CMPDD

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CENTRAL MISSISSIPPI
PLANNING AND DEVELOPMENT DISTRICT

EXECUTIVE SUMMARY

SAFE STREETS & ROADS FOR ALL (SS4A)

SAFETY ACTION PLAN

May 2024

NEEL-SCHAFFER

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1.0 Introduction

Safe Streets and Roads for All Program

The Central Mississippi Planning and Development District (CMPDD) in consultation with its member governments, began preparing a comprehensive Safety Action Plan for CMPDD's seven-county region in September 2023. The purpose of the Safety Action Plan is to develop a well-defined strategy to reduce roadway fatalities and serious injuries throughout CMPDD's region.

The Safety Action Plan analyzes safety needs, identifies high-crash and high-risk locations and factors contributing to crashes, and prioritizes strategies and projects to address identified safety concerns.

CMPDD was awarded funding to prepare the comprehensive Safety Action Plan through the Safe Streets and Roads for All (SS4A) program. The program was funded by the Bipartisan Infrastructure Law (BIL) to implement improvements and strategies to prevent fatalities and serious injuries for all roadway users, including pedestrians, bicyclists, public transportation users, motorists, and personal conveyance/micro-mobility users. The BIL provides $5 billion over five years, 2022-2026. The program supports a goal of zero roadway fatalities using a Safe System Approach.

This Safety Action Plan was adopted by CMPDD on May 8, 2024. The Safety Action Plan Final Report is posted and publicly available at https://cmpdd.org/transportation/safety-action-plan-ss4a/. With the adoption of the Safety Action Plan, local jurisdictions can apply for Implementation and Demonstration funding through the SS4A discretionary grant program. Safety Action Plan elements are identified in **Figure 1.1.**

This Executive Summary summarizes key findings from the Final Report.

Figure 1.1: Safety Action Plan Elements

Self-Certification Eligibilty Checklist

An Action Plan is considered eligible for an SS4A application for an Implementation Grant or a Planning and Demonstration Grant to conduct Supplemental Planning/Demonstration Activities if the following two conditions are met:

1. You **MUST** answer "YES" to items **3**, **7**, and **9** below; and
2. You **MUST** answer "YES" to **at least four of the six remaining** items **1**, **2**, **4**, **5**, **6**, or **8**.

CMPDD SAP Plan Elements

	YES	NO		YES	NO
1. Leadership Commitment & Goal Setting	☒	☐	6. Policy & Process Changes	☒	☐
2. Planning Structure	☒	☐	7. Strategy & Project Selections	☒	☐
3. Safety Analysis	☒	☐	8. Progress & Transparency	☒	☐
4. Engagement & Collaboration	☒	☐	9. Action Plan Date	☒	☐
5. Equity Considerations	☒	☐			

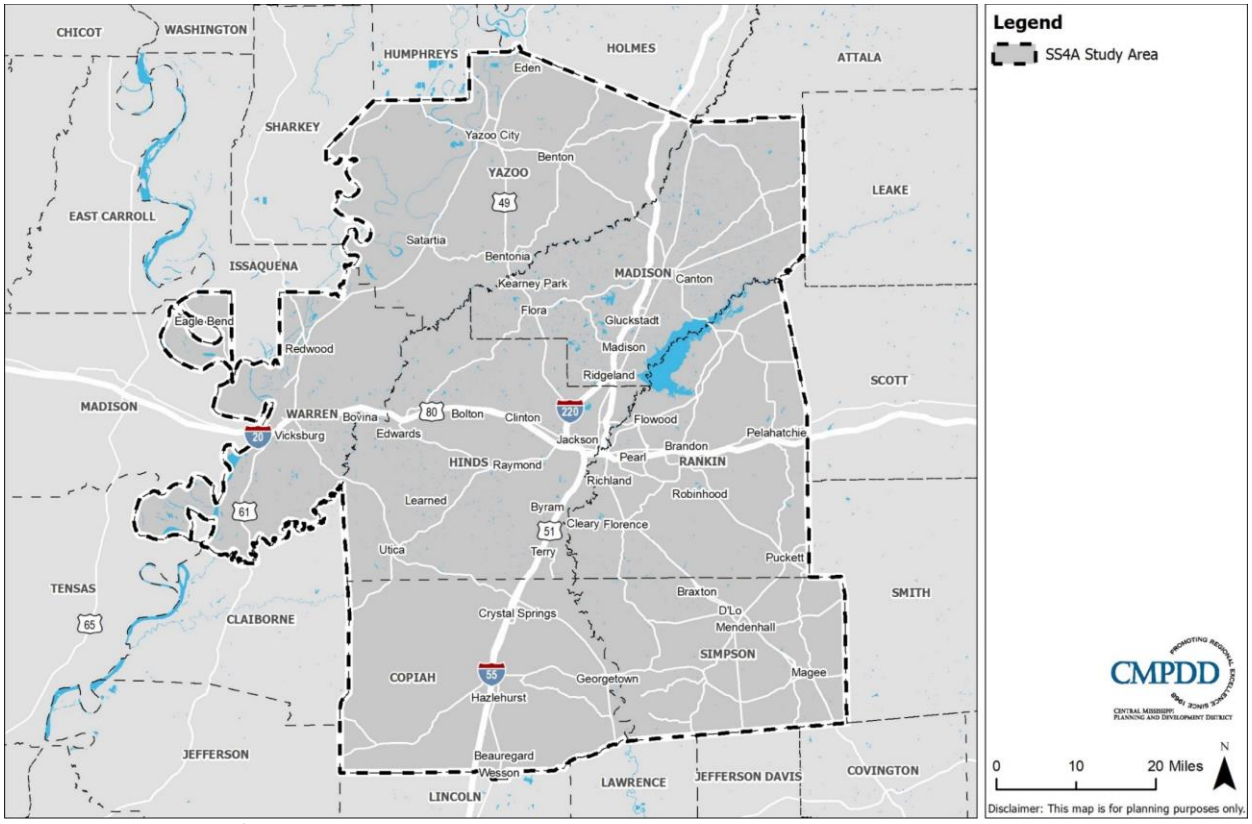
Safety Action Plan Study Area

The Safety Action Plan study area includes seven counties and thirty-five municipalities within the CMPDD region. These counties are listed below, and the study area can be seen in **Figure 1.2.**

The seven-county study area includes:

- Copiah County
- Hinds County
- Madison County
- Rankin County
- Simpson County
- Warren County
- Yazoo County

Figure 1.2: CMPDD Study Area Map



Source: Neel-Schaffer

Safety Commitment Resolution

A Safety Commitment Resolution was adopted by CMPDD on May 8, 2024. The Resolution confirms the commitment by the CMPDD to improve safety on the region's transportation system for all users and establishes a goal toward eliminating deaths and serious injuries by 2050.

Safety Commitment Resolution

RESOLUTION OF THE
CENTRAL MISSISSIPPI PLANNING
AND DEVELOPMENT DISTRICT
BOARD OF DIRECTORS

WHEREAS, the Central Mississippi Planning and Development District (CMPDD) is a voluntary association of local governments whose intent is to find common solutions to problems and issues that go beyond any one political subdivision; and

WHEREAS, CMPDD is governed by a Board of Directors comprised of political, business, education, workforce development, and minority interests from each of the seven (7) counties in Central Mississippi including Copiah, Hinds, Madison, Rankin, Simpson, Warren, and Yazoo Counties; and

WHEREAS, planning for safe, accessible, and multimodal transportation options in the region is central to CMPDD's mission; and

WHEREAS, CMPDD's region had 549 fatal crashes and 1,825 serious injury crashes between 2018-2022; and

WHEREAS, among the 2,374 total fatal and serious injury crashes there were 235 pedestrian crashes and 22 bicycle crashes; and

WHEREAS, CMPDD received a planning grant through the U.S. Department of Transportation's Safe Streets and Roads for All discretionary grant program to develop a comprehensive Safety Action Plan for CMPDD's seven-county region; and

WHEREAS, the goal of the Safety Action Plan is to develop a holistic well-defined strategy to prevent roadway deaths and serious injuries; and

WHEREAS, CMPDD's Safety Action Plan is a data-driven, comprehensive, and actionable strategy developed utilizing the Safe System approach to assist CMPDD's region in considering a broader approach to improving transportation safety throughout the entire transportation network for all users; and

WHEREAS, the Safe System approach prioritizes the elimination of crashes that result in death and serious injuries by incorporating six key principles: Death and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared among all stakeholders, safety is proactive, and redundancy is crucial in the transportation system; and

WHEREAS, the implementation of strategies identified in CMPDD's Safety Action Plan by its member jurisdictions will assist not only the U.S. Department of Transportation's vision of zero deaths and serious injuries on the nation's roadways, but the State of Mississippi's goal toward zero deaths and serious injuries by the year 2050; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors for the Central Mississippi Planning and Development District does hereby adopt the Central Mississippi Safety Action Plan and commits to a systematic approach to reducing transportation related serious injuries and deaths throughout CMPDD's seven-county region with a goal toward zero deaths and serious injuries on the region's transportation network by the year 2050.

THE FOREGOING RESOLUTION WAS ADOPTED BY THE BOARD OF DIRECTORS OF THE CENTRAL MISSISSIPPI PLANNING AND DEVELOPMENT DISTRICT ON MAY 8, 2024.

ATTEST:

Les Childress, Secretary Treasurer
CMPDD Board of Directors

William Banks, President,
CMPDD Board of Directors

2.0 Safe System Approach

According to the Federal Highway Administration (FHWA[1]):

Reaching zero deaths requires the implementation of a Safe System approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts. In a Safe System, those mistakes should never lead to death. Applying the Safe System approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body doesn't result in a fatality or serious injury. Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity.

There are six principles that form the basis of the Safe System approach:

- Deaths and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive, and
- Redundancy is crucial.

Safe System Elements

The FHWA defines five elements that comprise a Safe System Approach. These are:

- Safe Roads
- Safe People
- Safe Speeds
- Safe Vehicles
- Post-Crash Care

To address fatalities and serious injuries, the United States Department of Transportation (USDOT) strongly encourages transportation agencies to consider widespread implementation of Proven Safety Countermeasures to accelerate safety goals. Countermeasures include speed management, intersections, roadway departures, multimodal, and crosscutting. Additionally, the National Highway Traffic Safety Administration (NHTSA) has developed a Highway Safety Countermeasures Guide. The Safety Action Plan includes a Countermeasure Toolbox in Section 5.4 that includes some of these key countermeasures.

[1] Zero Deaths and Safe System | FHWA (dot.gov)

3.0 Safety Actin Plan Process and Stakeholder Engagement

The Safety Action Plan followed the development process shown in **Figure 3.1.** Key tasks during the process included Technical Committee and stakeholder group meetings, public engagement, visioning, safety analysis, equity analysis, and project prioritizations and recommendations.

Figure 3.1: Safety Action Plan Development Process

Safety Action Plan Technical Committee

To guide development of the plan and provide equal representation across the region, a Technical Committee was formed. The committee was comprised of transportation professionals from each county within the region and throughout the study area. The Technical Committee met regularly to discuss plan development, approve outreach materials, review plan findings, and provide input on local priorities and project selection.

Public and Stakeholder Engagement

The Safety Action Plan included a comprehensive and robust public engagement campaign. Stakeholders throughout the region were engaged throughout the process. A summary of the outreach activities undertaken during the development of the plan is included below. Comments received from survey participants during phase 1 are summarized in **Figure 3.3**.

Figure 3.2: Outreach Opportunities

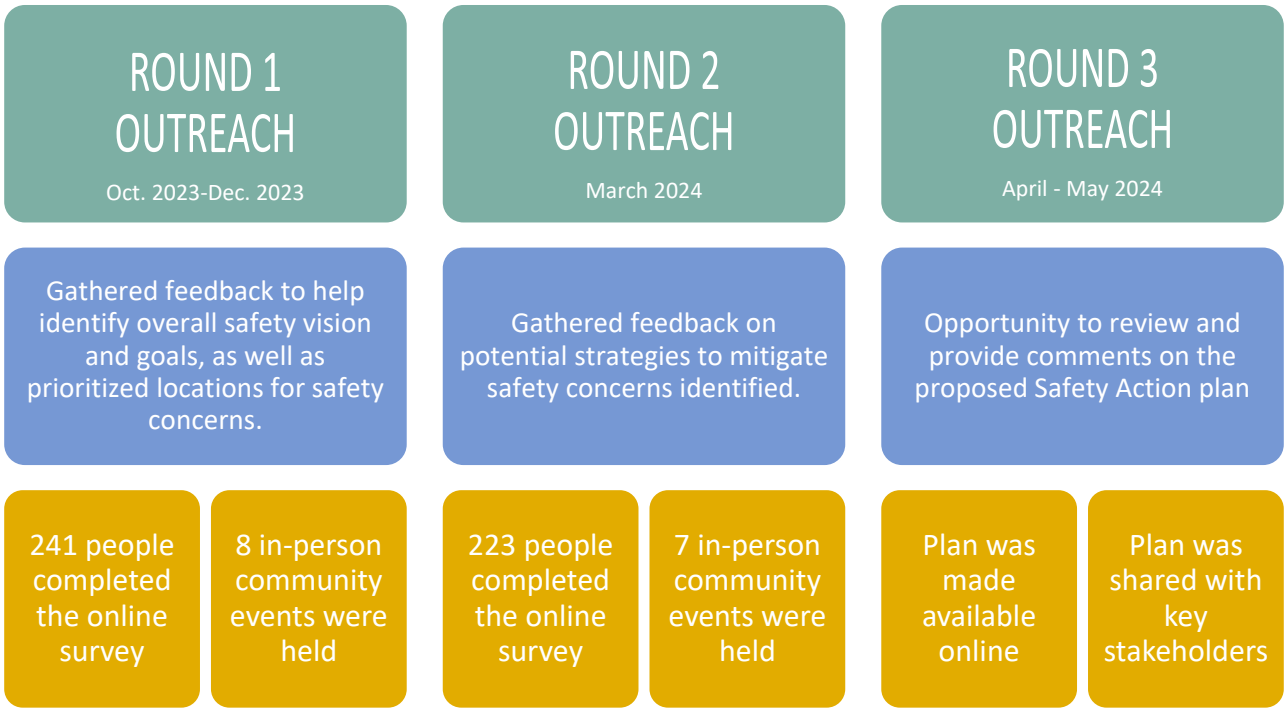


Figure 3.3: Key Findings - MetroQuest Survey #1

4.0 Study Area Safety Analysis Results

Within the CMPDD region, there were 549 fatal crashes, and 1,825 serious injury crashes reported during the five-year analysis period. **Figure 4.1** shows the fatal and serious injury crashes by year. **Figure 4.2** shows the fatal and serious crashes by county.

Figure 4.1: Fatal and Serious Injury Crashes by Year, 2018-2022

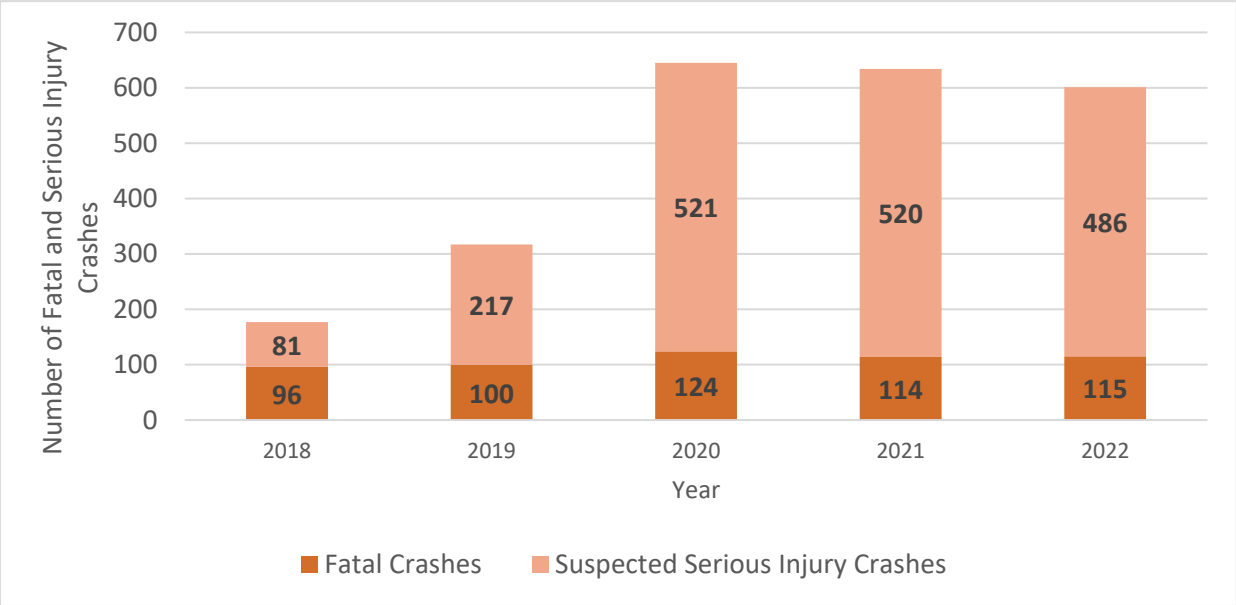
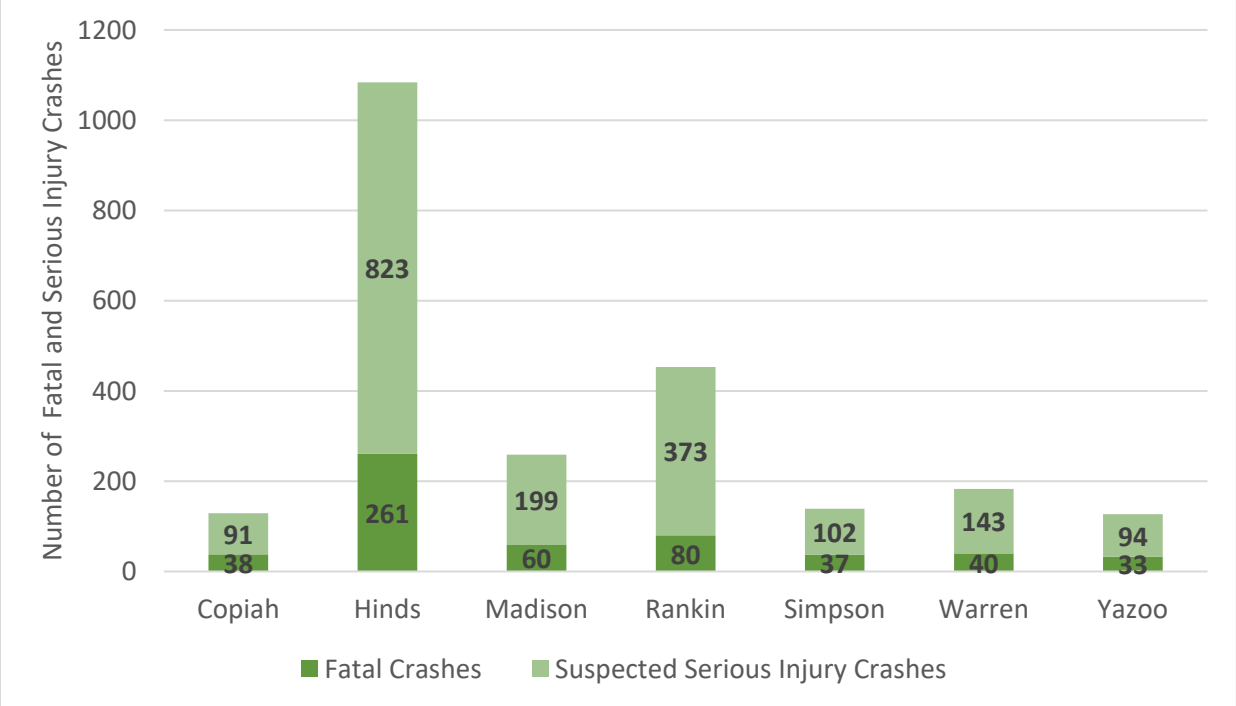
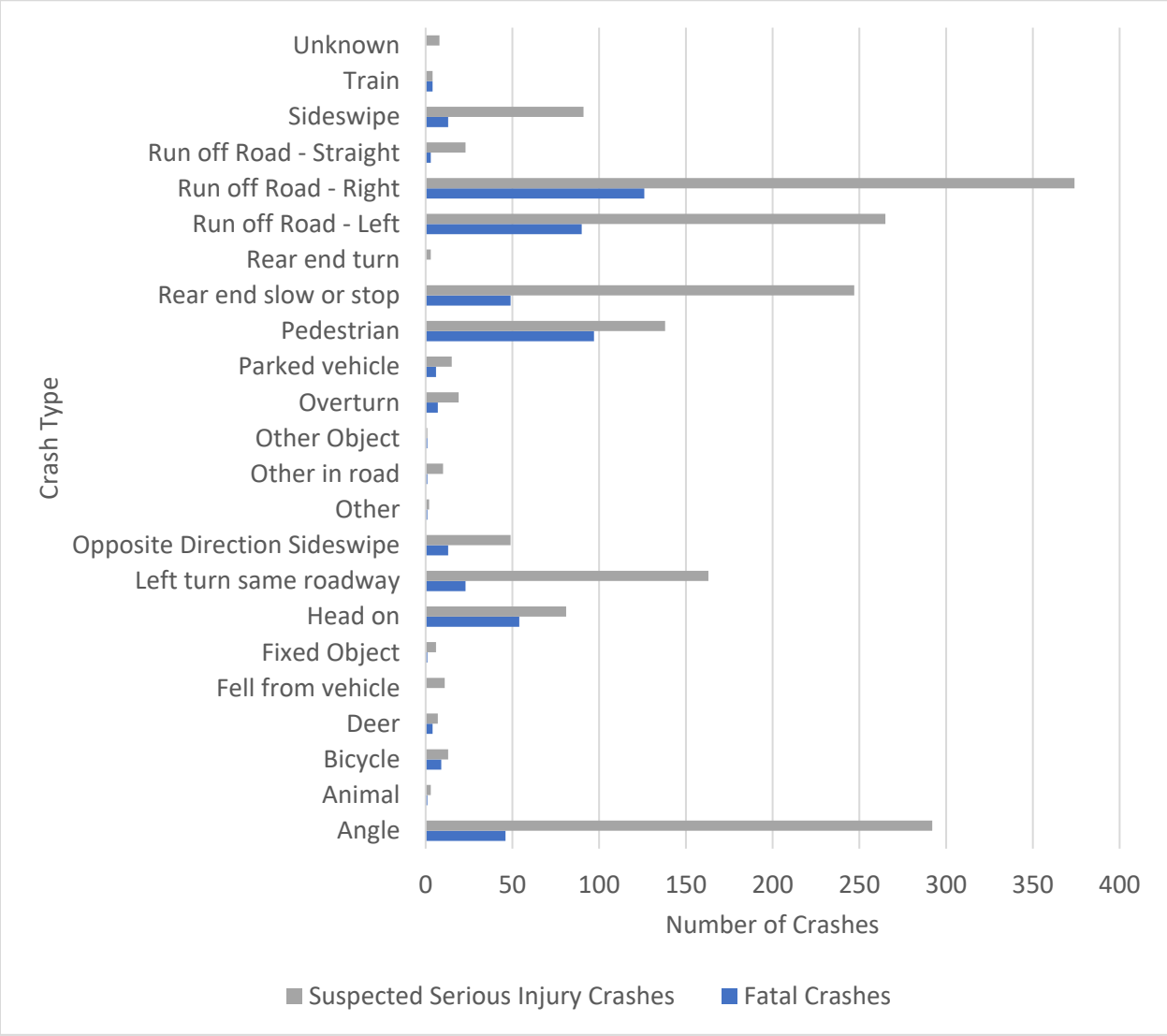


Figure 4.2: Number of Fatal and Serious Injury Crashes by County, 2018-2022



The most common crash types among the fatal and serious injury crashes reported in the five-year analysis period were run-off-road (36 percent), angle (14 percent), and rear-end (12 percent) crashes. Crash types and numbers for the study area can be seen in **Figure 4.3.**

Figure 4.3: Fatal and Serious Injury Crashes by Type, 2018-2022



During the five-year analysis period, there were 235 fatal or serious injury pedestrian crashes, and 22 fatal or serious injury bicycle crashes recorded within the CMPDD region. Among pedestrian-involved crashes, there were 97 fatal crashes and 138 suspected serious injury crashes. Bicycle-involved crashes included 9 fatal crashes and 13 suspected serious injury crashes.

Figure 4.4: Total Pedestrian and Bicycle Involved Crashes by County, 2018-2022

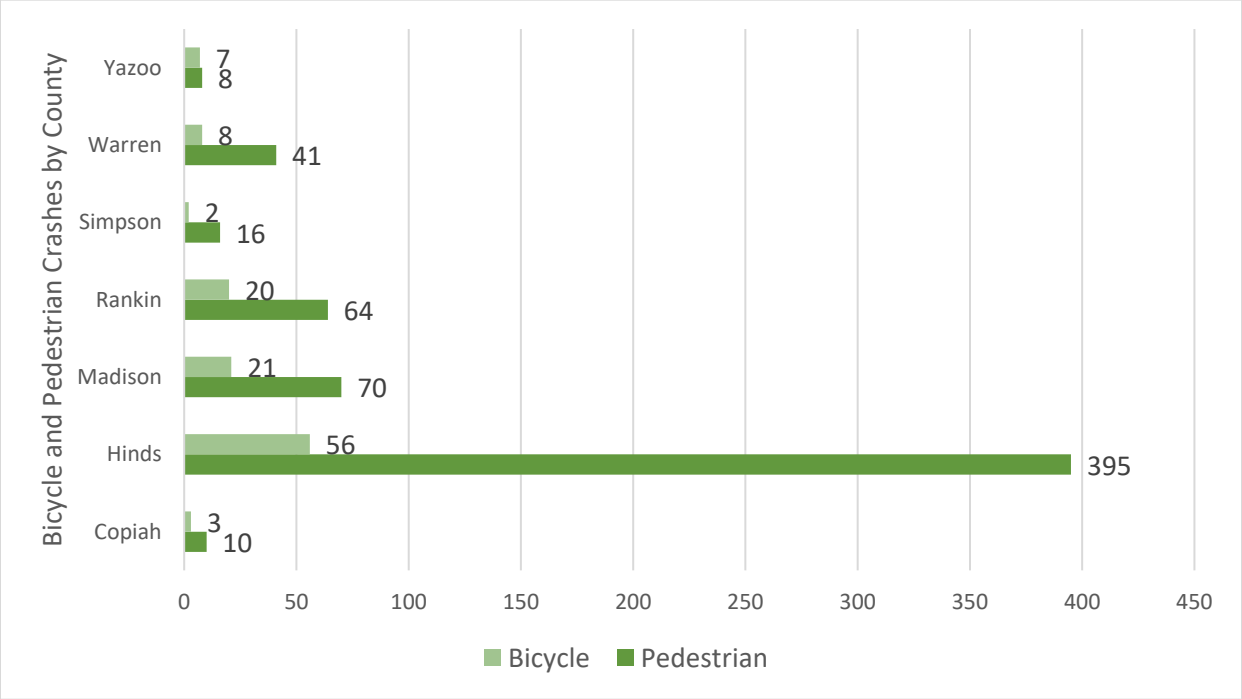
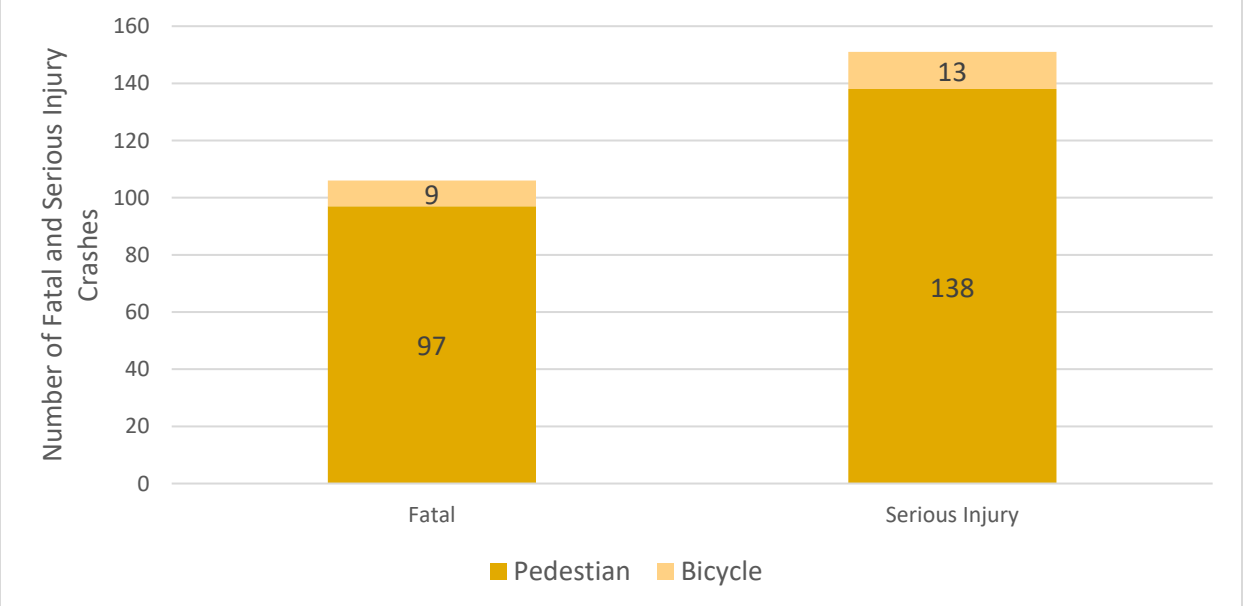


Figure 4.5: Number of Pedestrian and Bicycle Involved Fatal and Serious Injury Crashes, 2018-2022



The historical crash data for each of the CMPDD's seven counties was reviewed to identify crash trends and patterns specific to each county and a high injury network was developed. The High-Injury Network (HIN) analysis identified locations with historical safety concerns to guide local investments in infrastructure and safety programming. Two separate HINs were developed for each county and region:

- One focused on all roadway users
- One focused on vulnerable road users (bicyclists and pedestrians)

Each HIN (for each county) consisted of roadway segments and intersections that experience the highest crash frequency of fatal and serious injury crashes. **Figure 4.6** shows the HIN.

Segment Analysis

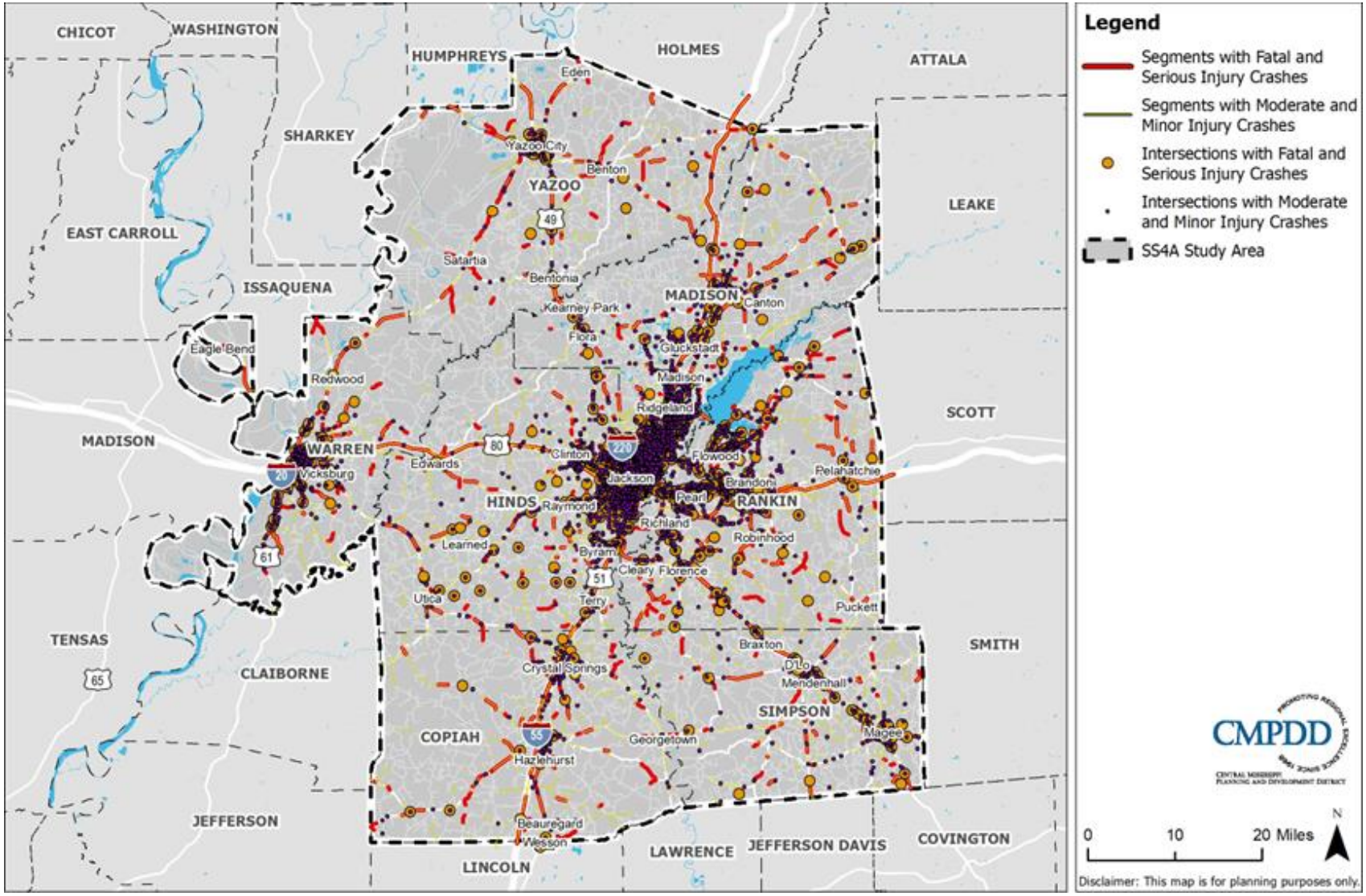
The segment analysis identified the top 25 segments, in each county, within the study area with the highest frequency of fatal and serious injury crashes. The following process was used to determine those segments:

1. Segments with at least one fatal and/or serious injury crash were sorted based on the number of fatal and/or serious injury crashes.
2. While maintaining the order of fatal and serious injury crash frequencies, segments were then sorted based on the number of total injury crashes (this included all injury classifications).
3. Segments were then sorted based on the total number of crashes, while maintaining the order established in the prior steps.

Intersection Analysis

The intersections analysis identified the top intersections in each county with the highest frequency of fatal and serious injury crashes, using the same process discussed for segment crashes.

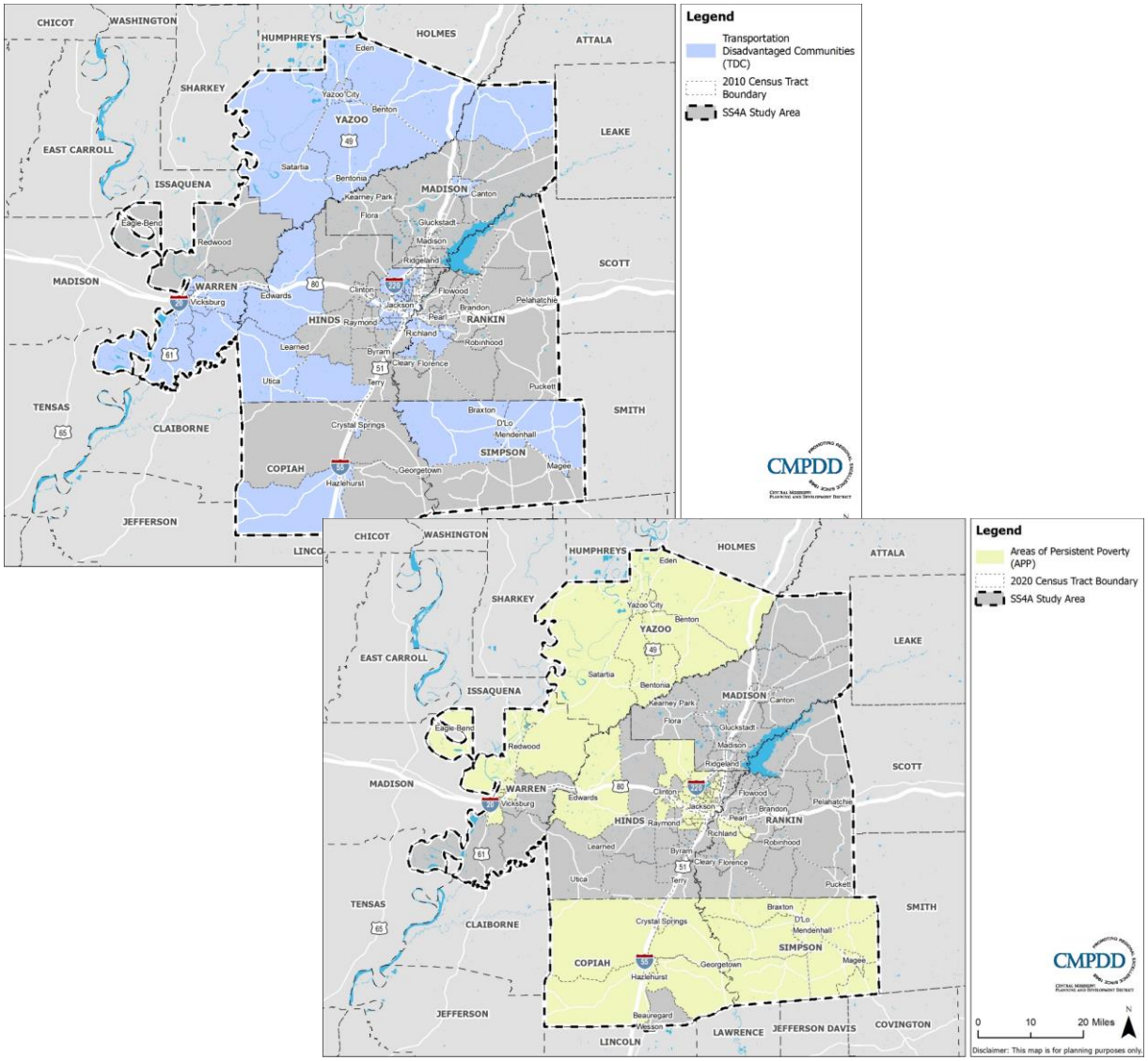
Figure 4.6: All Injury Crashes on the High Injury Network



5.0 Equity Considerations

Equity is a central guiding principle of the process to identifying the HIN, engaging stakeholders, and determining project priorities within the SS4A program. The program strongly emphasizes inclusive public outreach and input gathering and makes use of datasets provided by the FHWA and Census Bureau to determine and locate equity populations for the purposes of ensuring fairness and equity in safety solutions. The equity analysis conducted in the Safety Action Plan incorporates the communities required by the FHWA including Transportation Disadvantaged Communities (TDCs) and Areas of Persistent Poverty (APPs). Additionally, the plan incorporates an Environmental Justice (EJ) element, using the same American Communities Survey (ACS) data used to determine APPs.

Figure 5.1: Equity Areas



6.0 Strategies and Solutions

The Safety Action Plan recommends various projects and strategies that can be implemented to reduce the frequency of fatalities and serious injuries within the study area.

Project Prioritization

Safety projects were prioritized by a variety of factors (crash severity, multimodal, focus areas, equity, infrastructure, existing plans, and public concerns.) The methodology is intended to support the previously stated goals and objectives and was developed using input received during Phase 1 of the public outreach. The full scores of the project prioritization process are displayed in **Appendix C of the Safety Action Plan.**

Safety Countermeasures Toolbox

A Countermeasure Toolbox was developed **(Section 5.4 of the Safety Action Plan)** to improve safety within the CMPDD Region. A safety study should be conducted at each location identified to determine which countermeasures are appropriate for the type and severity of crashes experienced at that location. Some countermeasures may be inappropriate at one site yet may be the best choice for another site. At times, multiple countermeasures may be necessary.

Safety concerns that the toolbox addresses include speeding, vulnerable roadway user safety, roadway departure, intersection safety, crosscutting, distracted driving, and impaired driving.

Figure 6.1: Countermeasure Toolbox Example

Safety Concern	Countermeasure	Pros	Cons
Speeding	Select appropriate speed limits	• Low cost • Reduce crash severities • Safer for all roadway users • Traffic calming	• Opposition from regular roadway users • Excess violations issued if not implemented properly
Roadway Departure	Longitudinal rumble strips or stripes	• Center line rumble strips reduce head-on crashes • Shoulder rumble strips reduce run-off-road crashes • Relatively low cost	• Noise concerns
Intersection	Dedicated turn lanes at intersections	• Address left-turn and rear-end crashes • Provides deceleration lane • Opposing left turns with positive offset increases visibility	• Additional ROW required • Left turns with zero or negative offset result in turning vehicles blocking line of sight

CMPDD

Central Mississippi Planning & Development District

Promoting Regional Excellence since 1968

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