KENTUCKIANA REGIONAL SAFETY ACTION PLAN

On the Road to Safety, Every Life Counts

Jeffersonville, IN

Safety Action Plan

6/25/2025

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Contributors

KENTUCKIANA REGIONAL PLANNING & DEVELOPMENT AGENCY (KIPDA)

Andy Rush | Transportation Director

Mick Logsdon | Transportation Planner

Spencer Williams | Transportation Planner

JEFFERSONVILLE

Mike Moore | Mayor, City of Jeffersonville

Andy Crouch | City Engineer, City of Jeffersonville

Chad Reischl | Director of Planning & Development, City of Jeffersonville

Shane Shaughnessy | Planner, City of Jeffersonville

Introduction

In 2023, the City of Jeffersonville, in collaboration with the Kentuckiana Regional Planning & Development Agency (KIPDA) and 15 other participating cities and counties, applied for and successfully received a Safe Streets and Roads for All (SS4A) Action Plan Grant. The SS4A Action Plan Grant is a vital component of the broader federal SS4A initiative to improve road safety across the United States. The goal of the SS4A Program is to create a safer transportation network by supporting the development and implementation of comprehensive safety plans that are data-driven and community-focused.

The City of Jeffersonville is dedicated to working towards a goal of zero traffic deaths and serious injuries by 2050. Achieving this goal will require a clear focus on prioritizing safety for all road users. The Jeffersonville Safety Action Plan addresses eight important SS4A Program safety components. Each component is a chapter in the Safety Action Plan.

- Leadership Commitment and Goal Setting
- Planning Structure
- Safety Analysis
- Engagement and Collaboration
- Policy and Process Changes
- Strategy and Project Selections
- Progress and Transparency

Safe System Approach

The Safe System Approach is a comprehensive approach based on the understanding that humans are fallible and make mistakes, but those mistakes should not result in fatalities or serious injuries. There are five broad impact areas for achieving this goal: **Safer People, Safer Vehicles, Safer Speeds, Safer Roads, and Post-Crash Care**. This approach significantly expands the traditional safety plan focus on roadway infrastructure. Six key principles undergird the approach.

Safe System Key Principles

Death and Serious Injuries are Unacceptable: Every human life is invaluable, and ensuring safety is the highest priority.

Humans Make Mistakes: Recognizing that human error is inevitable, we design and manage our roads to be forgiving, mitigating the potential consequences of these errors to prevent serious harm.

Humans are Vulnerable: We design the roadway system to account for the biological limits the human body can tolerate in a crash.

Responsibility is Shared: Preventing fatal and serious injuries is a shared responsibility. All stakeholders must work together to enhance road safety.

Safety is Proactive: Taking a proactive stance on safety means anticipating and addressing risks before they result in crashes. Being proactive involves identifying potential hazards and implementing measures to mitigate them.

Redundancy is Crucial: Embedding multiple layers of safety within the transportation system is important, so that if one layer fails, others can still protect people. This redundancy is vital for creating a resilient transportation network.

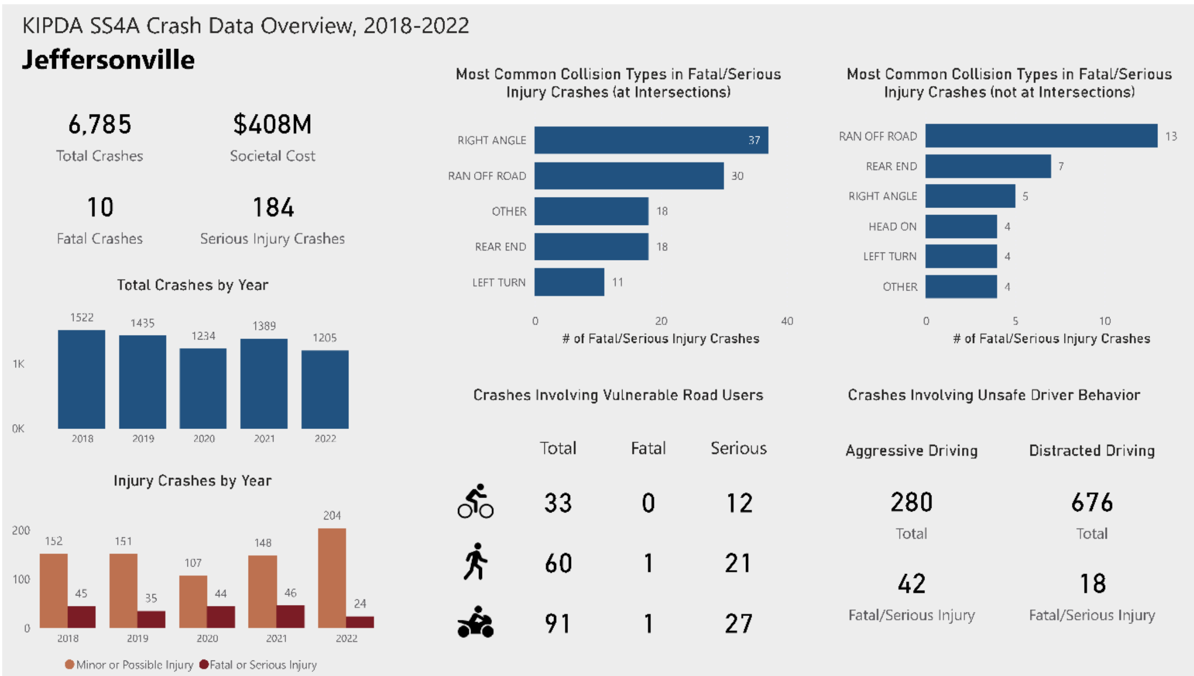
Safe System Approach vs Traditional Approach

The traditional approach to road safety often relies on perfect human behavior from all road users and tends to react to crashes *after* they occur, focusing on individual accountability. In contrast, the Safe System Approach acknowledges that humans are fallible and will inevitably make mistakes. This approach builds a system designed to minimize the severity of crashes resulting from those errors. This shift from an individual-focused model to a system-centric one highlights all stakeholders' shared responsibilities. The comparative graphic illustrates this fundamental shift, showcasing how the Safe System Approach aims to create a safer, more forgiving transportation system.

Traditional approach	Safe System approach
Prevent crashes	Prevent death and serious injuries
Improve human behavior	Design for human mistakes/limitations
Control speeding	Reduce system kinetic energy
Individuals are responsible	Share responsibility
React based on crash history	Proactively identify and address risks

Overview

Jeffersonville had 10 fatal crashes and 184 serious injury crashes during the five-year period from 2018 to 2022, for a total of 194. There were 6,785 total crashes during this time. The total societal cost of all crashes was $408 million (including economic and quality of life factors). The figure below provides an overview of the crash data.



Important safety findings for Jeffersonville include:

- Right Angle Crashes were the most common collision type for those crashes that were fatal or caused serious injury at an intersection – with a total of 37
- 34 of 194 fatal or serious injury crashes involved a pedestrian or a cyclist
- 18 fatal or serious crashes between 2018-2022 involved a driver who was distracted
- 42 fatal or serious crashes involved aggressive driving

1. Leadership Commitment and Goal Setting

Jeffersonville is dedicated to ensuring safety for all users on the City's streets and highways. The City's commitment is demonstrated by the resolution on the following page, which states that its leaders have established "a goal of achieving zero traffic fatalities and serious injuries by the year 2050."

The commitment and leadership in implementing safety-focused projects, strategies, and policies are also supported by current programs and policies.

The Jeffersonville Building Jeff Comprehensive Plan was adopted in 2023 and is being implemented through the coordinated efforts of the Jeffersonville Planning Commission, local government officials, and community stakeholders.

The Comprehensive Plan outlines strategies to facilitate redevelopment, improve traffic and pedestrian safety, streamline traffic flows, and help facilitate connectivity. Focused initiatives also included road and intersection improvements to improve safety, access, and traffic flow on Allison Lane between Middle Road and 10th Street. In addition to the Comprehensive Plan, the Sidewalk Master Plan and the 10^{th} St Corridor Master Plan make efforts to identify and support pedestrian networks as well as provide funding for access management to help improve roadway performance and safety for drivers.

These plans and programs work to promote improvements that address safety issues and access concerns.

RESOLUTION NO 2024-R-14

A RESOLUTION OF THE CITY OF JEFFERSONVILLE IN SUPPORT OF VEHICULAR AND PEDESTRIAN SAFETY/VISION ZERO

WHEREAS, the City of Jeffersonville's comprehensive plan, Building Jeff, urges the City to work regionally in order to improve transportation systems and quality of life; and

WHEREAS, the CITY OF JEFFERSONVILLE is coordinating with the Kentuckian Regional Planning and Development Agency (KIPDA) to develop a regional traffic safety action plan to analyze existing conditions, historical trends, systemic and specific needs and to identify projects and strategies to address identified problems; and

WHEREAS, the project is utilizing an SS4A planning grant through the Safe Streets and Roads for All Program; and

WHEREAS, said grant calls for participating communities to adopt resolutions in support of Vision Zero a nationwide effort to eliminate preventable traffic crashes and their associated injuries and/or tragic deaths ; and

WHEREAS, the City acknowledges that vehicular crashes and collisions involving vehicles and pedestrians are a serious transportation issue and threat to our City's quality of life; and

WHEREAS, the City aspires to reduce and eventually eliminate traffic related fatalities and serious injuries on its roadways;

NOW, THEREFORE BE IT RESOLVED that the CITY OF JEFFERSONVILLE hereby establishes a goal of achieving zero traffic fatalities and serious injuries by the year 2050.

SO RESOLVED AND DULY ADOPTED this 19 day of August, 2024, by the Common Council of the City of Jeffersonville.

Common Council for the City of Jeffersonville, Clark County, Indiana.

VOTED FOR: **VOTED AGAINST:**

This resolution shall be effective upon adoption by the Common Council for the City of Jeffersonville and approval by the Mayor of the City of Jeffersonville.

Dustin White, Council President

2. Planning Structure

The planning structure for the City of Jeffersonville Safety Action Plan consisted of various committees, each playing a crucial role. The following describes these bodies and their collaborative efforts in the plan development.

Regional Steering Committee

The Regional Steering Committee provided oversight and strategic direction for the Safety Action Plan development process. The Committee was composed of representatives from 16 local government agencies, including Jeffersonville. It also included KIPDA staff. Steering Committee meetings were held at key points to provide information and gather input and feedback. Topics covered during the meetings included:

- Purpose of safety action plans
- Data collection and safety analysis
- Identification of high crash highways and intersections
- Countermeasure identification and prioritization
- Documentation and implementation opportunities

Agency Leadership Meetings and Plan Review

Agency Leadership and Staff Meetings were conducted at two key points during plan development to receive and relay detailed input and feedback. The first meeting focused on presenting the initial data analysis and prioritization of needs, allowing agency leadership to identify, confirm, and prioritize critical safety issues. The second meeting allowed agency leadership to provide feedback on draft recommendations and potential countermeasures. These interactions allowed the unique concerns and priorities of Jeffersonville to be adequately addressed in the plan.

The final Safety Action Plan was also reviewed by agency leadership to provide feedback and yield a plan that is useful for moving the City of Jeffersonville forward toward a safer future.

Safety Committee Meetings

The Safety Committee is the cornerstone of the planning structure, providing localized oversight and input into the plan. The Committee consisted of a multidisciplinary team comprising key stakeholders in the community. The Safety Committee will advise the City of Jeffersonville and KIPDA on the plan's development, implementation, and monitoring. The Committee provided input and feedback on potential safety needs and possible reactive and systemic safety countermeasures. Having the many different perspectives and agencies in the meetings has facilitated effective communication and resulted in a more effective safety action plan that better addresses the five elements of the Safe System Approach. A detailed review of the Safety Committee Meetings is provided in **4. Engagement and Collaboration.** The dialogue will continue in the future as the plan is implemented, updated, and enhanced over time.

3. Safety Analysis

Study Area

The study area for the safety analysis includes the entirety of Jeffersonville, IN, as shown in Figure 3-1. This study consists of all public streets and roads within the city except interstate highways (I-65, I-265), private streets, or parking lots.

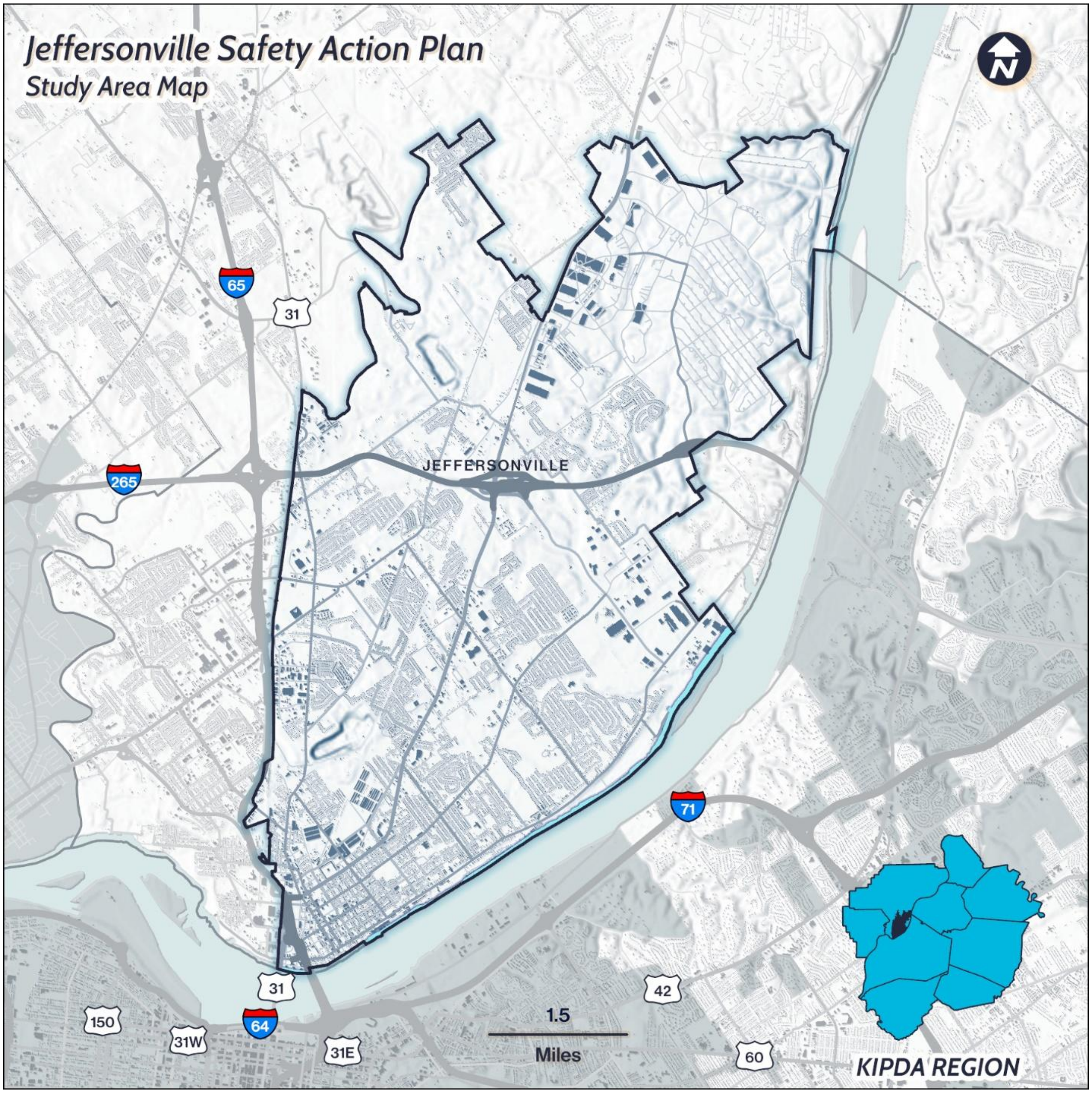


Figure 3-1. Study Area

Crash Data

The safety analysis was conducted using the five years of crash data between 2018 and 2022. This period was selected based on the desire to study consistent crash trends over a consecutive period, the availability of data when the project started, and expectations regarding future funding application data requirements.

The project team obtained the crash data from the Indiana State Police (ISP) crash database - Automated Reporting Information Exchange System (ARIES). This data is primarily collected by city, county, and state police department crash investigation teams when they complete an Indiana Officer's Standard Crash Report form. This form captures critical information about crashes, including location, type, severity, individuals and units involved, environmental factors, and contributing factors. Departments enter this information into a database maintained by ISP.

The initial crash data included all crashes in Jeffersonville from 2018 to 2022. Crashes located on I-265 and those that occurred in parking lots were removed from the dataset. Additionally, some crashes could not be linked to the GIS roadway due to missing information. After these adjustments, the final crash database used for the study included 6,785 crashes.

This report focuses on crash events based on the most severe injury sustained in each incident. Since the analysis is event-based rather than individual-based, a single crash involving multiple injuries is counted as one event, categorized by the highest severity level recorded. Pedestrian crashes involve at least one pedestrian and one motor vehicle. Similarly, bicycle crashes refer to crashes involving at least one bicycle and one motor vehicle. Vehicle crashes involve at least one vehicle and do not involve a pedestrian or a bicycle.

The study team obtained geographic information system (GIS) files of with roadway characteristics and traffic data for roadways where this information was available. The team used this information to create a database of roadway segments and intersections. The crash data was joined with the GIS information to create a crash database that facilitates detailed analyses to identify crash trends, areas of opportunity, and risk factors to assist in prioritizing projects.

Crash Severity

The crash database uses the KABCO Injury Classification Scale. The KABCO injury classification system categorizes traffic crash injuries into five levels: Fatal (K), Suspected Serious (A), Suspected Minor (B), Possible (C), and No Apparent Injury (O). The KABCO scale is the recommended best practice for individual injury reporting by the Model Minimum Uniform Crash Criteria (MMUCC), developed by the National Highway Traffic Safety Administration (NHTSA). ISP uses the KABCO scale during field data collection and reporting the injury severity of a crash. Crash severity is determined by the most severe injury occurring in the crash. For example, if a fatality occurs, the crash is classified as a "K" or fatal injury crash.

For this plan, the crash severity data was reviewed against the reported detailed injury data to confirm the severity. This resulted in some crashes being adjusted to better match the MMUCC. The following table provides a breakdown of the total crashes by severity. The table below provides a breakdown of the crashes in Jeffersonville by severity.

Severity	MMUCC Severity Description	Crashes (2018-2022)	%
K	Fatal Injury	10	0%
A	Suspected Serious Injury	184	3%
B	Suspected Minor Injury	566	8%
C	Possible Injury	196	3%
O	No Apparent Injury	5,829	86%
	Total	**6,785**	

Table 3-1. Crashes by Severity

Figure 3-2 shows the location of all 6,785 crashes documented during the study period. Density of crashes is shown with a gradient scale. The highest number of crashes during the study period occurred near the intersection of E 10th Street and Allison Lane, and E 10th Street and Spring Street. Figure 3-3 shows the locations of fatal and suspected serious injury crashes.

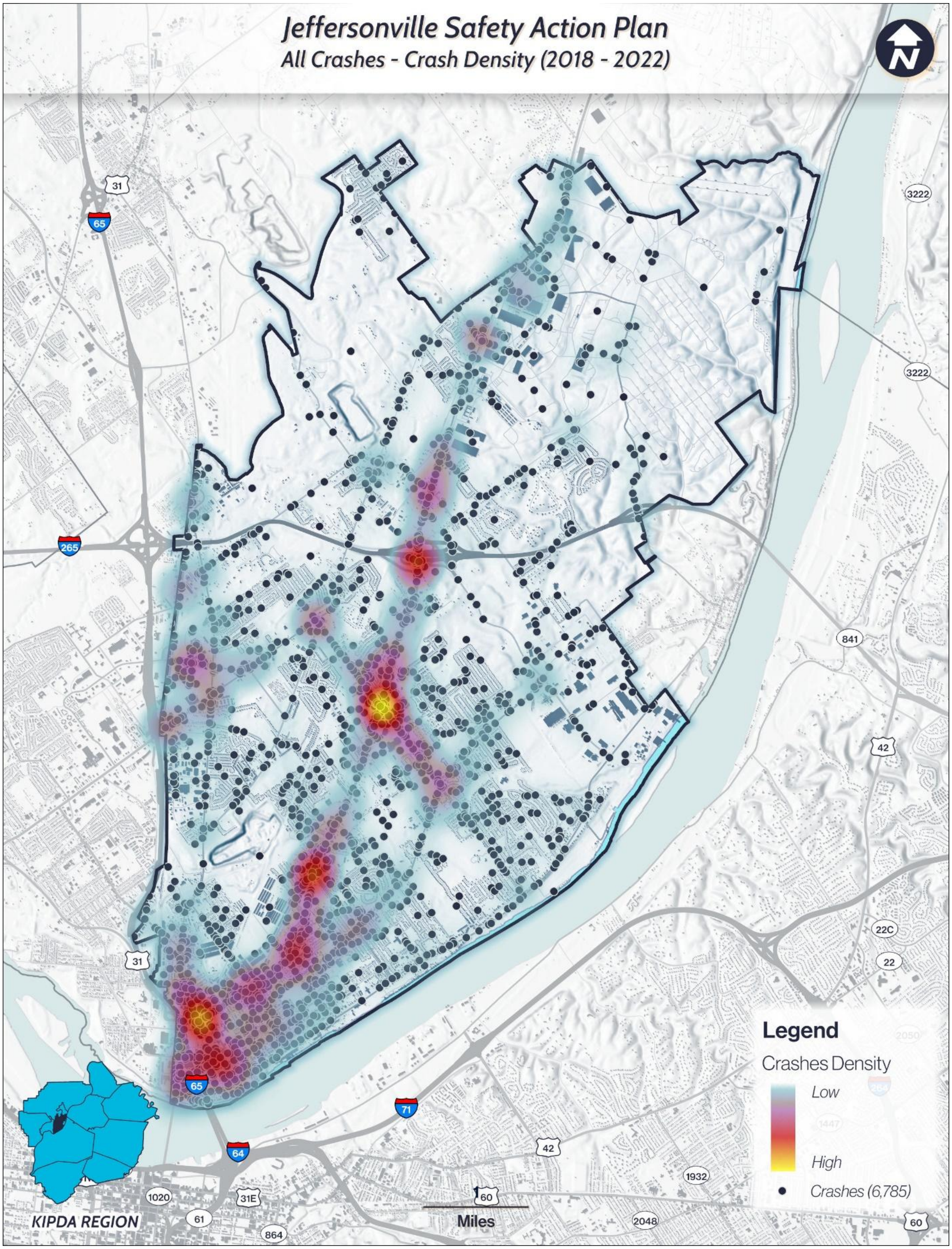


Figure 3-2. Crash Density Map

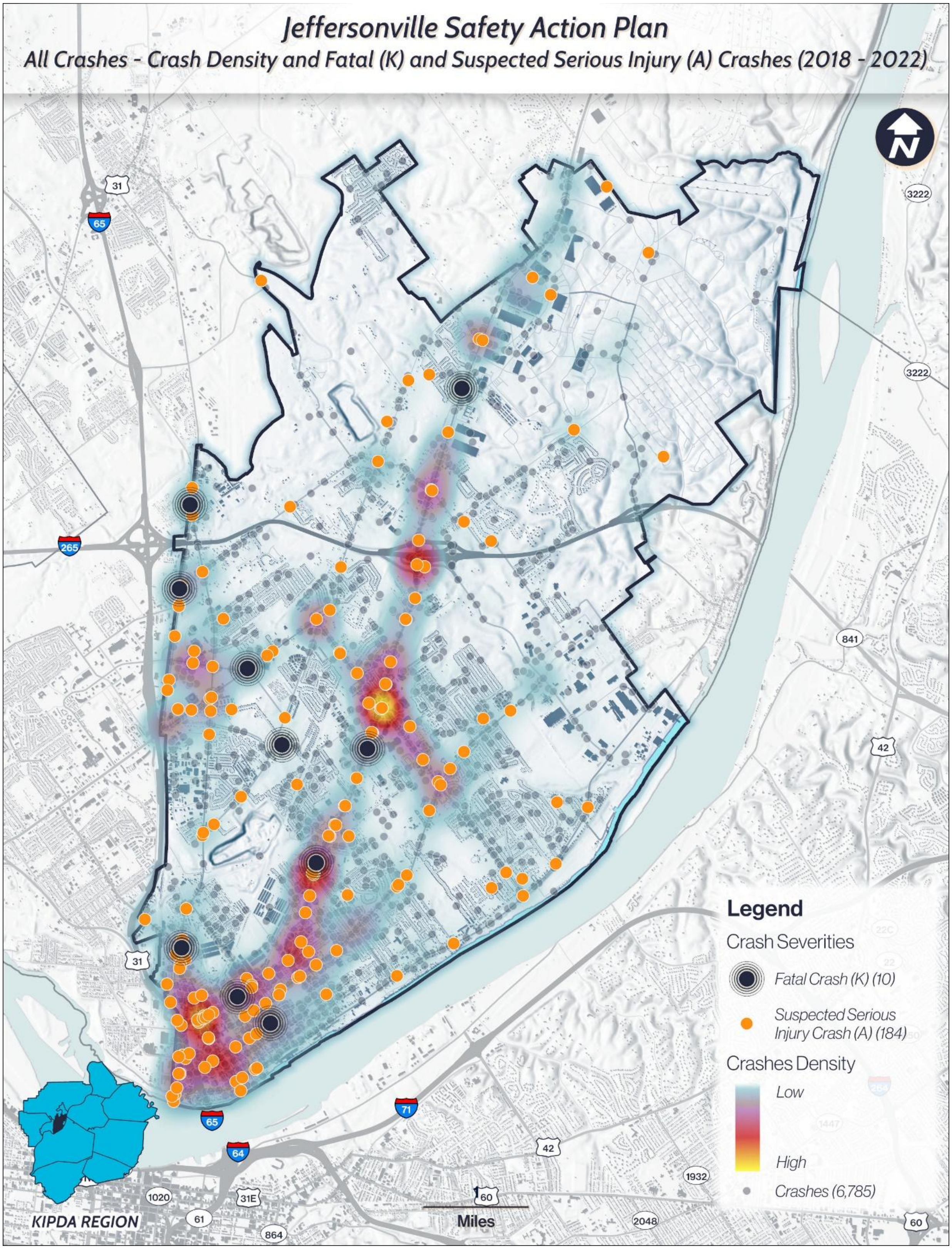


Figure 3-3. Fatal and Suspected Serious Injury Crash Map

Crash Trends

The crash data has been examined considering a number of different factors to identify patterns and safety needs. This trend analysis also provides information about potential safety countermeasures and approaches that could be explored to address those needs.

Annual Crash Trends

The 2018-2022 crash analysis shows a relatively consistent number of crashes per year, ranging between 1,522 and 1,205 crashes annually. The highest number of crashes occurred in 2018 and generally decreased in the subsequent years. The lowest rate of crashes occurred in 2022, with 1,205 crashes. The second lowest number of crashes occurred in 2020, aligning with the COVID-19 pandemic, which greatly affected traffic patterns and likely led to underreporting of crashes. In early 2020 police operating procedures were modified to minimize potential exposure to the virus. Consequently, the reported number of crashes in 2020 is likely distorted, as crashes were underreported. Crashes increased in 2021 to 1,389 before falling again in 2022. Fatal and suspected serious injury crashes ranged between 45 and 35 from 2018 to 2021, then fell to 24 in 2022.

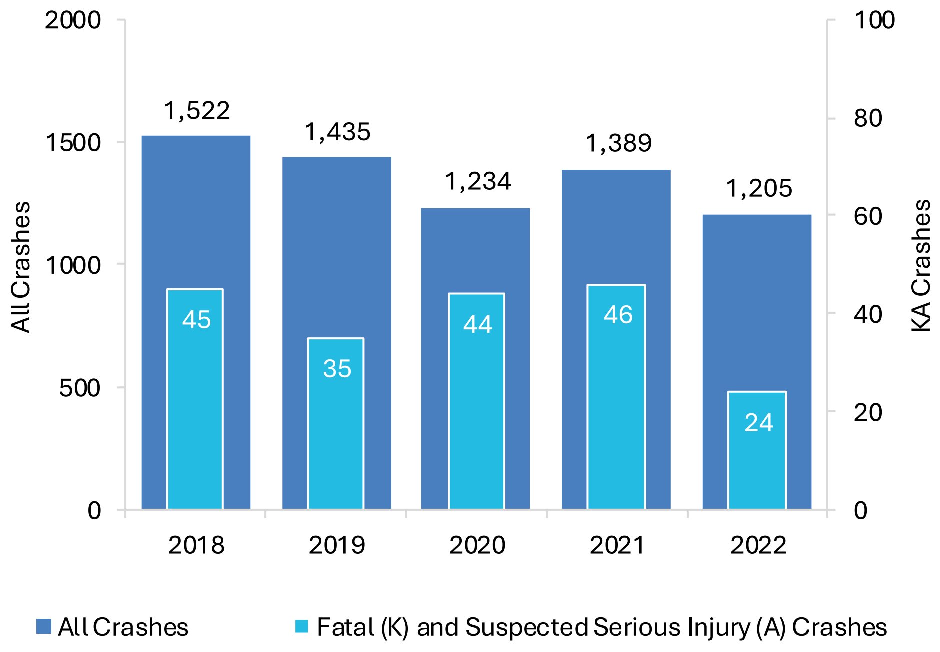


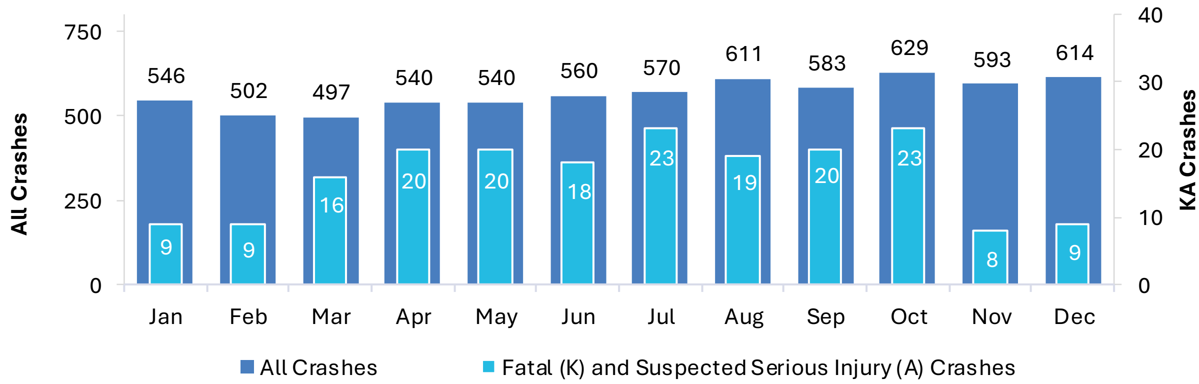
Figure 3-4. Overall Crashes per Year

Figure 3-4 shows the trajectory of severe fatal (K) and suspected serious injury (A) crashes compared to total crashes through the study period.

Crash Occurrence

Month

The following charts present the crashes by month over the 5-year study period. This monthly crash data shows notable variations in crash frequency and severity throughout the year. The highest total crashes occurred in August and October, with 611 and 629 crashes, respectively. However, July and October experienced higher percentages of fatal and suspected serious injury crashes, each with 12%, respectively, despite these months contributing to only 8% and 9% of all crashes.



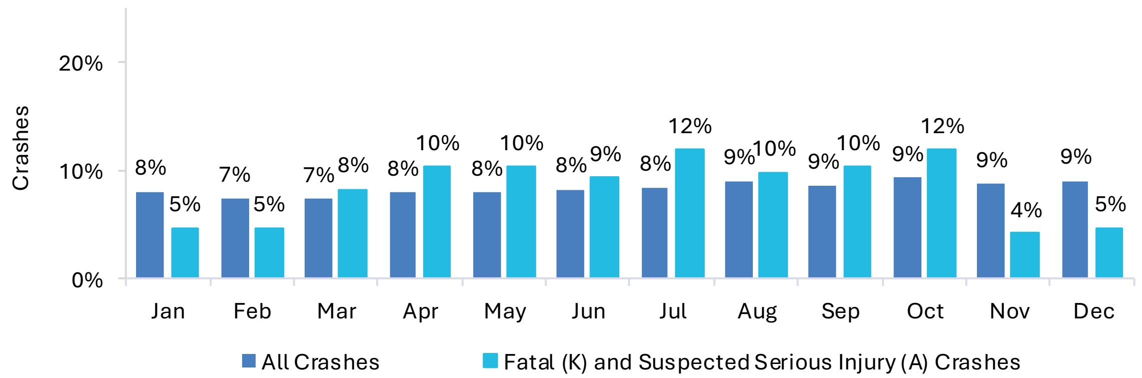


Figure 3-5. Monthly Crash Breakdown

Day of Week

As seen in Figure 3-6, crashes remain relatively consistent during the week, ranging from 1,146 crashes on Wednesday to 1,000 crashes on Monday. A decline is observed on weekends, with 829 crashes on Saturday and 619 on Sunday, representing the lowest crash frequency. The decrease in weekend crashes is most likely attributed to lower traffic exposure, lowering the potential for crashes.

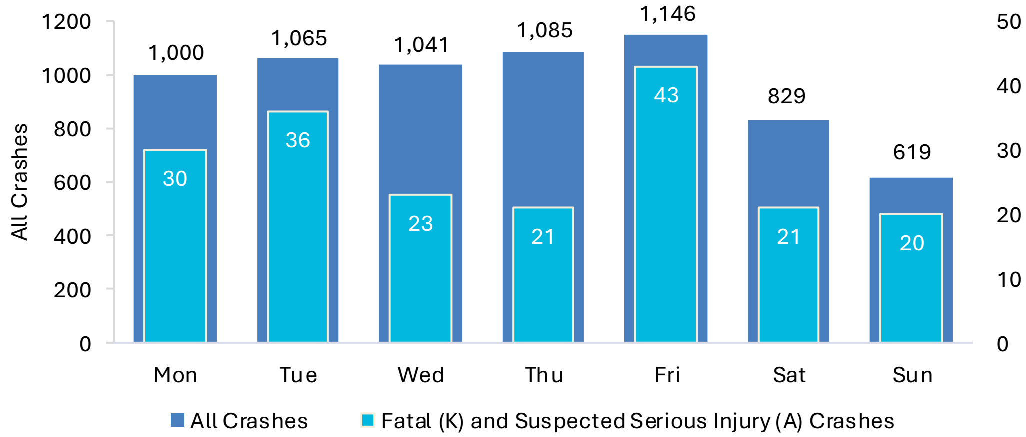


Figure 3-6. Crashes by Day of Week

Time of Day

The 3-6 pm period experienced the highest number of crashes, with 1,400, or 21% of all crashes. This time frame also experienced the second highest number of severe crashes, with 28 fatal and suspected serious injury crashes. The period between 6 am and 6 pm shows a relatively consistent number of severe crashes, ranging from 26 to 33 fatal and suspected serious injury crashes during each time frame. The early morning hours, such as 12-3 am and 3-6 am, report the lowest crash frequencies, with 389 and 594 crashes, respectively, and relatively few severe crashes (14 and 16 fatal and suspected serious injury crashes). Similarly, the late evening periods of 9 pm-12 am show a lower crash frequency for all crashes (345) and severe crashes (21).

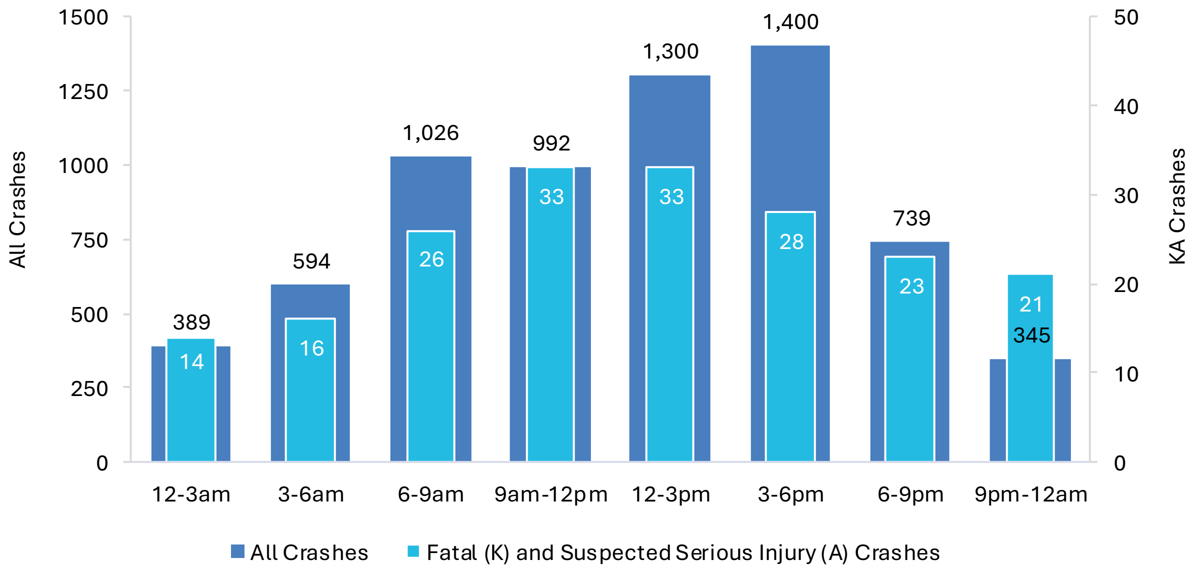


Figure 3-7. Crashes by Time of Day

Manner of Collision

As shown, rear-end crashes are the most common type, accounting for 29% of all crashes. Right angle and roadway departure crashes result in the highest number of fatal and suspected serious injury crashes, with 22% each.

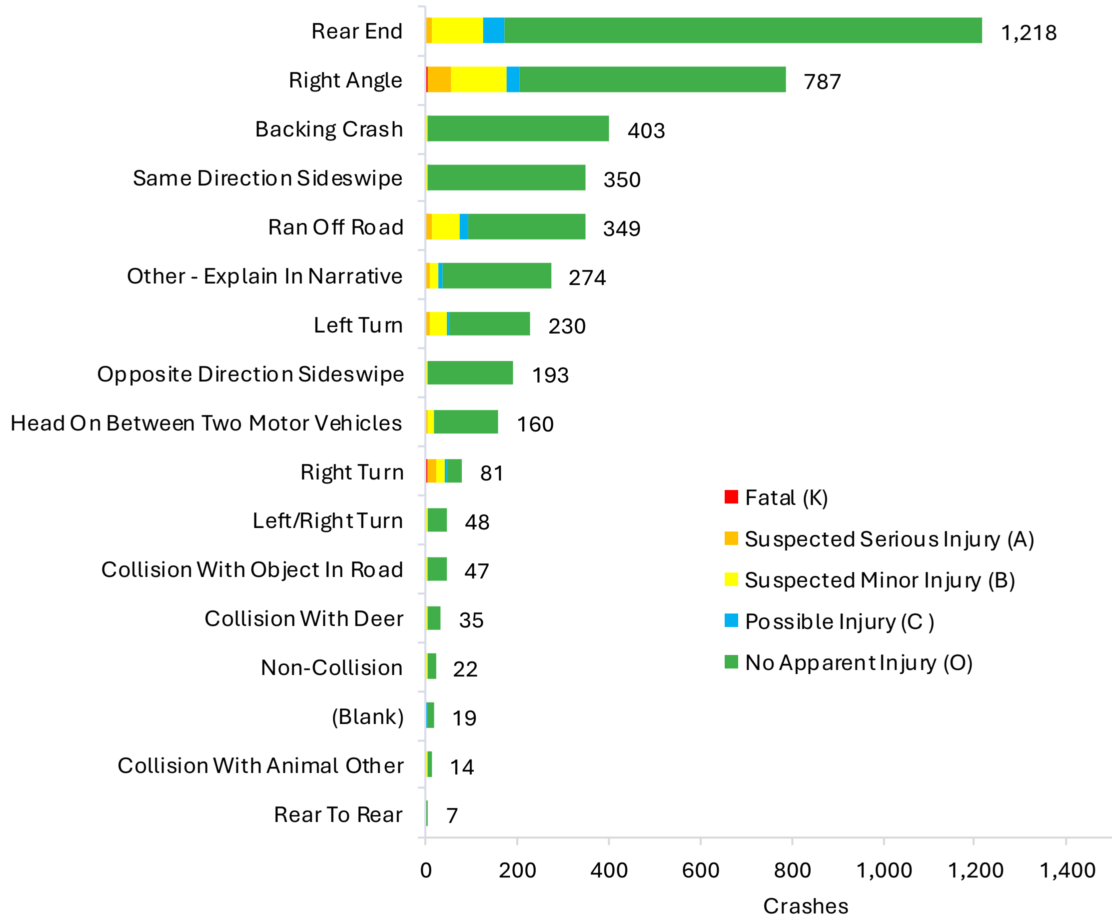


Figure 3-8. Manner of Collision

The most severe crash types in Jeffersonville are Ran Off Road and Right Angle collisions, each accounting for 22% of fatal and suspected serious injury crashes. While rear-end crashes are the most common overall at 29%, they contribute to a smaller share (13%) of severe crashes.

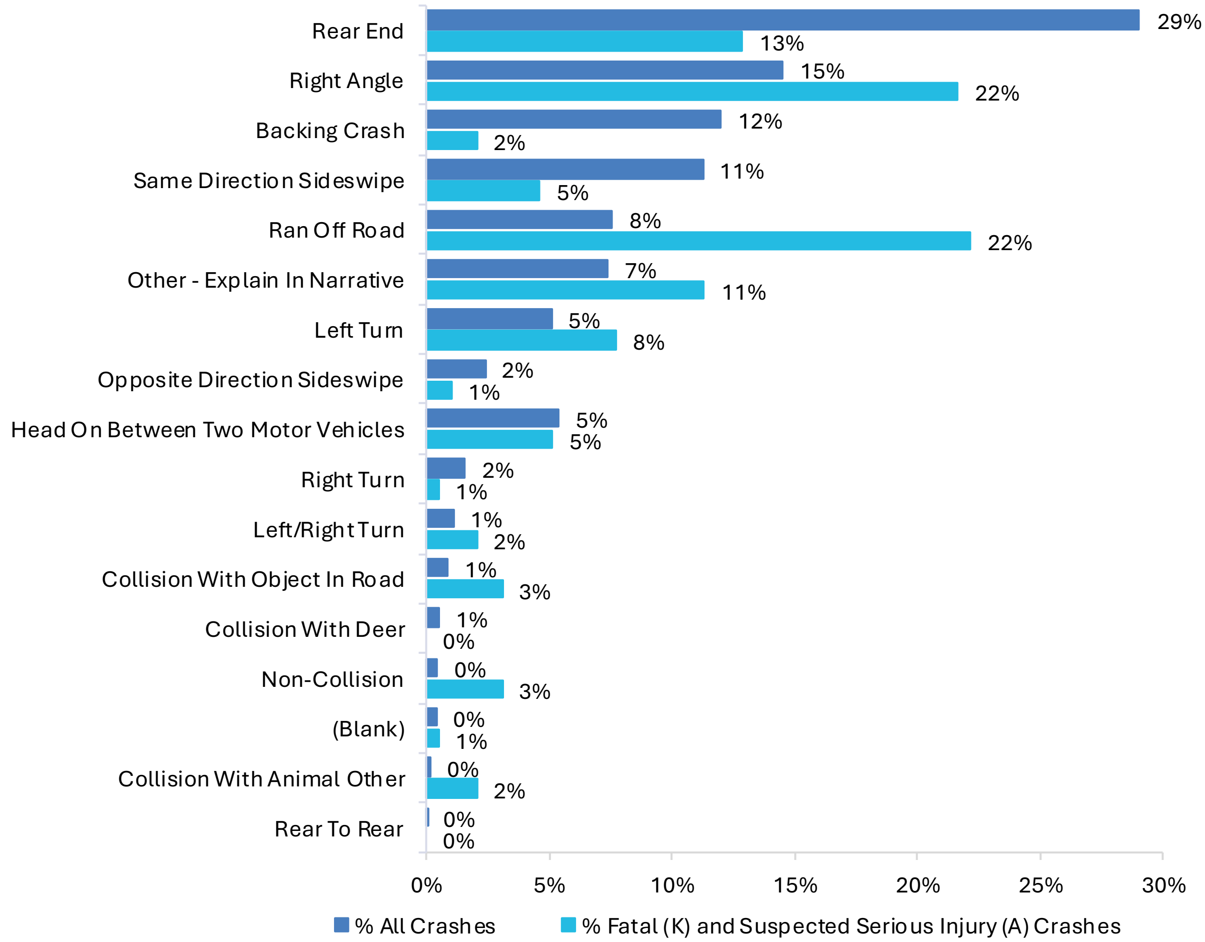


Figure 3-9. Manner of Collision by Severity

Lighting Conditions

Roadway lighting is a safety factor that impacts visibility and reaction times. However, the documentation of lighting infrastructure is not comprehensive. The available crash data provides only anecdotal evidence regarding the lighting condition during a crash. Currently, there is no established infrastructure database detailing the presence and condition of street lighting, making it challenging to analyze the correlation between illumination and road safety.

Most crashes occur during daylight hours, accounting for 72% of all crashes and 60% of fatal or serious injury crashes. However, dark conditions, especially on lighted highways, are disproportionately represented in severe crashes—making up only 15% of all crashes but 24% of the most serious ones. Locations of these crashes are found on the next page.

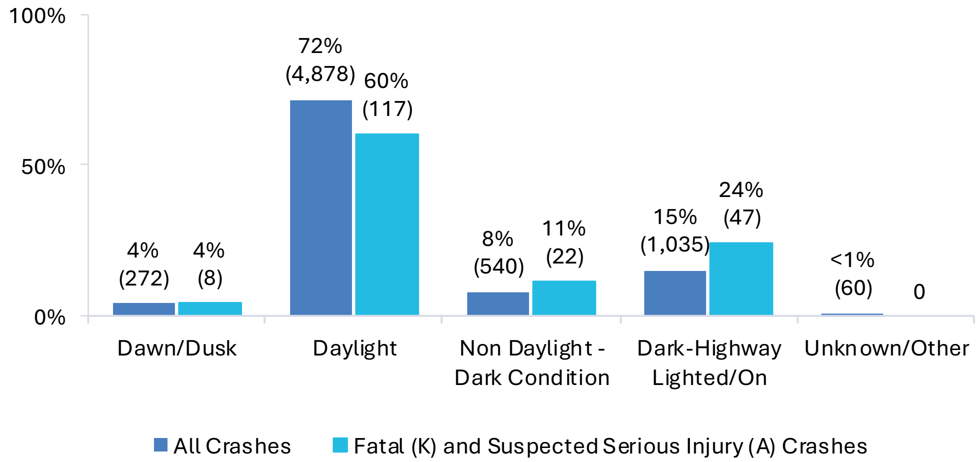


Figure 3-10. Crashes by Light Condition

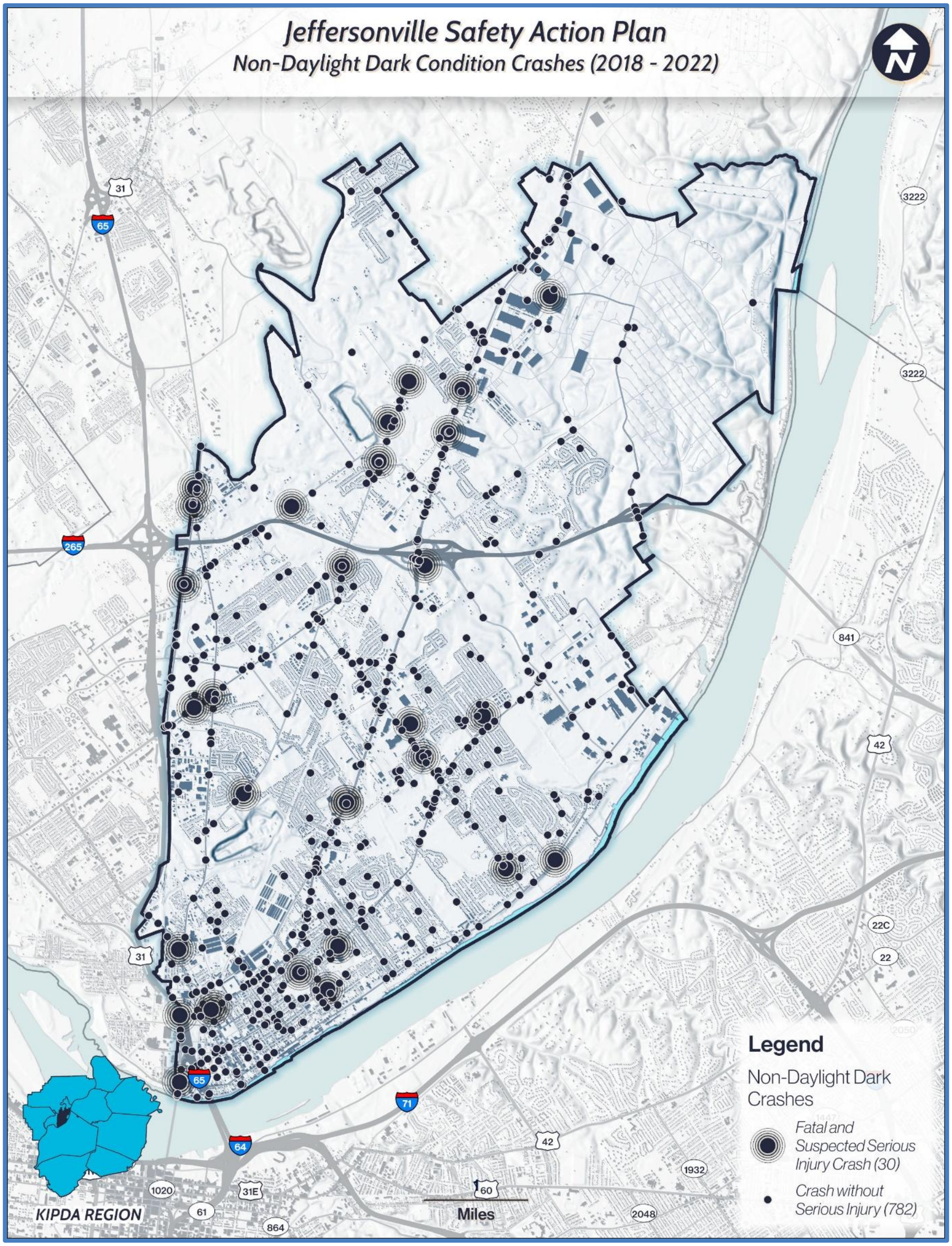


Figure 3-11. Lighting Condition: Non-Daylight Dark Condition Crashes Map

Crashes by Locations

The analysis identified crashes based on their location: intersections and roadway segments. Segment-related crashes make up the majority, accounting for 67% of all crashes and 70% of fatal or suspected serious injury crashes. In contrast, intersection crashes represent 33% of all crashes and 30% of severe crashes.

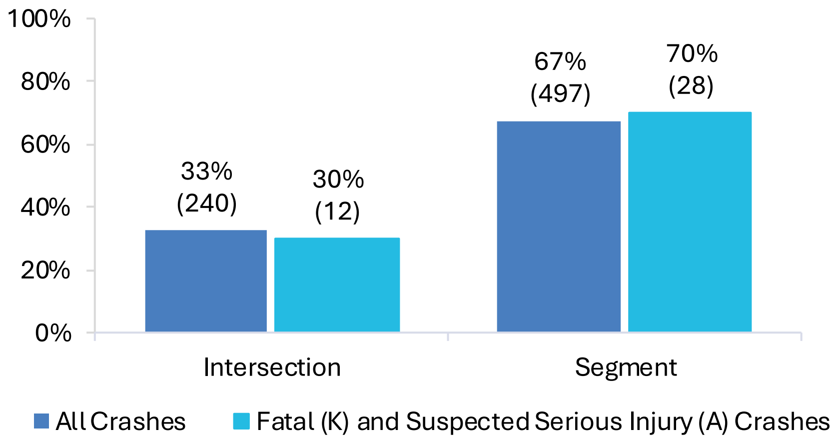


Figure 3-12. Crashes by Location

Roadway Departure Crashes

Roadway departure crashes occur when a vehicle crosses an edge line, a centerline, or leaves the traveled way. These crashes often lead to some of the most severe outcomes due to the increased risk of collision with fixed objects, overturning, or encountering unsafe roadside conditions. The inherent dangers of leaving the roadway contribute to higher rates of serious injuries and fatalities compared to other crash types.

Crashes involving roadway departure are less common but more severe, accounting for only 8% of all crashes (526 out of 6,785). However, they represent a disproportionately high share of serious outcomes, with four fatal crashes and 39 suspected serious injury crashes. Figure 3-13 shows the locations of roadway departure crashes resulting in injuries or fatalities.

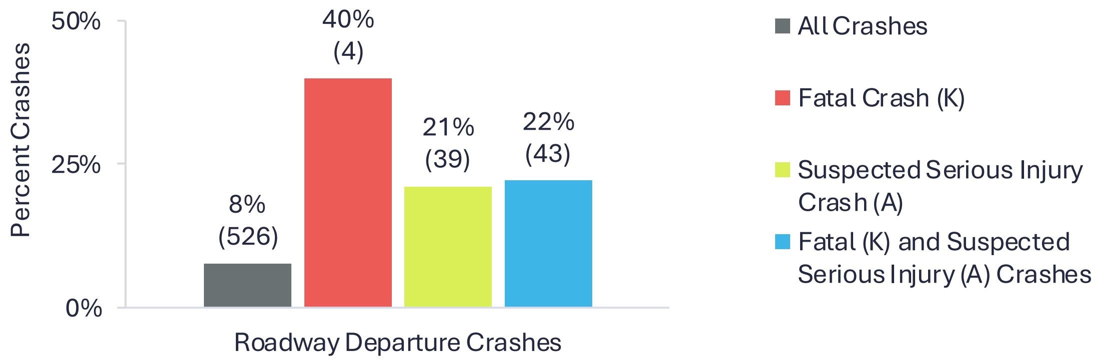


Figure 3-13. Roadway Departure Crashes by Severity

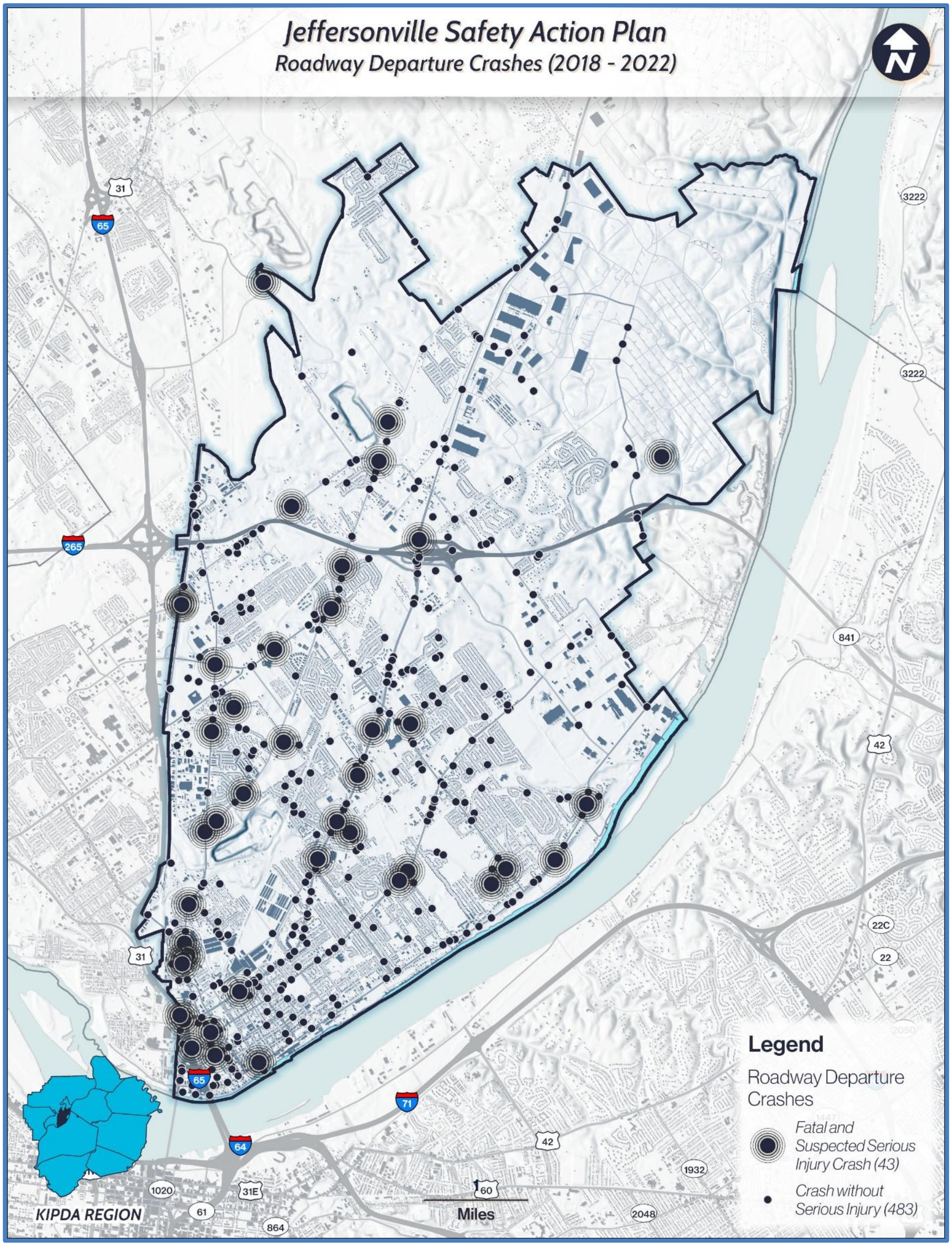


Figure 3-14. Roadway Departure Crashes Map

Vulnerable Road Users

Vulnerable road users, including pedestrians and bicyclists, are at greater risk due to their lack of physical protection compared to motor vehicle occupants. These crashes typically result in more severe injuries and fatalities because there is little to no buffer between these users and the force of a collision.

Pedestrians

Of the 64 pedestrian crashes, 36% resulted in suspected serious injuries and 2% were fatal. This means that pedestrian crashes alone account for over 12% of all fatal and serious injury crashes in the city (24 out of 194), despite being a small fraction of the total number of crashes. Figure 3-15 shows the locations of these crashes

Severity	Description	Crashes	%
K	Fatal	1	2%
A	Suspected Serious Injury	23	36%
B	Suspected Minor Injury	19	30%
C	Possible Injury	13	20%
O	No Apparent Injury	8	13%
TOTAL		**64**	

Table 3-2. Crashes by Pedestrian Severity

Bicyclists

In Jeffersonville, there were 27 reported bicyclist crashes, and while none were fatal, 8 involved suspected serious injuries, making up 30% of all bicyclist incidents. These crashes account for over 4% of the city's total fatal and serious injury crashes (8 out of 194), despite being a small portion of overall crash volume. Figure 3-16 shows locations of these crashes.

Severity	Description	Crashes	%
K	Fatal	0	0
A	Suspected Serious Injury	8	30%
B	Suspected Minor Injury	7	26%
C	Possible Injury	3	11%
O	No Apparent Injury	9	33%
TOTAL		**27**	

Table 3-3. Cyclist Crashes by Severity

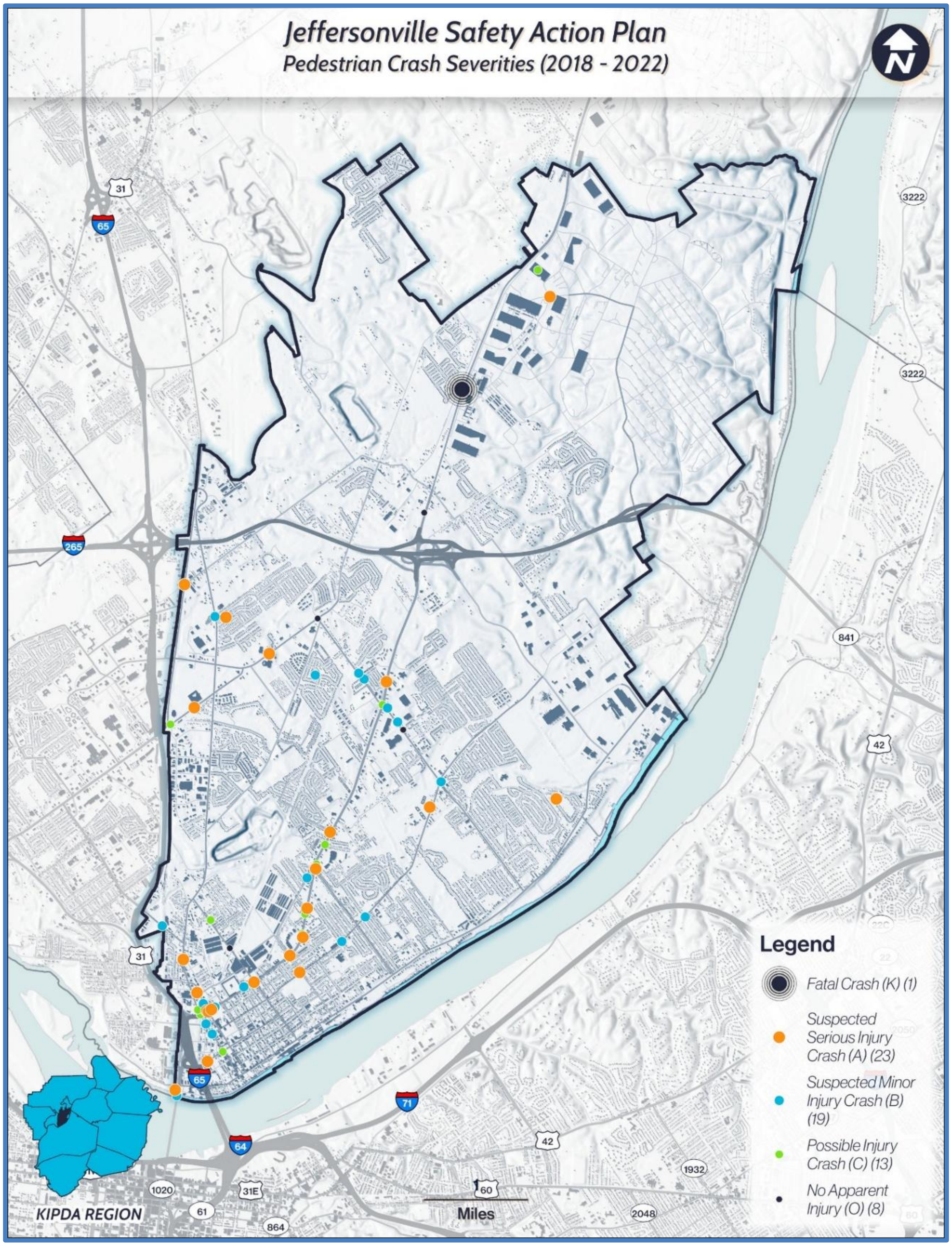


Figure 3-15. Pedestrian Crash Map

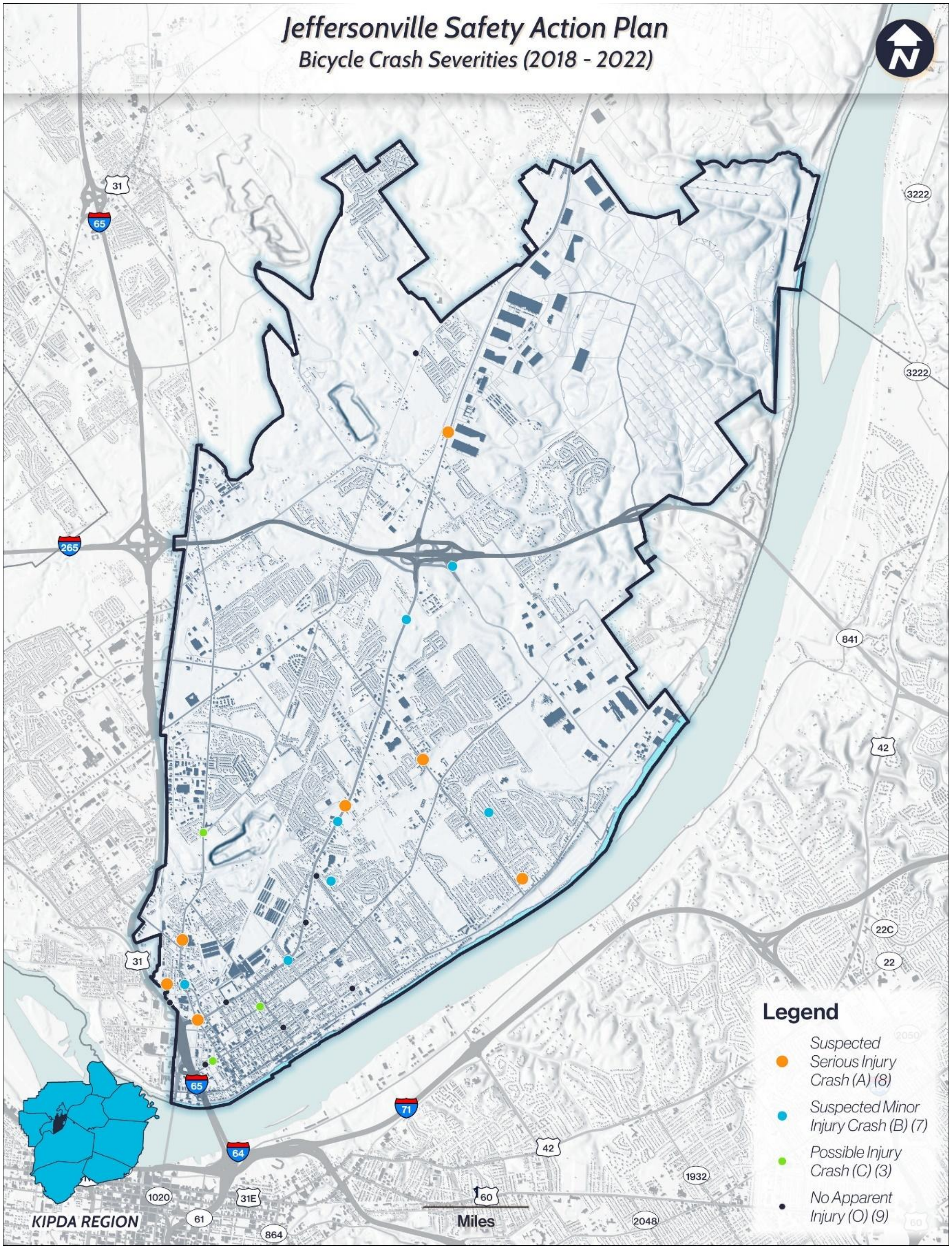


Figure 3-16. Cyclist Crash Map

Contributing Human Factors

Human factors play a significant role in crash occurrences, often tied to errors in judgment and risky behaviors. These factors include speeding, failing to yield, distractions, fatigue, and the influence of alcohol or drugs.

The top two contributing factors to crashes are Failure to yield the Right of Way and Following Too Closely. Together, these account for nearly 40% of all reported crashes, making them the most common causes.

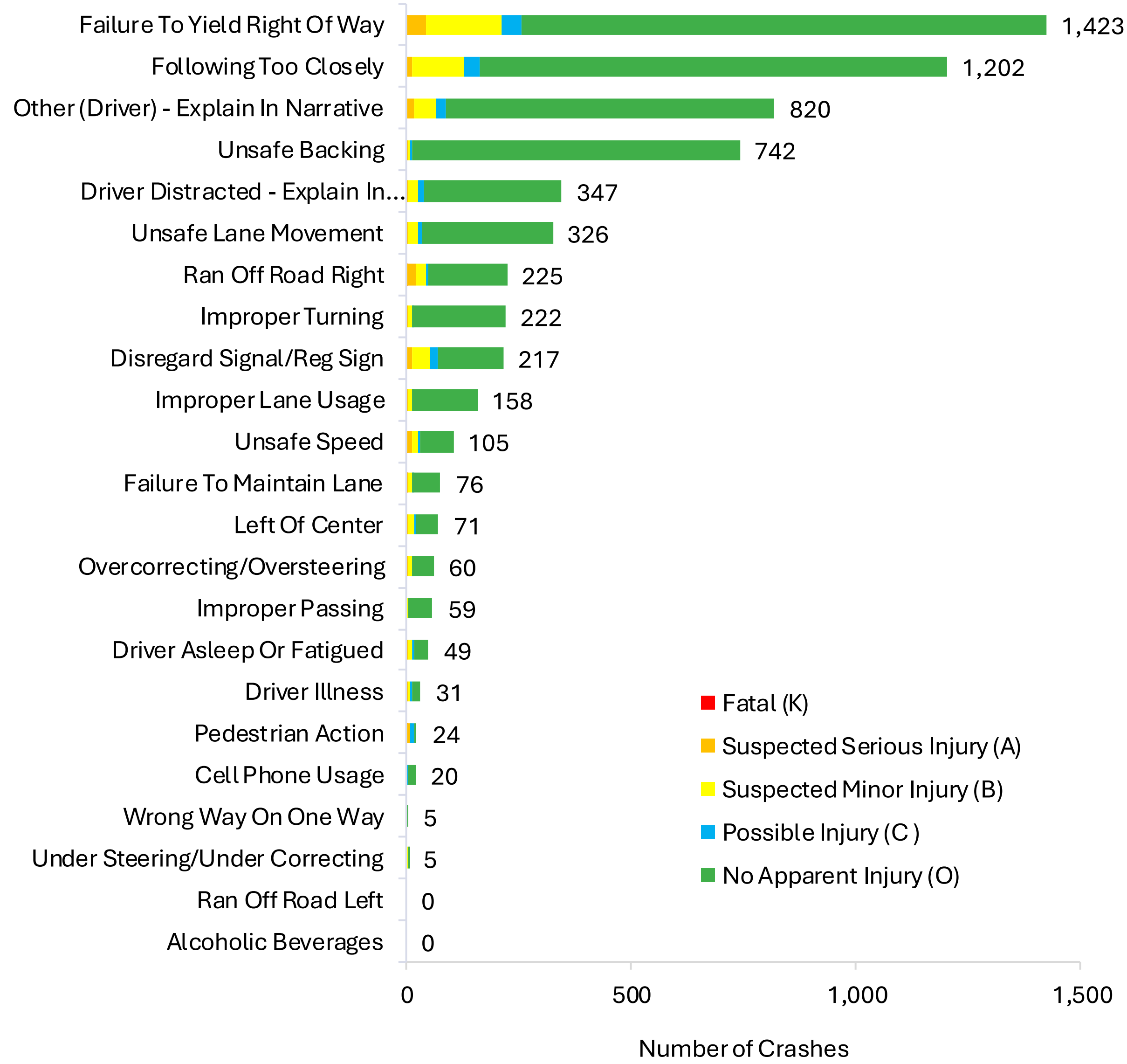


Figure 3-17. Crashes by Human Factor

Failure to yield the Right of Way accounts for 24% of all fatal and suspected serious injury incidents. Another notable factor is Running off the Road, which contributes to just over 10% of severe crashes.

Given the high proportion of severe crashes where drivers failed to yield the right of way, ran off the road, were driving at an unsafe speed, or were following too closely, a speed management program is recommended. This would be designed to encourage drivers to make better decisions regarding their speed in various conditions. It could include infrastructure, behavioral, educational, and enforcement elements.

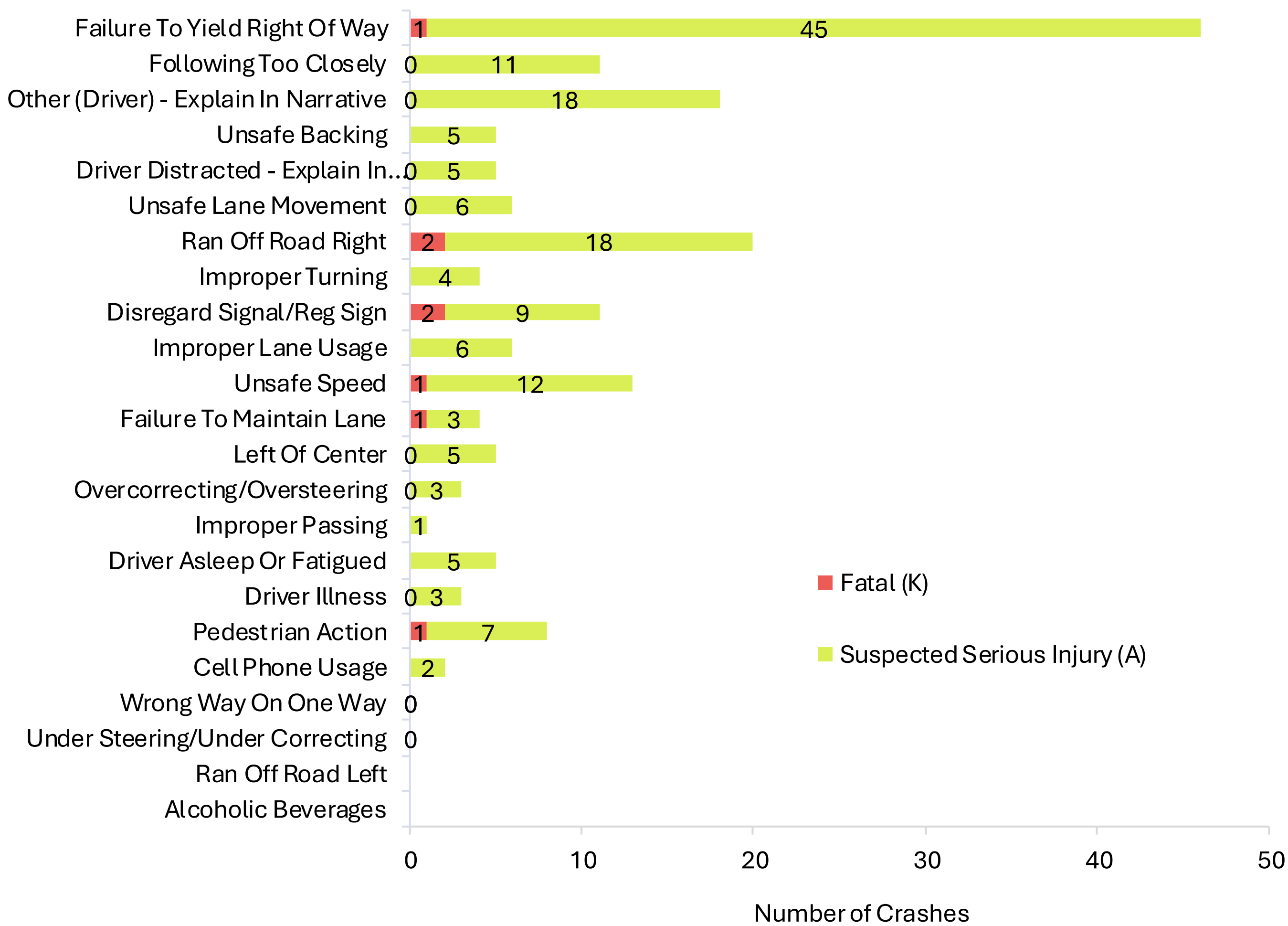


Figure 3-18. Fatal and Suspected Serious Injury Crashes by Human Factor

Environmental and Roadway Conditions

Environmental roadway conditions do not appear to contribute significantly to crash occurrence or severity. Adverse roadway conditions, defined as wet, snow, ice, or less common road conditions, comprise a small portion of the overall crashes. Most crashes in Jeffersonville occur on dry roads, which account for 81% of all crashes and an even higher 86% of fatal and suspected serious injury crashes. Wet conditions follow, involved in 17% of all crashes and 12% of severe ones.

Roadway Condition	All Crashes			Fatal and Suspected Serious Injury Crashes	
	#	%		#	%
Dry	5470	81%		167	86%
Wet	1122	17%		23	12%
Ice	69	1%		1	1%
Snow/Slush	86	1%		2	1%
Other	21	0%		0	0%
Sand-Mud-Dirt-Oil-Gravel	1	0%		0	0%
Water (Standing or Moving)	16	0%		1	1%

Table 3-4. Crashes by Roadway Condition

High Injury Network

A High Injury Network (HIN) is a data-driven approach used to identify roadway segments that account for a disproportionate amount of a community's fatal and serious injury crashes. The HIN enables communities to concentrate their limited resources on improving safety along those high-priority, dangerous corridors. Following the Safe System Approach, the HIN also corresponds to the Safe Roads pillar. This pillar focuses on designing roadway environments to mitigate human mistakes and account for injury intolerances, encourage safe behaviors, and facilitate safe travel by the most vulnerable users.

The HIN provides a data-driven and focused list of corridors where a majority of the community's fatal and suspected serious injury crashes are occurring. The routes identified in the HIN will guide the development of strategies and project selection. These strategies and more information on the HIN can be found in **Chapter 6: Strategy and Project Selection.**

4. Engagement and Collaboration

A key component of the planning process is meaningful engagement with both the public and stakeholders. Throughout the development of this Safety Action Plan, engagement took various forms, allowing for a deeper understanding of current conditions, safety concerns, and challenges. These insights provide crucial context for the safety analysis. The following summarizes the community and stakeholder engagement completed for this Safety Action Plan.

Safety Action Plan Community Engagement

Regional Steering Committee

The Steering Committee, comprised of diverse members from the region, was the guiding force and planning structure for the Safety Action Plan development. The Safety Action Plan's development evolved through a series of committee meetings.

The first meeting provided an overview of the Safe Streets for All (SS4A) program and plan components, an explanation of the safety analysis process, outline of the engagement process connection points and tools, an overview of considerations, and an overview of the project selection strategy and potential countermeasures. The second meeting reviewed detailed preliminary findings from the crash analysis. The project team identified focus areas based on feedback and local insights. Then, the project team guided the communities to adopt a Leadership Commitment resolution, setting a goal for each community to achieve the eventual goal of zero fatalities and serious injuries. The third meeting focused on the data collected from the public engagement to date and updates to the draft Safety Action Plan documents. During the fourth meeting, the discussions of the Committee centered on how the communities can use the Safety Action Plans, project identification, and potential improvements at the prioritized intersections and corridors on the High Injury Network (HIN).

Stakeholder Meetings

Twice during the planning process, the project team held one-on-one meetings with key stakeholders in the community to discuss elements brought up during the overall steering committee meetings. Local community engagement with the Safety Action Plan provided invaluable local knowledge and insight.

Meeting One

In July 2024, the first meeting introduced the project and set expectations for the project team and local leadership. The meeting included a request for previous plans and initiatives for community safety and future commitment goals to safety. The project team informed Stakeholders that the team would form Safety Committees following the first stakeholder meeting. The project team then provided a more extensive discussion of the currently available data and facilitated a discussion focusing on local conflict areas.

Meeting Two

The second meeting, held in February 2025, focused on reviewing the crash analysis dashboard and getting feedback on the initial prioritized High Injury Network (HIN) segments and priority intersections. Data on the dashboard included the location of the crash, mode of transportation, directional analysis, manner of collision, roadway condition, light condition, and the updated human factor. The group then discussed edits to the presented HIN potential corridor strategies, priority intersections, and potential intersection strategies. There was discussion about the importance of safety improvements to all of Spring Street. The proper segmentation and phasing of those improvements was discussed as well. Another meeting topic was the need for coordination with Clark County and other agencies.

Safety Committee

The Jeffersonville Safety Committee, comprised of diverse members from the community, such as emergency response representatives, played a key role in developing the Jeffersonville Safety Action Plan. Participants provided valuable feedback and insights into existing safety issues and concerns through two safety committee meetings.

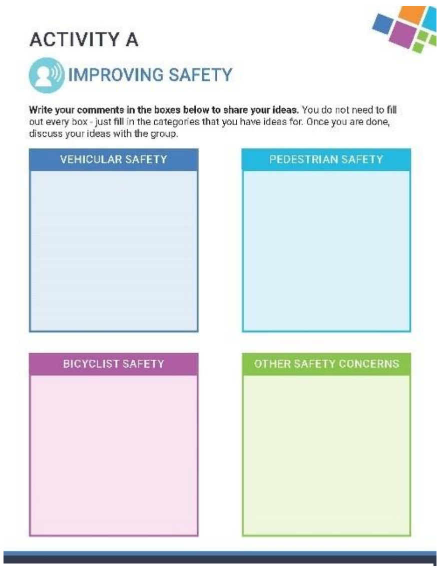


Figure 4-1. Meeting One Brainstorming Exercise

Four committee members attended the first meeting, which introduced the Safety Action Plan, its key components, and the Safe System Approach. The committee discussed historic crashes and brainstormed improvements for their local vehicular, pedestrian, and cyclist safety concerns. Data provided to the Committee included detailed crash maps organized by severity – including those for pedestrians and bicyclists – and intersection crash maps showing total and severe crashes. The committee's discussion focused on road condition in newly annexed areas, crosswalks around schools, signage, safety concerns in downtown, and parking issues and solutions.

Public Engagement

Survey One

The project team and committees conducted public engagement for the Safety Action Plan through an interactive online map. Residents within the KIPDA Region, including Jeffersonville, could provide input by identifying specific pedestrian, bicycle, or vehicle concerns on a map. Participants could add comments, images, and review or react to the contributions of others. This input offered valuable community perspectives on local safety issues.

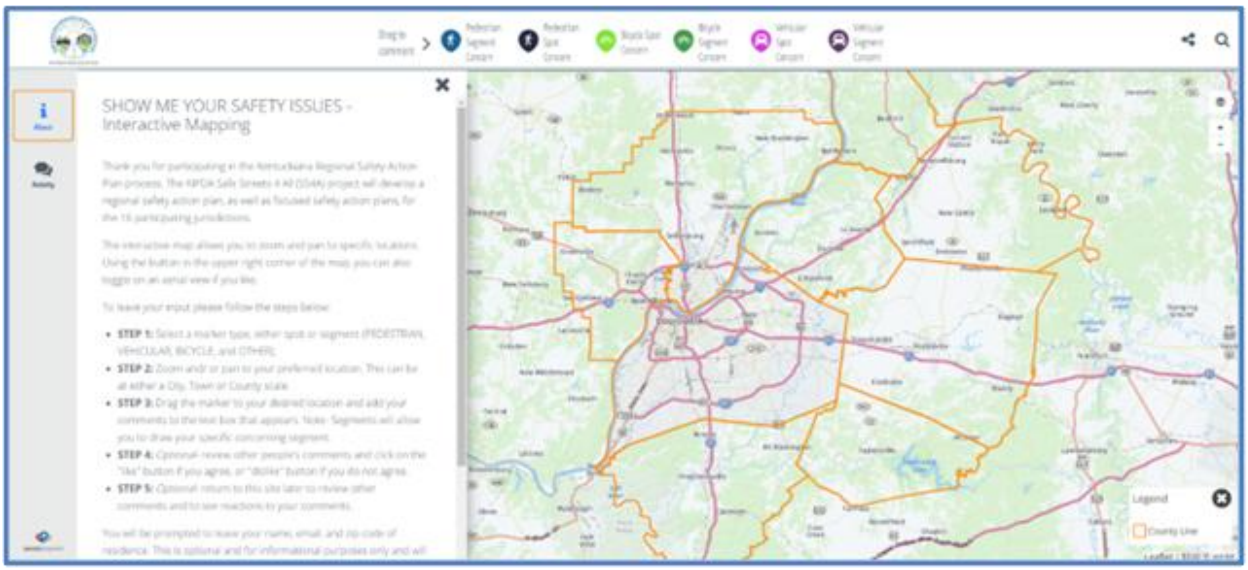


Figure 4-2. Social Pinpoint Online Engagement

The survey was available between July 9, 2024, and October 18, 2024. A total of 1,047 comments were collected for the entire region, with 112 comments located within Jeffersonville. Figure 4-4 provides an example view of the engagement map.

Vehicular Safety Concerns

- Signalization
- Narrow roads
- Speed Limits
- Pavement markings
- Pavement conditions
- Intersection Improvements
- Signage
- Turning lanes
- Interstate Access Points

Bicycle Safety Concerns

- Protected Bike Lanes
- Bike lane maintenance

Pedestrian Safety Concerns

- Adding sidewalks
- Adding crosswalks
- Raised crosswalks

Other Safety Concerns

- Speed bumps
- Add traffic calming
- Student zones
- Overgrown vegetation

The feedback collected from this platform played an integral role in identifying high-risk areas and shaping safety strategies so that the KIPDA Regional Safety Action Plan and the Jeffersonville Safety Action Plan address the concerns and needs of the public. The project team compared comment locations to the fatalities (K) and suspected serious injuries (A) in the 2018-2022 crash data to compare the public perception of safety and data-driven crash densities. The following map shows the crash locations (blue) with the public comments (yellow). The locations where these two colors overlap (green-toned areas) represent locations where the perception of a safety issue is consistent with where severe crashes have occurred. An example of this is the feeder roads along the I-65 corridor and the intersection of 10th Street and Holmans Lane.

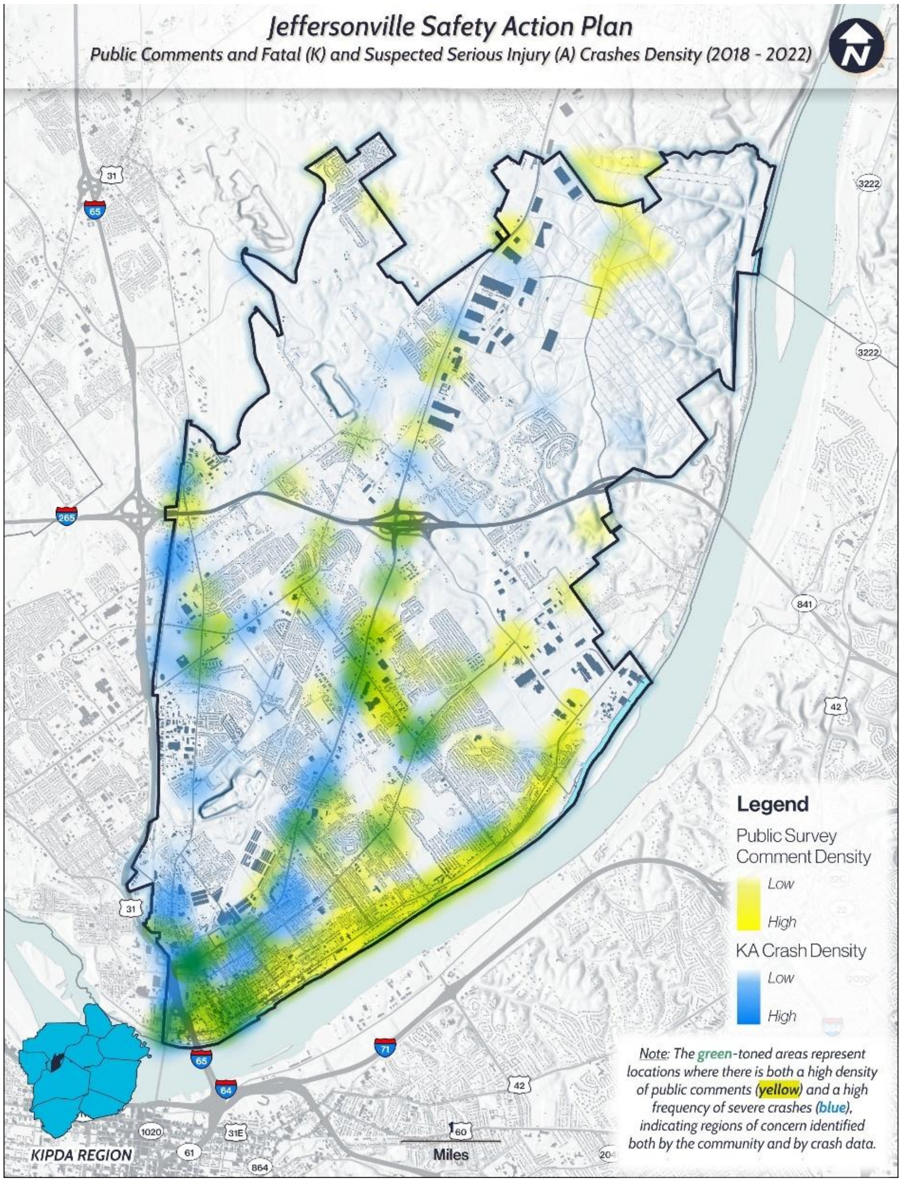


Figure 4-3. Spot Comments and Crash Density – Jeffersonville, IN

Survey Two

The project team and committees conducted a second public survey for the Safety Action Plan. Residents within the KIPDA Region, including Jeffersonville, could provide input on the results of the crash data analysis and potential countermeasures to improve safety in each community. Participants could provide opinions on if the identified recommended strategies and safety improvements were appropriate for each community. Links to additional information about the recommended strategies were included for reference.

The survey was available between April 1, 2025, and April 30, 2025. A total of 524 responses were collected for the entire region. Respondents from Jeffersonville ranked 10th Street, Veteran's Parkway, and Allison Lane/ Holmans Lane as top priorities. Intersections along these corridors also ranked high, with the 10th Street / Allison Lane intersection rated highest.

The highest rated safety countermeasures were crosswalk visibility enhancements, highway and intersection lighting, left turn lanes, low cost improvements at stop controlled intersections, speed control, and speed feedback sigs.

Active and Planned Projects

Transportation plans were reviewed to identify relevant Indiana Department of Transportation (INDOT) projects, KIPDA Transportation Improvement Program (TIP) and Metropolitan Transportation Plan (MTP) projects, and ongoing Jeffersonville projects. The first table and map show the current projects that have committed funds and are actively moving forward. The second table and map show the long-range planning projects.

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
T195	2200201	3015	SR 265 Patching	Maintenance	INDOT	Pavement patching on SR 265 from I-65 to 0.69 miles west of SR 62 (ORB O&M Limits).
T204	2100683	2976	SR 265 Utica-Sellersburg Road Bridge	Maintenance	INDOT	Bridge thin deck overlay on SR 265 Utica-Sellersburg Road bridge over SR 265 EB/WB
T205	2100647	2975	SR 265 at Old Salem Road	Maintenance	INDOT	Bridge thin deck overlay at SR 265 at Old Salem Road bridge over SR 265 EB/WB
T398	2201285	3219	Clark County Bridge Inspection 2024-2027		Clark County	Clark County is required to have all bridges inspected every 24 months unless otherwise noted. Inspections are scheduled to be completed in March.
T399	2100080	2949	Countywide Bridge Inspection and Inventory Program		Clark County	Inspect and rate all county bridges in Clark County.
T415	2300911	3268	I-265 EB Hamburg Pike			Bridge Deck Overlay I-265 EB Bridge over Hamburg Pike, 00.09 mi E of US 31.
T416	2300914	3269	I-265 WB Lick Run		INDOT	Bridge Deck Overlay on I-265 WB Bridge over Lick Run, 00.23 mi E US 31.

Map No.	State ID	KIPDA ID	Name	Type	Sponsor	Description
T417	2300913	3270	I 265 EB Lick Run		INDOT	Bridge Deck Overlay I-265 EB Bridge over Lick Run, 00.23 mi E US 31.
T418	2300910	3271	I-265 WB Conrail RR		INDOT	Bridge Deck Overlay I-265 WB Bridge over US 31, Conrail RR, 00.39 mi of E I-65.
T419	2300909	3272	I-265 EB Conrail RR		INDOT	Bridge Deck Overlay I-265 EB Bridge over US 31, Conrail RR, 00.39 mi E I-65.
T420	2300906	3273	I-265 WB Charlestown Pike		INDOT	Bridge Deck Overlay I-265 WB Bridge over Conrail RR
T421	2300905	3274	I-265 EB Charlestown Pike		INDOT	Bridge Deck Overlay I-265 EB Bridge over Conrail RR, Charlestown Pike.
T422	2300904	3275	I-265 WB Coopers Lane		INDOT	Bridge Deck Overlay I-265 WB Bridge over Coopers Lane, 00.28 mi E of I-65.
T423	2300903	3276	I-265 EB Coopers Lane		INDOT	Bridge Deck Overlay I-265 EB Bridge over Coopers Lane, 00.28 mi E of I-65.
T503	2301123	3306	I-265			Pavement patching on I-265 from I-65 to 0.69 miles W of SR 62 (ORB O&M Limit).
T516	2301123	3305	I-265	Maintenance	INDOT	Pavement patching on I-265 From I 65 to 0.69 miles W of SR 62 (ORB O&M Limit).
T530	2301302	3180	Henryville Sidewalks		Clark County	The existing sidewalks in Henryville area are crumbling and do not currently meet ADA requirements. Ramps will be added at intersections and slopes will be adjusted to help meet current ADA requirements. Extending sidewalks from the Henryville High School.
T550	2401659	3334	Jeffersonville High School HAWK Beacon		City of Jeffersonville	The City intends to install a High Intensity Activated crosswalk (HAWK) signal at the crosswalk in front of Jeffersonville High School on Allison Ln and Wooded Way.
T551	2401673	3335	Jeffersonville Raised Pavement Markings 1		City of Jeffersonville	The purpose of this project is to install raised pavement markings (RPMs) in the centerline stripes, broken white lane stripes, and turn lane stripes on various city streets.
T552	2401683	3336	Utica Pike Rumble Strips		City of Jeffersonville	The city intends to install centerline rumble strips along Utica Pike from Main Street to Loop Road.

Table 4-1. Current Jeffersonville TIP Projects

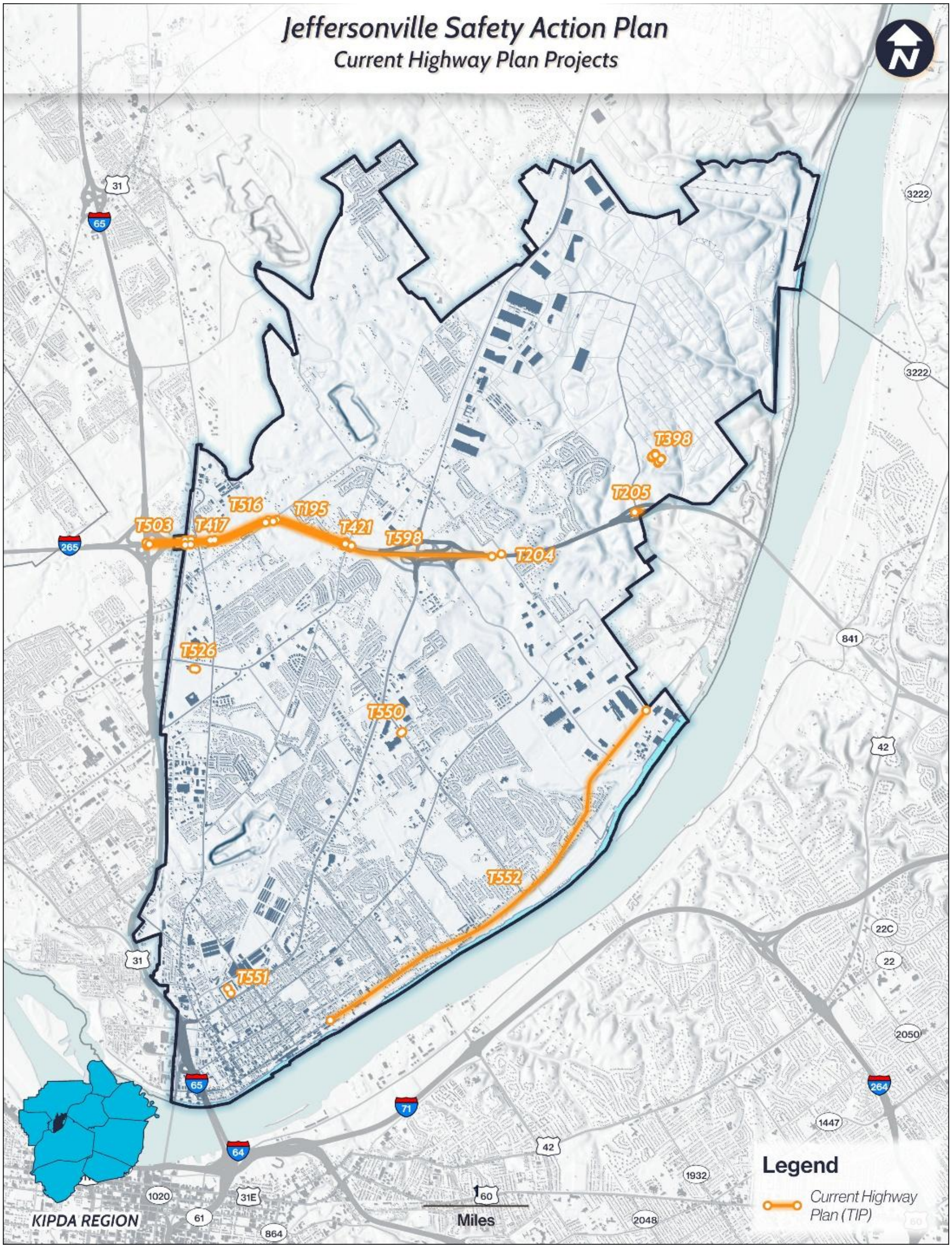


Figure 4-4. Current Jeffersonville TIP Projects

Map No	KIPDA ID	Name	Type	Sponsor	Description
M31	3065	Charlestown-Jeffersonville Pike Improvements	Roadway - Minor Widening	Clark County	Repave and widen the existing travel lanes from 8 to 10 feet on Charlestown-Jeffersonville Pike lanes from Highway 62 to the Salem-Noble Road. Paved shoulders will be provided and right of way for the future development of sidewalks will be secured.
M213	2754	Spring Street Revitalization and Enhancement	Roadway - Minor Widening	Jeffersonville	This project will completely reconstruct Spring Street through Downtown Jeffersonville. The project will include the addition of bicycle lanes, turn lanes where necessary, transit stop enhancements and improved pedestrian infrastructure.
M215	2756	Spring Street - Eastern Blvd Intersection	Intersection/ Interchange	Jeffersonville	This project will fully reconstruct the Spring Street and Eastern Boulevard intersection.
M217	2757	Spring Street - Eastern Boulevard to Dutch Lane	Roadway - Minor Widening	Jeffersonville	Reconstruct Spring Street from Eastern Boulevard to Dutch Lane as a two-lane road with bicycle lanes, new curb and gutter, and sidewalks. Provide turn lanes where necessary.
M223	2759	Court Avenue Streetscape Improvements	Roadway - Capacity Reconfiguration	Jeffersonville	This project will reconstruct portions of Court Avenue from the I-65 Interchange to Graham Street per the recommendations in a recently completed planning study for the corridor.
M226	2760	Market Street Revitalization Project	Roadway - Operations	Jeffersonville	Following full closure and cleanup of the Jeff Boat Facility, reconstruct Market Street from Spring Street to Blanchel Terrace. Reconstruction will include new pavement, curb, gutter, sidewalks, and sharrows.
M228	2763	Reeds Lane Extension	Roadway - New	Jeffersonville	This plan will improve the geometry of the Reeds Lane and 10th Street intersection and extend Reeds Lane through the existing Shopping Center. The extension will connect to the existing Kehoe Lane and create a new north-south connection across 10th street
M231	2789	10th Street	Bicycle/ Pedestrian	Jeffersonville	Provide pedestrian and bicycle facilities on both sides of 10th Street.
M297	3177	Jeffersonville-Charlestown Pike Improvements	Bicycle/ Pedestrian	Clark County	The Jeffersonville-Charlestown Pike project begins at the intersection of Jeffersonville-Charlestown Pike and Salem Noble Road and extend 0.8 miles to the intersection with Highway 62. T
M298	3178 (State ID 0400935)	Salem-Noble Road From Highway 62 to Jeffersonville-Charlestown Pike	Roadway - Minor Widening	Clark County	The project begins at the intersection of Highway 62 and Salem-Noble Road and extends to the intersection of Salem-Noble Road and Jeffersonville-Charlestown Pike, approximately 0.35 miles.

Table 4-2. Current Jeffersonville MTP Projects

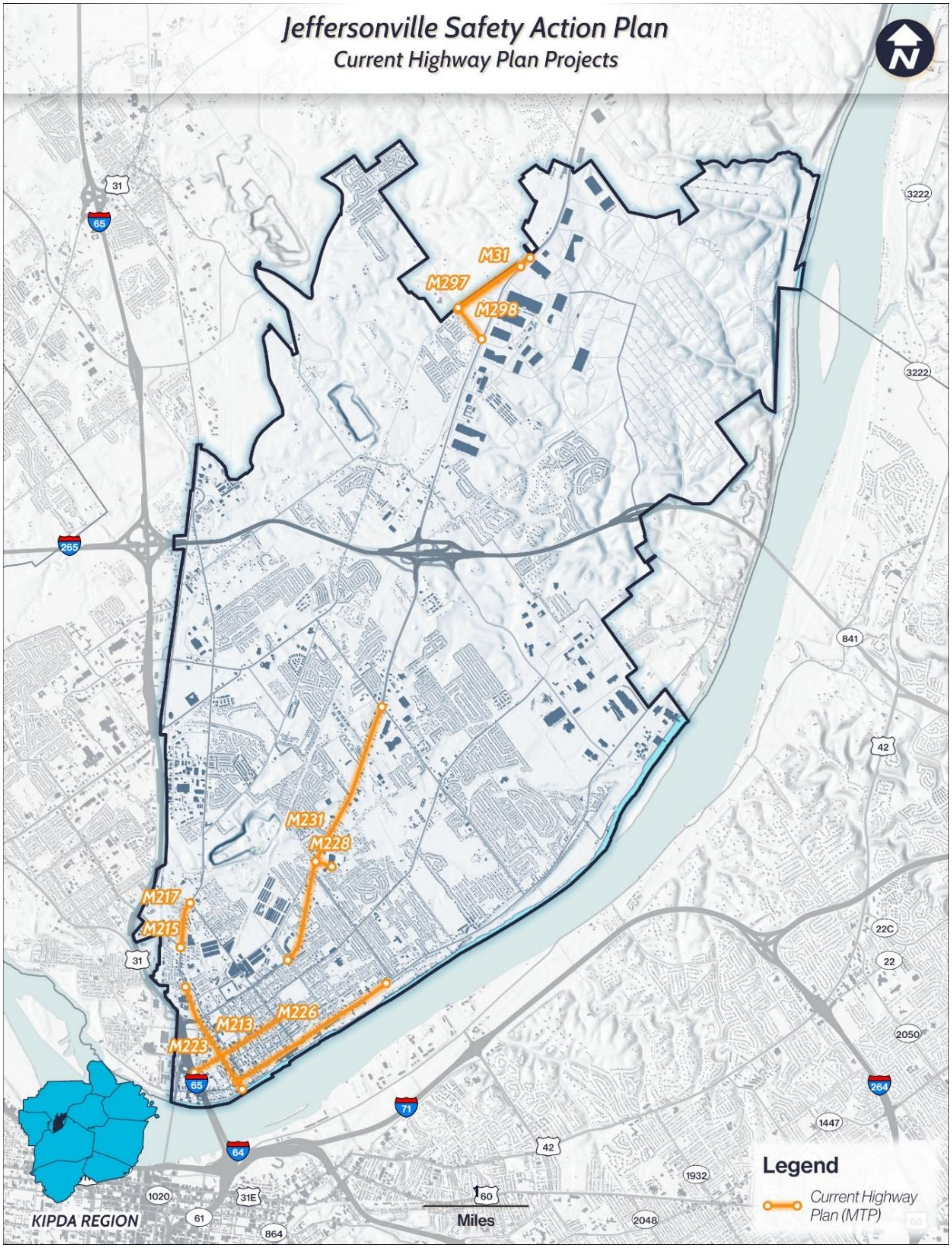


Figure 4-5. Current Jeffersonville MTP Projects

Community Considerations

The Safety Action Plan analyzed socio-economic and demographic data together with the crash data to determine if there are important trends, findings, or considerations related to specific areas or communities within the city.

Areas of Persistent Poverty

The Safe Streets and Roads for All 2025 Notice of Funding Opportunity defines Areas of Persistent Poverty (APP) based on the Infrastructure Investment and Jobs Act (IIJA, 49 U.S.C. 6702(a)(1)). It also states that this applies to the definition of Underserved Communities. Based on this definition, a project is located in an Area of Persistent Poverty if:

1. *The County in which the project is located consistently had greater than or equal to 20% of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent (2021) Small Area Income Poverty Estimates; OR*
2. *The Census Tract in which the project is located has a poverty rate of at least 20% as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR*
3. *The project is in any territory or possession of the United States.*

There are several areas of Jeffersonville that are designated as Areas of Persistent Poverty. It is important to consider these areas when planning safety projects as they are often areas of underinvestment in transportation safety infrastructure. It is also important to consider them because they tend to be overrepresented with regard to crashes and especially high severity crashes. This is the case in the APP designated portion of Jeffersonville.

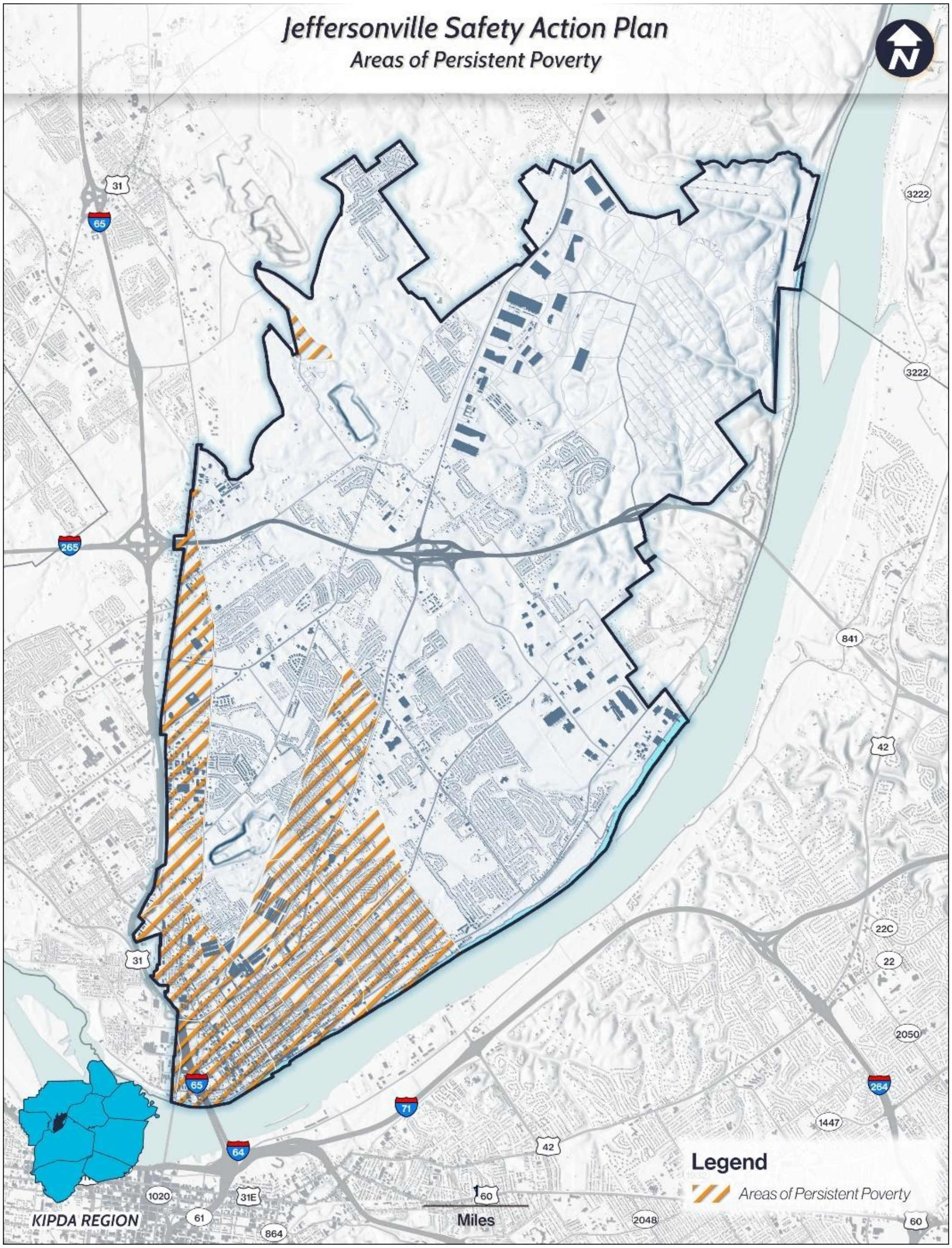


Figure 4-6. Areas of Persistent Poverty

Community Demographic Summary

The Safety Action Plan analyzed census tract areas, population, and crash occurrences within communities. The following populations were analyzed using the United States Census American Survey (ACS). The 2022 ACS five-year table was used.

Elderly Population

Approximately 18.6% of the population in Jeffersonville is 65 or older. Portions of the city with high elderly populations should consider tailored roadway safety countermeasures. Oversized signage, lighting, pedestrian refuge islands, leading pedestrian intervals (LPIs), and raised crosswalks are some of the countermeasures that benefit elderly populations.

Population Impacted by Disability

In Jeffersonville, approximately 24.2% of households have one or more occupants with a disability. Similar to elderly populations, there are safety countermeasures available that support disabled populations. Many of these relate to pedestrian facilities such as curb ramps.

Population Experiencing Poverty

Approximately 11.1% of the population in Jeffersonville is at or below the poverty line. The southwest portion of the city has the highest poverty rate. Areas with high poverty rates are often areas of underinvestment with regard to infrastructure and safety.

Minority Population

Approximately 19.7% of the population of Jeffersonville identifies as non-white. The central portions of the city have higher percentages of minorities.

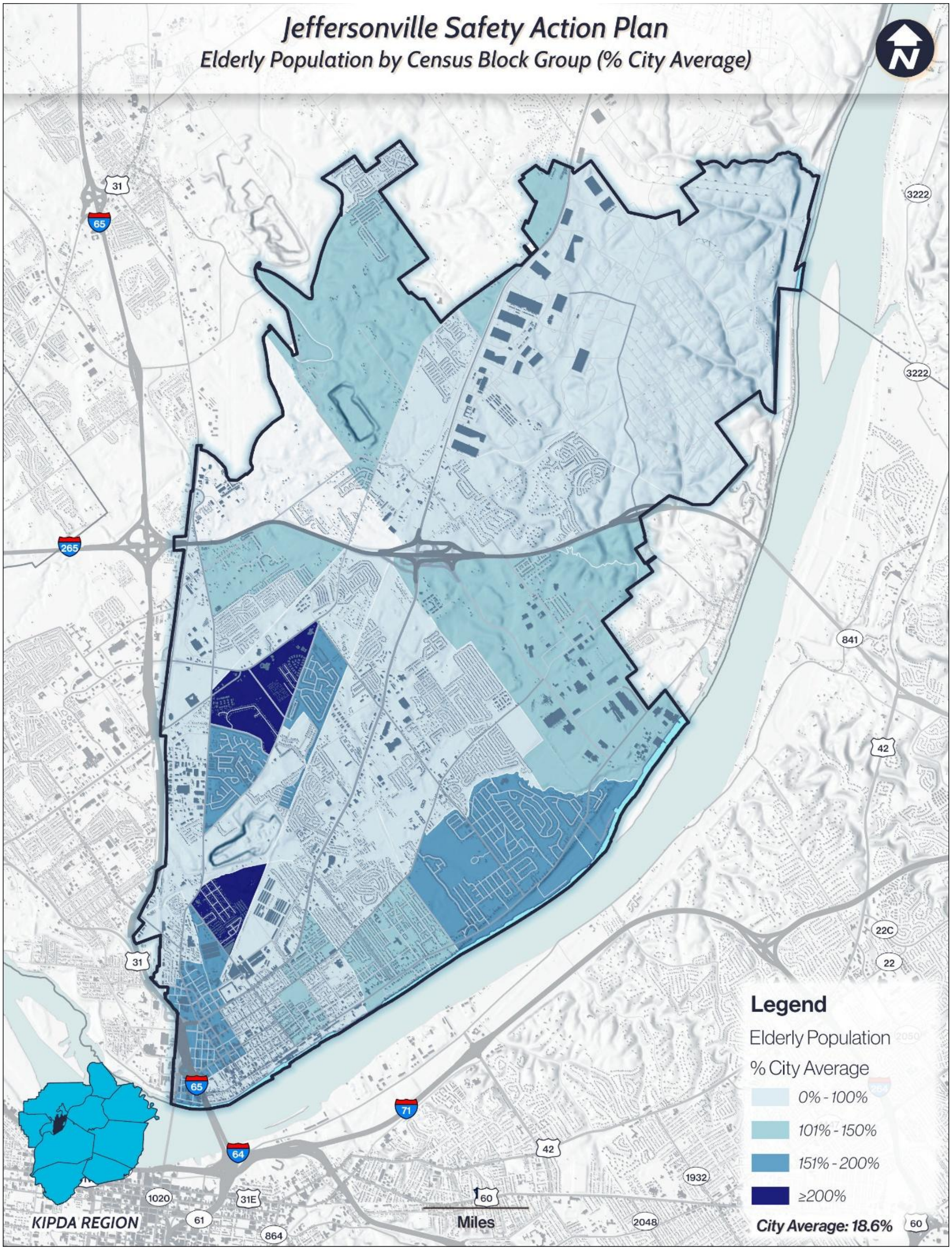


Figure 4-7. 8Elderly Population by Census Block Group Map

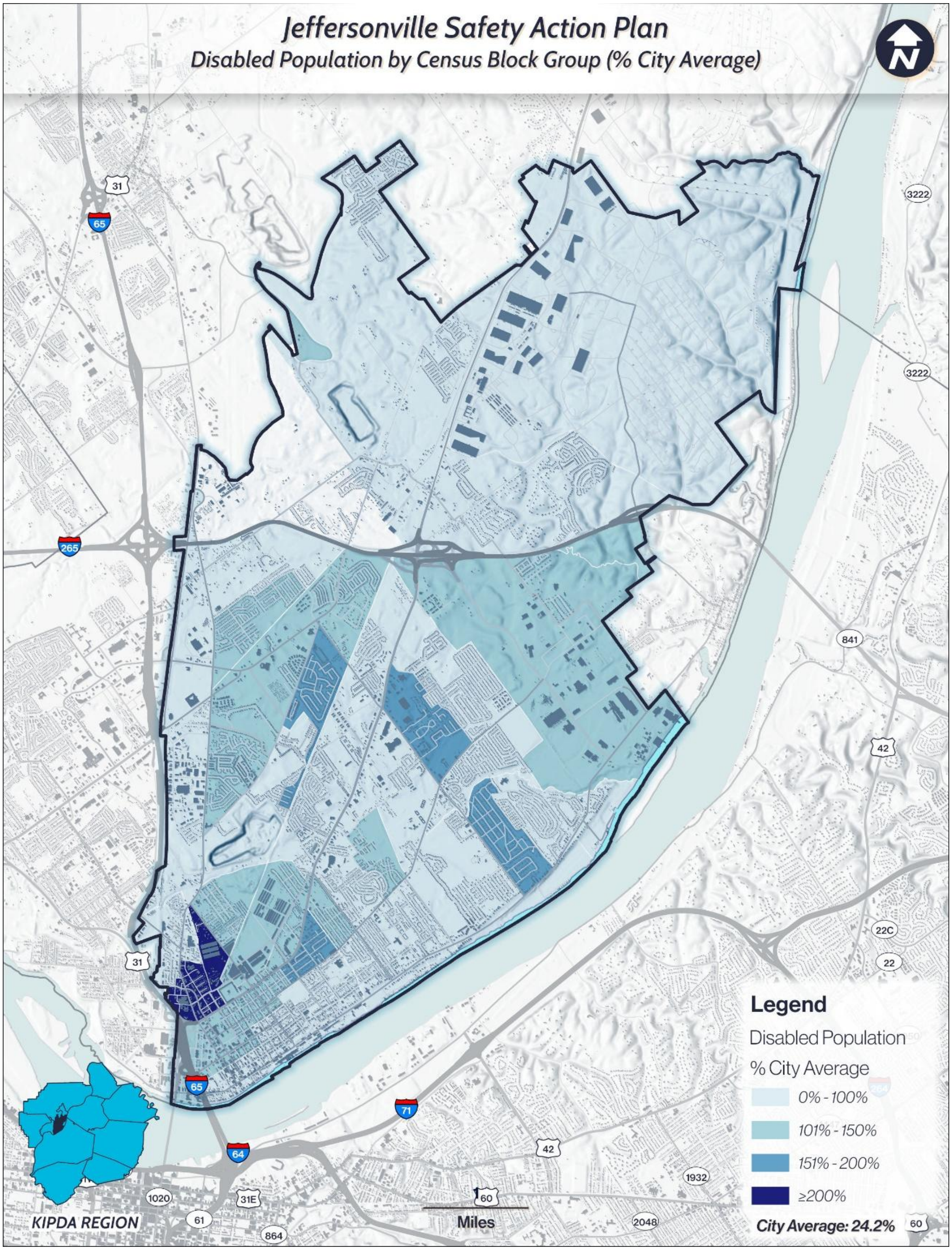


Figure 4-9. Disabled Population by Census Block Group Map

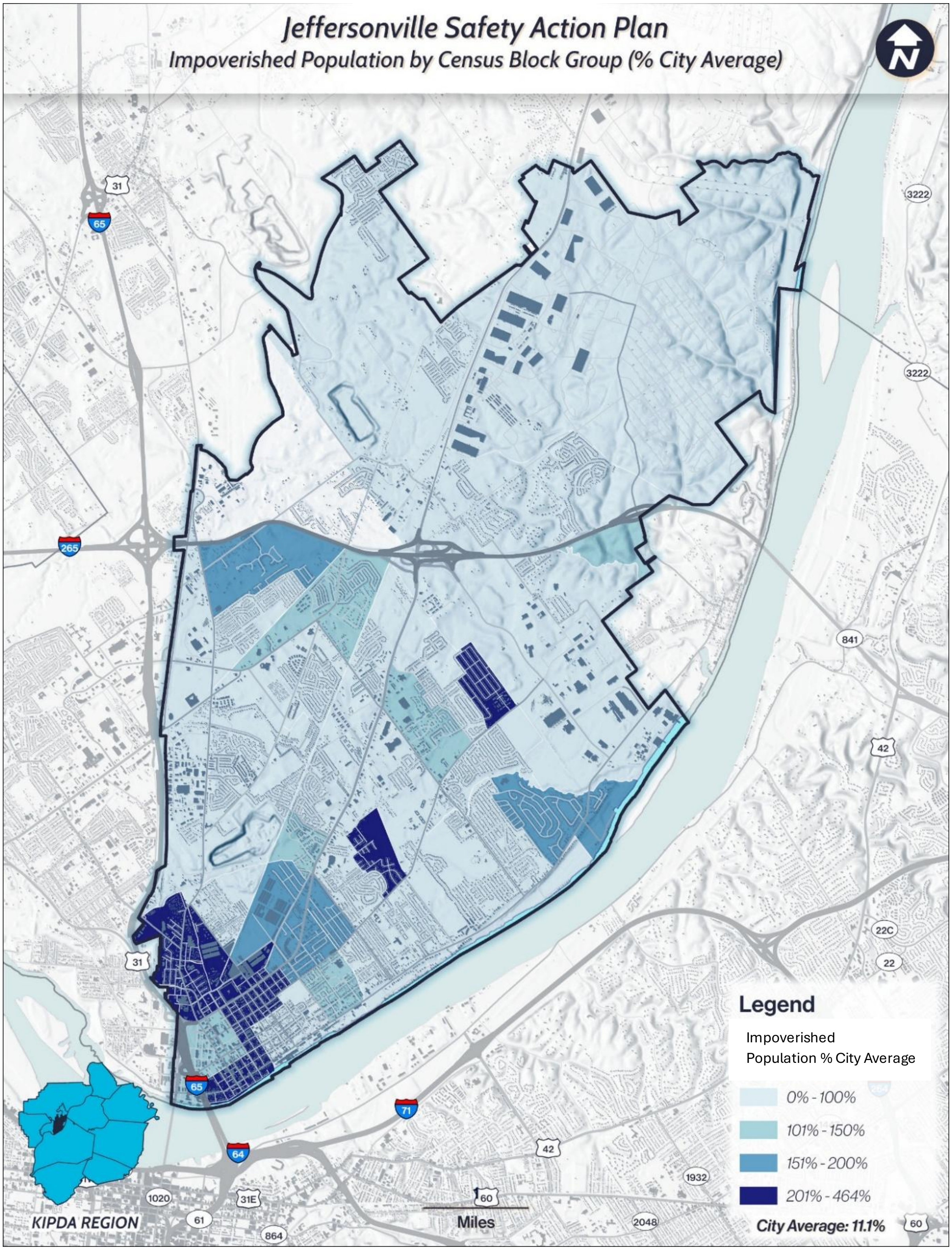


Figure 4-10. Impoverished Population by Census Block Group Map

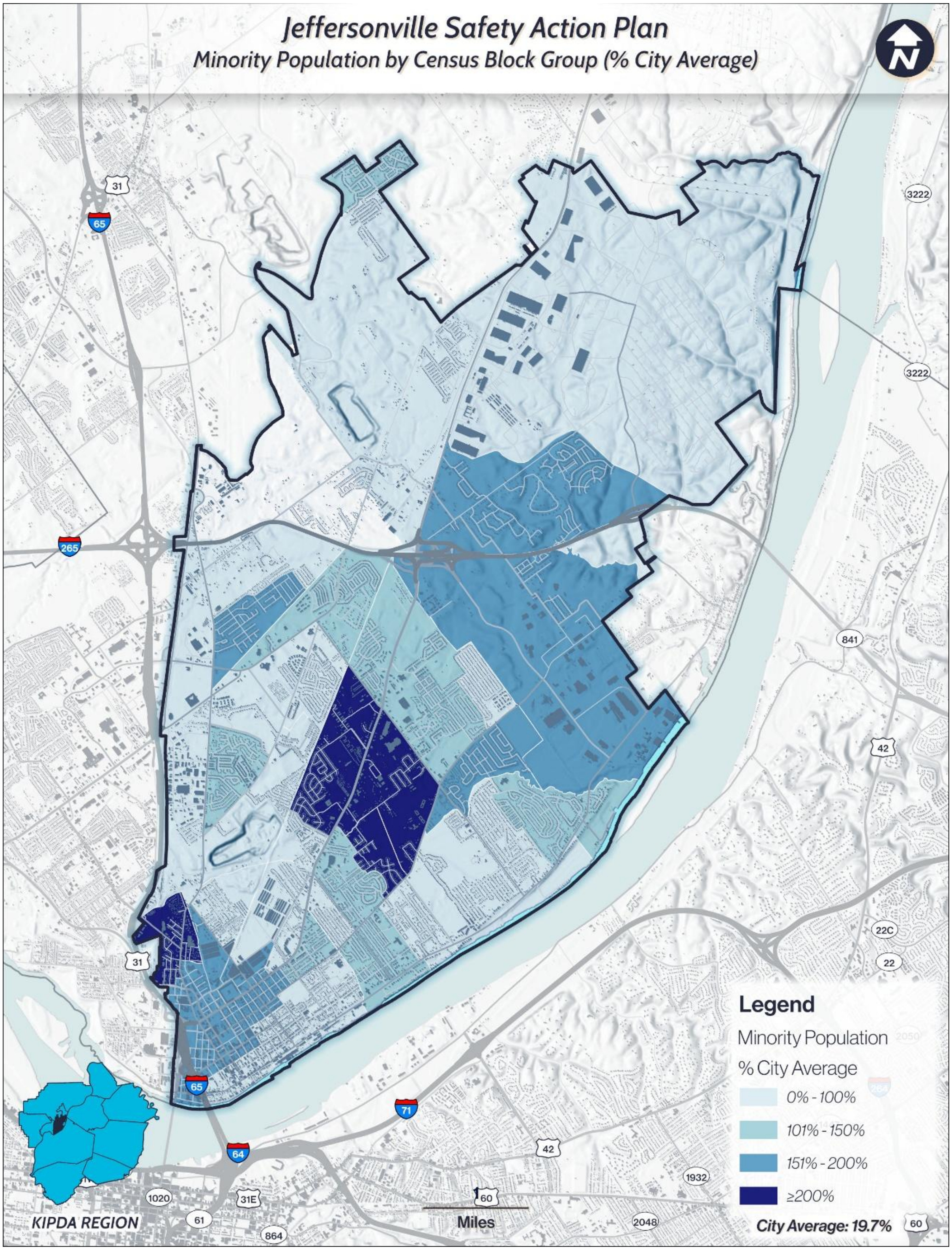


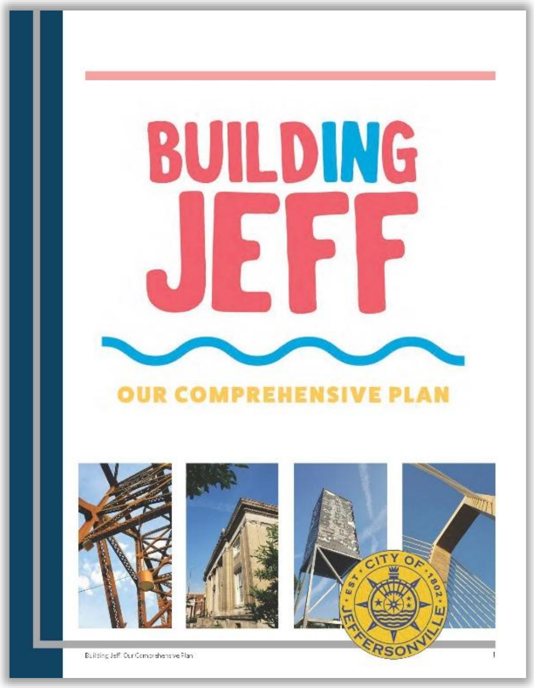
Figure 4-11. Minority Population by Census Block Group Map

5. Policy and Process Changes

A comprehensive review of Jeffersonville's existing policies, plans, guidelines, and standards has identified key opportunities to enhance transportation safety. The city aims to elevate safety as a priority while also creating a more inclusive and accessible transportation network for all users.

Building Jeff – Our Comprehensive Plan

Link: Building Jeff - Our Comprehensive Plan



The Building Jeff – Our Comprehensive Plan serves as Jeffersonville's long-range vision for growth, development, and infrastructure investment. It emphasizes planning for future needs along key corridors, improving mobility and access for all users, and guiding the physical and economic evolution of the city through infrastructure, land use, and design strategies. The plan identifies the following transportation safety elements:

- Multimodal Transportation Emphasis: The plan repeatedly emphasizes creating safe and convenient travel options for all users. Sidewalks, trails, and other pedestrian or bicycle facilities are prioritized throughout. Improvements are identified to enhance pedestrian and bicyclist facilities on key corridors such as 10th Street, Spring Street and the Ohio River Greenway connections.
- Intersection and Corridor Safety Improvements: Specific locations are targeted for safety upgrades, including the Port Road and Middle Road Intersection, and corridors in need of pedestrian crossings, trail connections, and streetscape enhancements.
- Complete Streets Policy: The plan recommends the City enact a Complete Streets Policy to guide future road projects toward inclusivity of all travel modes and promote infrastructure that supports users of all ages and abilities.

10th Street Master Plan and Strategic Investment Plan

Link: 10th Street Master Plan and Strategic Investment Plan

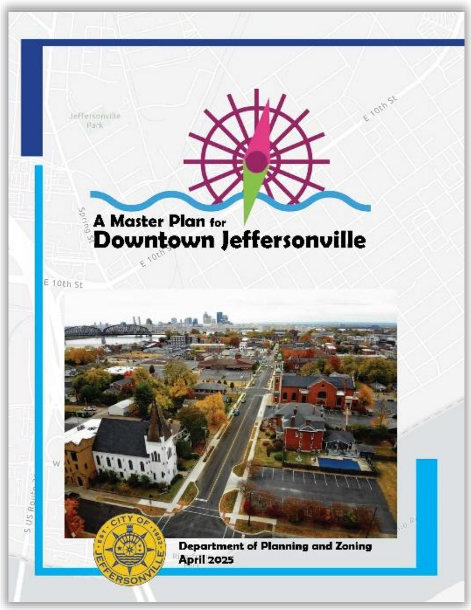
The 10th Street Strategic Investment Plan (2018) outlines a corridor-wide vision for transforming 10th Street into a safer, more accessible, economically vibrant thoroughfare. Spanning from I-265 to Penn Street, the plan provides infrastructure improvements, land use changes, and urban design enhancements that support multimodal access, corridor identify, and long-term growth.

Safety is a central theme throughout the plan, which identifies 10th Street as a high-speed, high-volume corridor in need of fundamental transformation to better serve pedestrian, bicyclists, and transit riders.

- The plan recommends applying access management best practices from INDOT's guide to enhance safety and traffic flow. Key strategies include creating dedicated left-turn lanes, consolidating driveways, improving parallel routes, and coordinating traffic signals. The plan also calls for consistent speed limits, upgrading lighting for safety, unified streetscape elements, and roadway cross-section changes in the redevelopment areas.
- The plan calls for closing sidewalk and trail gaps, enhancing ADA access, and prioritizing connections to neighborhood, schools, parks, and downtown. It also recommends expanding trail networks
- The plan envisions 10th Street as a multimodal spine linking destinations with River Ridge, downtown, and surrounding neighborhoods. A multi-use path is a central feature, with future extensions and connections to a broader bicycle network.
- The plan calls for supporting transit access and safety through a proposed premium transit service along the corridor aimed to reduce reliance on cars and mitigate congestion.

The Downtown Jeffersonville Master Plan

Link: [The Downtown Jeffersonville Master Plan]



The Downtown Jeffersonville Master Plan was adopted in April 2025 and provides a vision for Jeffersonville's historic downtown. The plan offers a policy framework for land use and transportation investments and programs for the area bounded by Clarksville to the west, the Ohio River to the south, Penn Street to the east, and 12th Street to the north.

Transportation safety is a key element of the plan, which spotlights the need to alleviate safety concerns and improve multimodal connectivity. Specifically:

- The plan mandates safety improvements including intersection signage and visibility enhancements, traffic calming, lighting, speed enforcement, and designated truck routes.

- The plan recommends pedestrian and bike investments to fill gaps in the network, provide safe crossings, and upgrade crosswalks and bike lanes.
- The plan proposes public transportation investments to improve bus stops, reduce ride-share conflicts, and explore safe and efficient alternative transportation options.

Future Considerations

Speed Management Plan: A city-wide Speed Management Plan could reduce speed-related crashes and improve safety for all road users. While existing plans establish strong policy direction, a focused speed strategy would address high-speed corridors, particularly where vulnerable road users are present.

Implement Complete Streets Policies: The Comprehensive Plan recommends enacting a Complete Street policy. To improve how processes prioritize safety, it is recommended to develop and adopt Complete Street guidelines that support safety, connectivity, comfort, and accessibility for all users. These guidelines would be applied to new and existing road projects, en suring that streets are designed to accommodate pedestrians, cyclists, motorists, and transit riders.

Traffic Safety Analysis and Improvements: Consider including language that requires a traffic safety analysis to demonstrate that the development or subdivision is not significantly impacting safety on nearby roads or intersections. Language could also be integrated into zoning and subdivision ordinances to provide for the analysis of, and recommendations for, potential countermeasures to address any potential impacts.

6. Strategy and Project Selection

The development of strategies and project selection is based on a comprehensive analysis of historical crash data, implementation of best practices, and active engagement with stakeholders and the community. The reactive approach involves a detailed examination of crash data by frequency, severity, and location to identify the areas that need the most improvement. The following sections detail the methodology for prioritizing projects and strategy selection.

Prioritization

The City's goal is to eliminate fatal and serious injury crashes; therefore, crash severity is a critical factor in prioritizing projects and strategy selection. Comprehensive crash costs combine the economic cost of a crash and monetized pain and suffering. The Federal Highway Administration (FHWA) developed national crash costs to use as default crash unit values (Crash Costs for Highway Safety Analysis), that states and municipalities can adjust based on regional differences. Table 6-1 provides the comprehensive cost per crash adjusted to the KIPDA region as prescribed in the FHWA Crash Costs for Highway Safety Analysis.

Severity	Severity Description	Comprehensive Cost Per Crash (2022 Dollars)
K	Fatal Injury	$10,175,024
A	Suspected Serious Injury	$594,471
B	Suspected Minor Injury	$182,274
C	Possible Injury	$116,572
O	No Apparent Injury	$12,220

Table 6-1. KIPDA Comprehensive Crash Cost

Equivalent Property Damage Only Method

The Equivalent Property Damage Only (EPDO) is a method of weighting crashes by severity using the equivalent number of No Apparent Injury Crash costs, also called Property Damage Only (PDO) crash costs, to develop the weights. The following table shows the comprehensive costs and EPDO value breakdown by crash severity.

Severity	Comprehensive Cost Per Crash (2022 Dollars)	EPDO Weighted Value
K	$10,175,024	833
A	$594,471	49
B	$182,274	15
C	$116,572	10
O	$12,220	1

Table 6-2. KIPDA EPDO Crash Value

As shown in Table 6-2, the comprehensive cost of a fatal crash (K) compared to the other crash severities is significant. The EPDO method, however, may overly emphasize fatal crashes, potentially skewing focus towards areas with fewer crashes. To address this imbalance, analysts used a modified EPDO (MEPDO) approach to equally consider both fatal and suspected serious injury crashes by blending their values based on their comprehensive costs and frequency. Table 6-3 presents a breakdown of the MEPDO, providing a more balanced evaluation while maintaining a focus on fatal and suspected serious injury crashes. The crashes for the entire KIPDA region were used to calculate weighted average costs and MEPDO.

<table>
<tr><th>Severity</th><th>Crashes</th><th>Comprehensive Cost Per Crash (2022 Dollars)</th><th>Severity</th><th>Weighted Average Costs</th><th>MEPDO Value</th></tr>
<tr><td>K</td><td>618</td><td>$10,175,024</td><td rowspan="2">KA</td><td rowspan="2">$2,224,193</td><td rowspan="2">182</td></tr>
<tr><td>A</td><td>3,015</td><td>$594,471</td></tr>
<tr><td>B</td><td>12,841</td><td>$182,274</td><td>B</td><td>$182,274</td><td>15</td></tr>
<tr><td>C</td><td>11,770</td><td>$116,572</td><td>C</td><td>$116,572</td><td>10</td></tr>
<tr><td>O</td><td>113,611</td><td>$12,220</td><td>O</td><td>$12,220</td><td>1</td></tr>
</table>

Table 6-3. KIPDA MEPDO Crash Value

Reactive Approach

Methodology

The reactive approach for analyzing crashes includes joining the crash data with roadway data. The team gathered Indiana geographic information system (GIS) files with roadway and traffic data. The GIS roadway layer was divided into segments and intersections. Analysts combined the crash data with the GIS information to facilitate detailed analysis by identifying the location of the crashes by road segment and intersection.

After joining the crashes to the roadway segments and intersections, analysts applied the MEPDO method to generate lists of prioritized intersections and corridors.

The lists are for planning purposes only. The intersections and corridors identified could potentially benefit from safety countermeasures; however, it is not necessary to make improvements in the listed order. In addition, there may be other high priority locally identified safety projects. Therefore, these lists provide high-level planning guidance for future agency consideration

Intersections

Enhancing safety at intersections is vital for achieving a Safe System Approach. Evaluating roadway features such as geometrics and traffic operation and control is necessary for eliminating fatal and serious injury crashes. Intersections are deliberate points of interaction where vehicles and non-motorized users converge, significantly impacting the overall safety performance of the transportation system. These conflict points are historically where fatal and serious injury crashes occur. Therefore, intersection projects present unique opportunities to incorporate Safe System principles into planning, design, and operational decisions. Improving intersections can play a significant role in eliminating fatal and serious injury crashes.

Prioritized Intersections

Jeffersonville experienced 148 fatal and suspected serious injury crashes at intersections, representing 76% of all fatal and suspected serious injury crashes. These crashes occurred at both signalized and unsignalized intersections. Both intersections contain multiple conflict points and offer significant opportunities to enhance safety for all users. MEPDO was calculated and ranked for each intersection.

Table 6-4 lists the top 20 intersections by MEPDO. These intersections account for the top fatal and suspected serious injury crashes at intersections. Figure 6-1 and Figure 6-2illustrates this approach of prioritizing intersections.

Ranking	Intersection	K	A	B	C	O	KA	TOTAL	MEPDO
1	E 10th St & Wall St	0	6	6	3	56	6	71	1266
2	E 10th St & Springdale Dr	0	4	11	5	158	4	178	1098
3	E 10th St & Nachand Ln	0	4	8	2	62	4	76	928
4	Middle Rd & Allison Ln	0	4	7	2	55	4	68	907
5	Spring St & 10th St	0	3	11	4	122	3	140	870
6	E Market St & Walnut St	0	4	0	1	3	4	8	741
7	E 10th St & Allison Lane / Holmans Ln	0	2	11	3	148	2	164	705
8	E 10th St & Penn St	0	3	4	2	26	3	35	651
9	E 10th St (SR 62) & Utica-Sellersburg Rd	0	2	11	5	65	2	83	641
10	E 10th St & Woodland Ct	0	3	4	1	15	3	23	630
11	E 10th St & Hoskins Dr	0	3	0	0	9	3	12	555
12	E 10th St & Sportsman Dr	0	2	6	2	41	2	51	514
13	E 10th St & Meijer Dr	0	2	5	2	32	2	41	490
14	E 10th St & Renfroe Way	0	2	6	0	25	2	33	479
15	Spring St & E 8th St	0	2	4	1	15	2	22	448
16	Hamburg Pk & Charlestown Pk	0	2	3	1	14	2	20	432
17	E 8th St & Main St	0	2	3	0	18	2	23	427
18	US-31 & Progress Way	0	2	3	1	6	2	12	424
19	Veterans Pkwy & Woehrle Rd	1	1	2	0	20	2	24	414
20	Veterans Pkwy & Hamburg Pk	0	2	1	1	22	2	26	410

Table 6-4. Prioritized Intersections by MEPDO

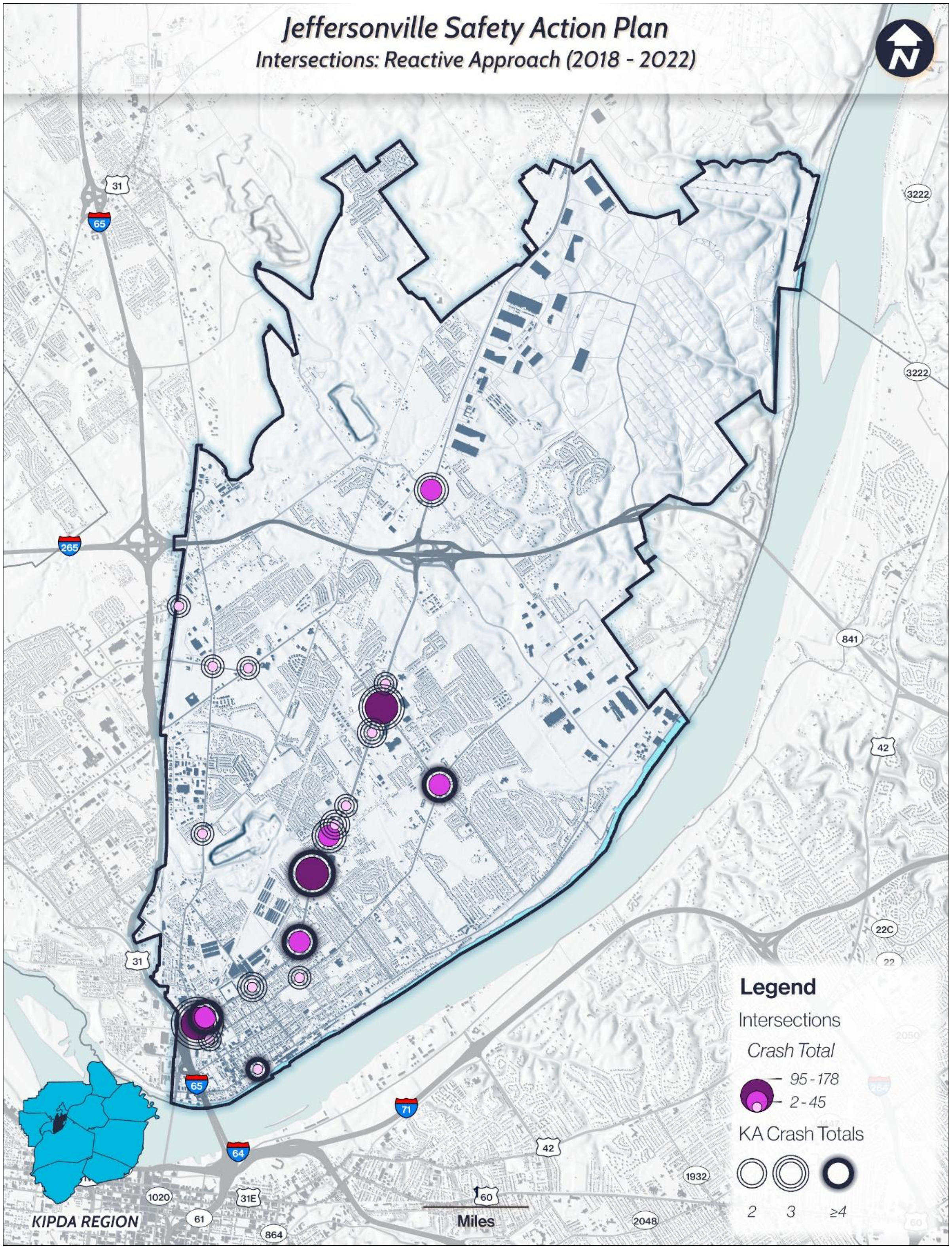


Figure 6-1. Intersections: Reactive Approach Map

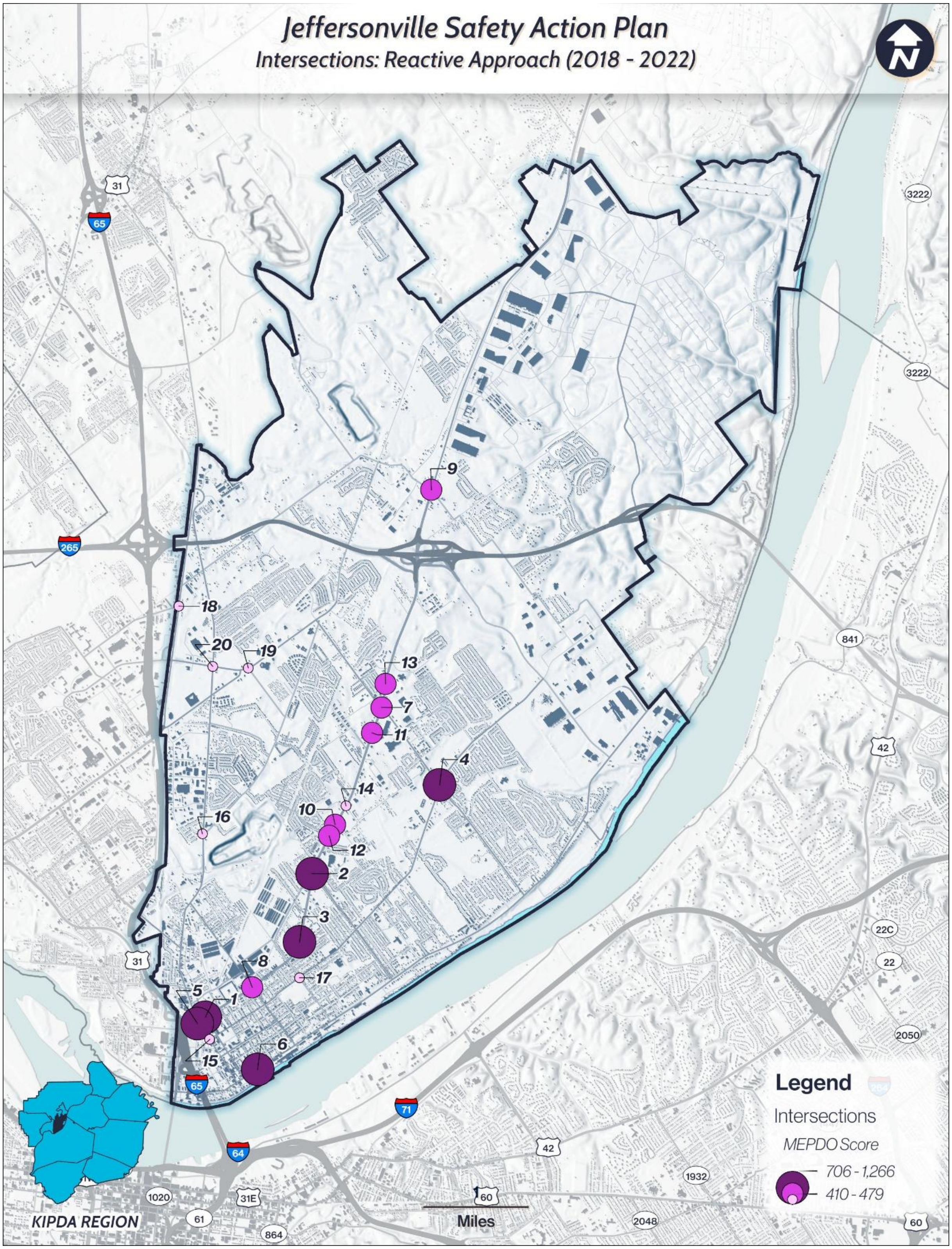


Figure 6-2. Intersections Prioritized by MEPDO Map

High Injury Network and Prioritized Corridors

A High Injury Network (HIN) is a data-driven approach to identify roadway segments that experience a disproportionately high number of fatal and serious injury crashes. This approach enables communities to focus resources on improving safety along those high priority corridors. Jeffersonville HIN was developed using detailed crash data analysis and GIS mapping to pinpoint corridors with the highest concentration of severe crashes. Table 6-5, Figure 6-3, Figure 6-4, and Figure 6-5 illustrate Jeffersonville HIN, highlighting its overlap with locations of fatal and serious injury crashes, and prioritized intersections based on MEPDO analysis.

Ranking	Route	Begin	End	Length (mile)	MEPDO	MEPDO / Mile
1	E 10th St	Spring St	Plank Rd / Springdale Dr	1.92	6171	3214
2	E 10th St	Plank Rd / Springdale Dr	I-264 Interchange	3.12	6516	2089
3	Court Ave	Missouri Ave	Graham St	1.27	2122	1671
4	Spring St	W Riverside Dr	W Eastern Blvd	1.52	2217	1459
5	Veterans Pkwy	Highway 31	Armstrong Rd / Holmans Ln	1.54	1957	1271
6	Highway 31	Charlestown New Albany Pike	Appleleaf Ln / Hamburg Pike	2.31	2766	1197
7	E 8th St	Spring St	Perrin Ln	2.45	2664	1087
8	Middle Rd	Perrin Ln	Port Rd	2.39	2388	999
9	Allison Ln / Holmans Ln	Middle Rd	Veterans Pkwy	1.98	1955	988
10	E 10th St	I-264 Interchange	Salem Rd	2.26	2085	923
11	E Market / Utica Pike	Spring St	Brighton Ave	1.34	1106	825
12	Spring St / Hamburg Pike	W Eastern Blvd	Charlestown New Albany Pike	2.48	1790	722
13	Ohio River Scenic Byway (SR 62)	Salem Rd	Lucas Ave	1.73	1192	689
14	Charlestown-Jeffersonville Pike	Armstrong Rd / Holmans Ln	Coopers Lane	1.68	756	450
15	Utica Pike	Brighton Ave	6 Mile Ln	3.06	1059	346
16	Hamburg Pike	Charlestown New Albany Pike	US 31	2.09	719	344
17	Charlestown Jeffersonville Pike	Hamburg Pike	Holmans Lane	2.34	795	340
18	Charlestown-Jeffersonville Pike	Coopers Lane	SR 62	2.43	402	166

Table 6-5. Prioritized Corridors - High Injury Network

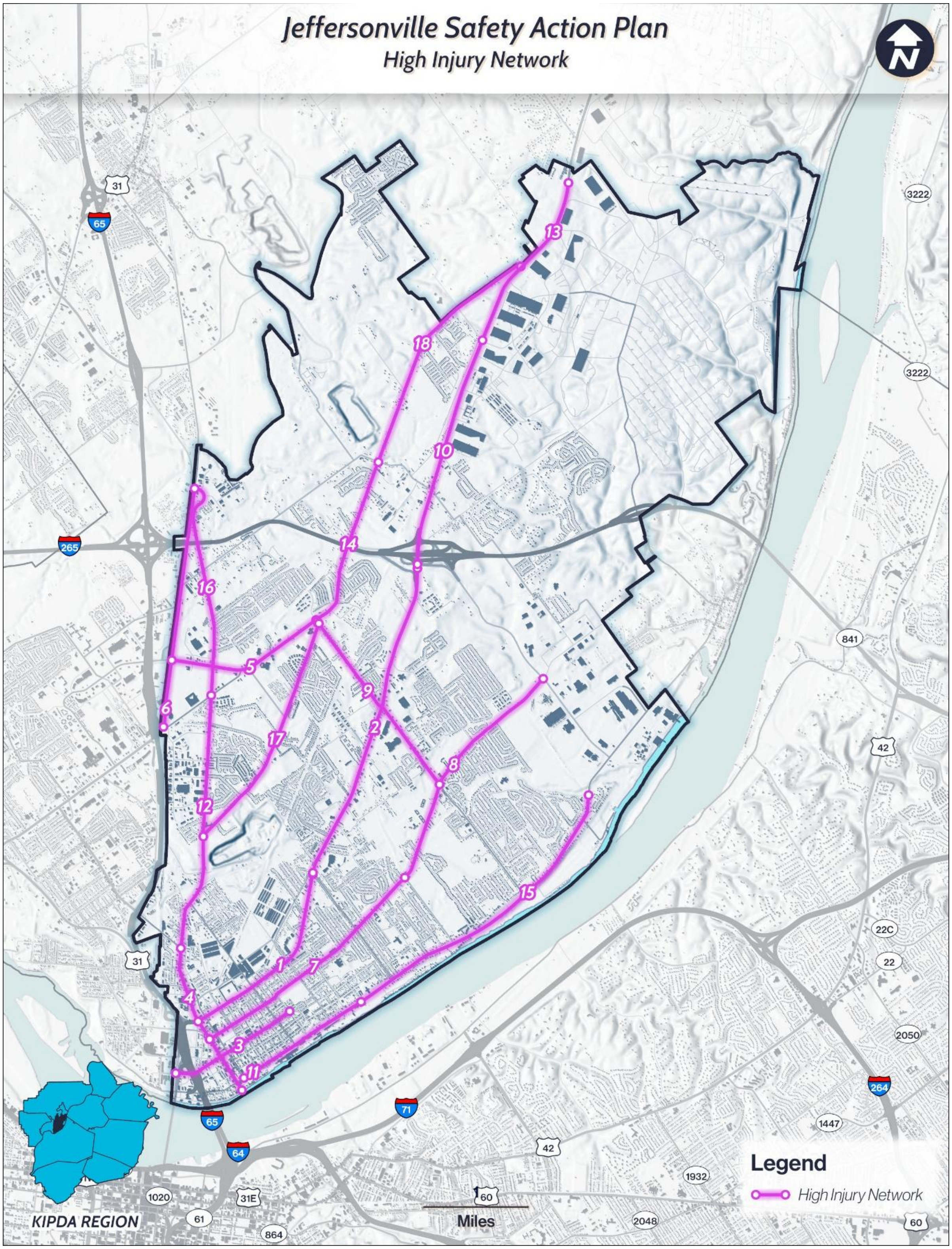


Figure 6-3. High Injury Network

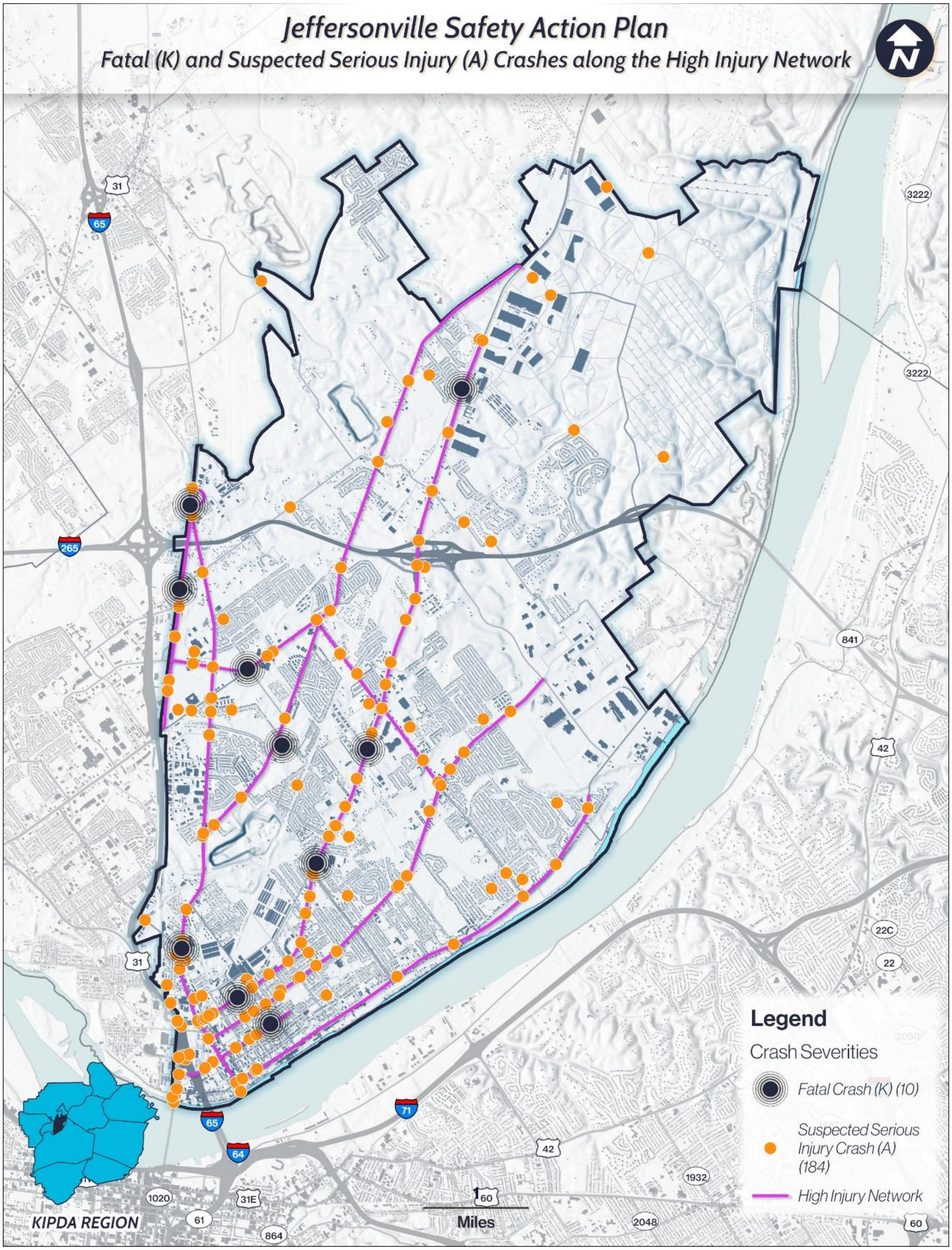


Figure 6-4. High Injury Network and Fatal and Suspected Serious Injury Crashes

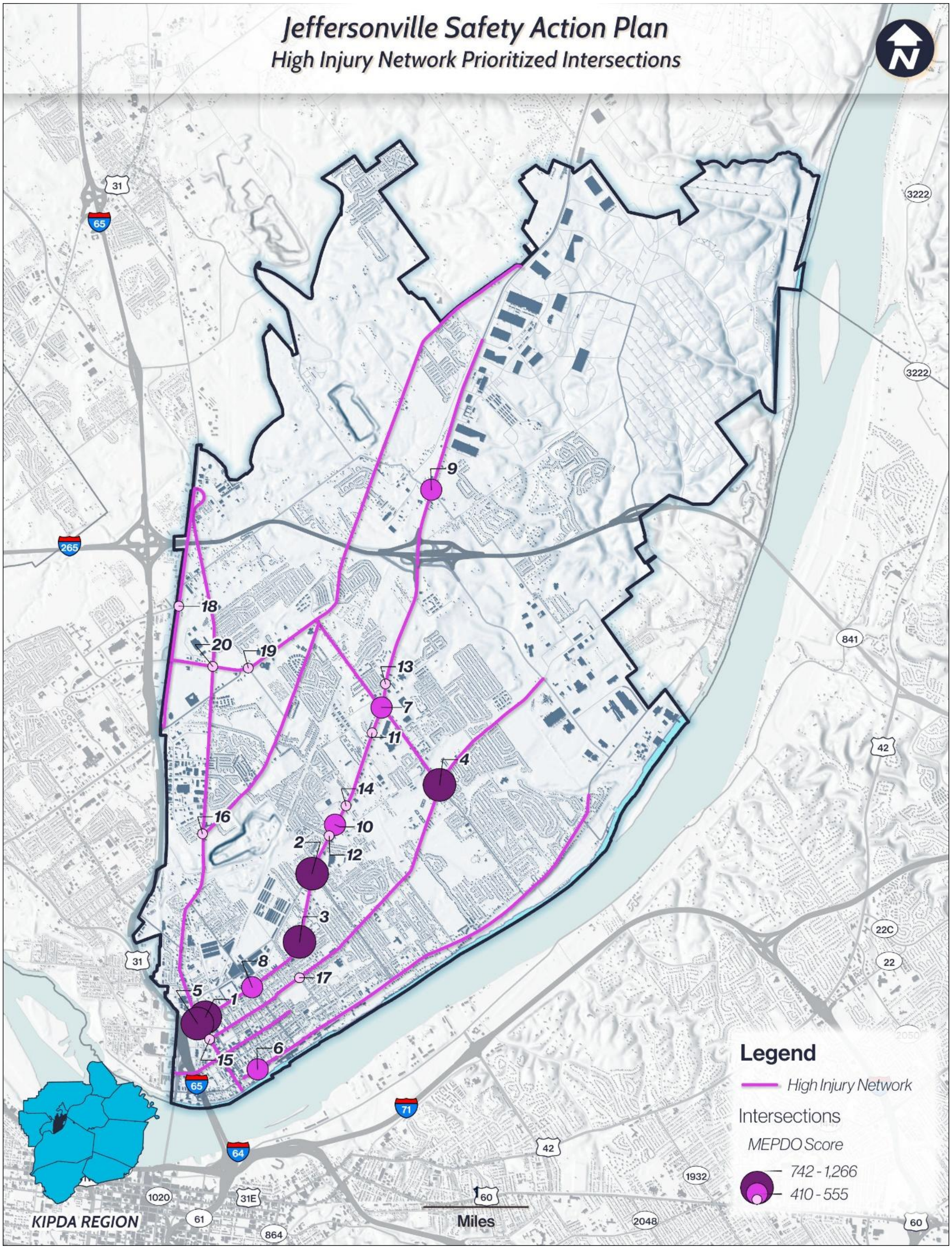


Figure 6-5. High Injury Network and Prioritized Intersections

Project Selection

A comprehensive set of recommended strategies and safety improvements was developed for the top-ranked intersections and corridors within the HIN. The improvements are based on the results of the safety analysis, feedback from Safety Committee and the public, and are guided by the considerations and the principles of the Safe System Approach.

Proven Safety Countermeasures

The following tables present a selection of proven safety countermeasures designed to reduce crashes. These measures are informed by before-and-after crash data from case studies. The countermeasures are organized into roadway segment and intersection improvement tables. The countermeasures includes an image, a description of the countermeasure's safety benefits, estimated safety impact statistics, and a link for further information.

Countermeasures should be implemented as appropriate based on the prioritized project locations. Estimated cost ranges for safety countermeasures can be found in Appendix A. This appendix also includes a project implementation timeline reference chart, which provides high-level guidance on the time required to complete a range of potential safety improvement projects. Please refer to the notes on the chart during the development of project timelines.

Additional information on potential safety countermeasures can be found using these links:

Proven Safety Countermeasures (Federal Highway Administration)
https://highways.dot.gov/safety/proven-safety-countermeasures

Innovative Intersections (Virginia Department of Transportation)
https://www.vdot.virginia.gov/about/our-system/highways/innovative-intersections/virginia-icap/

Federal Highway Administration Safety Programs
Intersection Safety - https://highways.dot.gov/safety/intersection-safety/about
Roadway Departure Safety – https://highways.dot.gov/safety/RwD
Speed Management Safety - https://highways.dot.gov/safety/speed-management
Pedestrian and Bicycle Safety – https://highways.dot.gov/safety/pedestrian-bicyclist
Local and Rural Safety - https://highways.dot.gov/safety/local-rural
Safety Data Analysis and Tools - https://highways.dot.gov/safety/data-analysis-tools

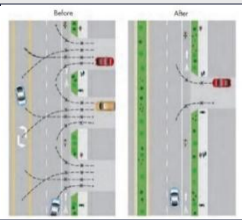
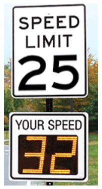
Example Segment Countermeasures							
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
Enhanced Delineation for Horizontal Curves				**Roadside Design Improvements at Curves**			
	High visibility markings and delineators around curves provide drivers with better information about curves.	Severe crashes ↓15-18%	FHWA		Includes treatments that improve horizontal curves, giving drivers the opportunity to recover safely or reducing crash severity.	Single Vehicle or All Crashes ↓8-44%	FHWA
Access Management (segment treatments)				**Medians and Pedestrian Refuge Islands**			
	Reducing the number and proximity of access points to focus turning traffic to fewer locations. Reduces turning conflicts.	2-lane Rural Road Crashes ↓5-23% Urban Severe Crashes ↓25-31%	FHWA		Provide curbed median between opposing travel lanes to provide separation, reduce left-turn risks, and improve pedestrian safety.	Ped Crashes ↓46-56% Vehicle Crashes ↓15%	FHWA and FHWA
Roadway Reconfiguration (Right Sizing or Road Diet)				**Shoulder Treatment – Safety Edge**			
	Often involves converting a 4-lane undivided road to a 3-lane road with 2 through lanes and a center two-way left-turn lane, which slows traffic and reduces conflicts.	All Crashes ↓19-47%	FHWA		Shoulder edge upgrades to improve recoverability for roadway departures.	Severe ↓11% Run-Off-Road ↓21% Head-On ↓19%	FHWA
Dynamic Speed Feedback Signs				**Pavement Friction Management**			
	Provide positive and negative feedback to drivers regarding their speed.	All Crashes ↓5%	FHWA (pg 5) FHWA Clearing house		High Friction Surface Treatment (HFST) can prevent roadway departure, intersection, and pedestrian-related crashes.	Severe Crashes at Curves ↓48% Crashes at Intersections ↓48%	FHWA

Table 6-6. Example Segment Countermeasures

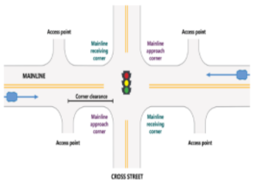
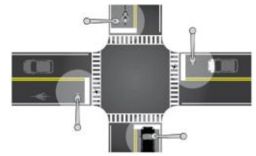
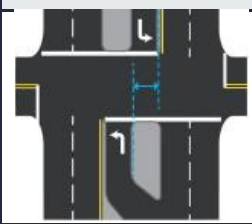
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
Example Intersection Countermeasures							
Access Management (intersection treatments)				**Intersection Lighting**			
	This refers to the design and control of access points including intersections which can enhance safety for all modes.	2-lane Rural Road Crashes ↓5-23% Urban Severe Crashes ↓25-31%	FHWA		Increased visibility at nighttime can improve safety for all modes of travel.	Nighttime Ped Injuries ↓42% Nighttime Crashes ↓33-38%	FHWA
Crosswalk Visibility Enhancement				**Reflective Backplates**			
	High-visibility crosswalks can reduce pedestrian injury crashes.	Pedestrian Injury Crashes ↓40%	FHWA		Improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background.	Total Crashes ↓15%	FHWA
Low-Cost Countermeasures at Stop-Controlled Intersections				**Modern Roundabouts (RAB)**			
	Deploying a package of low-cost countermeasures, including enhanced signing and pavement markings increasing driver awareness.	Severe Crashes ↓10% Night Crashes ↓15% Rural Severe Crashes ↓27%	FHWA		Converting an intersection (stop or signal) into a roundabout can slow traffic. It also minimizes conflicts and reduces crash severity.	2-way Stop to RAB Severe Crashes ↓82% Signal to RAB Severe Crashes ↓78%	FHWA
Left and Right Turn Lanes				**Positive Offset Left-Turn Lane**			
	Left and right turn lanes provide physical separation between through traffic and turning traffic that is slowing or stopped.	Left Turn Lane ↓28-48% Right Turn Lane ↓14-26%	FHWA		Provides increased visibility for drivers turning left. It prevents opposing left turning vehicles from blocking sightlines.	Severe crashes ↓36%	FHWA

Table 6-7. Example Intersection Countermeasures

Potential Intersection Strategies

The following table lists the prioritized intersections based on their MEPDO values. Each intersection was evaluated for its existing condition. Relevant safety countermeasures were identified as potential improvements for each intersection.

Intersections – Reactive Approach															
Ranking	Intersection	Potential Countermeasures													
		Offset Left Turn Lanes	Cycle Length and Clearance	Tighten Up Intersection	Right In / Right Out	Reflective Backplates	Curb Extensions (Bulb Out)	RCUT	Roundabout	Enhanced Markings / Striping	Enhanced Signing	Access Management	Crosswalk Visibility Enhancement	Re-Build Signal	Re-Align Intersection
1	E 10th St & Wall St				X				X	X	X	X	X		
2	E 10th St & Springdale Dr		X	X					X	X	X		X		
3	E 10th St & Nachand Ln		X						X	X	X		X		
4	Middle Rd & Allison Ln		X	X		X				X	X		X		
5	Spring St & 10th St		X			X			X	X	X		X		
6	E Market St & Walnut St						X			X	X				
7	E 10th St & Allison Lane / Holmans Ln	X	X	X		X		X	X	X	X				
8	E 10th St & Penn St		X			X			X	X	X		X		
9	E 10th St (SR 62) & Utica-Sellersburg Rd	X	X	X				X		X	X		X		
10	E 10th St & Woodland Ct				X			X		X	X	X			
11	E 10th St & Hoskins Dr				X			X		X	X	X			
12	E 10th St & Sportsman Dr		X	X	X	X		X		X	X	X			
13	E 10th St & Meijer Dr		X	X				X		X	X	X			
14	E 10th St & Renfroe Way	X	X		X	X		X		X	X				
15	Spring St & E 8th St		X			X			X	X	X		X		
16	Hamburg Pk & Charlestown Pk			X						X	X		X		X

Intersections – Reactive Approach															
Ranking	Intersection	Potential Countermeasures													
		Offset Left Turn Lanes	Cycle Length and Clearance	Tighten Up Intersection	Right In / Right Out	Reflective Backplates	Curb Extensions (Bulb Out)	RCUT	Roundabout	Enhanced Markings / Striping	Enhanced Signing	Access Management	Crosswalk Visibility Enhancement	Re-Build Signal	Re-Align Intersection
17	E 8th St & Main St		X						X	X	X		X		
18	US-31 & Progress Way		X						X	X	X			X	X
19	Veterans Pkwy & Woehrle Rd		X			X			X	X	X	X			
20	Veterans Pkwy & Hamburg Pk		X			X		X	X	X	X	X			

Table 6-8. Potential Intersection Strategies

Potential High Injury Network Corridor Strategies

Table 6-9 outlines potential safety improvement strategies for the identified HIN. The list of improvements was developed using proven safety countermeasures aimed at reducing and eventually eliminating severe crashes. These routes can be further studied to guide implementation efforts.

Rank	Route Name	Begin and End Limits	Length	Potential Project Strategies
1	E 10th St	Spring St and Plank Rd / Springdale Dr	1.92	Innovative intersections, access management, raised medians, enhanced pedestrian crossings, lighting This section of the HIN could be split at Main Street as the context of the street and the types of upgrades would differ east and west of that location.
2	E 10th St	Plank Rd / Springdale Dr and I-265 Interchange	3.12	Innovative intersections, offset turn lanes, lighting, connected pedestrian facilities, access management
3	Court Ave	Missouri Ave and Graham St	1.27	Innovative intersections, curb bump outs, enhanced pedestrian crossings, access management, speed management
4	Spring St	W Riverside Dr and W Eastern Blvd	1.52	Innovative intersections, curb bump outs, enhanced pedestrian crossings, access management, speed management
5	Veterans Pkwy	Highway 31 and Armstrong Rd / Holmans Ln	1.54	Innovative intersections, lighting, enhanced pedestrian crossing, access management
6	Highway 31	Charlestown New Albany Pike and Appleleaf Ln / Hamburg Pike	2.31	Innovative intersections, left turn lanes, lighting, enhanced striping, rumble strips
7	E 8th St	Spring St and Perrin Ln	2.45	Innovative intersections, bicycle lanes, curb bump outs, enhanced pedestrian crossings, speed management
8	Middle Rd	Perrin Ln and Port Rd	2.39	Innovative intersections, enhanced pedestrian crossings, raised medians, lighting, rumble strips
9	Allison Ln / Holmans Ln	Middle Rd and Veterans Pkwy	1.98	Innovative intersections, lighting, enhanced pedestrian crossing, access management
10	E 10th St	I-265 Interchange and Salem Rd	2.26	Innovative intersections, offset turn lanes, lighting, connected pedestrian facilities, access management
11	E Market / Utica Pike	Spring St and Brighton Ave	1.34	Enhanced pedestrian crossings, curb bump outs, lighting
12	Spring St / Hamburg Pike	W Eastern Blvd and Charlestown New Albany Pike	2.48	Innovative intersections, enhanced pedestrian crossings, access management
13	Ohio River Scenic Byway (SR 62)	Salem Rd and Lucas Ave	1.73	Innovative intersections, offset turn lanes, lighting
14	Charlestown-Jeffersonville Pike	Armstrong Rd / Holmans Ln and Utica Sellersburg Rd	1.68	Innovative intersections, lighting, turn lanes, pedestrian facilities, enhanced striping and signing **Active highway improvement project**

Rank	Route Name	Begin and End Limits	Length	Potential Project Strategies
15	Utica Pike	Brighton Ave and 6 Mile Ln	3.06	Pedestrian facilities, lighting, enhanced striping and signing, enhanced pedestrian crossings
16	Hamburg Pike	Charlestown New Albany Pike and US 31	2.09	Innovative intersections, enhanced signing and striping, rumble strips, left turn lanes
17	Charlestown Jeffersonville Pike	Hamburg Pike and Holmans Lane	2.34	Innovative intersections, pedestrian facilities, enhanced pedestrian crossings, turn lanes, lighting
18	Charlestown-Jeffersonville Pike	Utica Sellersburg Rd and SR 62	2.43	Minor roadway widening, rumble strips, enhanced signing **Active highway improvement project**

Table 6-9. Potential Corridor Strategies

System Level Approach and Strategies

The system level (or systemic) approach to safety identifies and addresses high-risk features across the entire roadway network rather than focusing solely on specific crash locations, as in the reactive approach.

For Jeffersonville's roadway network, the data showed that there is an overrepresentation of crashes on several local roadways. These roadways have much higher crash costs per vehicle mile traveled compared to some of the major highways in the area. Only about 10% of the fatal or serious injury crashes were on these roadways, so many of them were not flagged as part of the HIN. However, even the ones not on the HIN warrant future consideration given the high overall crash cost on low volume roadways.

The roadways identified are undivided two-lane facilities with less than 5,000 vehicles per day. About 18 miles of roadway were flagged, including Utica Pike, Main Street, Plank Road, Wall Street, Walnut Street, Perrin Lane, Allison Lane, Coopers Lane, Charlestown Pike, and Utica-Sellersburg Road. The analysis also highlighted failure to yield right-of-way as a major issue, related to nearly a quarter of the severe crashes in the city.

Run off road crashes were also flagged as they were nearly a quarter of the severe crashes. When head-on crashes are added, it is more than a quarter of all the severe crashes. These lane departure type crashes tended to occur on the major highways leading into and out of downtown Jeffersonville.

Systemic strategies typically involve implementing widespread low-cost improvements to reduce the likelihood and severity of crashes across an area, not just at specific locations. These strategies proactively identify and mitigate potential hazards to prevent crashes.

Strategy 1 – Intersection Upgrades

Given the driver errors that are leading to severe crashes in Jeffersonville, it is recommended that the town consider countermeasures that could either reduce the likelihood of the error or reduce the severity of the crash when the error occurs.

The types of countermeasures that could reduce the likelihood of the errors include townwide implementation of backplates on signals, oversize signs, upgraded intersection lighting, upgraded intersection striping, and smaller intersection turning radii (with truck aprons where needed).

Strategy 2 – Speed Management

High speeds are associated with more severe crashes. As highways are upgraded over time, steps should be taken to incorporate speed management techniques. This can include roundabouts, active speed feedback signs, using striping to narrow lanes (while leaving the road width unchanged), focused speed enforcement (including school speed zone enforcement), and many other techniques. Changing speed limits can be part of a speed management plan, especially if done in concert with other changes.

Strategy 3 – Roadside Edge Treatments and Centerline Treatments

The goal of roadside edge treatments is to both reduce the likelihood of a vehicle leaving the roadway and to reduce the severity of the crash when a vehicle does leave the roadway. This is in keeping with the Indiana Strategic Highway Safety Plan strategies for addressing roadway departures.

Specific proven safety countermeasures that could be applied systemically include the following:

- All Roads – Wider Edge Lines (up to 37% crash reduction) and Safety Edge
- Curves – Enhance curve delineation, guardrail, if volumes are sufficiently high curve flattening or high friction surface treatment could be considered
- Intersections and Sight Distance Limitations – Additional signing and markings or oversized signs, speed management techniques such as speed feedback signs
- Fixed Objects (culverts, poles, ditches, etc) – install upgraded guardrail
- Intersections – Roundabouts or transverse rumble strips

One of the most effective methods for preventing head-on crashes on two-lane highways is to introduce centerline buffers. The research on this approach shows that a one-foot buffer can eliminate nearly 20% of these crashes and a two-foot buffer can eliminate nearly 40% of these crashes. This approach should only be used where appropriate given the land use context.

If it is not possible or desirable to accommodate a center buffer then center rumble strips could be implemented. These have also proven to reduce head-on crashes.

Safety Action Plan Implementation

This plan has documented and prioritized many safety challenges. Based on the data, agency / stakeholder input, and best practices, it has also identified potential strategies and projects that would address these challenges. The focus continues to be on reducing high-severity crashes across the community. This section outlines an initial action plan for deploying potential strategies, projects, and safety programs. The actions are proposed to be implemented in four time ranges: short-term (0-3 years); mid-term (4-6 years); long term (7+ years); and ongoing. They cover the main intervention categories: infrastructure, behavioral safety, operational safety, and policies/procedures.

The implementation of each project, strategy, or program is dependent on funding availability. It is also dependent on the support of all relevant agencies and the City's capacity to execute each action. In cases where the City does not have primary authority for implementing the action, they will need to play a supporting role.

Timeframe	No	Project / Strategy / Program Description	Document Reference	Recommended First Step	Primary Category
Short Term (0 to 4 years)	1	Adopt updated traffic calming and/or updated safety related codes and policies	Chapter 5	Work with KIPDA to obtain model policies for adoption	Policy / Procedures
	2	Submit application for SS4A grant funding for one of the top HIN segments	Chapter 6; Table 6-9	Work with partners (as relevant) to identify and agree on a project and match funding	Infrastructure
	3	Initiate first citywide safety outreach; Consider focusing on aggressive driving and speeding	Chapter 3 and 4	Work with KIPDA and other jurisdictions to develop a multi-agency outreach approach	Behavioral
	4	Implement initial low-cost Speed Management strategies on HIN corridors	Chapters 3, 4 and 6; Systemic Sec.	Work with law enforcement and INDOT to identify key corridors	Operational
	5	Support targeted speed and traffic control enforcement	Chapter 3 and 4	Work with law enforcement to identify key locations	Operational
Mid Term (4 to 8 years)	6	Implement one easy to implement systemic infrastructure focused project	Chapters 3 and 6; Systemic Sec.	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	7	Implement high priority HIN segment project	Chapter 3 and Chapter 6	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	8	Implement high priority intersection project	Chapter 3 and Chapter 6	Work with partners (as relevant) to identify a promising project and funding	Infrastructure
	9	Implement safety focused local street/highway upgrades and maintenance	Chapter 3 and Chapter 6	Use local funds to advance priority local projects / maintenance	Infrastructure
	10	Initiate second citywide safety outreach; Consider focusing on aggressive driving, speeding, actions that cause roadway departures, or other relevant topics	Chapter 3 and 4	Work with KIPDA and other jurisdictions to develop a multi-agency outreach approach	Behavioral
Long Term (9+ years)	11	Implement additional systemic infrastructure focused projects (goal is one or more every five years)	Chapters 3 and 6; Systemic Sec.	Build long-term partnerships and identify funding to address key systemic needs	Infrastructure
	12	Implement additional infrastructure projects on HIN (goal is one or more every five years)	Chapter 3 and Chapter 6	Build long-term partnerships and identify funding to address key HIN needs	Infrastructure
	13	Implement additional intersection infrastructure projects (goal is one or more every five years)	Chapter 3 and Chapter 6	Build long-term partnerships and identify funding to address key intersection needs	Infrastructure
	14	Implement additional safety focused local street/highway improvements (goal is one or more every five years)	Chapter 3 and Chapter 6	Increase local funds to advance priority local projects / maintenance	Infrastructure
Ongoing	15	Continue Local Safety Meetings	Chapters 2 and 4	Schedule quarterly meetings	Policy / Procedures
	16	Collaborate with KIPDA to monitor, assess, and publicly report progress	Chapter 7	Coordinate with KIPDA to implement reporting plan	Policy / Procedures
	17	Continue building staff/agency knowledge regarding highway safety	Chapters 4, 5, and 6	Coordinate with KIPDA to schedule annual sessions	Policy / Procedures

Table 6-10. Implementation Action Plan Timeline

7. Evaluation and Transparency

The City of Jeffersonville, with support from KIPDA, is dedicated to ensuring the success of this Safety Action Plan. Effective communication, continuous monitoring, and evaluation are crucial to eliminating fatalities and serious injury crashes by 2050. Maintaining ongoing transparency through public accessibility and clear communication of outcome data is also essential.

The following chapter outlines the plan for measuring progress, maintaining transparency, and continuously incorporating feedback to enhance this road safety initiative.

Safety Performance Measurement

Safety improvements are measured using community-wide performance metrics to assess progress. Additionally, project-specific performance is monitored to promote effective implementation and positive safety impacts. The following sections outline the annual public and accessible progress reporting structure and proposed metrics.

Annual Safety Performance Measures

Crash Severity

The City and KIPDA expect to monitor the total number of crashes annually by crash severity: Fatal, Suspected Serious Injury, Suspected Minor Injury, Possible Injury, and No Apparent Injury. In addition, the crash rate for the total number of crashes would be estimated. The crash rate is the total number of crashes per vehicle miles traveled in the City.

Fatal and Suspected Serious Injury Crashes

Evaluating fatal and suspected serious injury crash trends is a key focus. Fatal and suspected serious injury crashes should be monitored annually. The measurement includes monitoring the total number of fatal and suspected serious injury crashes and the crash rate. The crash rate is the number of fatal and suspected serious injury crashes per vehicle miles traveled in the City annually.

Vulnerable Road User Crashes

Crashes involving vulnerable road users should be monitored annually, focusing on fatal and suspected serious injury crashes. Since a significant portion of severe crashes involve vulnerable road users, this metric is critical for assessing safety improvements.

Community Focused

The City and KIPDA expect to assess the above safety performance metrics by Census Tract to explore underlying factors contributing to crash trends. By comparing these metrics to city-wide results, patterns can be identified, allowing for tailored solutions and resources to meet the needs of different parts of the community. This approach aims to create a safer environment for all, by addressing concerns and promoting safety across the different parts of the community.

Project-Specific Performance Measures

The safety action plan recommends improvements using both the reactive and systemic approaches. Monitoring focuses on project-specific improvements at prioritized signalized intersections, unsignalized intersections, and along the corridors identified on the High Injury Network. Key project-specific measures anticipated to be collected include:

Safety Improvement Projects Implemented at Prioritized Locations

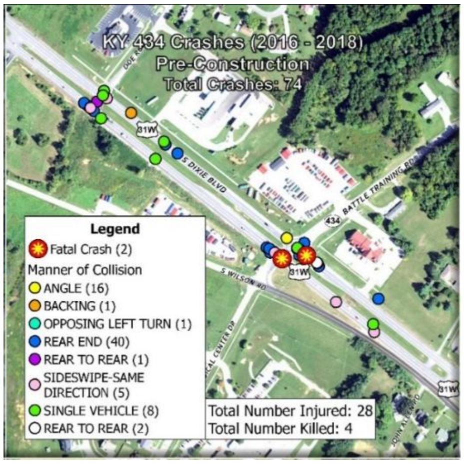
This performance measure tracks the number of safety-focused improvement projects constructed from the potential improvements listed in **Chapter 6. Strategy and Project Selection.** The total number of safety improvements implemented at the intersection and along the corridors identified on the HIN would be recorded annually.

Crash Trends at Project Locations

When a safety improvement project has been constructed, pre-construction and post-construction crash data can be collected to document the realized crash reduction benefit. Crash trends would be assessed for each project specific improvement to aid decision-makers in future safety improvement decisions. This performance measure tracks fatal and suspected serious injury crashes for each improvement project.

Safety Studies and Design

The status of safety studies and design plans would be monitored annually. These studies and design plans, which include cost estimates, public engagement, NEPA documentation, and project readiness, move projects closer to construction and the ultimate goal of eliminating fatal and suspected serious injury crashes.

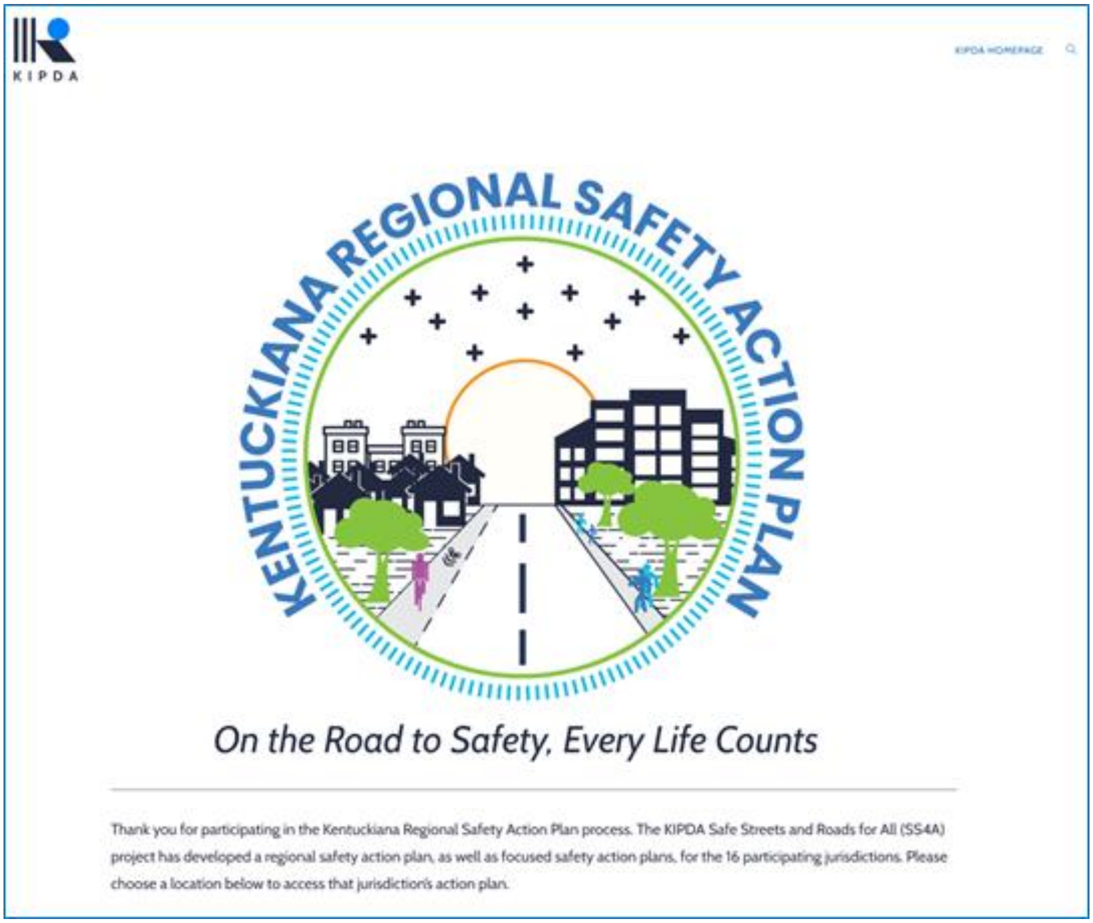


PRE-CONSTRUCTION → POST-CONSTRUCTION

Geospatial representation of crash trends for specific projects is an effective method to demonstrate their impact to the community. Illustrating pre and post-construction crash data, with a focus on the decrease in fatal and suspected serious injury crashes, clearly communicates safety improvements.

Transparency

The development of the Safety Action Plan has been shared publicly with residents and other relevant stakeholders through the KIPDA website. The MPO utilized its website to engage the community and disseminate further resources, including maps, the Safe Streets and Roads for All Grant Program, and the Safe Systems Approach. The Jeffersonville Safety Action Plan is posted publicly online at [SS4A – KIPDA Transportation](). The KIPDA website will continue to be the platform to engage the community and serve as a source of information and updates to the public.



Feedback and Continuous Improvement

Creating the Safety Action Plan involved a collaborative effort with active community participation. The project team conducted comprehensive public surveys and facilitated stakeholder discussions through Stakeholder and Safety Committees. This engagement underscored the importance of continuous improvement in achieving safety goals. By advancing ongoing dialogue, feedback is used to assess the plan's efficacy and provides for regular plan amendments. This can help keep the Safety Action Plan relevant and effective in addressing community needs.

Appendix A

Safety Countermeasure Cost Estimate Ranges

and

Project Implementation Timeline Reference Chart

Planning Level Safety Countermeasure Cost Estimate Ranges

Values are based on an assumed construction cost and percentages for all other categories

Results are for order of magnitude cost estimation only

6/12/2025

Notes: ***Low Cost*** *Assumes Minimal Scope, Low Cost Approaches, and/or Ideal Conditions*

High Cost *Assumes Full Scope and Several Project Challenges*

All category and contingency percentages may need to be adjusted based on project size and complexity

Project	Unit	Planning	Design and Environmental Permitting	Right-of-Way	Utilities	Construction Inspection	Construction	Subtotal	Low Planning Level Contingency	High Planning Level Contingency	Low Total 2025 Cost	High Total 2025 Cost	Low Total 2032 Programming Cost	High Total 2032 Programming Cost
													(7%/yr compounded)	
Cost Percentages ==>		*5%*	*15%*	*20%*	*10%*	*12%*			*15%*	*50%*			*61%*	*61%*
Curve Realignment (moderate right-of-way/utilities)	Curve	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Dynamic Speed Feedback Sign	Each	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Enhanced Signing/Striping - Curves	Curve	$750	$2,250	$3,000	$1,500	$1,800	$15,000	$24,300	$3,645	$12,150	$27,945	$36,450	$44,874	$58,531
Enhanced Signing/Striping - Intersection	Intersection	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
Enhanced Signing/Striping - Transition Zones	Location	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
Enhanced Striping - Highway	Mile	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Guardrail Upgrades (minimal regrading)	500 Feet	$1,500	$4,500	$6,000	$3,000	$3,600	$30,000	$48,600	$7,290	$24,300	$55,890	$72,900	$89,747	$117,061
High Friction Surface Treatments ($40/sq yd)	Curve	$5,000	$15,000	$20,000	$10,000	$12,000	$100,000	$162,000	$24,300	$81,000	$186,300	$243,000	$299,157	$390,205
Lighting - Highway (multilane)	Mile	$30,000	$90,000	$120,000	$60,000	$72,000	$600,000	$972,000	$145,800	$486,000	$1,117,800	$1,458,000	$1,794,943	$2,341,229
Lighting - Intersection	Intersection	$3,750	$11,250	$15,000	$7,500	$9,000	$75,000	$121,500	$18,225	$60,750	$139,725	$182,250	$224,368	$292,654
Pedestrian Enhancements (signs, striping, ADA, bulb outs)	Location	$5,000	$15,000	$20,000	$10,000	$12,000	$100,000	$162,000	$24,300	$81,000	$186,300	$243,000	$299,157	$390,205
Pedestrian Enhancements (signs, striping, ADA, refuge)	Location	$2,500	$7,500	$10,000	$5,000	$6,000	$50,000	$81,000	$12,150	$40,500	$93,150	$121,500	$149,579	$195,102
Positive Offset Left Turn Lanes	Each	$15,000	$45,000	$60,000	$30,000	$36,000	$300,000	$486,000	$72,900	$243,000	$558,900	$729,000	$897,471	$1,170,615
Raised Median (no widening)	Sq Yards	$8	$23	$30	$15	$18	$150	$243	$36	$122	$279	$365	$449	$585
Reflective Backplates (no signal rebuild)	Intersection	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Reflective Backplates (with signal rebuild)	Intersection	$10,000	$30,000	$40,000	$20,000	$24,000	$200,000	$324,000	$48,600	$162,000	$372,600	$486,000	$598,314	$780,410
Restricted Crossing U-Turn Crossing Intersection (un-signalized)	Location	$87,500	$262,500	$350,000	$175,000	$210,000	$1,750,000	$2,835,000	$425,250	$1,417,500	$3,260,250	$4,252,500	$5,235,249	$6,828,586
Restricted Crossing U-Turn Crossing Intersection (signalized)	Location	$150,000	$450,000	$600,000	$300,000	$360,000	$3,000,000	$4,860,000	$729,000	$2,430,000	$5,589,000	$7,290,000	$8,974,713	$11,706,147
Road Reconfiguration (Convert 4-lane to 3-lane, w/ resurfacing)	Mile	$25,000	$75,000	$100,000	$50,000	$60,000	$500,000	$810,000	$121,500	$405,000	$931,500	$1,215,000	$1,495,785	$1,951,024
Roundabout (dual-lane)	Each	$120,000	$360,000	$480,000	$240,000	$288,000	$2,400,000	$3,888,000	$583,200	$1,944,000	$4,471,200	$5,832,000	$7,179,770	$9,364,918
Roundabout (single lane)	Each	$50,000	$150,000	$200,000	$100,000	$120,000	$1,000,000	$1,620,000	$243,000	$810,000	$1,863,000	$2,430,000	$2,991,571	$3,902,049
Rumble Strips - Center (no widening)	Mile	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Rumble Strips - Edge (no widening, both sides)	Mile	$1,250	$3,750	$5,000	$2,500	$3,000	$25,000	$40,500	$6,075	$20,250	$46,575	$60,750	$74,789	$97,551
Rural Re-Align Skewed Intersection (limited ROW/utilities)	Intersection	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Rural to Urban Transition Zone Treatments (high-cost)	Location	$37,500	$112,500	$150,000	$75,000	$90,000	$750,000	$1,215,000	$182,250	$607,500	$1,397,250	$1,822,500	$2,243,678	$2,926,537
Rural to Urban Transition Zone Treatments (low-cost)	Location	$12,500	$37,500	$50,000	$25,000	$30,000	$250,000	$405,000	$60,750	$202,500	$465,750	$607,500	$747,893	$975,512
Shoulder Widening & Roadside Improvements (limited ROW/utilities)	Mile	$60,000	$180,000	$240,000	$120,000	$144,000	$1,200,000	$1,944,000	$291,600	$972,000	$2,235,600	$2,916,000	$3,589,885	$4,682,459
Sidewalks - Highway (one side only)	Mile	$20,000	$60,000	$80,000	$40,000	$48,000	$400,000	$648,000	$97,200	$324,000	$745,200	$972,000	$1,196,628	$1,560,820
Sidewalks - Intersection (includes ADA)	Intersection	$4,000	$12,000	$16,000	$8,000	$9,600	$80,000	$129,600	$19,440	$64,800	$149,040	$194,400	$239,326	$312,164
Sight Distance Improvements (vegetation)	Intersection	$1,000	$3,000	$4,000	$2,000	$2,400	$20,000	$32,400	$4,860	$16,200	$37,260	$48,600	$59,831	$78,041
Signal Timing - Cycle Length, Clearance and Leading Ped Intervals	Intersection	$500	$1,500	$2,000	$1,000	$1,200	$10,000	$16,200	$2,430	$8,100	$18,630	$24,300	$29,916	$39,020
Signal Upgrade (may be required for protected left turn phasing)	Intersection	$10,000	$30,000	$40,000	$20,000	$24,000	$200,000	$324,000	$48,600	$162,000	$372,600	$486,000	$598,314	$780,410
Tighten Intersection (small intersection, limited drainage)	Each	$17,500	$52,500	$70,000	$35,000	$42,000	$350,000	$567,000	$85,050	$283,500	$652,050	$850,500	$1,047,050	$1,365,717
Tree Trimming	Linear Foot	$3	$8	$10	$5	$6	$50	$81	$12	$41	$93	$122	$150	$195
Turn Lanes (one turn lane, 150 ft plus taper)	Each	$12,500	$37,500	$50,000	$25,000	$30,000	$250,000	$405,000	$60,750	$202,500	$465,750	$607,500	$747,893	$975,512
Urban Re-Align Skewed Intersection (limited ROW/utilities)	Intersection	$75,000	$225,000	$300,000	$150,000	$180,000	$1,500,000	$2,430,000	$364,500	$1,215,000	$2,794,500	$3,645,000	$4,487,356	$5,853,073
Access Management (Low Complexity)	Mile	$75,000	$225,000	$300,000	$150,000	$180,000	$1,500,000	$2,430,000	$364,500	$1,215,000	$2,794,500	$3,645,000	$4,487,356	$5,853,073
Adjusted Cost Percentages ==>		*3%*	*12%*	*20%*	*10%*	*10%*			*10%*	*35%*			*61%*	*61%*
Access Management (Moderate Complexity)	Mile	$120,000	$480,000	$800,000	$400,000	$400,000	$4,000,000	$6,200,000	$620,000	$2,170,000	$6,820,000	$8,370,000	$10,951,430	$13,440,391
Access Management (High Complexity, Often Complete Rebuild)*	Mile	$300,000	$1,200,000	$2,000,000	$1,000,000	$1,000,000	$10,000,000	$15,500,000	$1,550,000	$5,425,000	$17,050,000	$20,925,000	$27,378,574	$33,600,977

Project Implementation Timeline Reference Chart
6/23/2025

This chart is intended to provide high-level guidance on the time required to complete a range of potential safety improvement projects.
1) The time required to secure funding for each phase (federal, state, or local) is not included. The time to execute federal grant agreements or other state or federal project agreements is also not included.
2) Time to procure planning, design, or other professional services should be added as required. Construction and inspection procurement are included if they can reasonably be accommodated during the pre-construction phases.
3) Local agencies should coordinate with state and KIPDA staff to estimate the time required for each task. This applies to local public agency (LPA) projects and includes projects using federal, state, and KIPDA funding.

To use this table, please determine the level of complexity for each phase of the project you are considering. For example, a project may be moderate with respect to planning, design, and construction, but complex with respect to right-of-way and utility coordination. This would likely result in a project that is somewhere between those two categories for the total project timeline.

Level of Complexity for Each Phase	Planning	Preliminary Engineering and Environmental	Final Design	Right-of-Way (ROW)	Utility Coordination	Construction	Estimated Total Project Timeline
Simple	3-6 months Few alternatives Limited or no public involvement No anticipated controversy No TIP/STIP issues	6 - 9 months Minimal design No survey or geotech NEPA CE (programmatic or low level)	6 months Minimal design effort	N/A Within existing ROW	3-6 months Notification only No relocations	6 - 9 months <$500K No phasing needed	2 to 3 years
Moderate	6–12 months Several alternatives Public involvement May require TIP/STIP mods	6–12 months Straightforward design Survey required NEPA CE (with public input)	6-12 months Moderate design effort Agency reviews	6–12 months Easements and/or minor acquisitions	6-18 months Relocations possible Agreements possible	6–12 months $500K–$2M Lane closures/phasing	3 to 6.5 years
Complex	12–18 months Numerous alternatives Public involvement May require TIP/STIP mods Multiple agencies involved	12–18 months Alternatives analysis Extensive design (survey, traffic, geotech) NEPA EA or CE (with public input)	12-18 months Major design effort Extensive permitting Environmental constraints	12–24 months Full ROW Relocations/eminent domain	12–18 months Major relocations Agreements required	12–24 months $2M+ Detours or complex staging	6 to 10 years

Notes:
Schedule estimates assume all required project funding is available
NEPA = National Environmental Policy Act of 1969
CE = Categorical Exclusion
EA = Environmental Assessment
TIP/STIP = Transportation Improvement Program / State Transportation Improvement Program