of land and has a population of approximately 850,000 people. Residents of Ventura County drove an average of 7,700 miles per capita each year from 2014 to 2024 (Caltrans and California Department of Finance, 2024).

Overall Safety Trends

Between 2014 and 2024, an average of 53 people were killed, 266 people seriously injured, and 4,613 people sustained other injuries each year in traffic collisions in Ventura County. Over the past decade, the total number of fatalities reported in the county peaked three times, first in 2016 with 56 victims and then in 2021 and 2023 with 61 and 62 victims, respectively, as shown in **VN Figure 1**. A more gradual increase was observed among serious injury victims in the county, as highlighted in **VN Figure 2**, from a low of 194 victims in 2015 to a decade peak of 315 victims in 2023. **VN Maps 1** and **2** reflect the locations of reported collisions that resulted in a fatality or serious injury in Ventura County from 2014 through 2024. The maps for Ventura County display data from 2014 through 2024 to provide a historical overview of fatal and serious injuries. This broader timeframe was beneficial because Ventura County had a relatively smaller number of collisions in 2024 alone, making it difficult to identify meaningful patterns or conclusions from a single year of data. Areas with a high density (or concentration) of collisions are referred to as collision hot spots. **VN Map 1** illustrates the density of collisions resulting in fatalities was most concentrated in Oxnard, downtown Ventura, and Saticoy, with several more fatalities along and adjacent to major highways throughout the county, including U.S. Route 101, SR-33, SR-118, SR-126, and SR-232. **VN Map 2** illustrates the density of serious injury collisions in urban centers and major corridors around Ventura County, with serious injury collision hot spots comprising entire neighborhoods in the cities of Ventura, Oxnard, Port Hueneme, Camarillo, Simi Valley, Thousand Oaks, and along the Pacific Coast Highway.

From 2014 to 2024, about 75 percent of people killed in traffic collisions were in vehicles or on motorcycles while the other 25 percent of fatal victims were walking or biking. Of the roughly 53 fatalities that occurred on average each year in Ventura County, about 13 were pedestrians and bicyclists. **Figure VN 3** reflects the number of people killed or seriously injured while walking in Ventura County between 2014 and 2024. The number of fatalities was generally consistent throughout the analysis period, but the number of serious injuries generally increased over time from a low in 2015 (22 victims) to a peak in 2022 (41 victims). **VN Map 3** illustrates reported pedestrian-involved fatal and serious injury collisions that occurred in Ventura County between 2014 and 2024. Pedestrian-involved collisions primarily occurred in urbanized and incorporated areas of the county, though there were several corridors, including U.S. Route 101, Pacific Coast Highway, and SR-33, where several pedestrian-involved fatal collisions occurred.

VN Figure 4 reflects the reported number of people killed or seriously injured while biking in Ventura County between 2014 and 2024. The number of bicyclist fatalities was generally consistent throughout the analysis period, though they were at their highest in 2020 (five victims) at the onset of the COVID-19 pandemic. Bicyclist-involved serious injuries generally increased over time with a small dip in 2019 and 2020, before reaching a peak in 2021 (37 victims). **VN Map 4** illustrates reported bicyclist-involved collisions resulted in a fatality or serious injury in Ventura County between 2014 and 2024. Similar to pedestrian-involved collisions, bicyclist-involved collisions primarily occurred in the urbanized and incorporated areas of the county, though there were several park areas (e.g., Santa Monica Mountains National Recreation Area) and corridors, including U.S. Route 101, Pacific Coast Highway, SR-33, and SR-126 where several bicyclist-involved collisions occurred.

To provide a point of comparison across the region, **VN Figure 5** shows the rates of fatal and serious injury victims per 100,000 people over the last decade (2014 to 2024). Compared to the SCAG region, Ventura County consistently experienced lower fatality and serious injury rates per 100,000 people. Overall, Ventura County had more fluctuations in the rate of serious injuries compared to the region, possibly due to the county's relatively small population. **VN Figure 6** demonstrates that when normalizing for vehicle miles traveled (VMT), the trends in fatality and serious injury rates in the county were generally consistent with non-normalized trends. The consistency between the patterns of the absolute number and rate of fatalities and serious injuries suggest that factors other than population growth and

VMT may have contributed to observed collision trends. Compared to the SCAG region, Ventura County consistently had a lower fatality rate per 100 million VMT, but a similar or higher serious injury rate per 100 million VMT, which indicates that collisions in Ventura County tend to result in more serious injuries than fatalities per mile traveled.

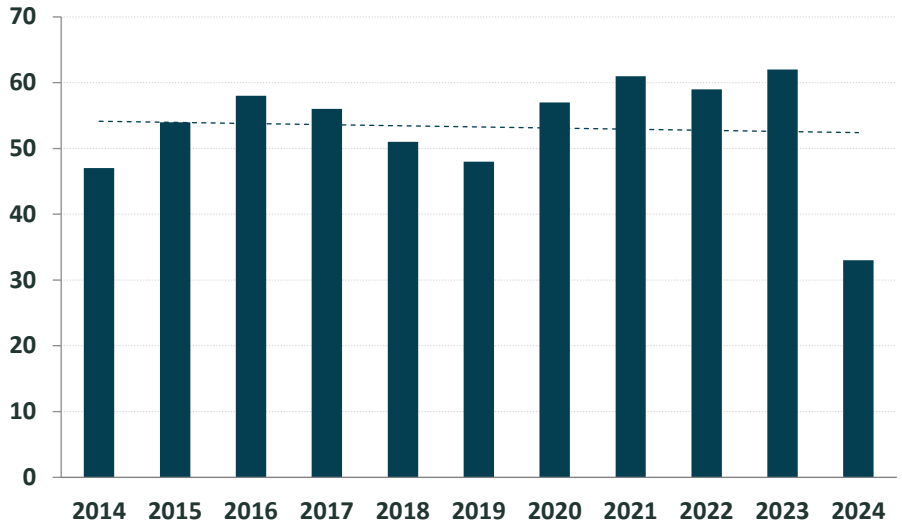
Where Collisions are Occurring

In Ventura County, collisions that resulted in fatalities disproportionately occurred in rural areas (18 percent) between 2014 and 2024, where under 12 percent of the county population lives (U.S. Census Bureau and Caltrans). However, the pattern differed for collisions that resulted in serious injuries, where only 11 percent of collisions occurred in rural areas, and the other 89 percent occurred in urbanized and small urban areas with 88 percent of the county population living in urban areas (86 percent in urbanized areas and two percent in small urban areas). For pedestrian-involved collisions, about 96 percent of fatal collisions and 98 percent of serious injury collisions occurred in urbanized and small urban areas. Similarly, for bicyclist-involved collisions, about 93 percent of fatal and serious injury collisions occurred in urbanized and small urban areas. **VN Maps 1-4** display the total fatal and serious injury collisions by mode that occurred in Ventura County in 2014-2024.

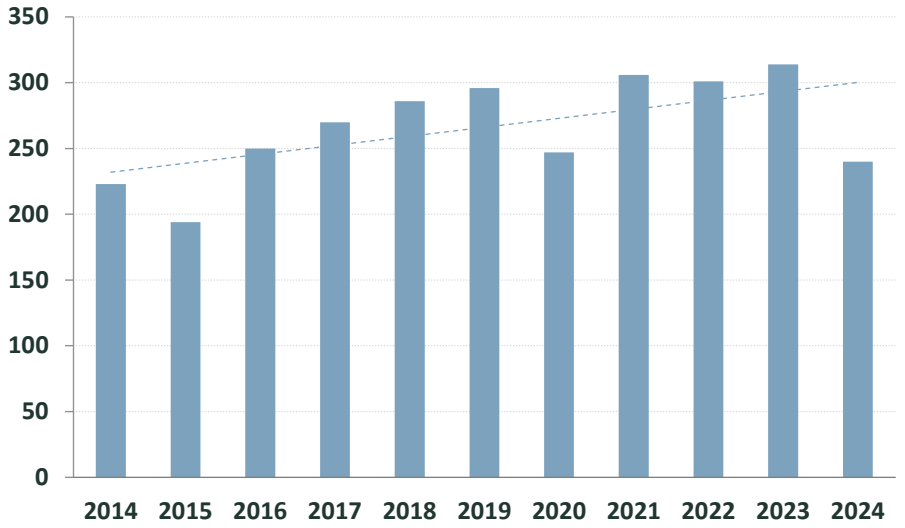
VN Figure 7 presents Ventura County's roadway network consisting of 80 highway centerline miles (three percent), 573 arterial centerline miles (19 percent), 382 collector centerline miles (13 percent), and 1,939 local road centerline miles (65 percent) (Caltrans, 2024). **VN Figure 8** shows that Ventura County has a bikeway network with 89 miles of Class I bikeways (15 percent of total county bikeways), 416 miles of Class II bikeways (69 percent), 97 miles of Class III bikeways (16 percent), and three miles of Class IV bikeways (<1 percent) (SCAG, 2024).

VN Figure 9 shows that between 2014 and 2024, about 49 percent of Ventura County fatalities occurred on local roads, 28 percent on arterials, and 23 percent on highways. As shown in **VN Figure 10**, approximately 62 percent of serious injuries occurred on local roads, 19 percent on arterials, and 19 percent on highways. During the same period, about 55 percent of pedestrian fatalities occurred on local roads, 26 percent on arterials, and 18 percent on highways. For bicyclist fatalities, about 74 percent occurred on local roads, seven percent on arterials, and 19 percent occurred on highways. For pedestrian serious injuries, 78 percent occurred on local roads, eight percent on arterials, and 14 percent on highways. For bicyclist serious injuries, 79 percent occurred on local roads, 16 percent on arterials, and five percent on highways. Overall, collisions occurred disproportionately on highways, while pedestrian-involved serious injury collisions and bicyclist-involved collisions disproportionately occurred on local roads, which highlighted the importance for local jurisdictions to continue prioritizing active transportation safety improvements and to engage in regional coordination efforts to advance multimodal safety.

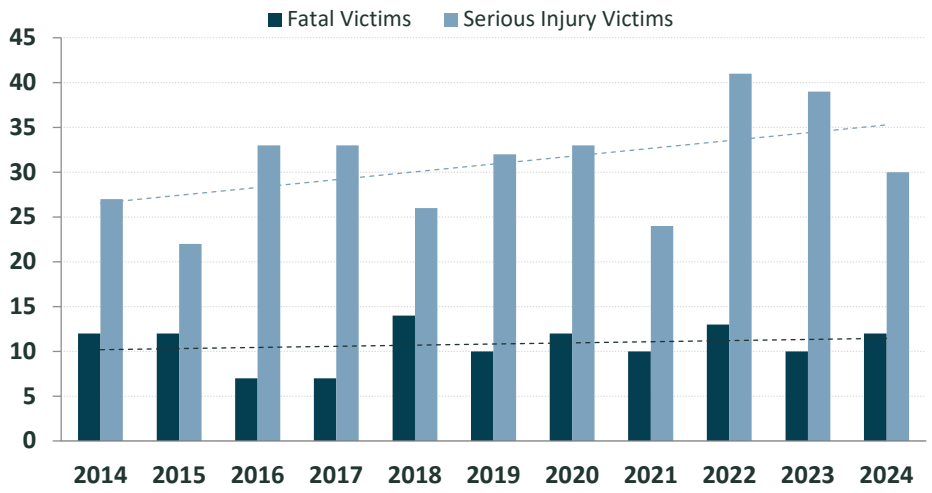
VN Figure 1: Ventura County, Total Number of Fatal Victims (2014-2024)



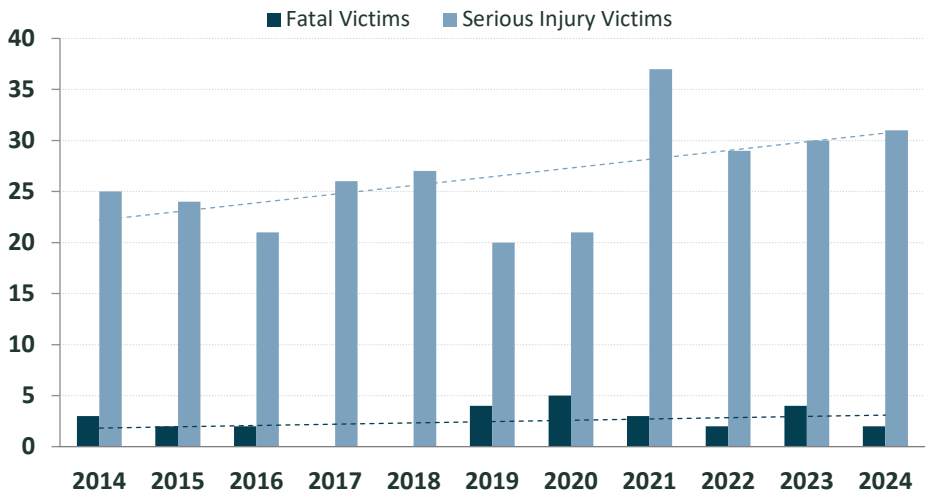
VN Figure 2: Ventura County, Total Number of Serious Injury Victims (2014-2024)



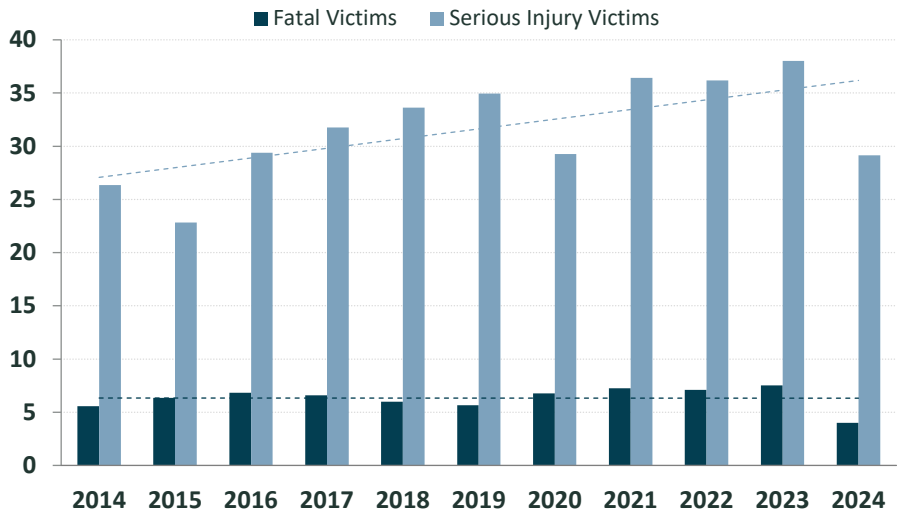
VN Figure 3: Ventura County, Total Number of Pedestrian Fatal and Serious Injury Victims (2014-2024)



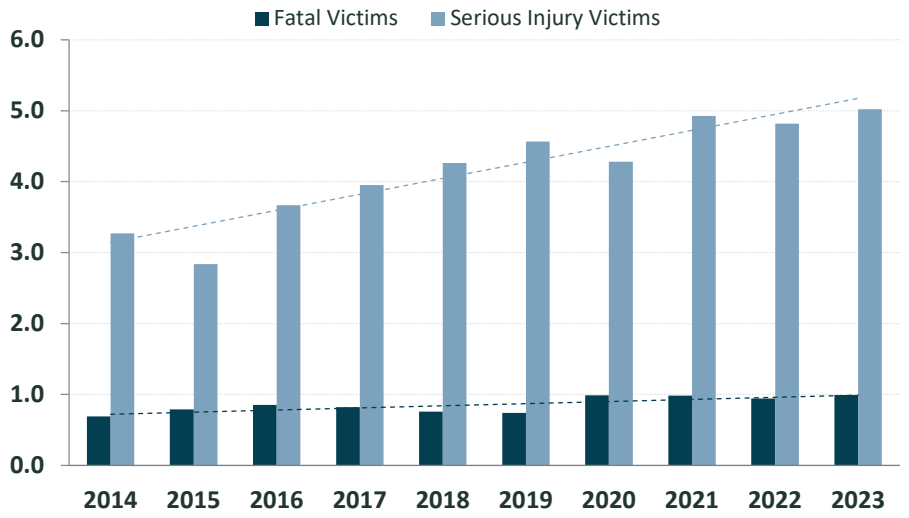
VN Figure 4: Ventura County, Total Number of Bicyclist Fatal and Serious Injury Victims (2014-2024)



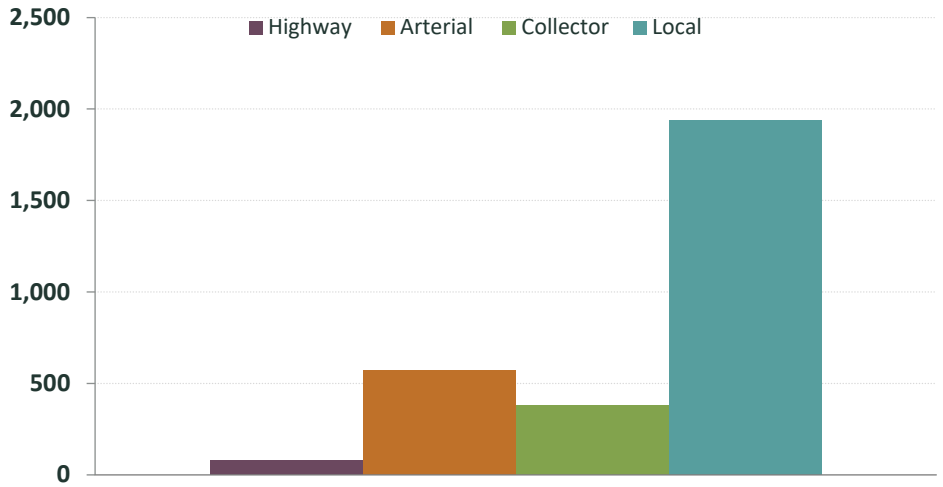
VN Figure 5: Ventura County, Fatal and Serious Injury Victims per 100,000 Population (2014-2024)



VN Figure 6: Ventura County, Total Fatal and Serious Injury Victims per 100 million VMT (2014-2023)

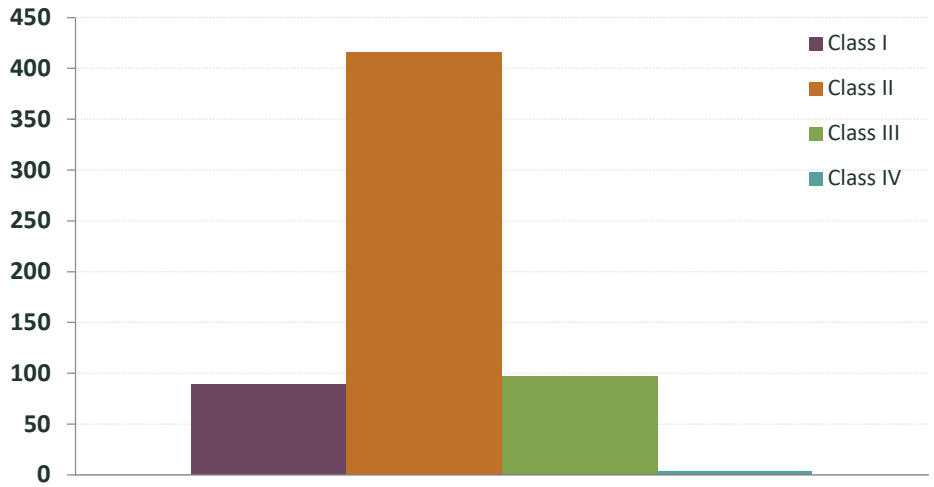


VN Figure 7: Ventura County, Centerline Miles by Roadway Classification (2024)



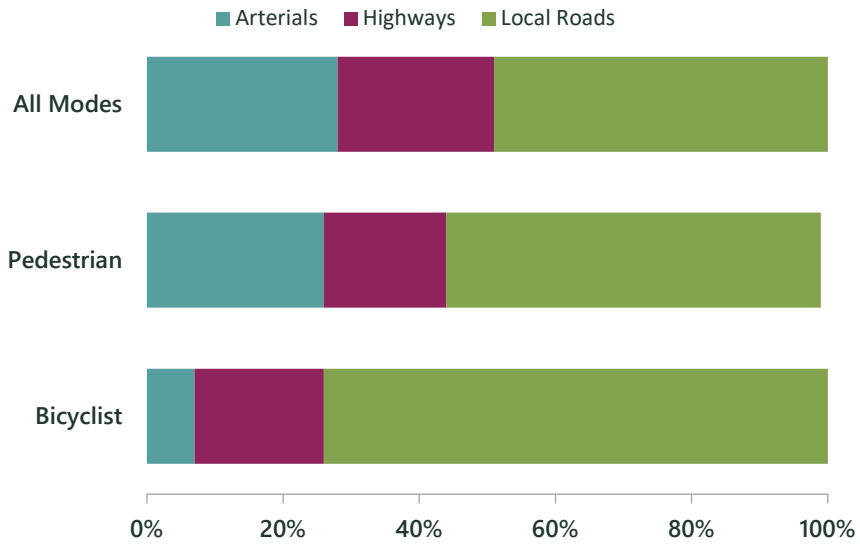
Source: Caltrans, 2024

VN Figure 8: Ventura County, Bikeway Miles by Classification (2024)

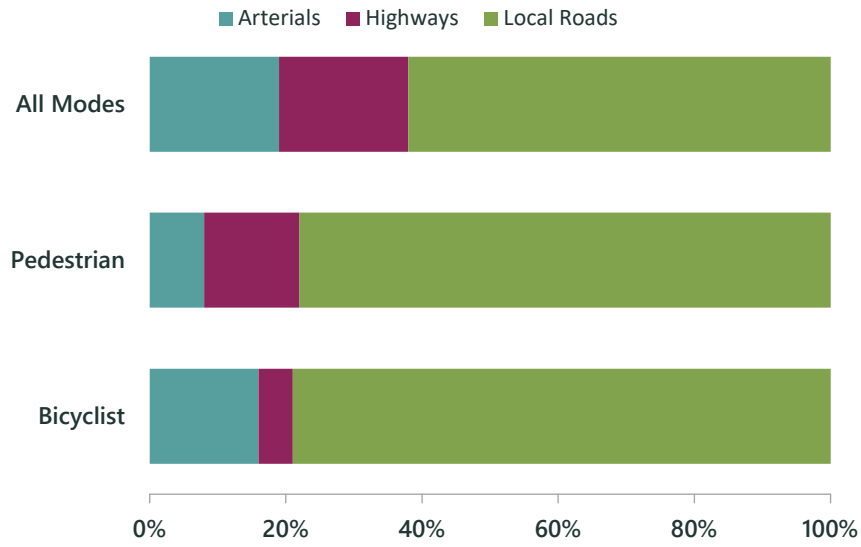


Source: SCAG, 2024

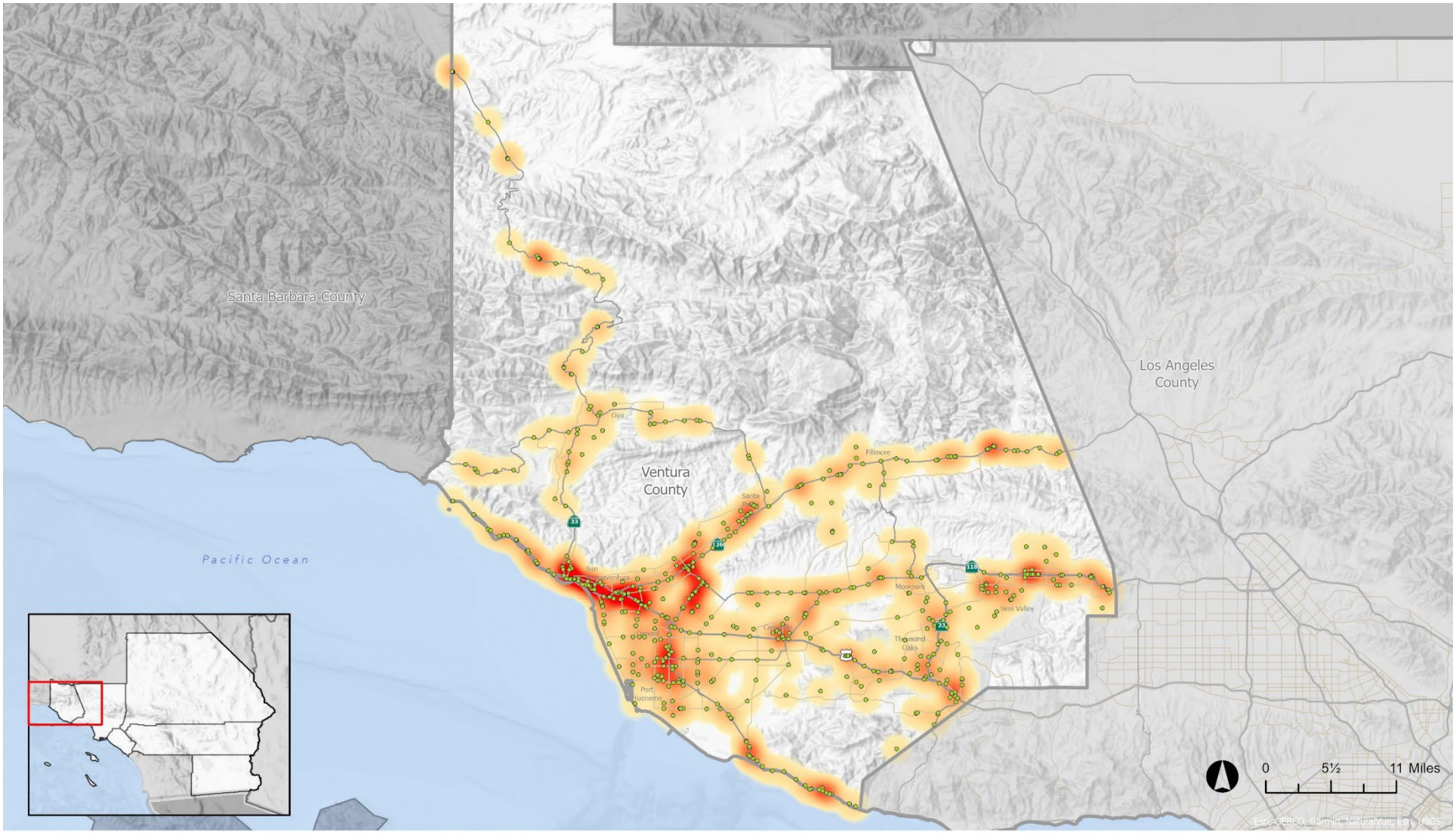
VN Figure 9: Ventura County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)



VN Figure 10: Ventura County, Distribution of Fatal Victims by Mode and Roadway Classification (2014-2024)

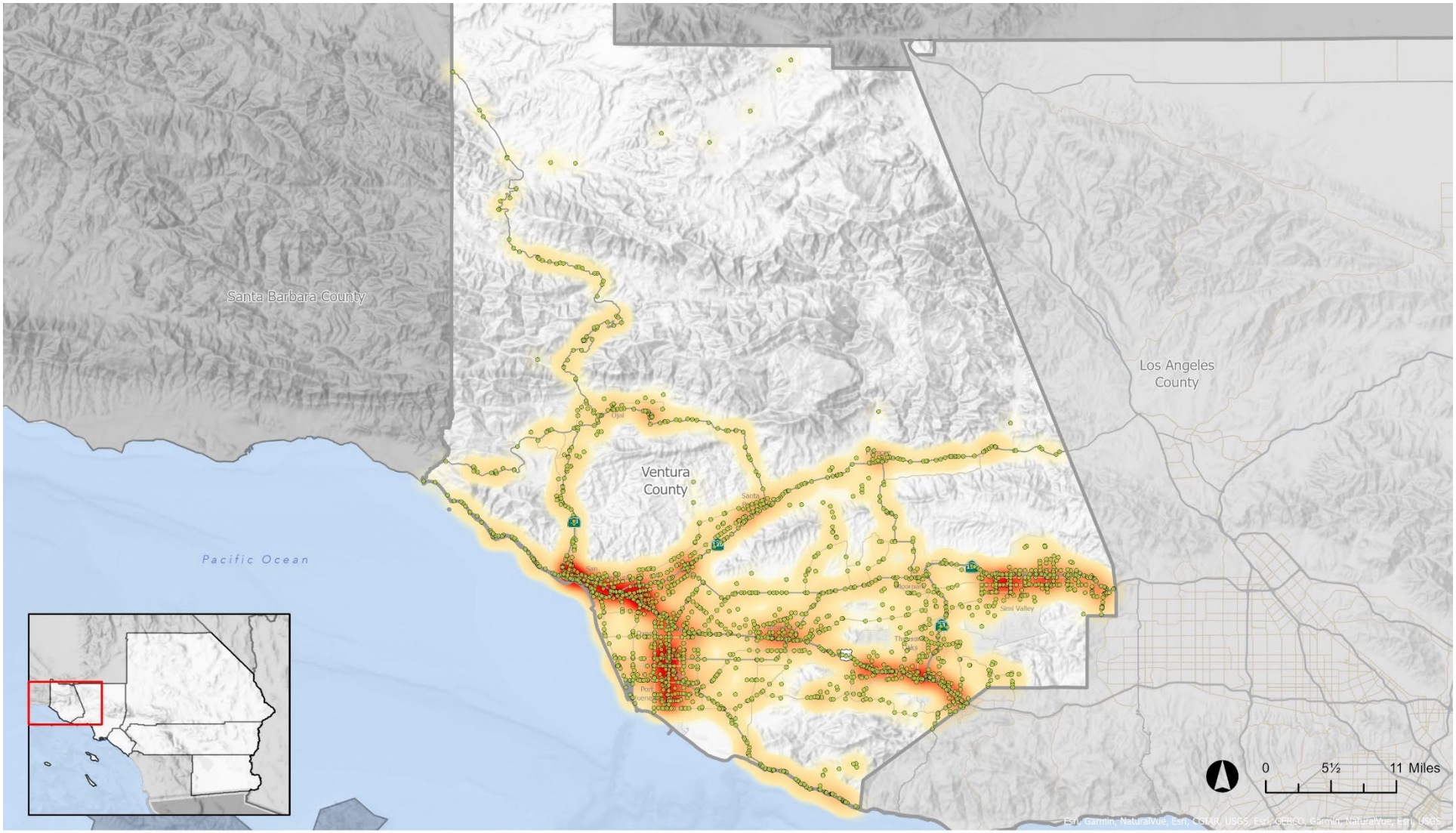


VN Map 1: Ventura County Fatal Collisions (2014-2024)



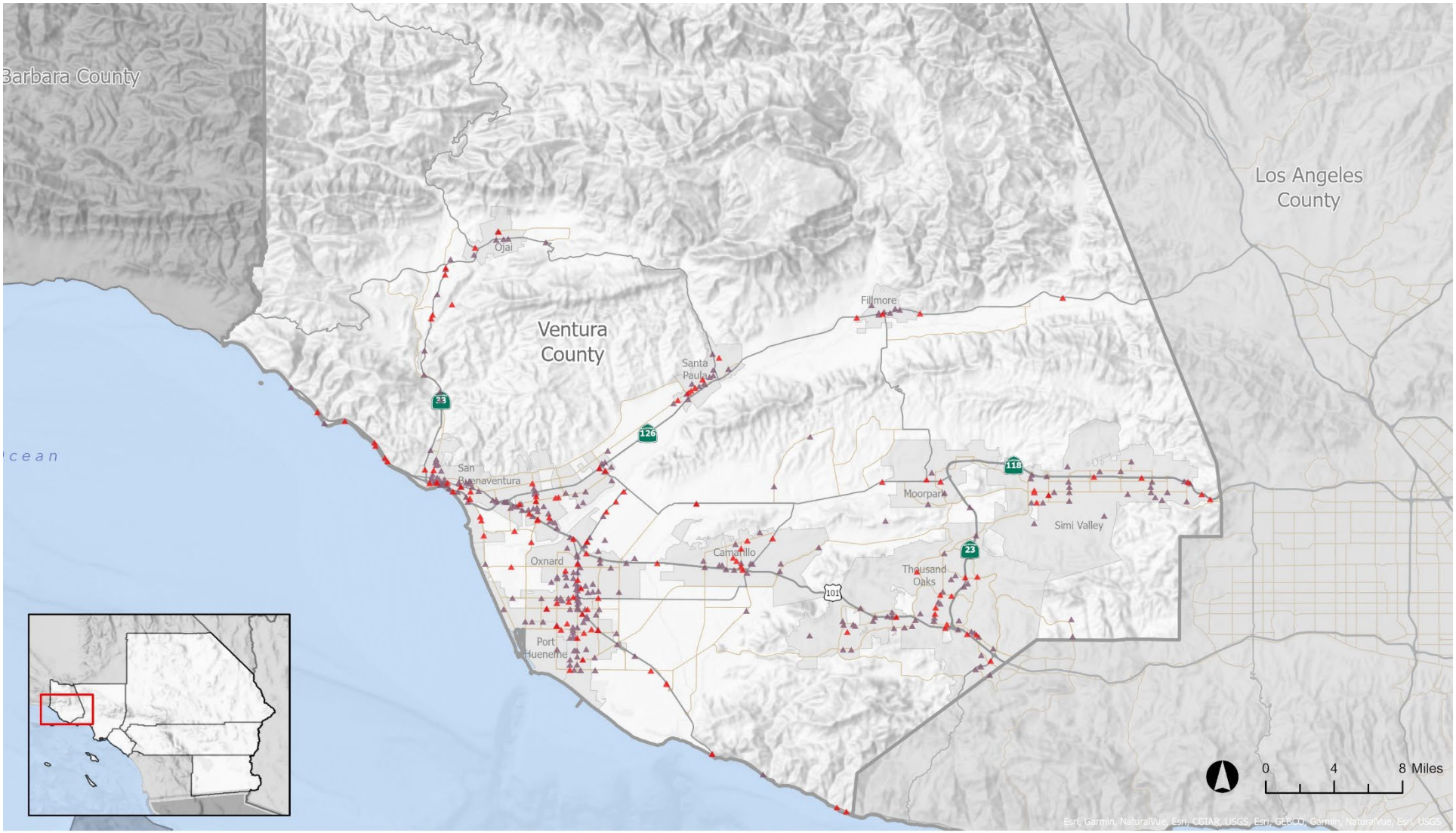
Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

VN Map 2: Ventura County Serious Injury Collisions (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

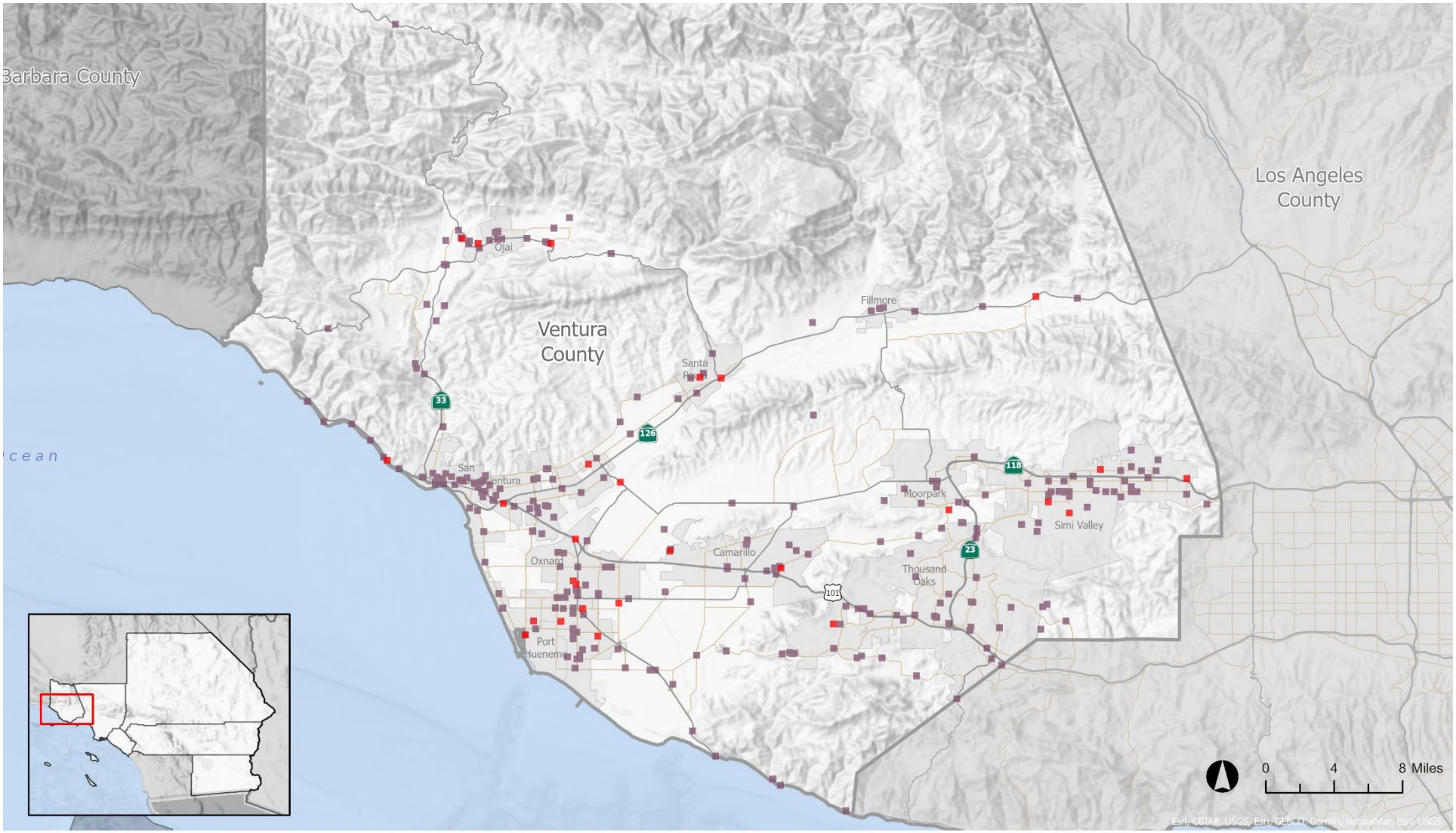
VN Map 3: Ventura County Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Pedestrian-Involved Fatal Collision
Pedestrian-Involved Serious Injury Collision

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

VN Map 4: Ventura County Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

When Collisions are Occurring

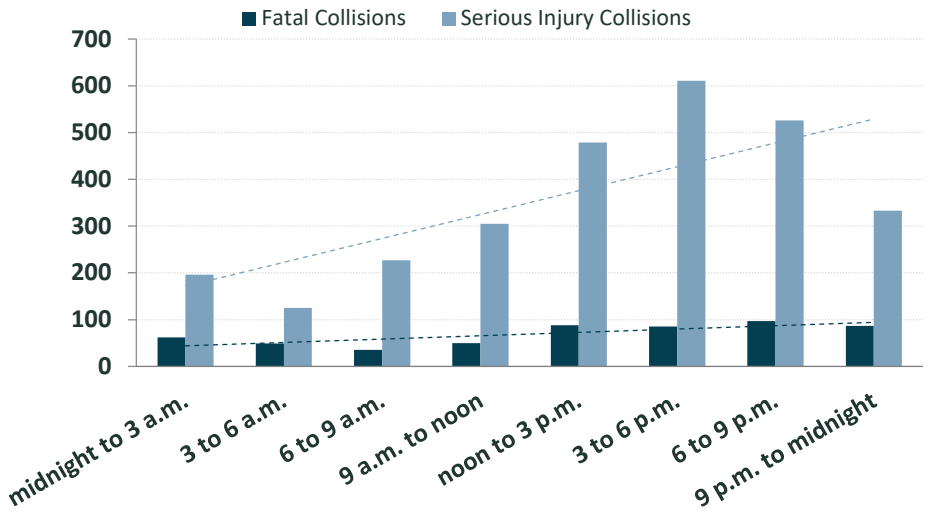
VN Figures 11 through 19 examine collisions in Ventura County across several time periods, including time of day, day of week, and month between 2014-2024.

VN Figure 11 shows that most collisions resulting in a fatal or serious injury occurred in the afternoon and evening with the largest number of fatal collisions (97 collisions) occuring in the evening between 6 p.m. and 9 p.m. and serious injury collisions peaked during the afternoon between 3 p.m. and 6 p.m. with 611 collisions. **VN Figure 12** shows trends by time of day for pedestrian-involved fatal and serious injury collisions, which were concentrated in the evening hours between 6 p.m. and midnight. Pedestrian-involved fatal collisions peaked between 9 p.m. and midnight (30 collisions), while pedestrian-involved serious injury collisions peaked between 6 p.m. and 9 p.m. (98 collisions). **VN Figure 13** shows trends by time of day for bicyclist-involved fatal and serious injury collisions, with the most fatal collisions (7 collisions) occurring between noon and 3 p.m. and the most serious injury collisions (62 collisions) occurring during two peak periods: 9 a.m. to noon and 3 p.m. to 6 p.m.

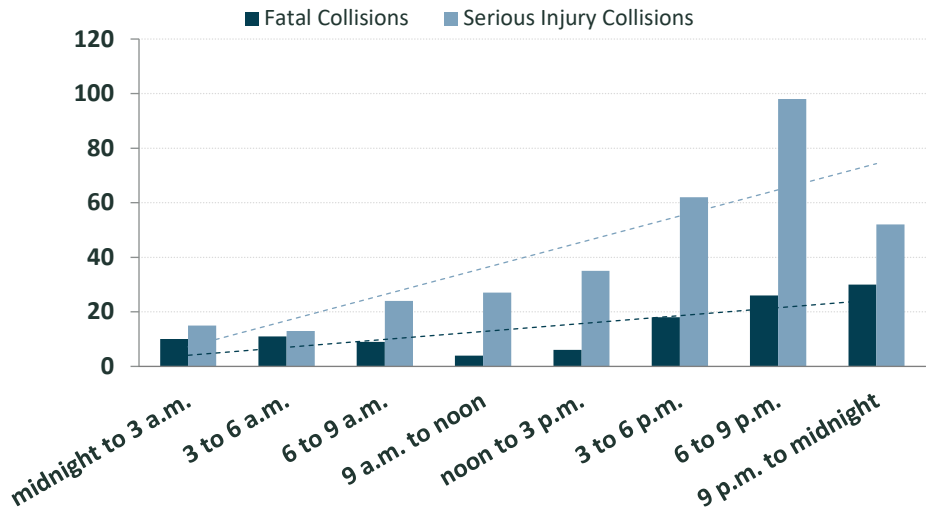
By day of week, fatal collisions generally increased through the week with a dip on Saturday and peaking on Sunday, as shown in **VN Figure 14**. On the other hand, serious injury collisions generally increased over the course of the week before it reached a peak on Saturdays with a small dip on Wednesdays. **VN Figure 15** shows that pedestrian-involved fatal and serious injury collisions decreased between Mondays and Wednesdays before increasing on weekends, with fatal collisions peaking on Sundays (23 collisions) and serious injury collisions peaking on Saturdays (54 collisions). **VN Figure 16** shows a less distinctive pattern for bicyclist-involved fatal collisions by day of the week, though a peak is seen on Fridays, with nine collisions. Bicyclist-involved serious injury collisions generally increased throughout the week with a dip on Fridays before peaking on Saturdays with 62 collisions.

When examining Ventura County collisions by month, **VN Figure 17** shows a relatively even distribution of fatal collisions throughout the year with the exception of peaks observed in March, May, and the highest peak in July (63 collisions). Serious injury collisions were roughly consistent except for a peak in October (305 collisions) and a low in March (203 collisions). **VN Figure 18** shows that pedestrian-involved fatal collisions generally fluctuated throughout the year with slight peaks in April and August. Serious injury collisions dipped during the winter (January to February) and early spring (March through April), dipped again in late spring (May), then increased throughout the summer (June to September), peaking in the early winter (November and December) months with 39 collisions each month). **VN Figure 19** shows a less distinctive pattern for bicyclist-involved fatal and serious injury collisions by month, though the highest number of fatal collisions occurred in May (five collisions) and the highest number of serious injury collisions occurred in August (35 collisions).

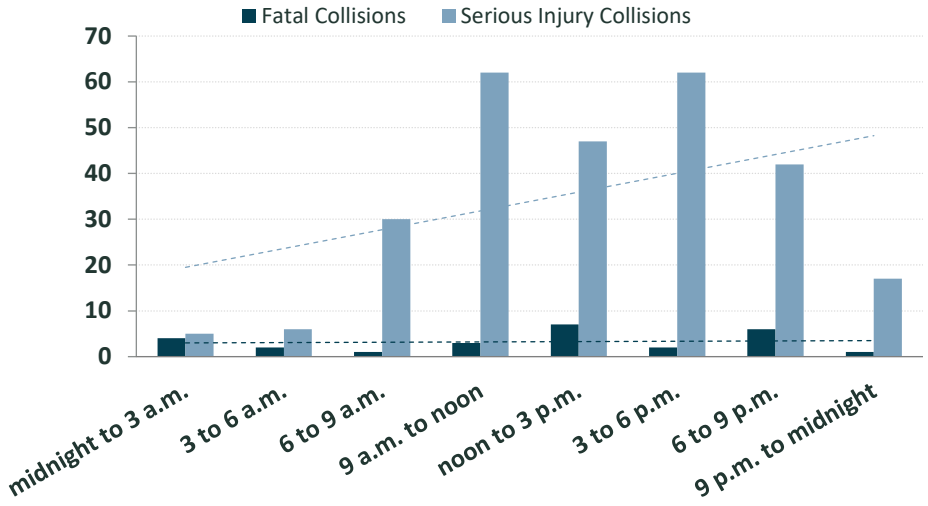
VN Figure 11: Ventura County, Fatal and Serious Injury Collisions by Time of Day (2014-2024)



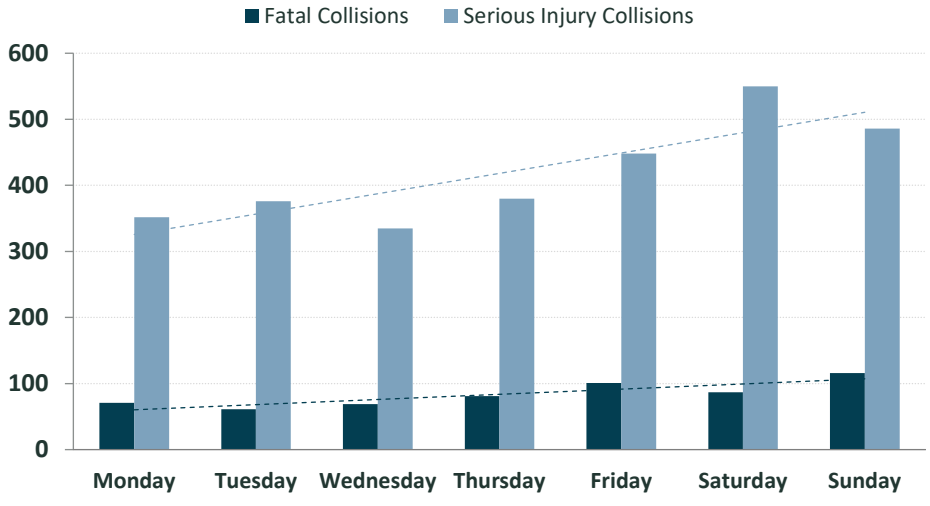
VN Figure 12: Ventura County, Pedestrian-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



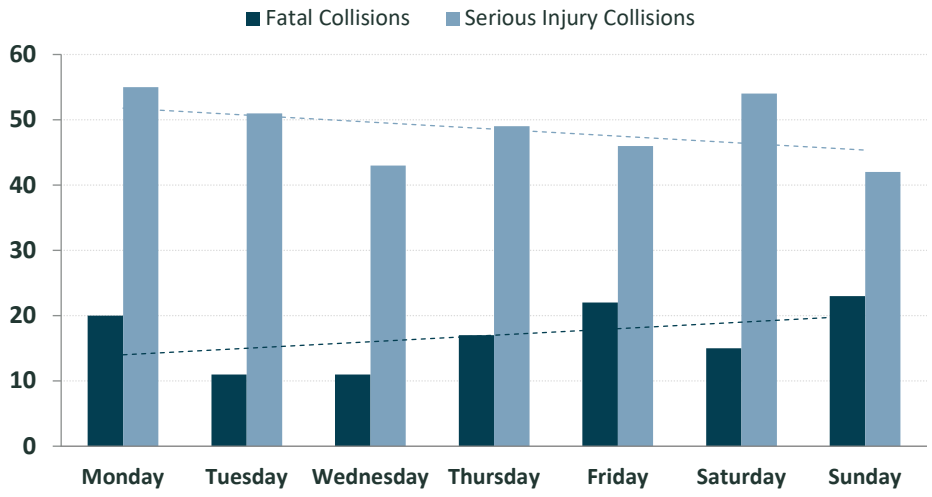
VN Figure 13: Ventura County, Bicyclist-Involved Fatal and Serious Injury Collisions by Time of Day (2014-2024)



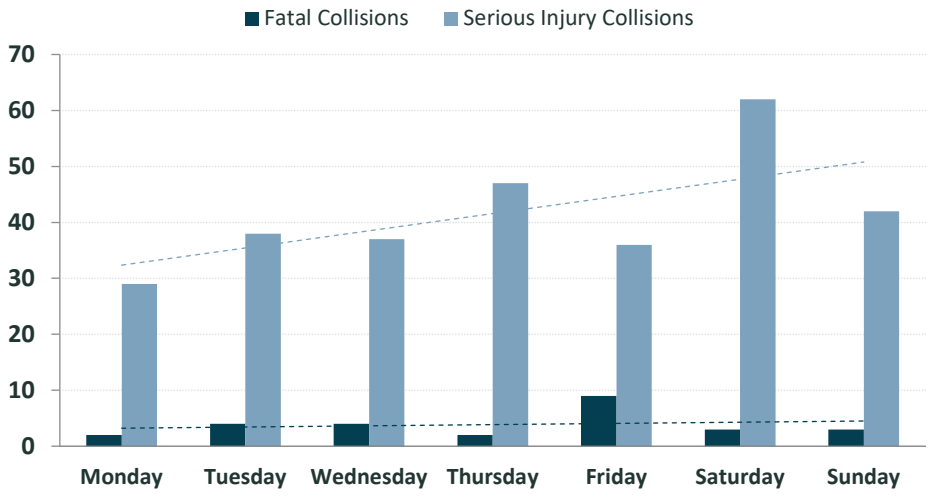
VN Figure 14: Ventura County, Fatal and Serious Injury Collisions by Day of Week (2014-2024)



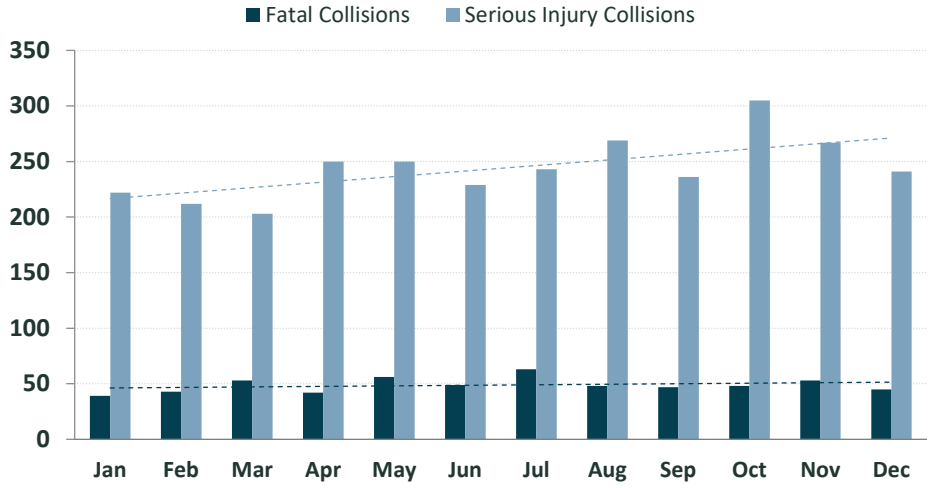
VN Figure 15: Ventura County, Pedestrian-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



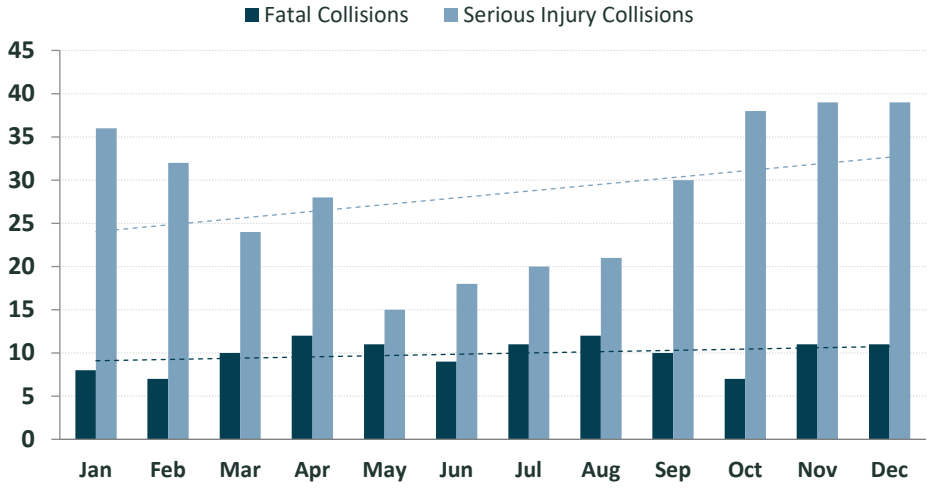
VN Figure 16: Ventura County, Bicyclist-Involved Fatal and Serious Injury Collisions by Day of Week (2014-2024)



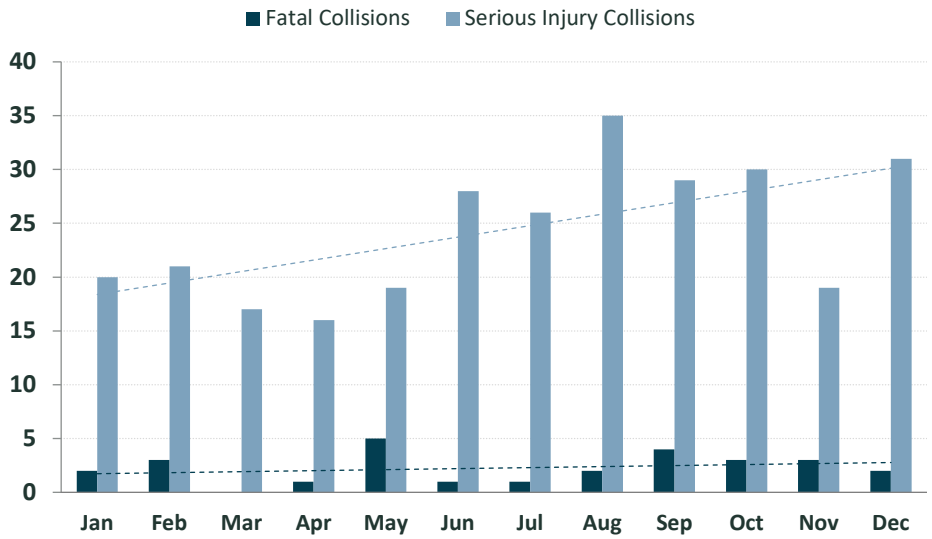
VN Figure 17: Ventura County, Fatal and Serious Injury Collisions by Month (2014-2024)



VN Figure 18: Ventura County, Pedestrian-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



VN Figure 19: Ventura County, Bicyclist-Involved Fatal and Serious Injury Collisions by Month (2014-2024)



Who are the Victims

MODE

In Ventura County, pedestrians and bicyclists accounted for about 25 percent of all fatal collision victims reported from 2014 to 2024, disproportionately higher than the just over two percent of people in the county who walk or bike to work (U.S. Census Bureau). Nearly 13 percent of all trips (work and non-work) in the SCAG region were taken via walking or biking, which was also significantly lower than the share of fatal collision victims who were walking or bicycling (National Household Travel Survey, 2017).

DEMOGRAPHICS

VN Figures 20 through 24 explore collision trends across several demographic factors between 2014 and 2024. Men experienced three times as many fatalities (429 victims) as women (142 victims). A similar trend was observed with serious injuries where 3,584 men and 2,611 women were seriously injured. These trends are consistent with regional and national trends where a higher number of men were involved in fatal and serious injury collisions. Additionally, between 2019, when data collection on non-binary persons began, and 2024, there was one reported passenger serious injury victim among non-binary people in Ventura County.

As observed in **VN Figure 20**, when victims of fatal collisions are stratified by age group, the largest number of fatalities occurred in those aged 25-34 (108 victims), which represented over 18 percent of reported fatalities in Ventura County. Fatalities occurred more often in men than women in every age group. Similarly, **VN Figure 21** shows the largest number of serious injuries occurred for those aged 25-34 (1,382 victims), representing nearly 22 percent of reported serious injuries. Men were more likely to be seriously injured in collisions compared to women at all ages, except for infants aged 0-4 and adults over 85 years old.

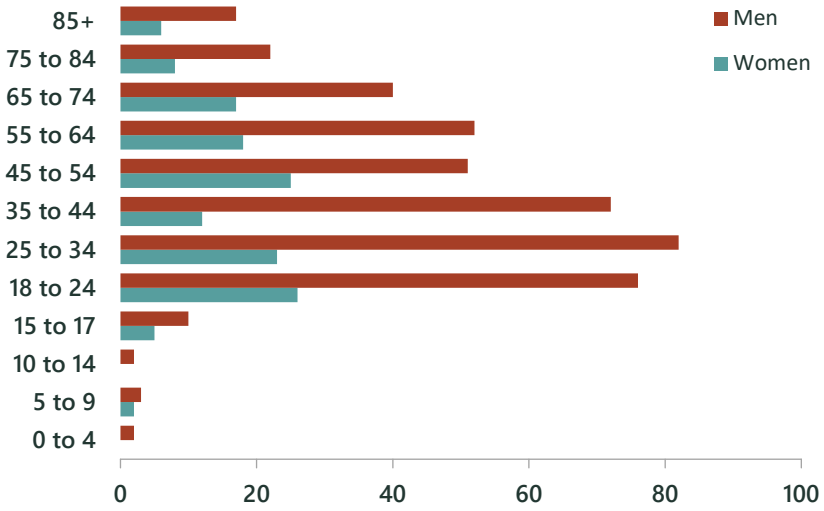
When analyzing trends by victim role (i.e., whether the victim is a driver, passenger, bicyclist, pedestrian or other), additional patterns emerge. Drivers experienced the largest number of fatalities (360 victims), followed by pedestrians (119 victims), passengers (79 victims), and bicyclists (27 victims). **VN Figure 22** shows significantly more drivers killed in collisions were men (286 victims) than women (68 victims), while passengers killed in collisions were similar for women (40 victims) and men (38 victims). There were more than twice as many fatalities among men who were walking (84 victims) compared to women who were walking (29 victims), and four times as many fatalities among men who were biking (20 victims) compared to women who were biking (four victims). **VN Figure 23** shows a similar pattern for serious injury victims though, notably, Ventura County was the only county in the SCAG region where more men were seriously injured while bicycling (337 victims) than walking (248 victims). Men who were driving still experienced the greatest number of serious injuries (2,520 victims) compared to women (1,557 victims), and more men suffered a serious injury compared to women who were walking (165 victims) and biking (94 victims).

Overall, men who were driving constituted nearly 49 percent of all fatal victims across gender, age, and victim role. Dissecting these factors further, men between the ages of 25 and 34 who were driving experienced the highest number of fatalities (65 victims) in Ventura County between 2014 and 2024.

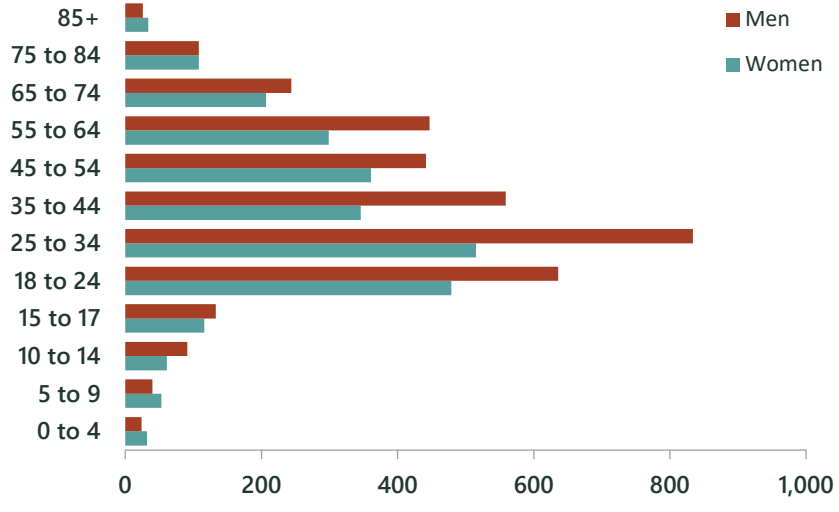
VN Figure 24 shows the percentage of fatal and serious injury victims by race/ethnicity compared to all collision victims and the county population in 2024. Black individuals were overrepresented among all collision victims and serious injury victims compared to their proportion of the population: while they represented under two percent of the county's population, Black individuals constituted three percent of all collision victims and two percent of all serious injuries across the county. Hispanic/Latino individuals represented about 44 percent of the county population and were also disproportionately represented among collision victims, accounting for 50 percent of fatalities, 47 percent of serious injury victims, and 51 percent of all collision victims. Non-Hispanic White individuals were also overrepresented among fatal and serious injury victims as they represented just under 43 percent of the county population but constituted 44 percent of fatal victims and 47 percent serious injury victims.

VN Maps 5 and **6** illustrate the location of fatal and serious injury collisions and Priority Equity Communities in Ventura County between 2014 and 2024. The maps show that more fatal and serious injury collisions occurred in and around Priority Equity Communities compared to collisions that did not occur in those areas. It should be noted, however, that serious traffic collisions were not exclusive to these designated areas, which suggest that safety improvements should remain focused on the vulnerabilities of people rather than generalized geographies.

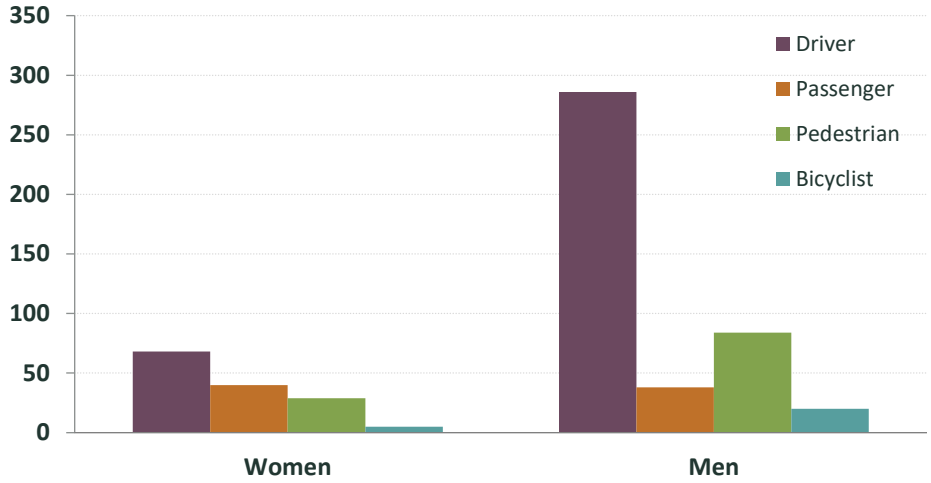
VN Figure 20: Ventura County, Fatal Victims by Age and Gender (2014-2024)



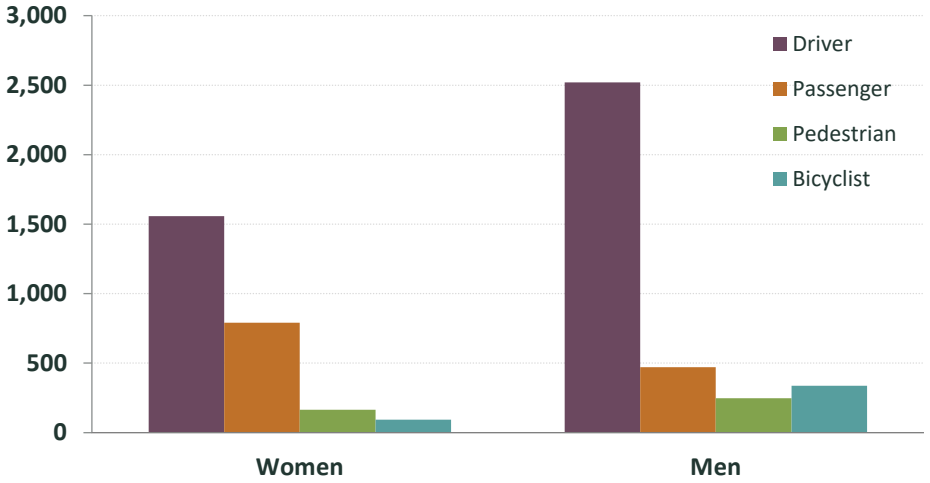
VN Figure 21: Ventura County, Serious Injury Victims by Age and Gender (2014-2024)



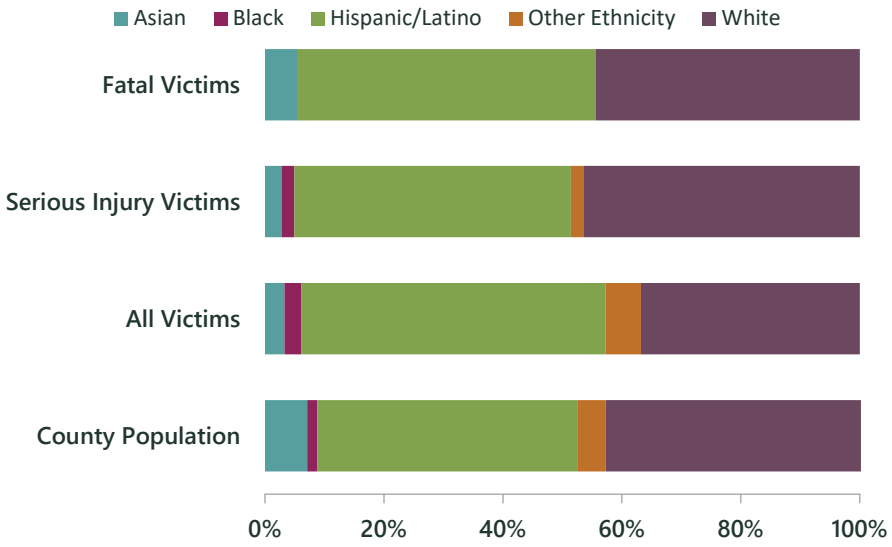
VN Figure 22: Ventura County, Fatal Victims by Involvement in Collision and Gender (2014-2024)



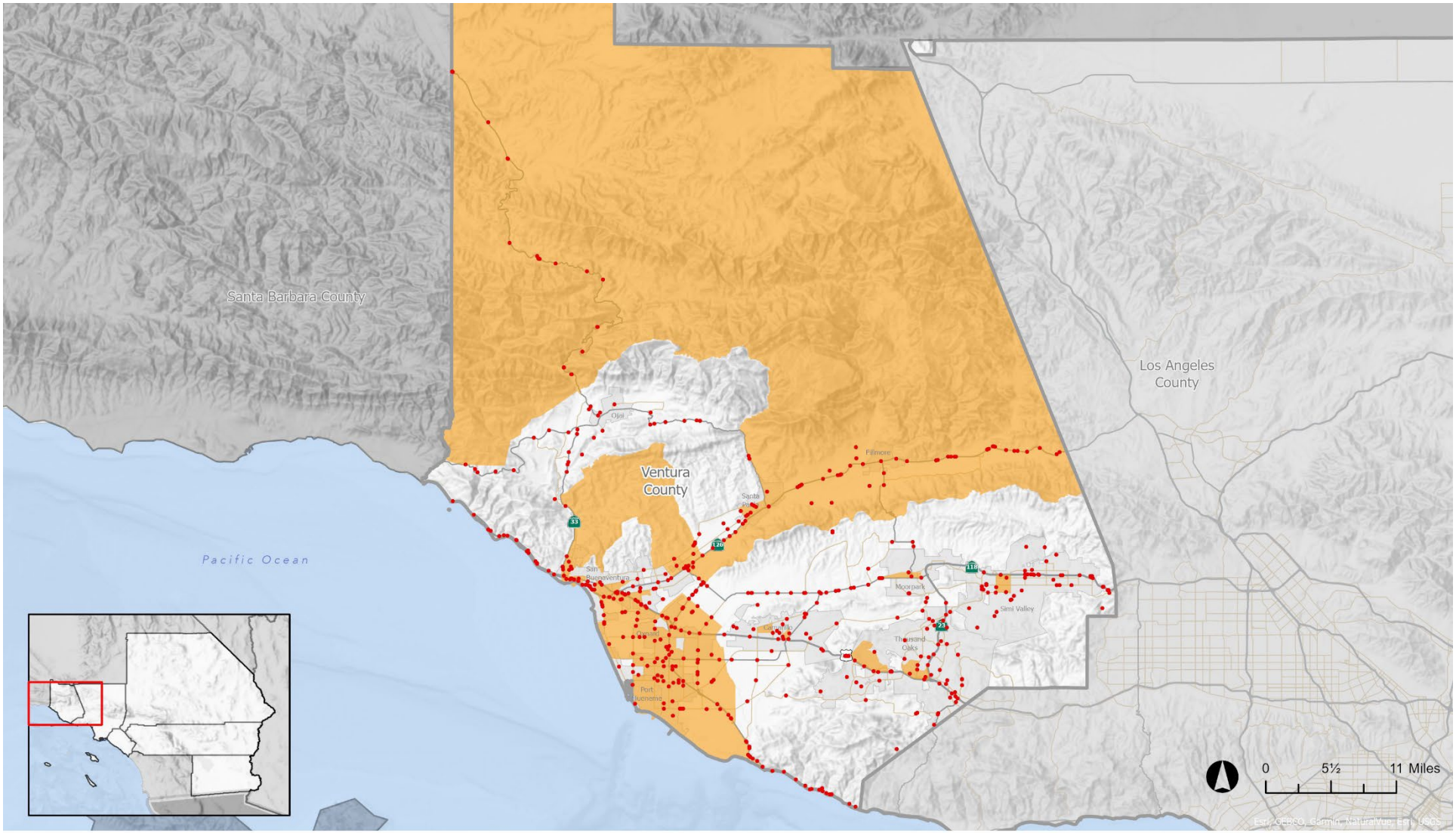
VN Figure 23: Ventura County, Serious Injury Victims by Involvement in Collision and Gender (2014-2024)



VN Figure 24: Ventura County, Fatal, Serious Injury, and All Victims by Race/Ethnicity (2024)

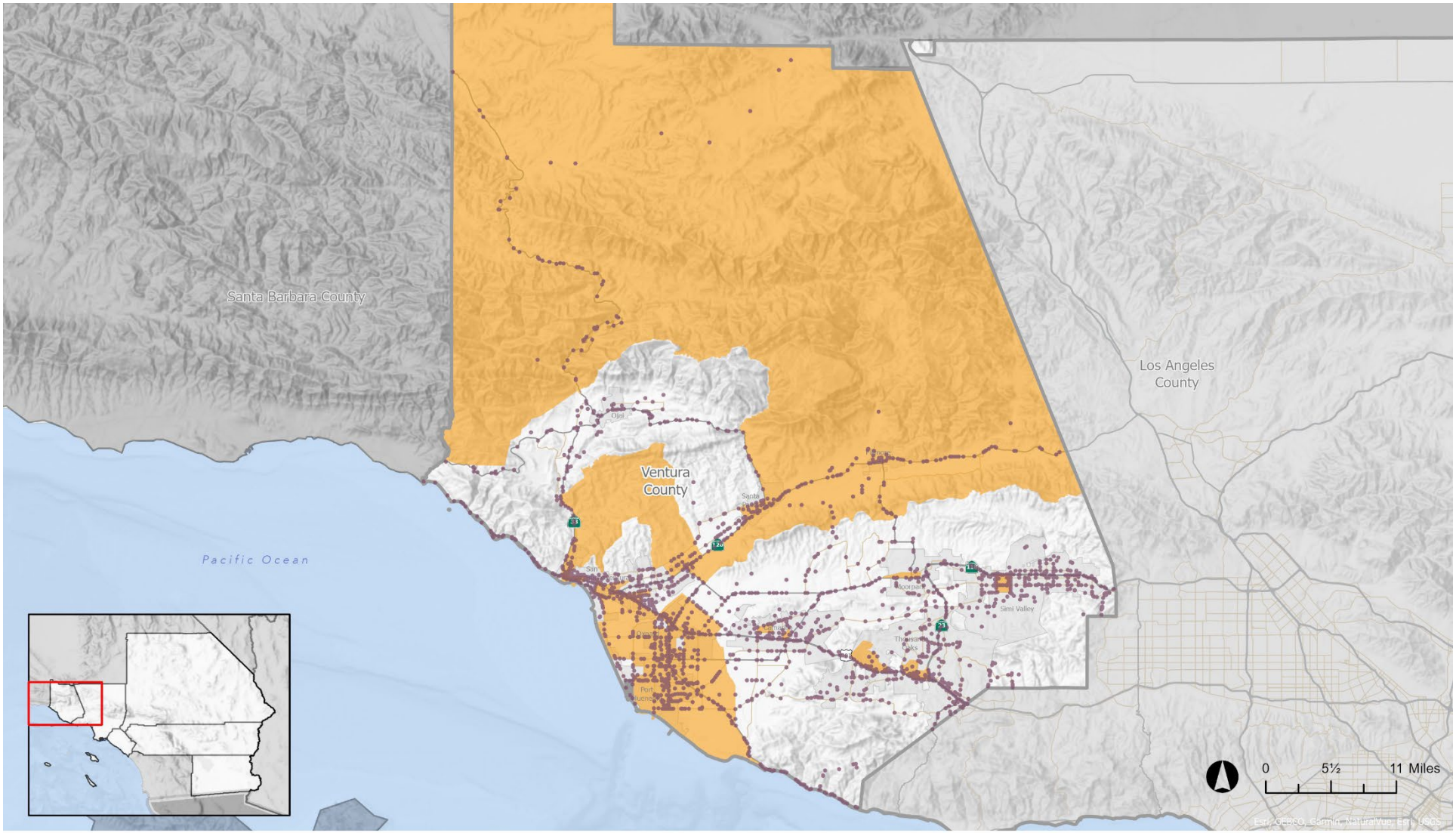


VN Map 5: Ventura County Fatal Collisions in Priority Equity Communities (2014-2024)



Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

VN Map 6: Ventura County Serious Injury Collisions in Priority Equity Communities (2014-2024)



County Boundaries
City Boundaries
Freeways and Other State Highways
Arterials
Serious Injury Collision
Priority Equity Communities

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

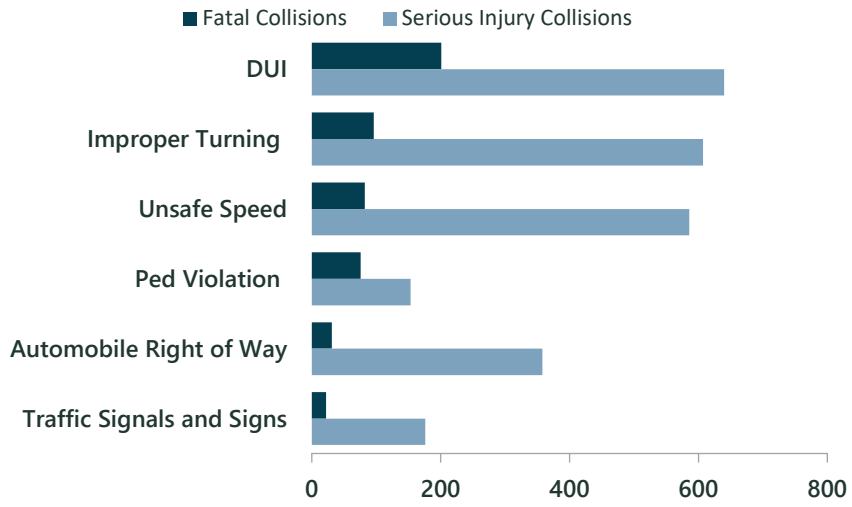
Why Collisions are Occurring

VN Figures 25 through 27 illustrate the top primary collision factors (PCFs) for fatal and serious injury collisions as reported in Ventura County between 2014 and 2024. The PCF is the main cause of the collision as determined by the officer at the collision scene, however there may be other factors which the officer notes as "other associated factors" on the collision report. As shown in **VN Figure 25**, the top three PCFs for fatal and serious injury collisions in the county were driving under the influence (34 percent and 21 percent), improper turning (16 percent and 20 percent), and unsafe speed (14 percent and 19 percent). These PCFs are generally consistent with regional trends, although driving under the influence was a much more prominent factor in fatal and serious injury collisions in Ventura County compared to the region. For definitions of each PCF category, please refer to the 'Definitions, Acronyms, and Data' section near the end of the report.

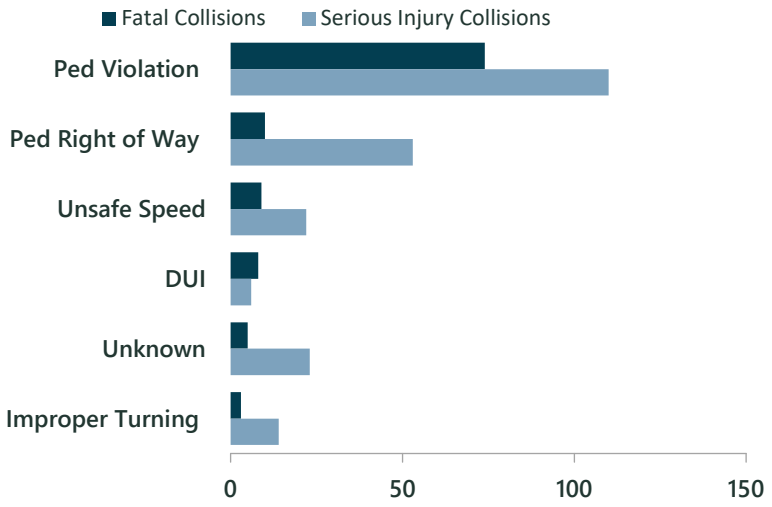
VN Figure 26 reflects the top PCFs for pedestrian-involved fatal and serious injury collisions. Consistent with regional trends, the top two PCFs for fatal and serious injury pedestrian-involved collisions were pedestrian violation (62 percent and 44 percent) and pedestrian right of way (eight percent and 21 percent). These were the two PCFs specifically related to pedestrians so further analysis that considers "other associated factors" noted in the collision reports and contextual factors, such as time of day, surrounding land use, and existing infrastructure, may provide more detailed insights on how the risk of these types of collisions may be reduced.

VN Figure 27 shows the top PCFs for bicyclist-involved fatal and serious injury collisions. The top PCFs for fatal bicyclist-involved collisions were improper turning (19 percent), automobile right of way (15 percent), and wrong side of road (15 percent). These PCFs are generally consistent with regional trends, with the exception that traffic signals and signs were not as significant of a collision factor in Ventura County as it was for the region. The top PCFs for serious injury bicyclist-involved collisions were improper turning (18 percent), automobile right of way (17 percent), and unsafe speed (16 percent). Similar to fatal collisions, PCFs related to serious injury collisions were generally consistent with regional trends, though improper turning was more of a significant issue in Ventura County compared to the region.

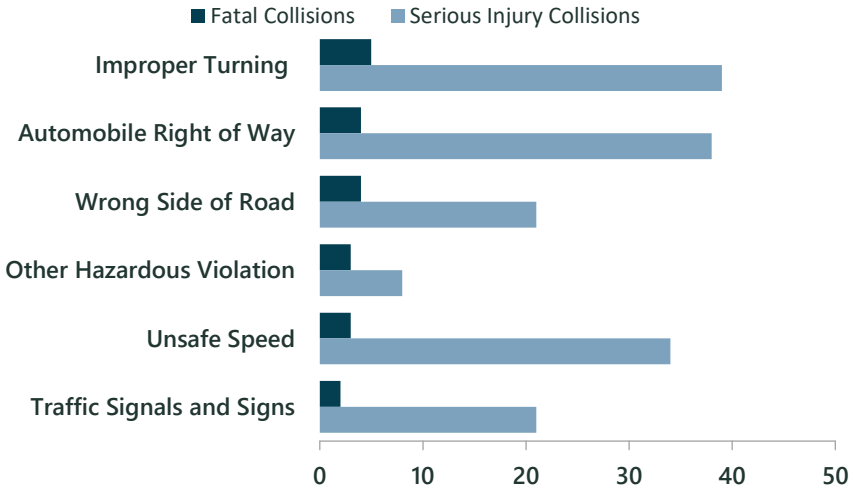
VN Figure 25: Ventura County, Primary Collision Factors of Fatal and Serious Injury Collisions (2014-2024)



VN Figure 26: Ventura County, Primary Collision Factors of Pedestrian-Involved Fatal and Serious Injury Collisions (2014-2024)



VN Figure 27: Ventura County, Primary Collision Factors of Bicyclist-Involved Fatal and Serious Injury Collisions (2014-2024)



Ventura County Conclusion

Overall, between 2014 and 2024, Ventura County experienced an average of 53 people killed and 266 people seriously injured annually, with most incidents involving vehicles or motorcycles. Over the past decade, fatalities reached three peaks in 2016, 2021, and 2023. All collisions, including pedestrian and bicyclist-involved collisions, were concentrated in urban areas and along key highways. A majority of fatal and serious injury collisions across all modes in Ventura County occurred on local roads. Compared to the SCAG region, Ventura County consistently experienced lower fatality and serious injury rates per 100,000 people. Overall, Ventura County had more fluctuations in the rate of serious injuries compared to the region, possibly due to the county's relatively small population. The county also had a lower fatality rate per 100 million VMT, but a similar or higher serious injury rate per 100 million VMT, which indicated that collisions in Ventura County tend to result in more serious injuries than fatalities per mile traveled.

When examining temporal patterns, fatal and serious injury collisions were more common in the afternoon and evening and tended to increase throughout the week, peaking on the weekend. Fatal collisions generally increased through the spring and summer, peaking in March, May, and July. Demographic data highlighted that young adults, especially men aged between 25-34 were overrepresented in fatal collisions across nearly all age groups. Ventura County was the only county in the SCAG region where more men were seriously injured while bicycling than walking. Additional demographic data showed that Black, Hispanic/Latino, and Non-Hispanic White individuals were overrepresented among fatal and serious injury victims. Fatal and serious injury collisions occurred within or near Priority Equity Communities in northern Ventura County, revealing the importance of targeting safety strategies toward vulnerable road users rather than focusing solely on high-collision locations. Driving under the influence, improper turning, and unsafe speed were identified as the top three primary collision factors for fatal collisions, highlighting the need for targeted safety improvements in these areas. Ventura County had many similar patterns as the SCAG region, including higher rates of fatal and serious injury collisions among male drivers aged 24-34, Black and Hispanic/Latino individuals. Fatal and serious injury collisions were also concentrated within Priority Equity Communities.

Next Steps

SCAG SAFETY PLANNING ACTIVITIES

Regional Safety Action Plan- In 2023, the U.S. Department of Transportation (U.S. DOT) awarded SCAG a Safe Streets and Roads for All (SS4A) Planning and Demonstration Grant to develop a regional safety action plan. This plan will serve as the roadmap for new and ongoing safety strategies and support supplemental planning and demonstration activities led by local jurisdictions. It will also improve roadway safety with the objective to reduce or eliminate serious injuries and fatalities within the SCAG region (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties).

***Go Human* Program Expansion**- SCAG's *Go Human* program expansion efforts are also funded by a U.S. DOT SS4A Planning and Demonstration Grant to continue piloting local safety educational campaigns and Complete Streets pop-up demonstration activities, as well as funding the expansion of up to 15 mini-grants to community-based organizations including support for quick-build projects.

Connect SoCal 2050 - The 2028-2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), called Connect SoCal 2050, is updated every four years along with the associated Mobility and Performance Monitoring Technical Reports. The technical reports expand upon transportation safety-related topics, providing transportation safety data and analyses, and provide information on SCAG's transportation safety goals and objectives.

TOOLS

Regional High Injury Network (HIN) Update- SCAG plans to update the regional High Injury Network to include updated collision data. The most recent HIN update was conducted in 2022 to include a new methodology and updated collision data.

SoCal Community Safety Model- SCAG is developing an interactive tool (GIS/web map-based) to allow local and regional stakeholders to model customized scenarios based on various local land use, demographic, and infrastructure changes. The ability to develop and assess scenarios will allow users to model, analyze, and mitigate potential safety impacts of future development before it is implemented.

MONITORING REGIONAL SAFETY PROGRESS

Local Jurisdictions with Local Road Safety and Vision Zero Plans and Projects:

Imperial County

- City of Calipatria: Community of Calipatria Summary and Recommendations Report 2021
- Imperial County Local Roadway Safety Plan 2024

Los Angeles County

- City of Alhambra Local Road Safety Plan 2023
- City of Carson Local Road Safety Plan 2023
- City of Claremont Local Roadway Safety Plan 2024
- City of Culver City Local Road Safety Plan 2023
- City of El Monte Vision Zero Action Plan 2020
- City of Hawthorne Safety Action Plan 2025
- City of Huntington Park Safety Action Plan 2021
- City of Lancaster Local Road Safety Plan 2022
- Los Angeles Department of Transportation (LADOT) Vision Zero 2025
- City of Long Beach Safe Streets Long Beach 2020
- Los Angeles County Vision Zero 2019
- City of Norwalk Transportation, Mobility, and Parking 2023
- City of Palmdale Local Road Safety Plan 2024

- City of Pasadena Pedestrian Transportation Action Plan (Revised 2024)
- City of Pico Rivera Local Road Safety Plan 2023
- City of Pomona Local Roadway Safety Plan 2025
- City of Pomona Citywide Collision Analysis (2015-2019)
- City of San Fernando Safe and Active Streets Implementation Plan 2022
- City of Santa Monica Local Roadway Safety Plan 2022
- City of South Gate Comprehensive Safety Action Plan and Local Road Safety Plan 2025
- City of West Hollywood Engage WeHo 2023

Orange County

- City of Huntington Beach Local Road Safety Plan 2022
- City of Orange Local Road Safety Plan 2022
- City of Seal Beach Safety Action Plan 2025

Riverside County

- City of Indian Wells Traffic Safety Action Plan 2024
- City of Lake Elsinore Local Roadway Safety Plan for Railroad Canyon Road
- City of Menifee Local Road Safety Plan
- City of Moreno Valley Local Road Safety Plan
- City of Palm Desert Vision Zero Safety Dashboard
- City of Riverside Local Roadway Safety Plan
- City of Wildomar Local Roadway Safety Plan 2022

San Bernardino County

- Town of Apple Vally Complete Streets Action Plan 2025
- Town of Apple Valley Corridor Connections 2025
- City of Chino Local Roadway Safety Action Plan 2023
- City of Chino Hills Local Roadway Safety Action Plan 2022
- City of Montclair Local Roadway Safety Action Plan 2022
- San Bernardino County Local Roadway Safety Plan 2022

Ventura County

- City of Camarillo Local Road Safety Plan 2022
- City of Oxnard Local Roadway Safety Plan 2023

2023 and 2024 Safe Streets and Roads for All (SS4A) and *Go Human* Awardees:

- **2024 *Go Human* Awardees**
  - Arts Council for Long Beach, 14th Street Basketball Court Mural Project Celebration and Traffic Safety Fair, City of Long Beach, *Los Angeles County*.
  - Bike Ventura County (BikeVC), Community Voices, City of Ventura, *Ventura County*.
  - Central City Neighborhood Partners, Connecting Communities, City of Los Angeles, *Los Angeles County*.
  - Latino Health Access, Ride, Walk and Roll, Orange County 2024!, City of Santa Ana, *Orange County,*
  - Los Amigos de la Communidad, Inc., Safety in Mobility/Seguridad en la Movilidad, City of Brawley, Imperial County.
  - Los Angeles Walks, Safe Street Promotora Office Hours, City of Los Angeles, Los Angeles County
  - Nyeland Promise, Safe Travels Continue in Nyeland Acres, City of Oxnard, Ventura County
  - Office Of: People, Sites of Repair: methodologies for collective healing in high-injury intersections, City of Los Angeles, Los Angeles County
  - People for Mobility Justice, South Central LA Mob J Summer, City of Los Angeles, Los Angeles County
  - Proyecto Pastoral, Comunidad en Movimiento – Safe Passage, City of Los Angeles, Los Angeles County

  - Reach Out, Skate Thru Summer 2024, City of Jurupa Valley, Riverside County
  - Riverside Art Museum, RIDE-WALK-ENGAGE, City of Riverside, Riverside County
  - Santa Ana Active Streets, Santa Ana Active Transportation Workshops, City of Santa Ana, Orange County
  - Streets for All, RethinkLA: Hollywood Plaza Block Party, City of Los Angeles, Los Angeles County
  - STN: Stronger Together Now, STN in the Streets, City of San Bernardino, San Bernardino County
  - Yolanda Davis-Overstreet Consulting, Liberating Our Streets: A Mobility Justice Roadmap for Community Engagement and Empowerment, City of Los Angeles, Los Angeles County

- **2023 *Go Human* Awardees**
  - Bike Ventura County (BikeVC), Youth Summer of Safety at the Oxnard Hub, Ventura County
  - Highlander Boxing Club, HBC Community Hub, San Bernardino County
  - Youth Leadership Institute, Eastern Coachella Valley Transportation Equity Allied Leadership (ECV TEAL), Riverside County
  - Nyeland Promise, Viajes Seguros en Nyeland Acres – Comadres al Rescate, Ventura County
  - Reach Out, Jurupa Valley Community Hub, Riverside County
  - The Bicycle Tree, TWIGY Bikey Summer, Orange County
  - Latino Health Access, Ride, Walk and Roll Orange County! 2023, Orange County
  - Yolanda Davis-Overstreet Consulting, Re-Imagine Biking While Black: A Road Map to Advocacy and Joy Guide, Los Angeles County
  - People for Mobility Justice, South LA Quick Build Community Planning, Los Angeles County
  - Koreatown Youth and Community Center, Koreatown Walk Audits, Los Angeles County
  - BikeLA, Safety Through Education and Distribution Program, Los Angeles County

2024 Sustainable Communities Program Active Transportation and Safety Awardees

- **Community/Areawide Plan**
  - Cal State University, Dominguez Hills, CSUDH Travel Demand Management Plan: LA 28 and Beyond
  - Orange County Transportation Authority, Move OC: A Vibrant Path to Active Transportation
- **Quick-Build Projects**
  - City of Burbank, Safer Downtown Burbank Mobility Network Improvement Project
  - City of Covina, Covina Town Center Bicycle/Pedestrian Safety and Connectivity (Gap Closure) Quick-Build Roadway Project
  - Los Angeles County, Norwalk Boulevard Vision Zero Quick-Build Pedestrian Safety Project
  - City of Monrovia, Monrovia Active Community Travel Vinculum Phase II
  - City of Montebello, Montebello CycleSafe Bridge Project
  - City of Pico Rivera, Pio Pico Bikeway Connector Project
  - City of Santa Monica, Santa Monica Neighborhood Greenways Project
  - City of Westminster, City-wide Safe Routes to Schools Quick-Build Project
  - City of Banning, Banning Two-Way Cycle Track Safety Project
  - City of Victorville, La Paz Dr. / Seneca Rd. Traffic Circle
  - City of Port Hueneme, Rectangular Rapid Flashing Beacons Citywide
- **Quick-Build Contingency List**
  - Los Angeles County, East Los Angeles Pedestrian Enhancements Project
  - Los Angeles County, West Carson Pedestrian Safety Project
  - City of Montebello, Madison Avenue Neighborway
  - City of Pico Rivera, Walkable Uptown Pico Rivera
  - City of San Bernardino, City of San Bernardino Rectangular Rapid Flashing Beacons Installation Project

TRANSPORTATION SAFETY COORDINATION

- Strategic Highway Safety Plan (SHSP) Executive Leadership and Steering Committee- SCAG will continue its participation in the SHSP Executive Leadership and Steering Committee Voting Member Agencies as the Metropolitan Planning Organization Representative. This role includes supporting the development of the 2025–2029 California Safe Roads SHSP Plan, presenting transportation safety-related topics and collaborating with other SHSP representatives, and voting on organizational goals and programs.
- SHSP Pedestrian and Bicyclist Challenge Area Teams- SCAG will continue its participation in addressing two of the SHSP Plan's challenge areas: bicyclists and pedestrians. The goal of the Bicyclist Challenge Area Team is to improve safety for people biking on public roads. This includes crashes involving motor vehicles and bicyclists, including those riding e-bikes. The Pedestrian Challenge Area Team aims to improve pedestrian safety by reducing fatal and serious injury crashes involving motor vehicles and pedestrians. This also includes individuals using wheelchairs, human-powered scooters, and other non-motorized mobility devices, excluding bicycles and e-bikes.
- Safe and Active Streets Working Group (SASWG)- SCAG will continue to host its SASWG meetings to explore methods to increase the value of the Connect SoCal active transportation and safety components, share information on SCAG transportation safety-related initiatives and funding programs, discuss emerging issues, share innovations and best practices, assist SCAG staff developing transportation safety analyses and policies, and provide guidance on SCAG staff on Regional Safety Strategy.

Definitions, Acronyms, and Data Sources

VEHICLES MILES TRAVELED (VMT)

VMT is used to describe collision rates per vehicle miles traveled. This helps us normalize the measurement of safety performance per distance traveled.

SERIOUS INJURY VERSUS NON-SERIOUS INJURY

Serious injuries are non-fatal that result in one or more of the following:

- Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood;
- Broken or distorted extremity (arm or leg);
- Crush injuries; Suspected skull, chest, or abdominal injury other than bruises or minor lacerations;
- Significant burns (second and third degree burns over ten percent or more of the body);
- Unconsciousness when taken from the crash scene; and/or
- Paralysis.

Note: The definition of serious injuries was changed in 2017 to include suspected serious injuries. Non-serious injuries are more common and may include visible injuries and/or a complaint of pain.

NON-MOTORIZED TRANSPORTATION

Non-motorized transportation is a term used to refer to active or human powered transportation which includes walking and bicycling and variants such as skates, skateboards, and wheelchairs.

CRASHES AND COLLISIONS ARE NOT ACCIDENTS

Traffic collisions are not always simply “accidents” – that is, unavoidable tragedies. People driving, walking, or bicycling will make mistakes on the road. We recognize that most crashes have identifiable causes, and we can work together to implement programs and improvements to reduce the risk of future similar mistakes resulting in death or serious injury.

PRIMARY COLLISION FACTORS (PCF)

The Primary Collision Factor refers to the main behavior, action, or condition that directly caused a collision as determined by the officer at the collision scene. In addition to the PCF, there may be other contributing factors that are noted on the collision report as “other associated factors”.

- Categories:
- Driving or Bicycling Under the Influence of Alcohol or Drug- Driving or bicycling while under the influence of alcohol or drug.
- Unsafe Speed- Driving at a speed unsafe for the conditions.
- Wrong Side of Road- Driving on the wrong side of the road.
- Improper Passing- Ignoring proper protocol when passing a vehicle (e.g. passing across center lane without clearance, passing on the right, passing in a no-passing zone, departing the roadway to pass, passing a school bus when lights flashing, giving inadequate space).
- Unsafe Lane Change- Changing lanes in a situation where there is insufficient clearance, and/or no turn signal was used.
- Improper Turning- Turning at a distance unnecessarily far from a curb, turning without using turn signals, or making a type of turn prohibited by signage.

- Automobile Right of Way- Making a maneuver without respecting the right-of-way of another driver.
- Pedestrian Right of Way- Making a maneuver from a motor vehicle without respecting the right-of-way of a pedestrian.
- Pedestrian Violation- Making a maneuver as a pedestrian without respecting the right-of-way of a motor vehicle.
- Traffic Signals and Signs- Inconsistent, and/or confusing roadway signage.
- Unknown-The cause of the collision is unknown or not reported (City of San Bernardino, 2022).

DATA SOURCES

Collision data for this report was sourced from the University of California, Berkeley, Safe Transportation Research and Education Center (SafeTREC) Transportation Injury Mapping System (TIMS), which sources and geocodes data from the California Statewide Integrated Traffic Reporting System (SWITRS). Because SWITRS combines records from all state and local police departments, data varies due to differences in reporting methods. It is important to note that the number of collisions reported to SWITRS is likely an underestimate of the actual number of collisions that take place because some parties do not report minor collisions to law enforcement, particularly collisions not resulting in injury or property damage. In addition, because reports are written at the time of the collision, the severity of injuries and even fatalities may be different from reality as injuries may worsen with time and eventually become fatalities. Although under-reporting and omissions of near misses are limitations, analyzing the collision data allows for the identification of trends both spatially and in behaviors or design factors that cause collisions in the region. It is important to note that the most recent year of complete data is from 2022. The 2023 and 2024 data provided in this report is provisional and offers a preliminary analysis of trends. However, the report includes data from 2014 through 2024 to provide an analysis of a full decade of traffic collisions and crash trends. For Imperial County and Ventura County, the maps displayed a historical overview covering the 2014 through 2024 data range to provide a more comprehensive analysis of fatal and serious injury collisions within the counties. This approach was taken because limiting the maps to 2024 data would have shown insufficient information compared to the SCAG region and other counties (Los Angeles through San Bernardino County).

VMT data was generated from the Highway Performance Monitoring System (HPMS), a national level highway information system that includes data on the extent, condition, performance, use, and operating characteristics of the nation's highways. The HPMS contains administrative and extent of system information on all public roads, while information on other characteristics is represented in HPMS as a mix of universe and sample data for arterial and collector functional systems. Limited information on travel and paved roadway miles is included in summary form for the lowest functional systems. Additional data on mode share was obtained from the U.S. Census Bureau, American Community Survey (ACS).

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