



*On the Road to Safety, Every Life Counts*

# Charlestown, IN

## Safety Action Plan



**6/25/2025**



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- Tony Jackson | Building Commissioner, MS4 Coordinator, Safety Officer
- Tubby Purcell | Building Inspector, Code Enforcement



# Introduction

In 2023, the City of Charlestown, IN, 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.



Charlestown 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 Charlestown 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 road safety approach often relies on all road users' perfect human behavior. It 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.

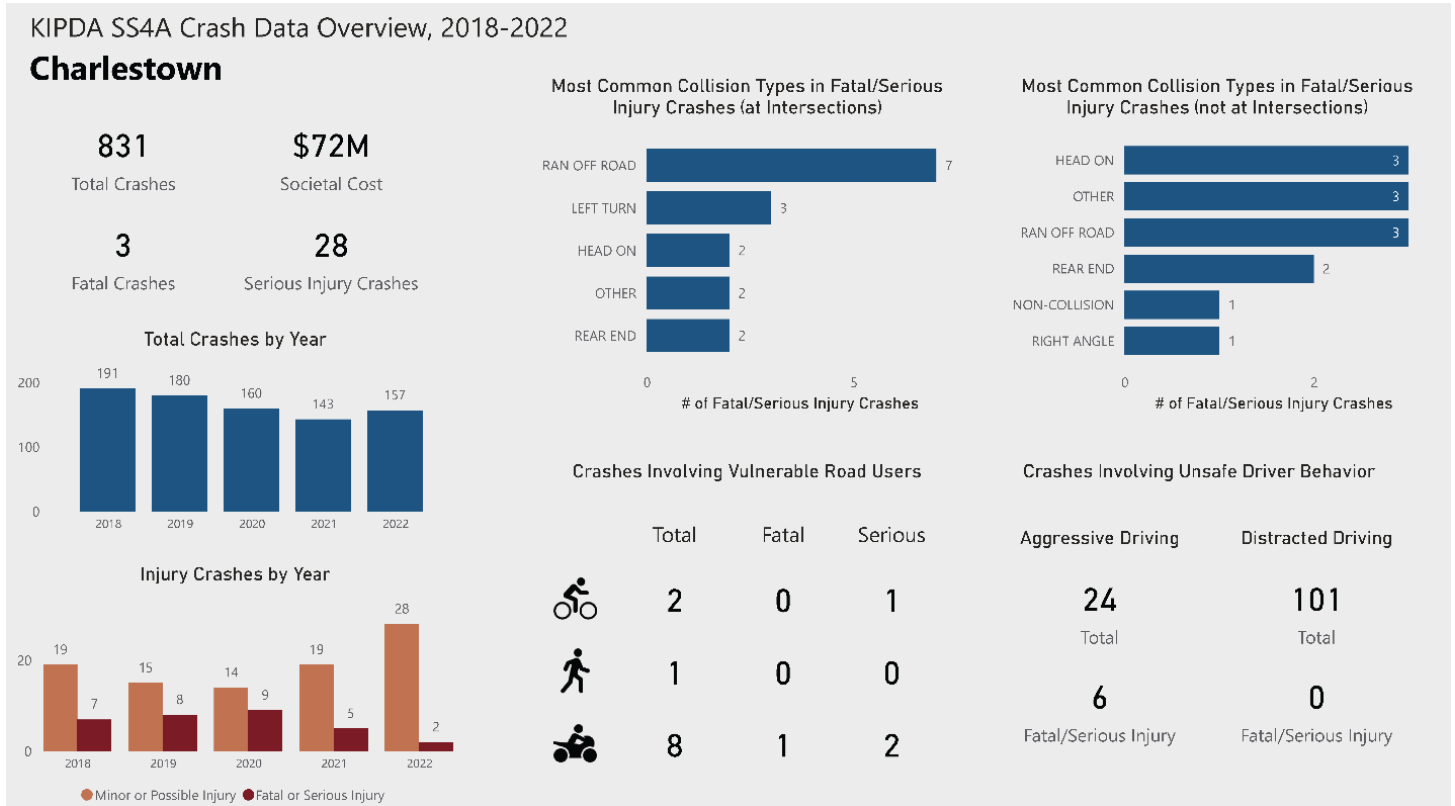
### Traditional approach

### 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

The City of Charlestown has three fatal crashes and 28 serious injury crashes during the five-year period from 2018 to 2022, for a total of 32. There were 831 total crashes during this time. The total societal cost of all crashes in the city was \$72 million (including economic and quality of life factors). The figure below provides an overview of the crash data.



Important safety findings for Charlestown include:

- Over 90% of the 31 serious crashes involved human factor issues as a primary factor
  - Top issues were failure to yield right-of-way and running off the road (losing control)
- Nearly one-third of the 31 serious crashes were run-off road crashes
- Major highways are where most serious crashes occurred. Charlestown can use design and other tactics to address run-off-road crashes, speeds, and driver conflicts on these streets.
- Only two serious (non-fatal) crashes occurred in 2022, showing how close Charlestown was that year to achieving zero fatal and serious injury crashes



# 1. Leadership Commitment and Goal Setting

The City of Charlestown, IN is dedicated to ensuring safety for all users on the City's streets and roads. The City's commitment is demonstrated by the resolution on the following page, which states that its leaders have established "a goal of working towards zero traffic fatalities and serious injuries by the year 2050." This resolution passed City Council unanimously in January of 2025.

Improving the safety of the city's transportation system has long been a priority. For example, the 2016 Comprehensive Plan listed several strategies that address traffic safety:

1. Develop and implement a complete streets policy
2. Complete missing bicycle and pedestrian connections between neighborhoods and local and regional destinations
3. Create access management & enhancement plans for 403 and 62 to preserve high level of service
4. Provide enhanced pedestrian facilities on major streets that include enhanced crosswalks, expanded sidewalks, and additional pedestrian amenities

It also called for safety focused upgrades at locations such as at the Bethany Road/County Road 403 intersection.

Recently, the community was awarded over \$1 million from the Indiana Department of Transportation (INDOT) Community Crossings Matching Grants (CCMG) program. Combine with the matching funds, this will result in a \$1.4 million investment in street, sidewalk, and stormwater upgrades on Green Alley, Harrison Street, Madison Street, High Street, and High Jackson Street.

This plan will support Charlestown's ongoing efforts to create a safe and efficient transportation system that effectively serves the community's residents and businesses.

Before the Common Council  
City of Charlestown, Indiana

RESOLUTION NO. 2025-R-01

A RESOLUTION OF THE CITY OF CHARLESTOWN  
IN SUPPORT OF VISION ZERO

WHEREAS, VISION ZERO is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all; and

WHEREAS, the City of Charlestown is utilizing a planning grant through the Safe Streets and Roads for All Program (SS4A) and coordinating with Kentuckiana Regional Planning and Development Agency (KIPDA) to develop a safety action plan for the City of Charlestown to analyze existing conditions, historical trends, systematic and specific needs and to identify projects and strategies to address the identified problems; and

WHEREAS, a safety plan is an eligibility requirement for implementation grants through the SS4A program; and

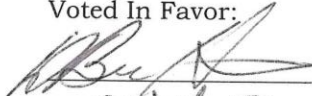
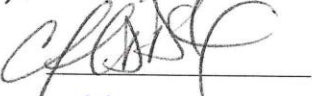
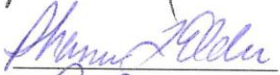
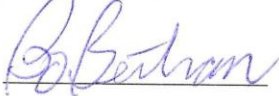

WHEREAS, community commitment to an eventual goal of zero fatalities and serious injuries is an important component for USDOT consideration of an implementation grant through SS4A program; and

WHEREAS, the herein Resolution was considered by the City of Charlestown Common Council at a public meeting.

NOW, THEREFORE BE IT RESOLVED, the City of Charlestown Common Council hereby establishes a goal of working towards zero traffic fatalities and serious injuries by the year 2050.

All of which is Resolved by the Common Council of the City of Charlestown  
Common Council on this 6<sup>th</sup>, day of January, 2025.

Voted In Favor:

Voted Against:

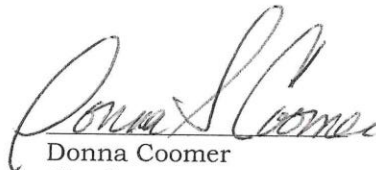
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SEEN AND APPROVED BY THE MAYOR ON THIS 14 DAY OF  
January, 2025.

  
Treva Hodges, Mayor

Attest:

1-14-2025  
Date

  
Donna Coomer  
Charlestown  
Clerk/Treasurer



## 2. Planning Structure

The planning structure for the City of Charlestown 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 the City of Charlestown. It also included KIPDA staff. Steering Committee meetings were held at key points to provide information and gather input. 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

### City Leadership Meetings and Plan Review

Meetings were held with city leadership at two key points during the 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 city leadership to identify, confirm, and prioritize critical safety issues. The second meeting gave city leadership the opportunity to provide feedback on the draft High Injury Network (HIN) and potential safety countermeasures. These interactions allowed the unique concerns and priorities of the City of Charlestown to be adequately addressed in the plan.

The final Safety Action Plan was also reviewed by City leadership to provide feedback and yield a plan that is useful for moving the City of Charlestown 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 Safety Committee also provides a means of continuing the safety planning and project implementation process in the future. The Committee consisted of a multidisciplinary team comprising key stakeholders from the community, including:

- City of Charlestown Mayor
- Mayor's Assistant
- Street Department Director

- Chief of Police
- Building Commissioner, Safety Officer
- Building Inspector, Code Enforcement
- Kentuckiana Regional Planning & Development Agency (KIPDA) staff

The Safety Committee provided advice and feedback on the plan development and is intended to continue this advisory role as the plan moves into implementation and monitoring. The Committee provided input and feedback on potential safety needs and possible reactive and systemic safety countermeasures. Having many different perspectives and agencies in these meetings facilitates effective communication and results 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 is expected to continue in the future, facilitated by KIPDA staff, as the plan is implemented, updated, and enhanced over time.



### 3. Safety Analysis

#### Study Area

The study area for the safety analysis includes the city limits of Charlestown, as shown in Figure 3-1. This study includes all public streets and roads within the city except interstate highways, private streets, or parking lots.

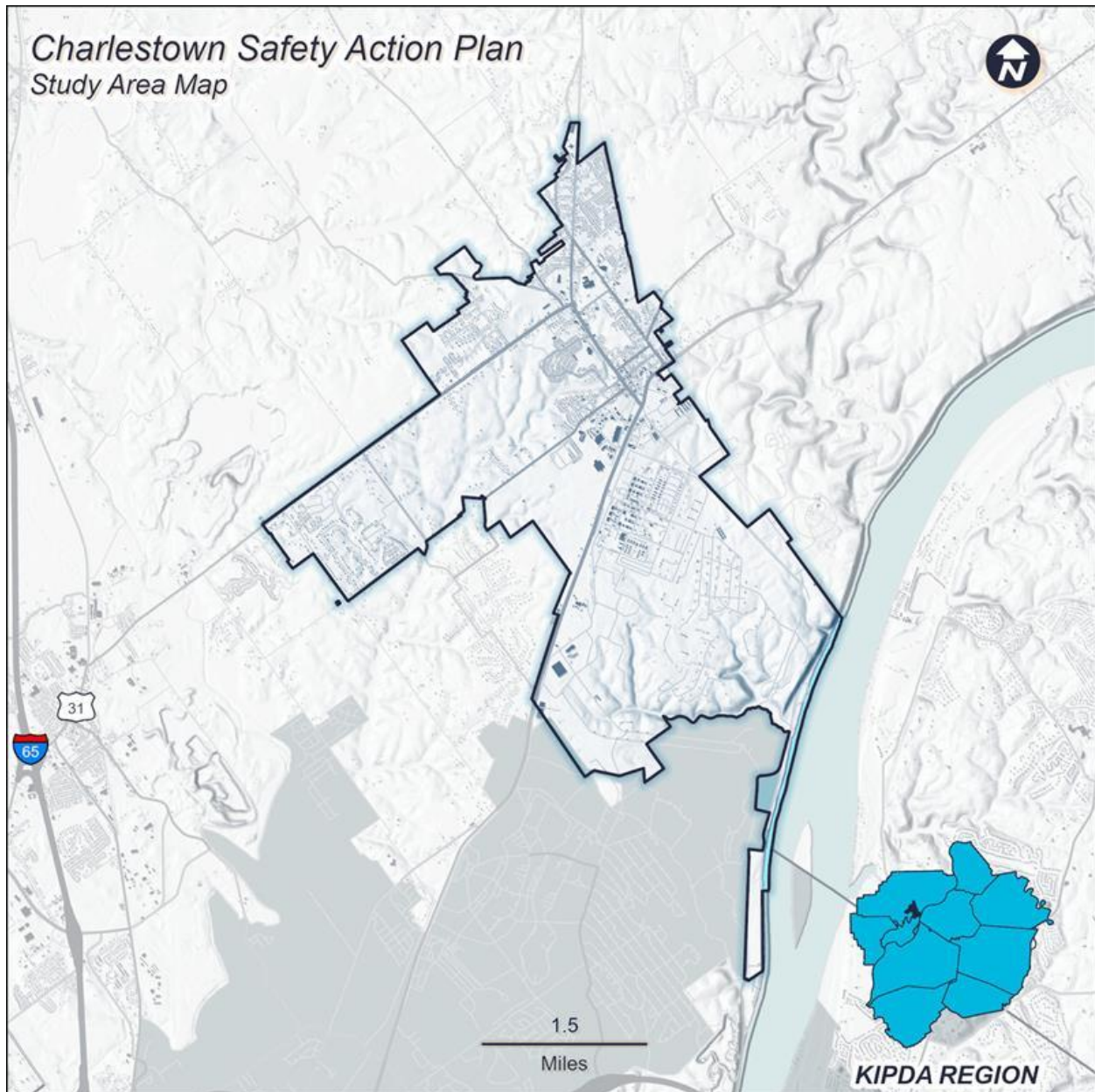


Figure 3-1: Study Area

## 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 through the 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 the crashes, including location, type, severity, individuals and units involved, environmental factors, and the contributing factors of each crash. Departments enter this information into a database maintained by ISP.

The initial crash data included all City of Charlestown crashes from 2018 to 2022. Crashes 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 831 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 Charlestown by severity.

Severity	MMUCC Severity Description	Crashes (2018-2022)	%
K	Fatal Injury	3	0%
A	Suspected Serious Injury	28	3%
B	Suspected Minor Injury	71	9%
C	Possible Injury	24	3%
O	No Apparent Injury	705	85%
<b>Total</b>		<b>831</b>	

Table 3-1: Crashes by Severity

Figure 3-2 shows the location of all 831 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 intersections of

- County Road (CR) 403 and Highway 3 (Market Street)
- CR 403 and Old State Road 160
- Highway 62 / Highway 3 (Market Street)

Figure 3-3 shows the locations of fatal and suspected serious injury crashes on top of the crash density map. There are concentrations of severe injury crashes in the same general areas noted above, but there are also several severe crashes along Highway 62 south of town and Highway 3 north of town. There were also two fatal crashes at the CR 403 / Bethany Road intersection. This intersection was identified as a high priority for safety improvements in the 2016 Comprehensive Plan and it remains a high priority in this plan.



# Charlestown Safety Action Plan

## All Crashes - Crash Density (2018 - 2022)

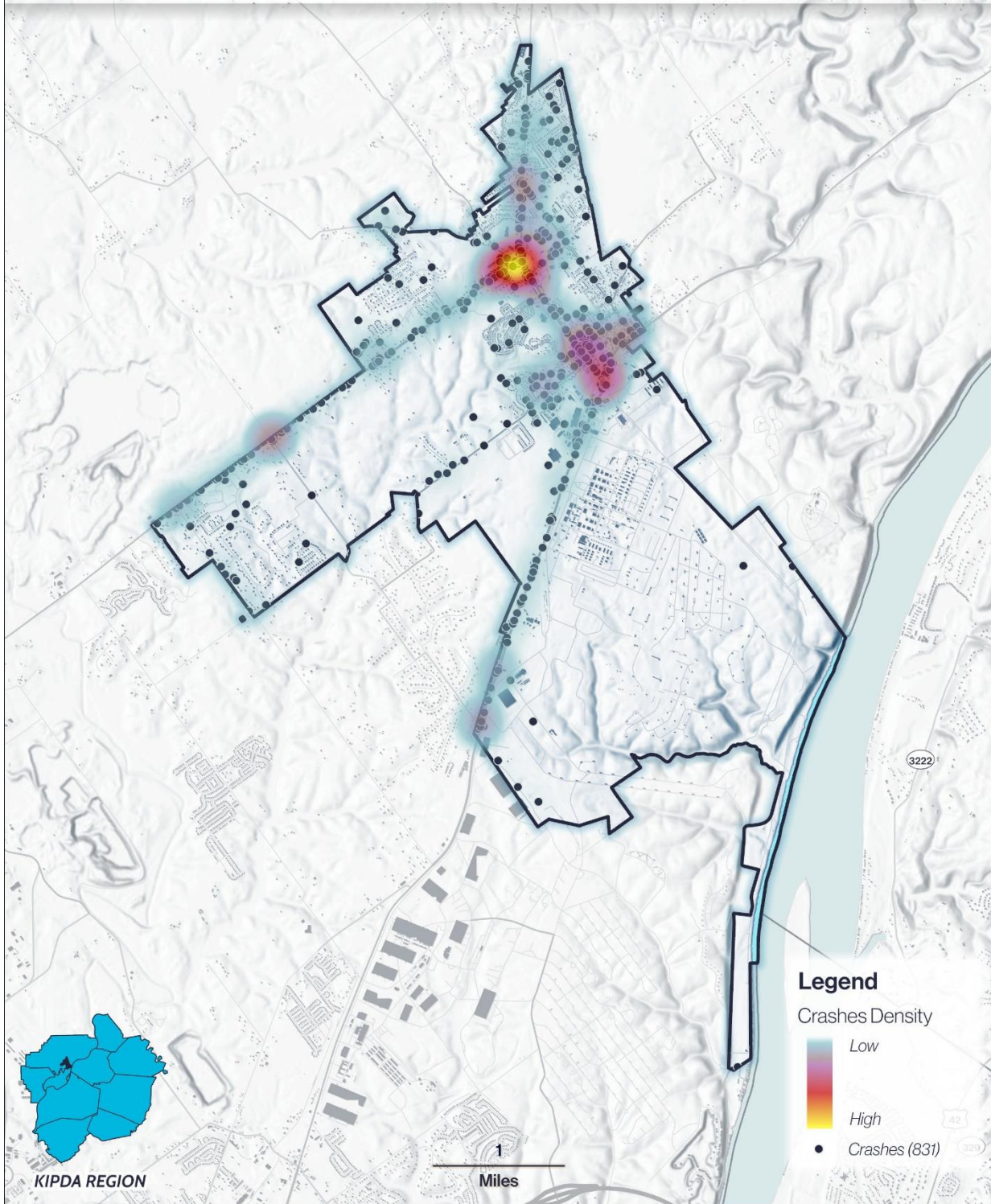


Figure 3-2: Crash Density Map



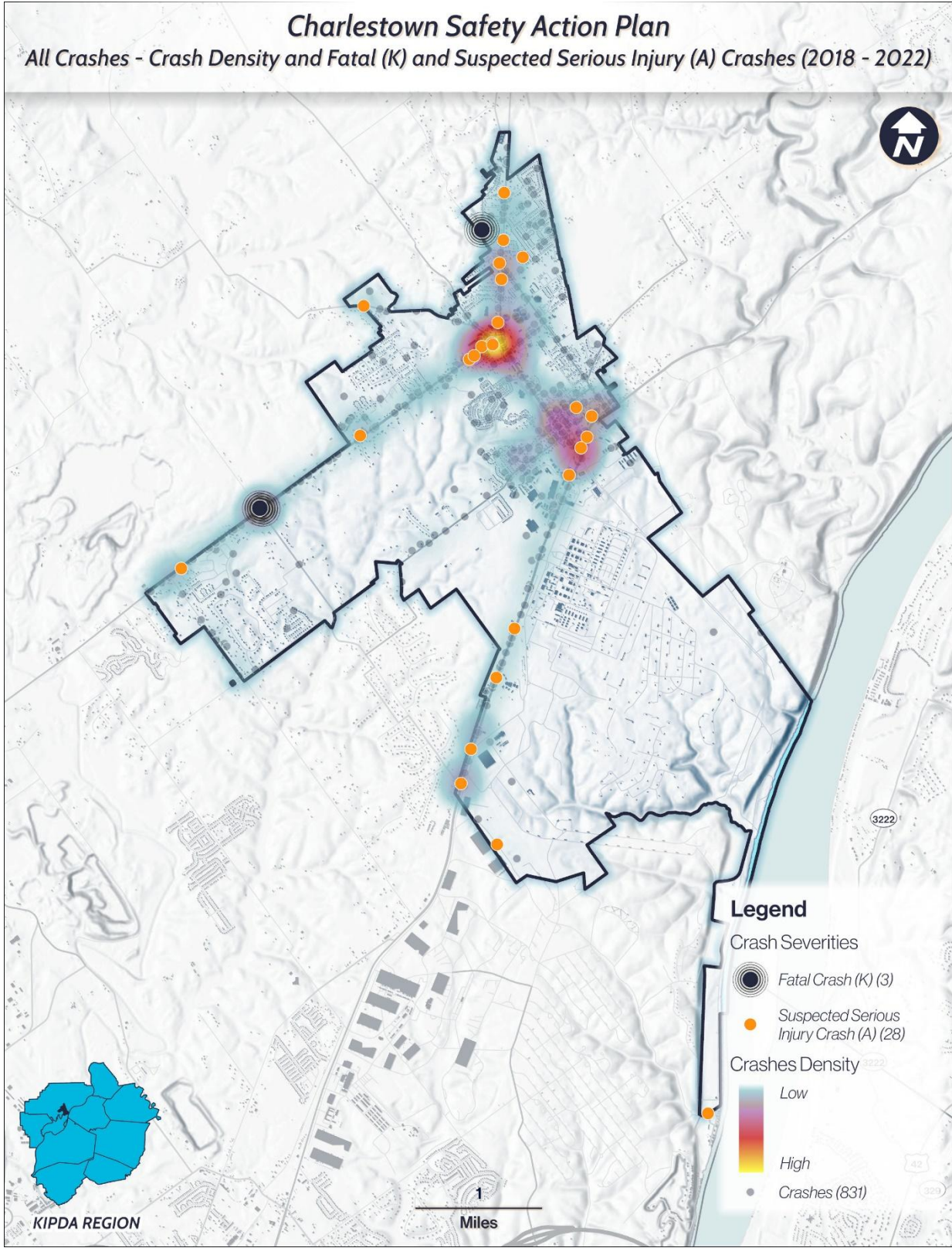


Figure 3-3: Fatal and Suspected Serious Injury Crash Map



## 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 fluctuation in the number of crashes per year, ranging between 143 and 191 crashes annually. The highest number of crashes occurred in 2018, with a total of 191 crashes, followed by a decrease in 2019 to 2021. Crashes were down 25% from 2018 to 2021. Crashes increased 10% in 2022, back up to 157 that year.

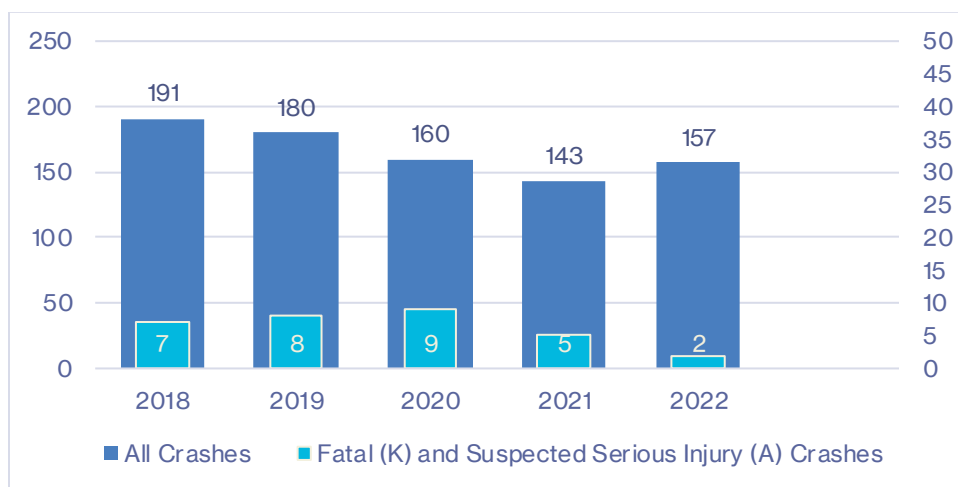


Figure 3-4: Overall Crashes per Year

The number of minor or possible injury crashes has ranged from 14 to 28 with the highest number in 2022. In contrast, fatal (K) and suspected serious injury (A) crashes, have generally declined over the five-year period. In 2022, there were only two of these crashes and they were both suspected serious injury crashes. This indicates that with continued safety initiatives and investments, Charlestown may be able to go an entire year without any severe crashes.



## 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 November, with 96 crashes. However, May experienced the highest percentage of fatal and suspected serious injury crashes, with 19%, despite this month contributing to only 8% of all crashes.

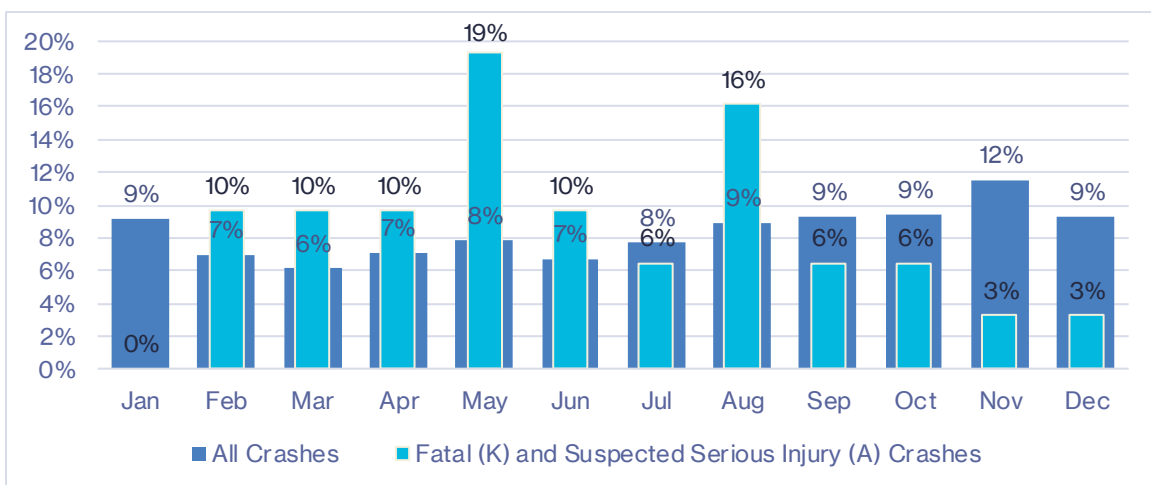
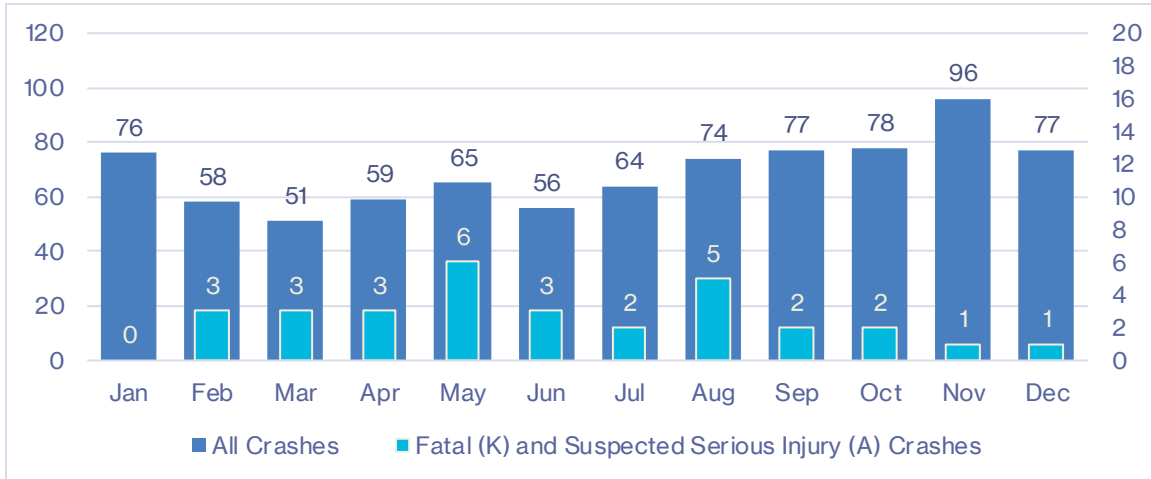


Figure 3-5: Monthly Crash Breakdown



### Day of Week

As seen in the Figure 3-6, crashes remain relatively consistent across the weekdays, ranging from 111 crashes on Wednesday to 157 crashes on Friday. A decrease is observed on weekends, with 74 crashes 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.

Despite having the fewest weekday crashes, Wednesday accounts for the highest number of fatal and suspected serious injury crashes (7), indicating a higher severity of crashes on this day.

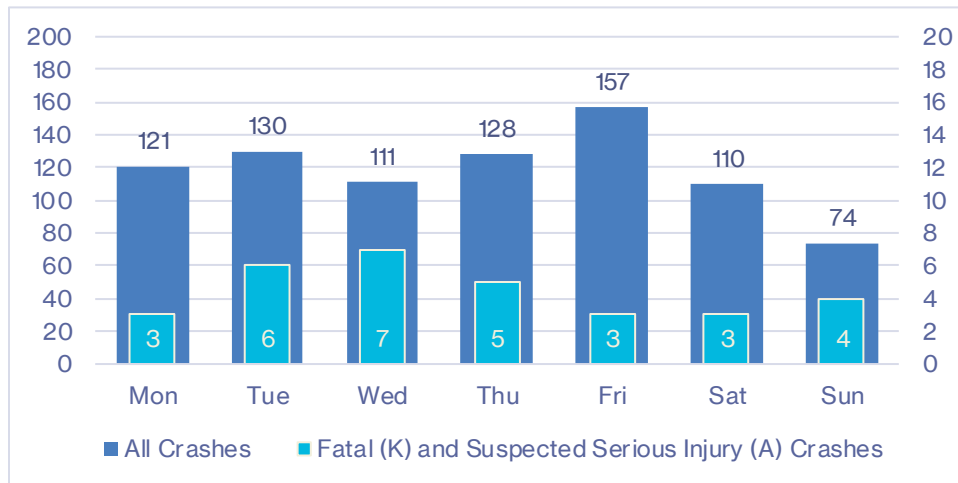


Figure 3-6: Crashes by Day of Week



### Time of Day

The 3-6 pm period experiences the highest number of crashes, with 200 crashes. This time frame also experienced a high number of severe crashes, with 10 fatal and suspected serious injury crashes (5% of the total).

The overnight hours, 9pm -12am and 12am - 3am, report the lowest crash frequencies, with 41 and 36 crashes, respectively. However, these hours have the highest proportion of severe crashes with approximately 12% and 8% respectively.

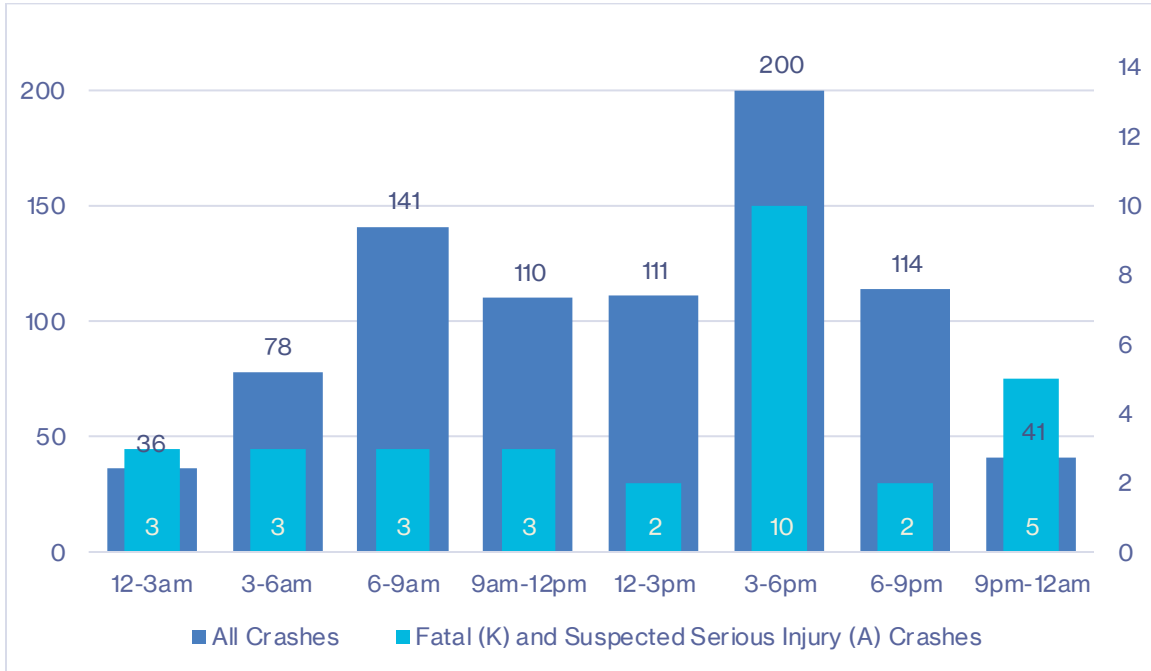


Figure 3-7: Crashes by Time of Day



## Manner of Collision

As shown, rear-end crashes are the most common, but they tend to have a lower severity. Run off road crashes and head-on crashes are much more likely to result in a high severity crash.

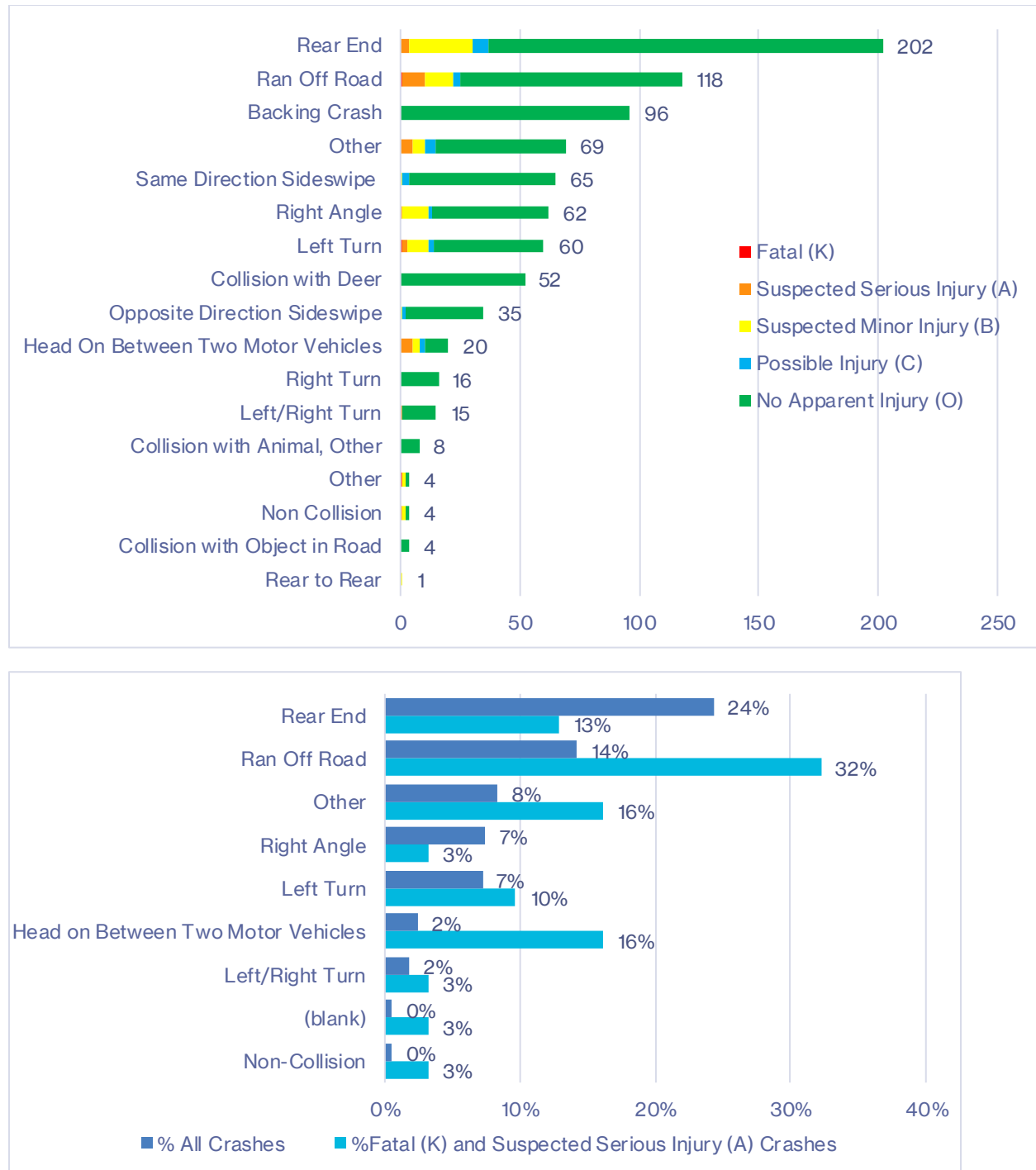


Figure 3-8: Manner of Collision by Severity



## Driver Behavior

Driver behavior is a shared responsibility and can be the determining factor in a crash. The actions and decisions drivers make can significantly influence the likelihood and severity of crashes. Addressing key areas of concern, such as aggressive, distracted, and impaired driving, is essential to fostering a safer roadway environment.

### ***Aggressive Driving***

Aggressive driving is generally defined as behavior by drivers that negatively impacts the safety of other motorists or pedestrians, contributing to crashes. Aggressive crashes are coded to have the following behaviors.

- Failure to yield to the right of way
- Following too close
- Traveling too fast for conditions
- Disregarding traffic control
- Exceeding the posted speed limit
- Improper passing
- Weaving in traffic

Crashes involving aggressive driving contribute disproportionately to severe crashes when compared to all crashes

### ***Distracted Driving***

Distracted driving refers to any activity by a vehicle operator that diverts their attention from the primary task of driving, thereby increasing the risk of a crash. The three main types of distracted driving involve drivers taking their eyes off the road, hands off the wheel, and minds away from driving.

### ***Impaired Driving***

Impaired driving is the act of driving a motor vehicle while under the influence of alcohol or narcotics. Impairment affects reaction time, judgment, and coordination, which are critical to safely operating a vehicle.

## 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.

# Charlestown Safety Action Plan

## Non-Daylight Dark Condition Crashes (2018 - 2022)

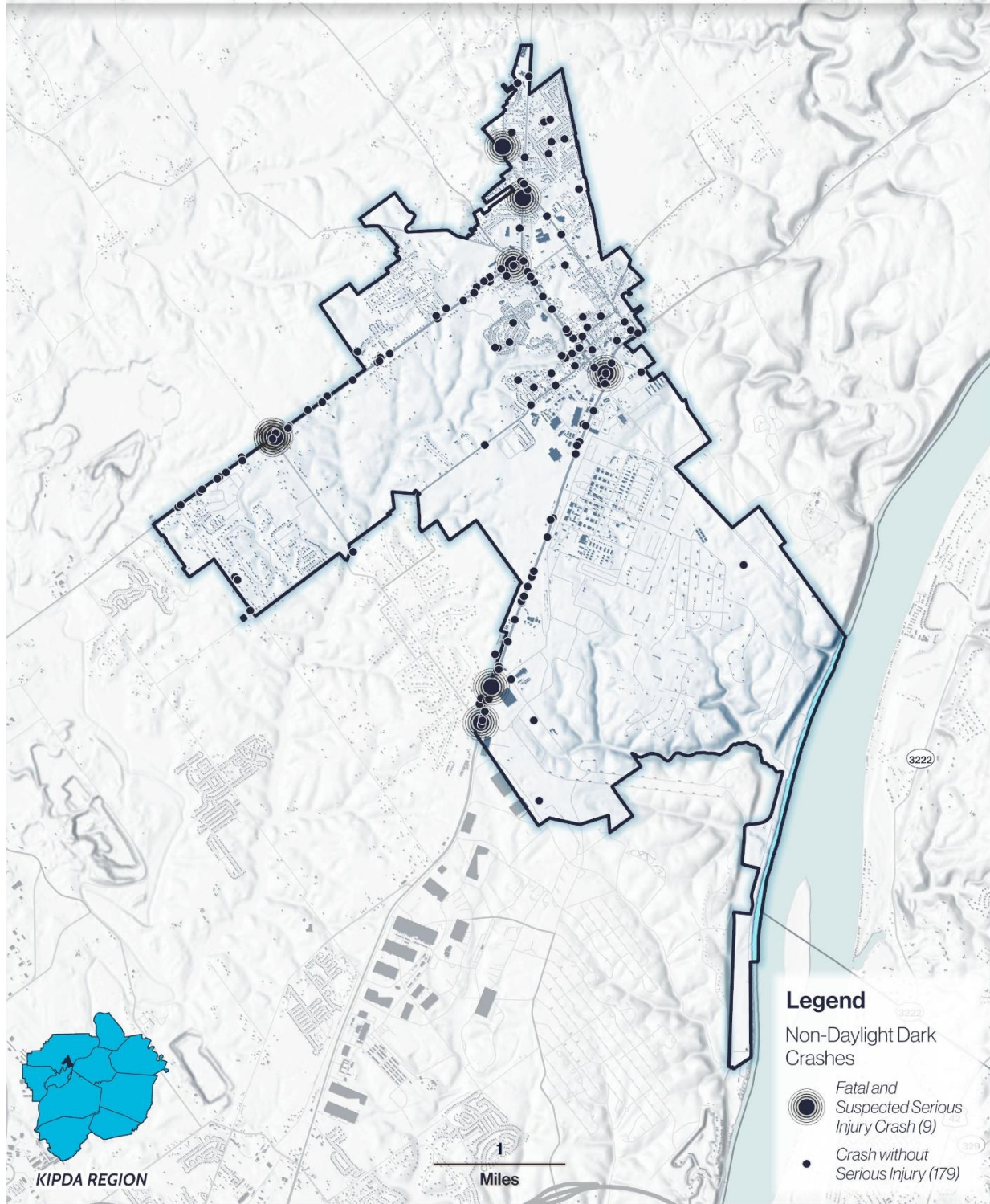


Figure 3-9: Lighting Condition: Non-Daylight Dark Condition Crashes Map



## 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.

Figure 3-10 shows the locations of roadway departure crashes resulting in injuries or fatalities.

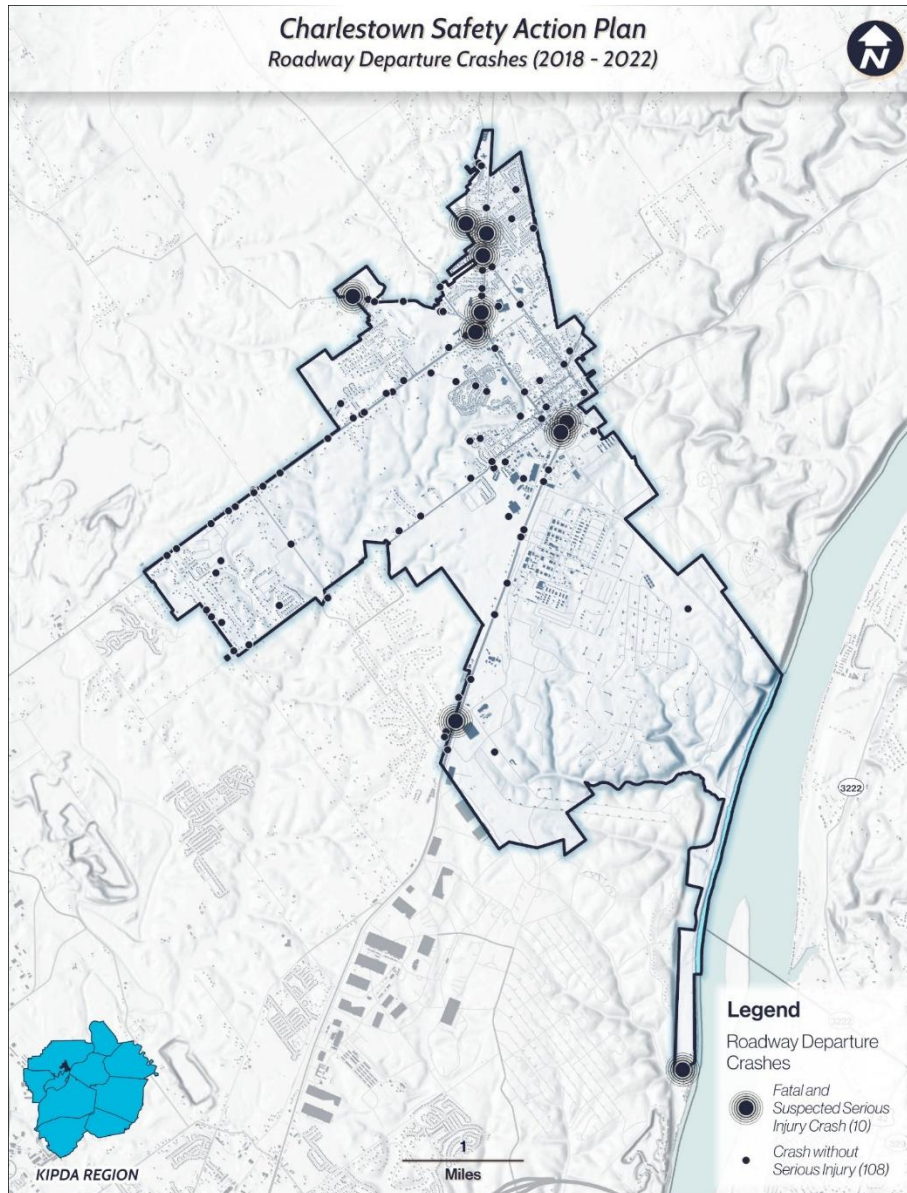


Figure 3-10: Roadway Departure Crashes Map

## 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. One possible injury pedestrian crash was reported and no bicycle crashes were reported during the study period.

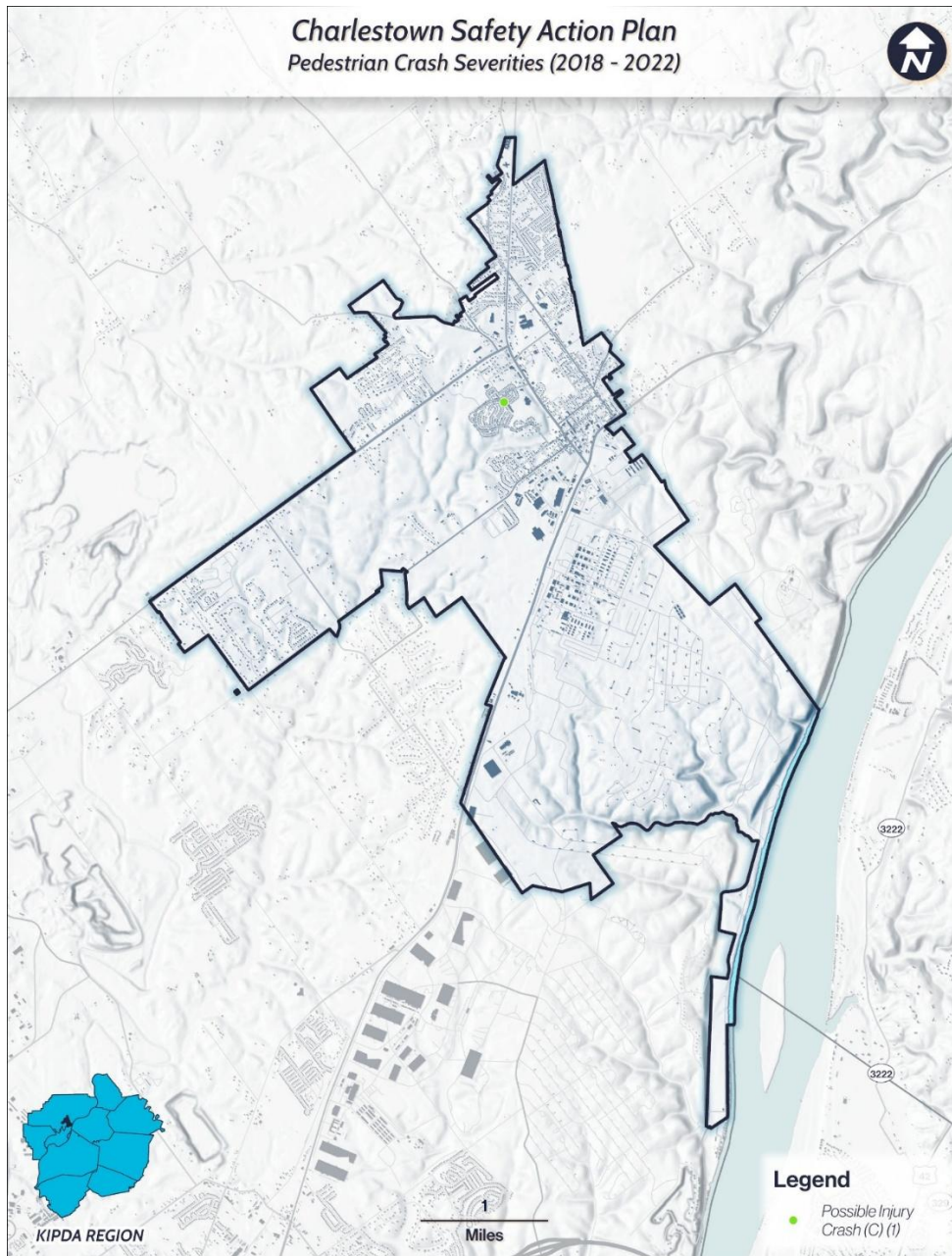


Figure 3-11: Pedestrian Crash Map



## 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. In Charlestown, the factors contributing to the highest number of fatal and suspected serious injury crashes is failure to yield right-of-way and following too closely.

Given the high proportion of severe crashes where drivers failed to yield the right of way, ran off the road, 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.

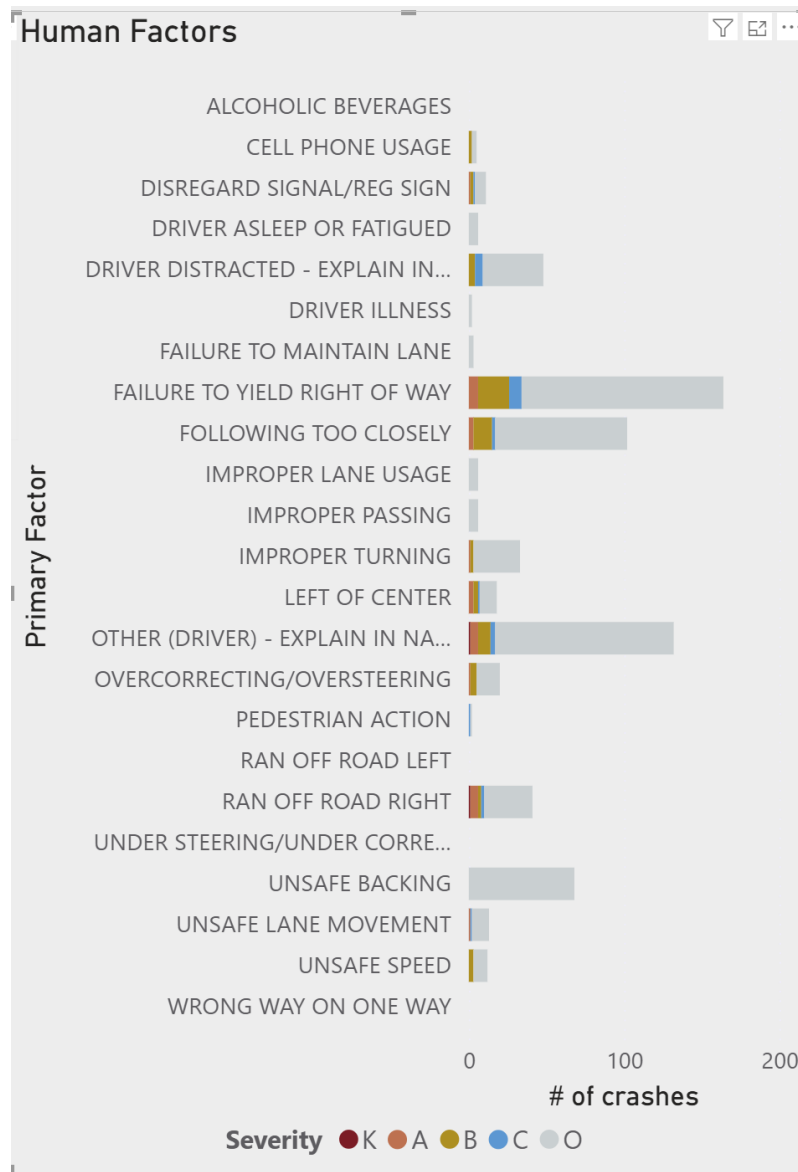


Figure 3-12: Crashes by Human Factor and Severity



## 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. Wet roads account for 17% of all crashes and 19% of fatal and suspected serious injury crashes. In comparison, icy conditions account for just 1% of all crashes and 3% of severe crashes. Snow, slush, standing water, and other conditions combined account for 3% of all crashes with no associated severe outcomes.

Roadway Condition	All Crashes		Fatal and Suspected Serious Injury Crashes	
	#	%	#	%
Dry	657	79%	24	77%
Wet	143	17%	6	19%
Ice	10	1%	1	3%
Snow/Slush	16	2%	-	-
Water (Standing or Moving)	5	1%	-	-

Table 3-2: 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 Regional 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. Safety concerns related to High Jackson Road, Highway 62, and Old Indiana 403 were all discussed.

### 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.

Feedback included concerns related to High Jackson Street, school traffic, pedestrians, and the need for sidewalks. It was noted that Spring Street may become more of a problem in the future. New development and the safety implications of new development were discussed. The potential for installing simple roundabouts or other safety upgrades was mentioned. Roundabouts are being viewed more favorably in the community as they are shown to work in other locations.


## Safety Committee

The Charlestown Safety Committee, comprised of diverse members from the community, such as emergency response representatives, played a key role in developing the Charlestown Safety Action Plan. Participants provided valuable feedback and insights into existing safety issues, priority improvement locations, and potential improvement strategies.

Five committee members attended the Charlestown safety committee meeting. The Committee reviewed the draft prioritized HIN corridor segments, prioritized intersections, and potential safety countermeasures. The data provided included a preliminary ranking for each intersection and HIN corridor. It also included descriptions of potential countermeasures with their expected safety impacts. The project team provided maps of the HIN corridors and intersections for reference. The committee provided their priorities for both the HIN and the intersection list. They also provided feedback on what improvements they thought would be most appropriate and beneficial. There were four activities designed to elicit this information.

**Activity A: Prioritizing HIN Corridors** – There was general agreement on the top ranked HIN corridors with participants agreeing on the top ten in that order.

ACTIVITY B

 SAFETY COUNTERMEASURES

Potential Segment Countermeasures





Countermeasure	Description	Safety Impact
	Reconfigured lanes/pace within roadway based on number of vehicles per day to calm traffic speeds and improve safety to all users.	All Crashes ↓ 30%
	Enhanced signs and striping can alert drivers to upcoming curves, the direction of curves, and sharpness of the curve.	Night-time Crashes ↓ 25%
	Alerting drivers through vibration and sound, these tell drivers that their vehicle has left the travel lane.	CLRS ↓ 14-64% ELRS ↓ 13-51%
	Provide a painted measure that removes left-turning traffic (which is slowing or stopped) from the travel lanes.	All Crashes ↓ 24%

Figure 4-1: Meeting Two Handout: Potential Safety Countermeasures



**Activity B: Potential Corridor Improvements** - Most participants noted that all recommendations were appropriate with only minor notes about curve signage and center turn lanes.

**Activity C: Prioritizing Intersections** – The committee expressed interest in prioritizing several intersections that they thought were critical but were initially ranked lower than the top five intersections. These locations have been highlighted in **Chapter 6. Strategy and Project Selection**.

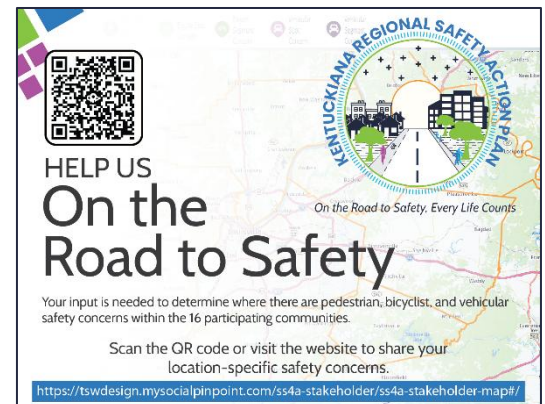
**Activity D: Potential Intersection Safety Countermeasures** – The committee agreed with the recommendations but also proposed additional improvements at several of the intersections, such as offset left turn lanes, roundabouts, and crosswalk visibility enhancements. These suggestions have been incorporated into **Chapter 6. Strategy and Project Selection**.

## 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 Charlestown, 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.

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 138 comments located within Charlestown. Figure 4-4 provides an example view of the engagement map and the table below summarizes many of the responses within Charlestown.



#### Vehicular Safety Concerns

- Signalization
- Speed Limits
- Speeding in School Zone
- Stop sign enforcement
- Vegetation Viewshed
- Enforcement

#### Pedestrian Safety Concerns

- Lack of sidewalks
- Lack of school transportation, increased students walking to school

#### Other Safety Concerns

- Vegetation overgrowth
- Flooding during major rainfalls

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 Charlestown Safety Action Plan address the concerns and needs of the public. The project team compared comment

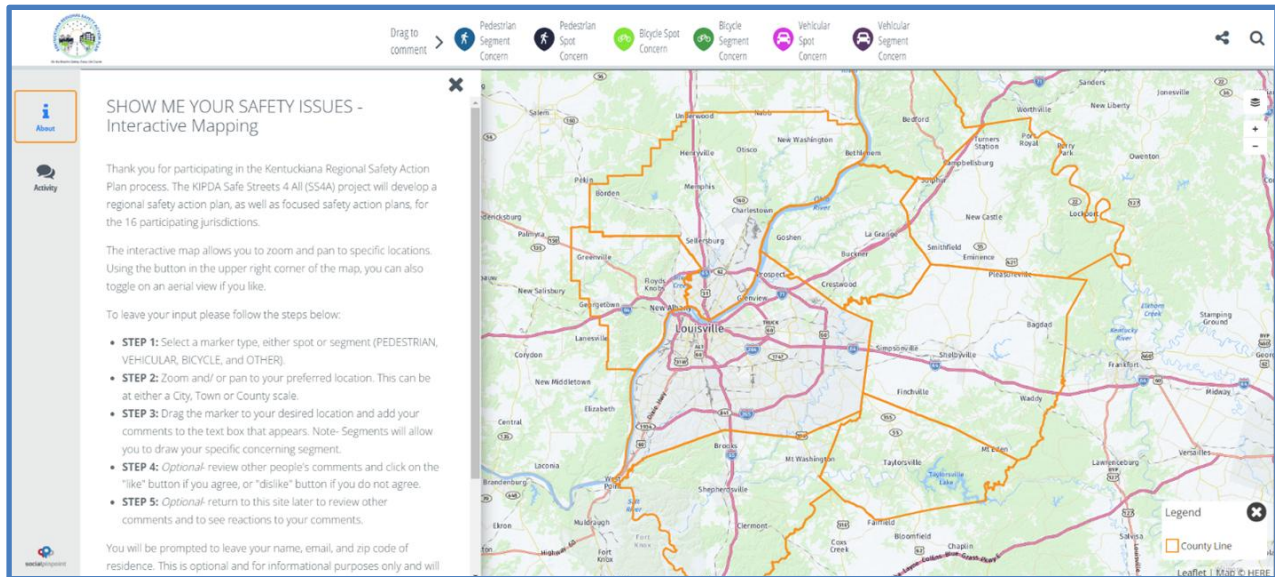


Figure 4-2: Social Pinpoint Online Engagement

locations to the fatalities (K) and suspected serious injuries (A) in the 2018-2022 crash data to compare public perception of safety and data-driven crash densities. The map below 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 along the State Road 3 and State Road 62 corridors.

### Survey Two

The project team and committees conducted a second public survey for the Safety Action Plan. Residents within the KIPDA Region, including Charlestown, 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, with eight responses in Charlestown. The public indicated that Old Indiana 403 (CR 403) was their highest priority for improvement. They also supported upgrades at CR 403 and Bethany Road as the top intersection improvement, followed by CR 403 at CR 160/Horton Drive and CR 403 at Gospel Road. The top rated improvements were lighting, left turn lanes, center two-way left turn lanes, raised medians, and shoulder treatments.



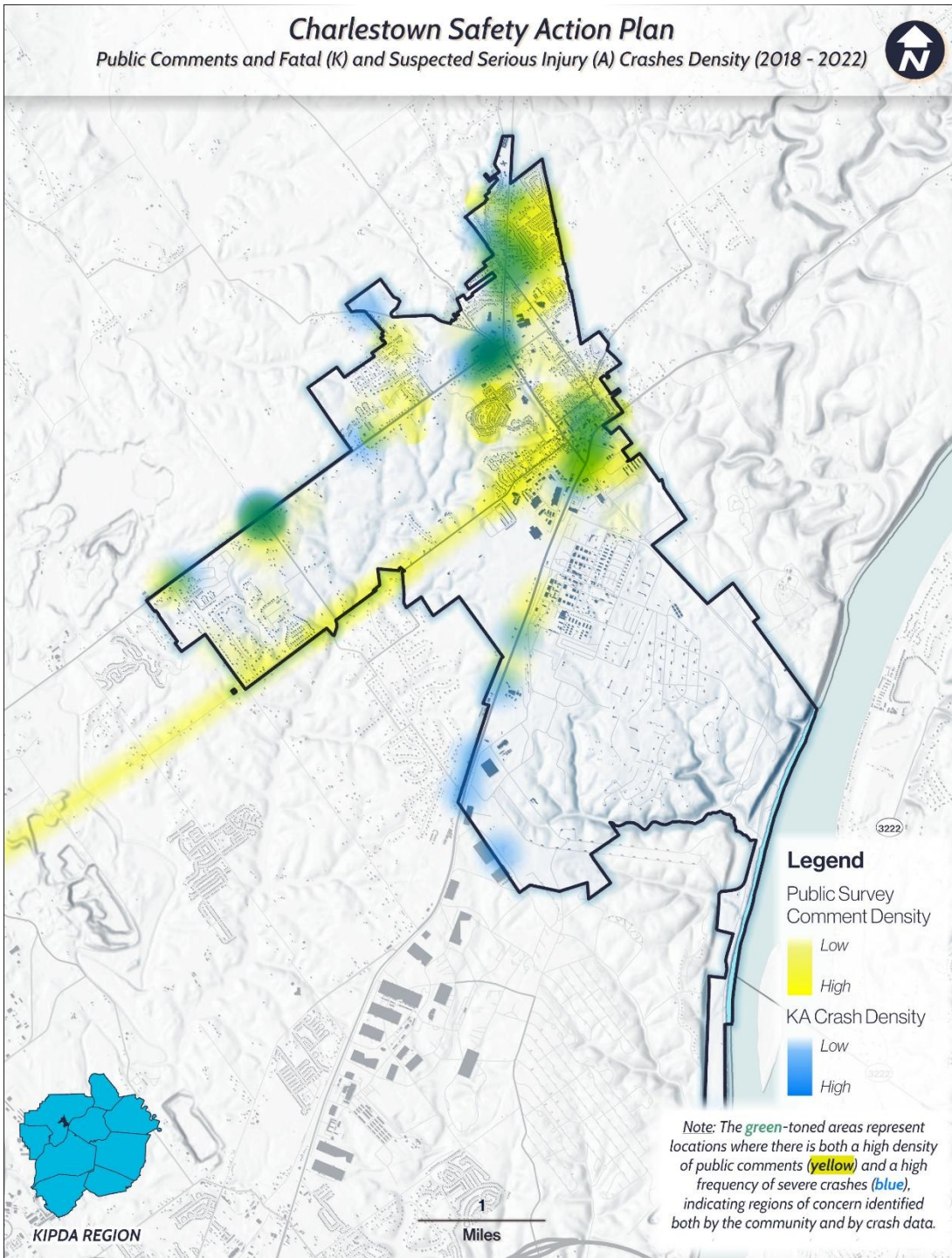


Figure 4-3: Spot Comments and Crash Density Map



## 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 City of Charlestown 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
T1	1802805	2549	CR 403 at Stacy Road Intersection Improvements	Intersection	Clark County	Intersection improvement including construction of a roundabout to improve safety at CR 403 and Stacy Road.
T2	2300707	3323	SR 62 and Charlestown Pike	Maintenance	INDOT	Project is an intersection improvement that will take place over 6.25 miles of SR 62 from 0.39 mi. north of SR 265 to SR 3.
T3	2400032	3256	Scenic Byway Corridor along the Ohio River	Signage	INDOT	This is a scenic byway project replacing old signs with new ones. This is in 13 counties along the Ohio River.
T4	2401157	3324	SR 3 Bridge Deck Overlay	Maintenance	INDOT	SR 3 Bridge over Pleasant Run, 1.01 miles N o SR 62. Bridge Deck Overlay.

Table 4-1. Current Highway Plan Projects

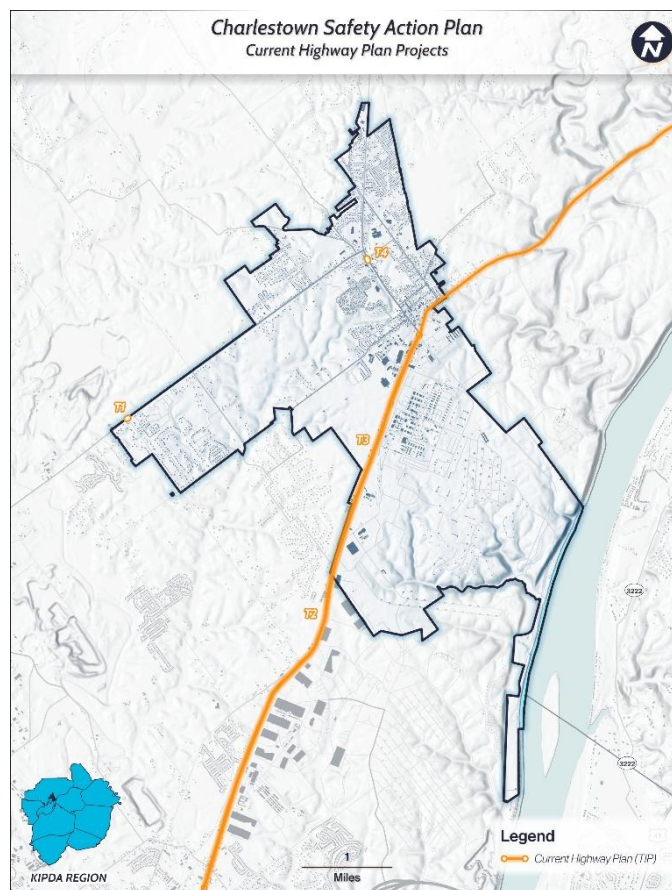


Figure 4-4: Current Highway Plan Projects

Map No.	KIPDA ID	Name	Type	Sponsor	Description
M1	2549	CR 403 and Stacy Road Intersection Improvements	Intersection	Clark County	Intersection improvement including construction of a roundabout to improve safety at CR 403 and Stacy Road.
M2	3066	CR 403 Widening	Roadway - Major Widening	Clark County	Widen CR 403 from Greenleaf Road to Gospel Road from two to four lanes with left turn lanes and considerations for dedicated bike lanes.
M3	2746	403/62 Connector	Roadway - New	Charlestown	Construction of a new two-lane arterial road with curb, gutter, and sidewalks from Highway 403 to Highway 62.
M4	2747	Clark Road Extension	Roadway - New	Charlestown	Reconstruct and extend portion of Clark Road - uniformly widening approximately 0.6 miles of existing road to two 12-foot lanes. Existing sidewalks will be improved and new sidewalks will be constructed.

Table 4-2. KIPDA Metropolitan Transportation Plan (MTP) Projects

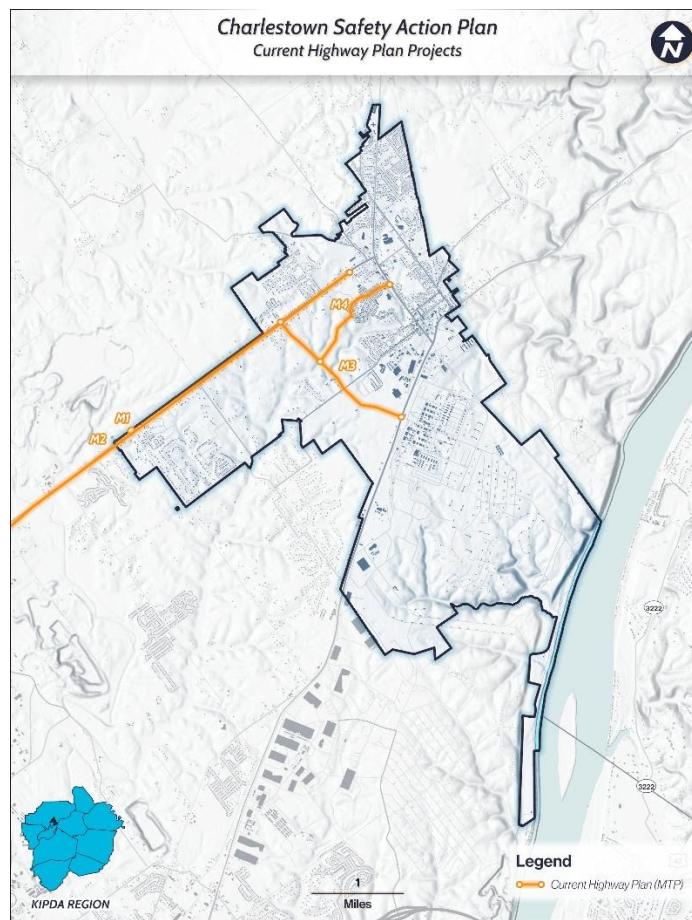


Figure 4-5: KIPDA Metropolitan Transportation Plan (MTP) Projects



## 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 based on the Infrastructure Investment and Jobs Act (IIJA, 49 U.S.C. 6702(a)(1)). It also states that this applies as 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 located in any territory or possession of the United States.*

The City of Charlestown is not located within a designated Area of Persistent Poverty.

## Demographics Analysis

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

### ***Population Impacted by Disability***

To help in determining certain roadway countermeasures, disability population block groups were analyzed. Similar to elderly populations, there are pedestrian safety countermeasures available that support disabled populations. This safety action plan evaluates disabilities on a household-by-household basis. Any residence with one or more occupants with a disability meets the disability designation. The City of Charlestown has approximately 24.2% of all households that meet this definition.

### ***Elderly Population***

Elderly population block groups were analyzed to aid in determining tailored roadway countermeasures. Pedestrian refuge islands, Leading Pedestrian Intervals (LPIs), and raised crosswalks are some of the many countermeasures that benefit the elderly population. This safety action plan categorizes the elderly

as 65 or older. The City of Charlestown has approximately 12.1% of all individuals who meet this definition.

***Population Experiencing Poverty***

The poverty population of the City of Charlestown includes individuals with incomes below the poverty level. Charlestown has approximately 8.7% of all individuals who meet this definition.

***Minority Population***

The minority population of the City of Charlestown encompasses all individuals who identify as non-white. Charlestown has approximately 12.6% of all individuals who meet this definition.



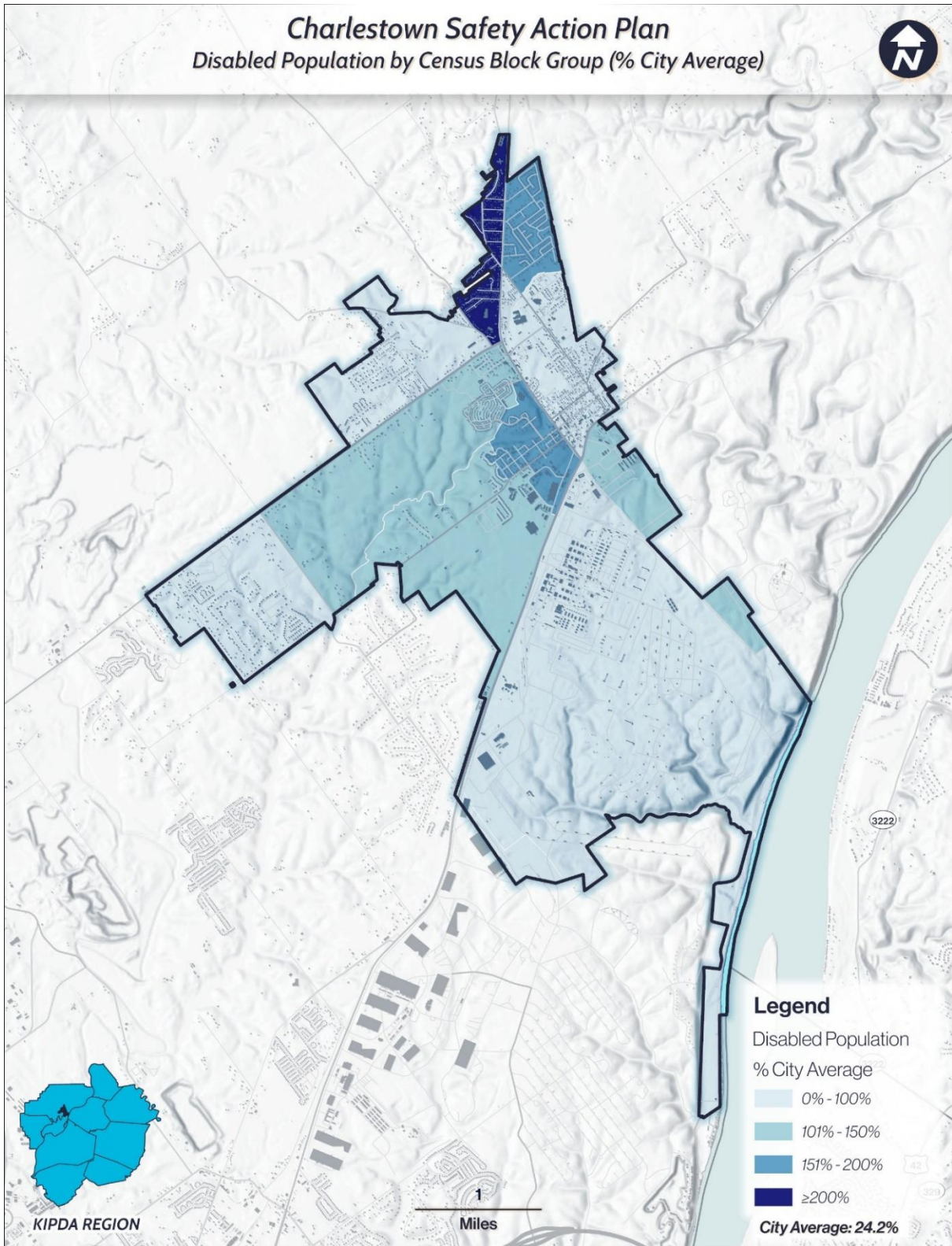


Figure 4-6: Disabled Population by Census Block Group Map



# Charlestown Safety Action Plan

## Elderly Population by Census Block Group (% City Average)

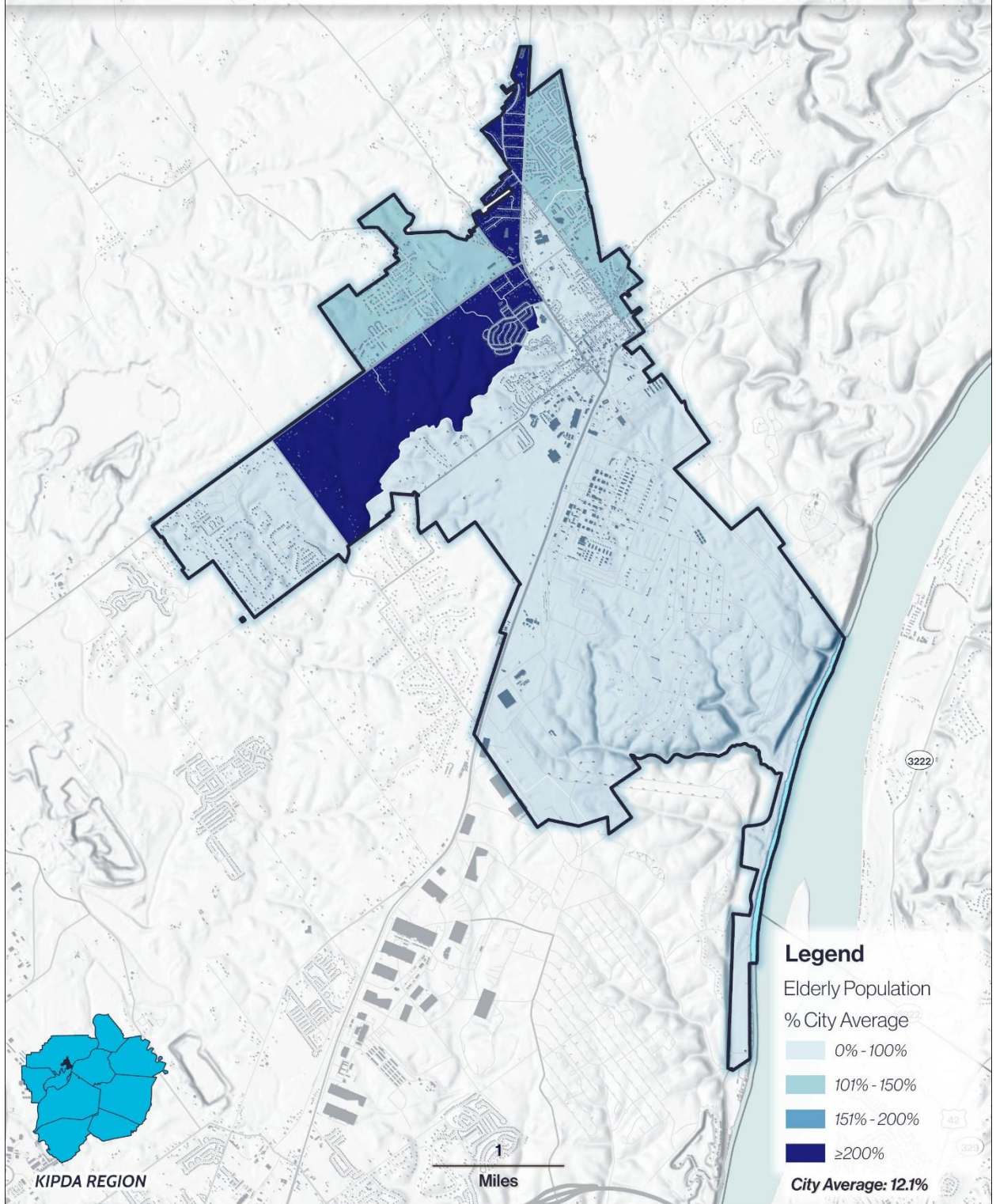


Figure 4-7: Elderly Population by Census Block Group Map



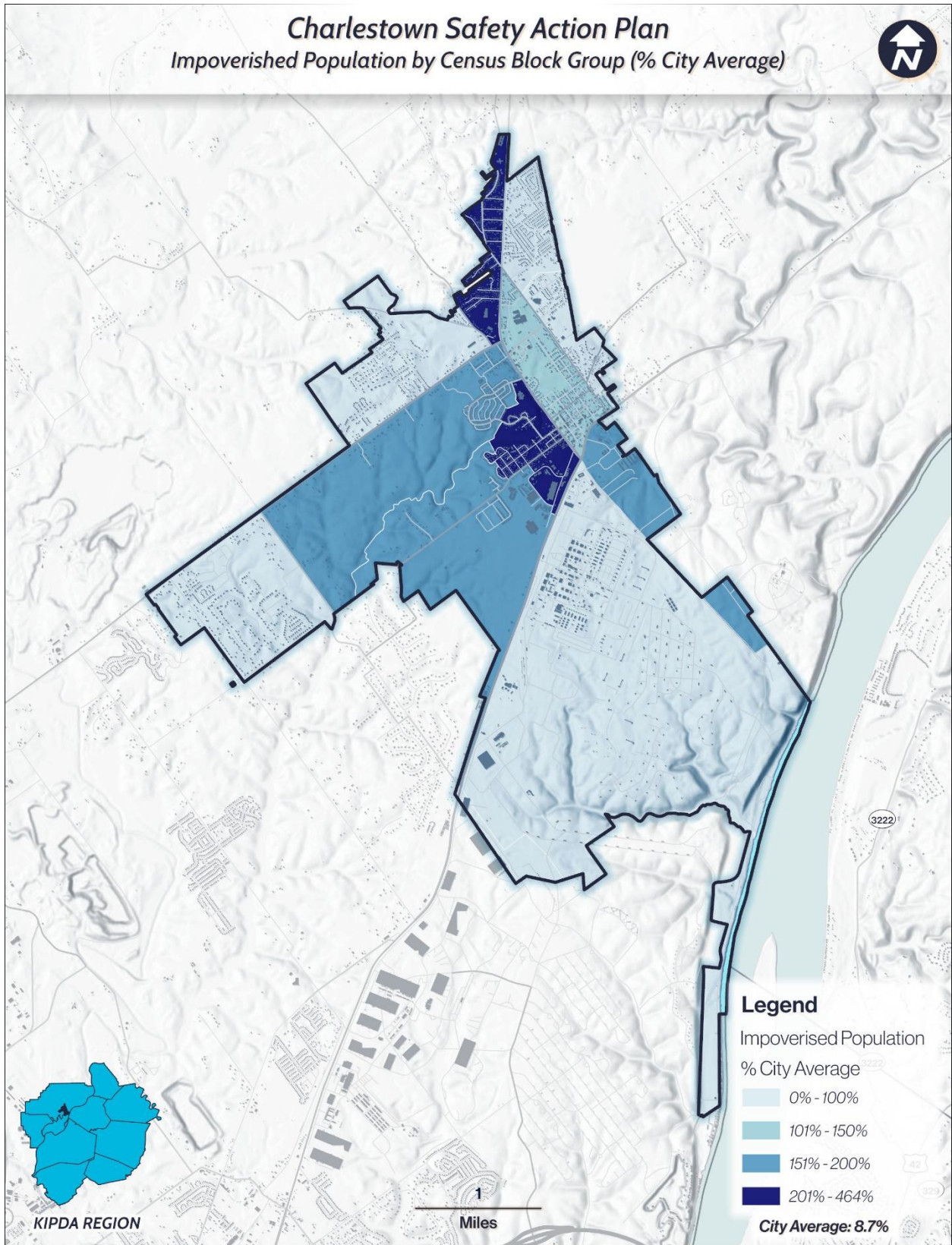


Figure 4-8: Impoverished Population by Census Block Group Map



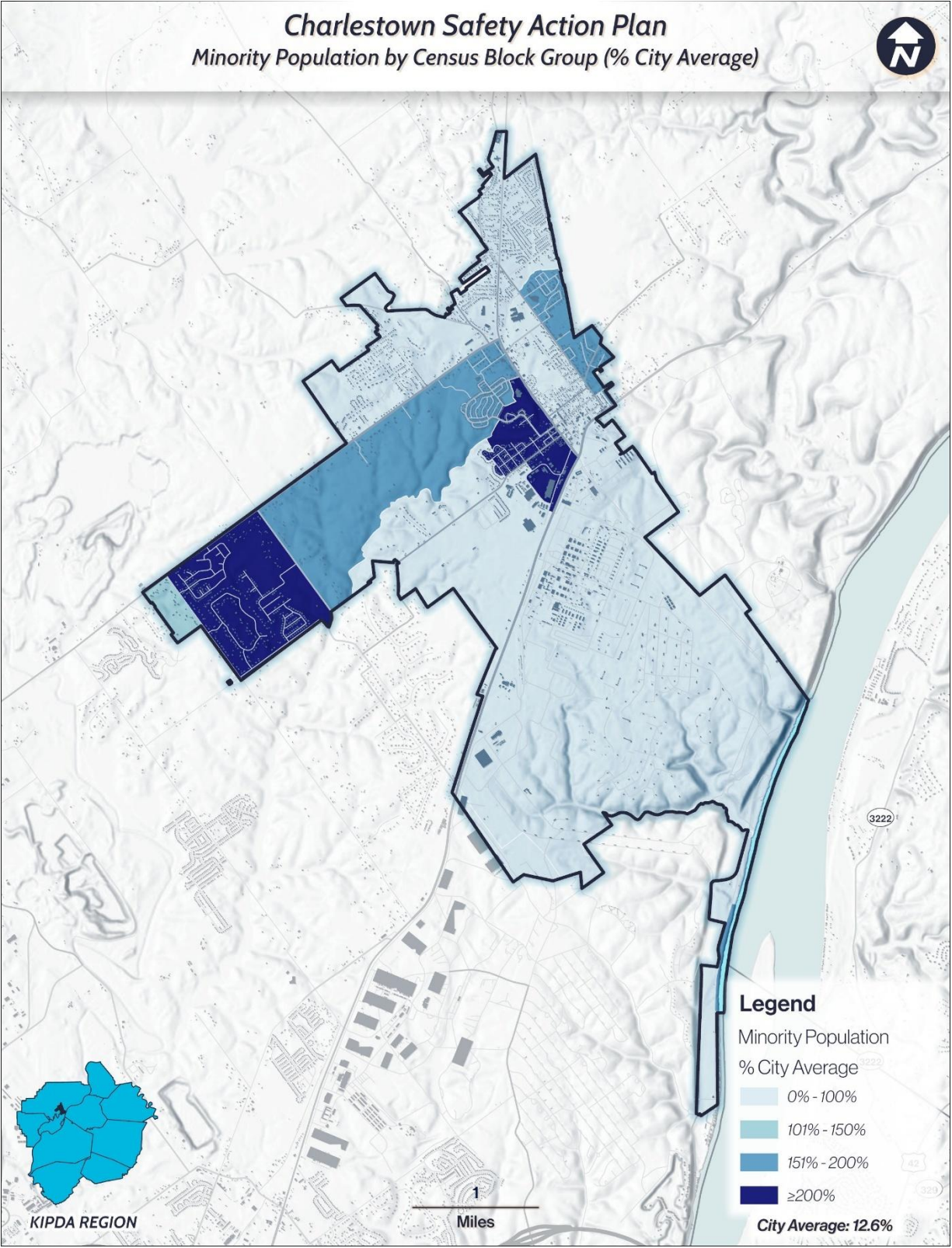


Figure 4-9: Minority Population by Census Block Group Map



## 5. Policy and Process Changes

A comprehensive review of the City of Charleston's existing policies, plans, guidelines, and standards has identified key opportunities to enhance transportation safety. The City aims to prioritize safety while creating a more safe and accessible transportation network for all users.

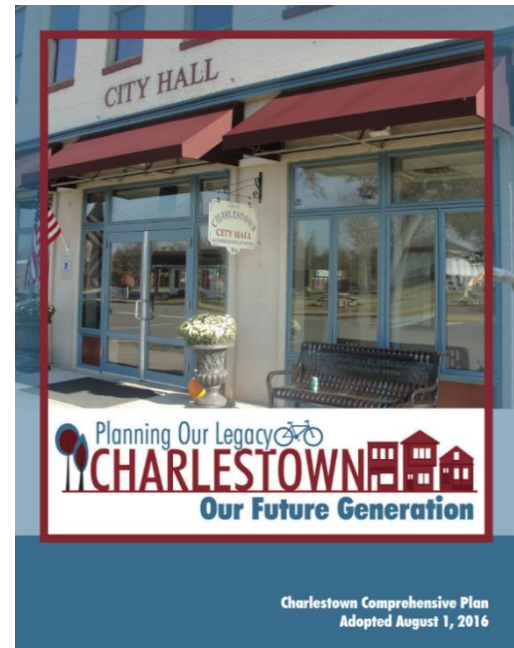
### Comprehensive Plan - 2017

Link: [Charlestown Comprehensive Plan 2016](#)

The City of Charlestown Comprehensive Plan is a planning document prepared and adopted by the residents and officials. This plan is intended to provide a long-range guide for the development of the city.

The overall transportation goal of this comprehensive plan is to promote the most efficient and safe movement of people and goods throughout the transportation system. To achieve this goal, the plan provides six objectives:

- Develop and implement a Complete Streets Policy.
- Complete missing bicycle and pedestrian connections between neighborhoods and local destinations.
- Create access management and enhancement plans for 403 and 62 to preserve a high level of service.
- Develop new roads for growth areas with an emphasis on improving connectivity within Charlestown during peak times.
- Provide public transportation for local destinations in Charlestown.



### Future Policy and Planning Considerations

These recommendations cover potential future policy, planning, or guideline documents.

**Implement Traffic Calming Measures:** Consider creating a traffic calming guide. Traffic calming measures, such as speed bumps, roundabouts, and narrowed lanes, play a crucial role in creating safer streets by reducing vehicle speeds and minimizing the risk of accidents. These interventions align with Vision Zero principles, which aim to eliminate all traffic fatalities and severe injuries by fostering safer, more predictable road environments for all users.



**Complete Streets Design:** Develop a complete streets design guide to guide how to incorporate land use into road design to provide for a safer road network.

**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, best practices implementation, 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 needing improvement the most. 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.

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

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 a list 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***

The City of Charlestown experienced 3 fatal crashes and 15 suspected serious injury crashes at intersections, representing 58% 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.

The table below lists the top 20 intersections by MEPDO. These intersections account for all of the fatal and suspected serious injury crashes at intersections. The remaining nine intersections tended to have higher numbers of crashes but with lower severities.



Ranking	Intersection	K	A	B	C	O	KA	TOTAL	MEPDO
1	CR-403 & Bethany Rd	2	2	5	0	21	4	30	824
2	CR-403 & CR-160 / Horton Dr	0	3	2	3	16	3	24	620
3	SR-62 & Bethany Rd	0	1	3	1	13	1	18	249
4	Edgewood Dr & Market St	0	1	3	0	18	1	22	244
5	SR-62 & Grace Ave	0	1	1	2	3	1	7	219
6	SR-62 & Level St	0	1	0	1	12	1	14	204
7	Saddleback Dr & Charlestown Memphis Rd	0	1	1	0	3	1	5	200
8	Market St & 1st St / Brentview Dr	0	1	1	0	2	1	4	199
9	SR-62 & Connecting Rd	0	1	1	0	1	1	2	198
10	CR-403 & Gospel Rd	0	1	0	0	4	1	5	186
11	SR-62 & Connecting Rd	0	1	0	0	1	1	2	183
12	Edgewood Dr & Vienna Rd	1	0	0	0	1	1	2	183
13	Conservation Dr & Longview Beach Rd <i>(per comments, not in Charlestown's primary area)</i>	0	1	0	0	0	1	1	182
14	SR-62 & Monroe St	0	0	3	0	9	0	12	54
15	Market St & Park St	0	0	2	0	23	0	25	53
16	Market St & Birch Dr	0	0	3	0	6	0	9	51
17	SR-62 & Market St	0	0	2	0	16	0	18	46
18	Level St & Park St	0	0	2	1	2	0	5	41
19	CR-403 & Stacy Rd	0	0	2	0	7	0	9	37
20	SR-62 & Lentz Ave	0	0	2	0	7	0	9	37

Table 6-4: Prioritized Intersections by MEPDO



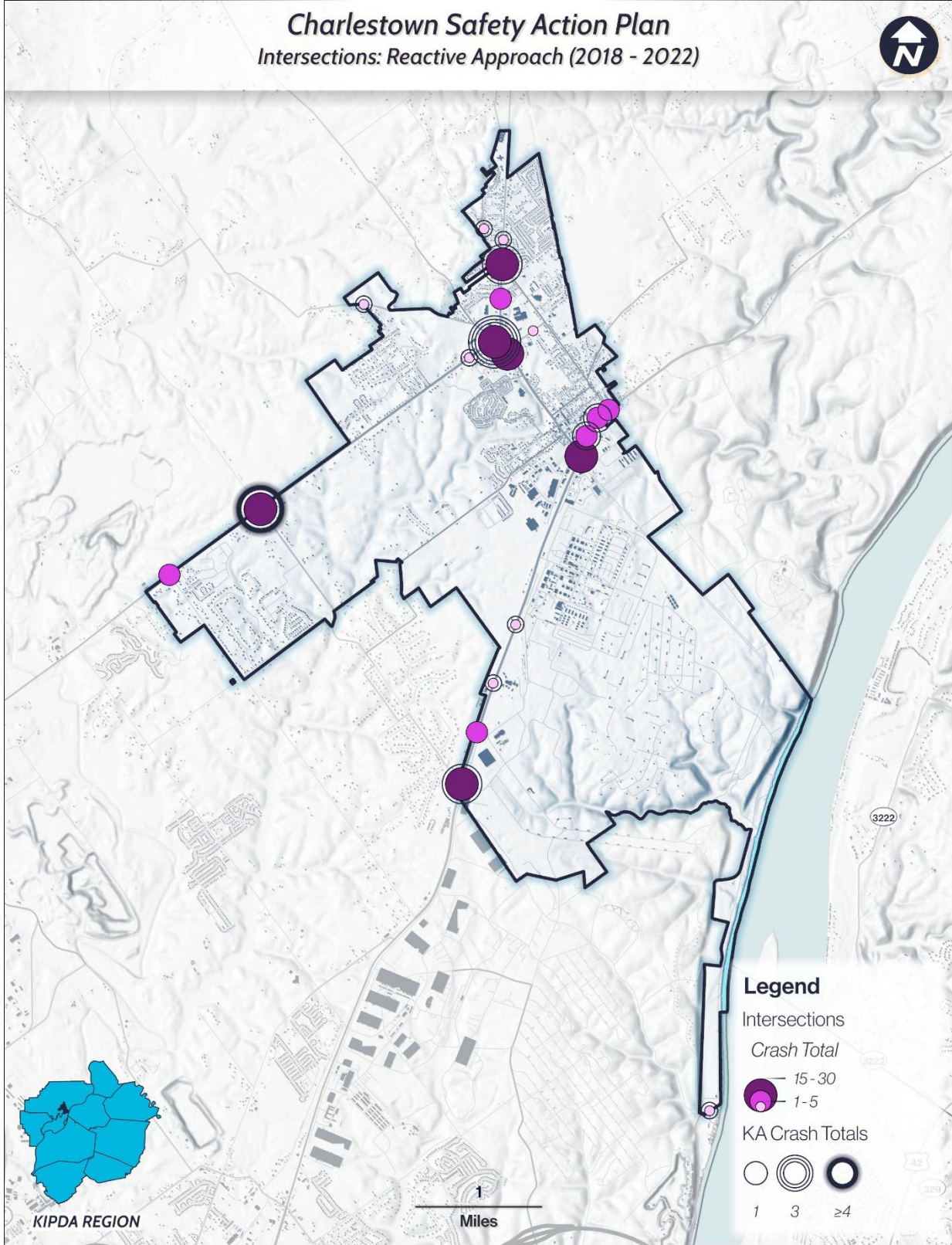


Figure 6-1: Intersections: Reactive Approach Map



# Charlestown Safety Action Plan

## Intersections: Reactive Approach (2018 - 2022)

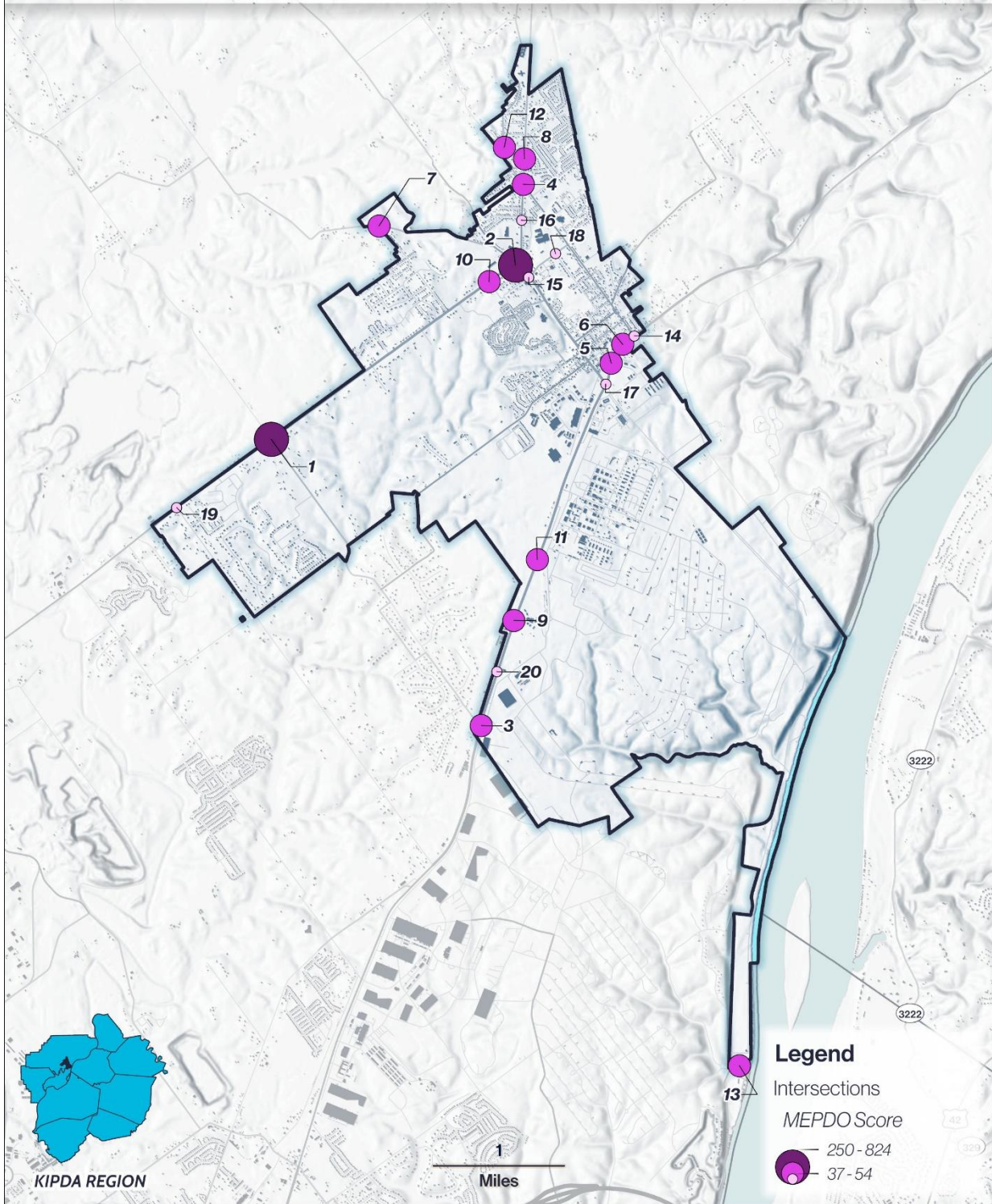


Figure 6-2: Intersections Prioritized by MEPDO Map



## 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. The City of Charleston’s HIN was developed using detailed crash data analysis and GIS mapping to pinpoint corridors with the highest concentration of severe crashes. The following table and maps illustrate the City of Charleston’s 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	Old Indiana 403 (CR-403)	Locust Drive	Market St (IN-3)	0.7	1303	1861
2	Ohio River Scenic Byway (IN-62)	Market St (IN-3) / Landing Road	Jefferson St	0.5	606	1213
3	Market St (IN-3)	CR 403	5th St	1.13	1105	978
4	Old Indiana 403 (CR-403)	Stoney Point Rd / Bethany Rd	Locust Drive	1.65	1149	696
5	Old Indiana 403 (CR-403)	Clark County Highway Garage	Stoney Point Rd / Bethany Rd	1.08	302	280
6	E 10th St - Ohio River Scenic Byway (IN-62)	Bethany Rd / Paul Garrett Ave	Market St (IN-3) / Landing Road	2.78	720	259
7	Charlestown Memphis Road	CR 160	Saddlebrook Drive	0.91	224	246
8	Market St (IN-3)	Pleasant St	CR 403	0.58	128	220
9	Market St (IN-3)	Ohio River Scenic Byway (IN-62)	Pleasant St	0.55	108	196

Table 6-5. Prioritized Corridors - High Injury Network



# Charlestown Safety Action Plan High Injury Network

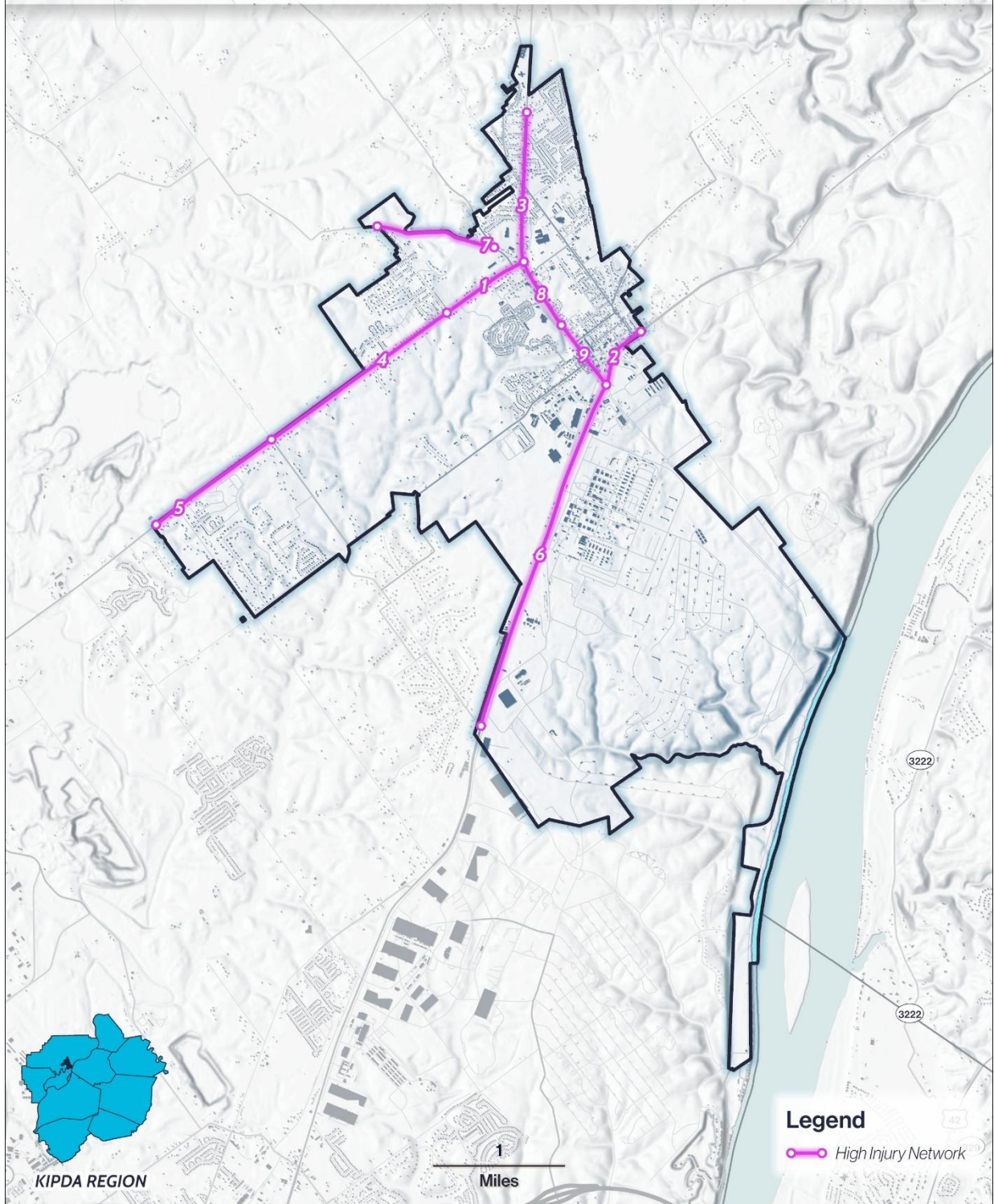


Figure 6-3: High Injury Network



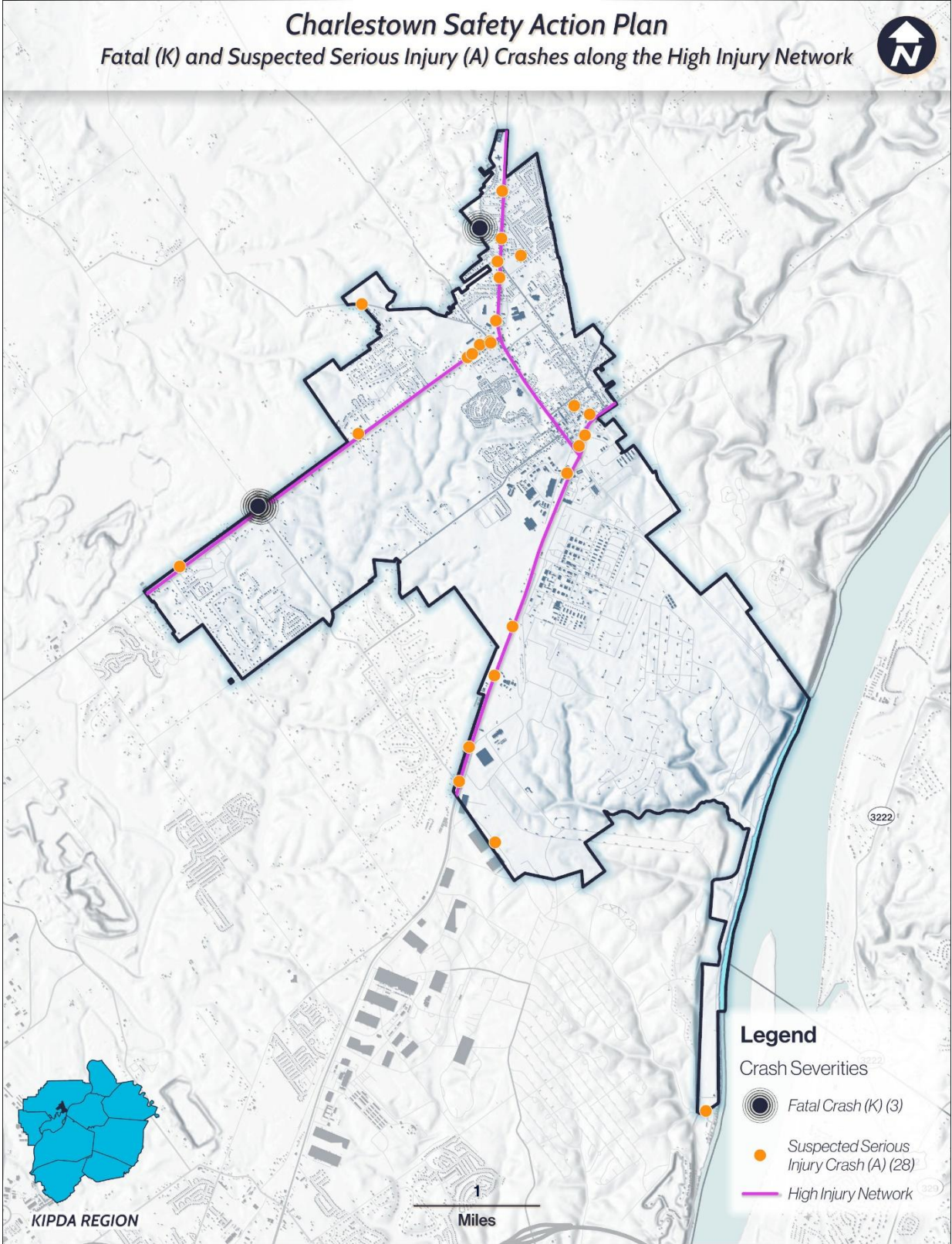


Figure 6-4: High Injury Network and Fatal and Suspected Serious Injury Crashes



# Charlestown Safety Action Plan

## High Injury Network Prioritized Intersections

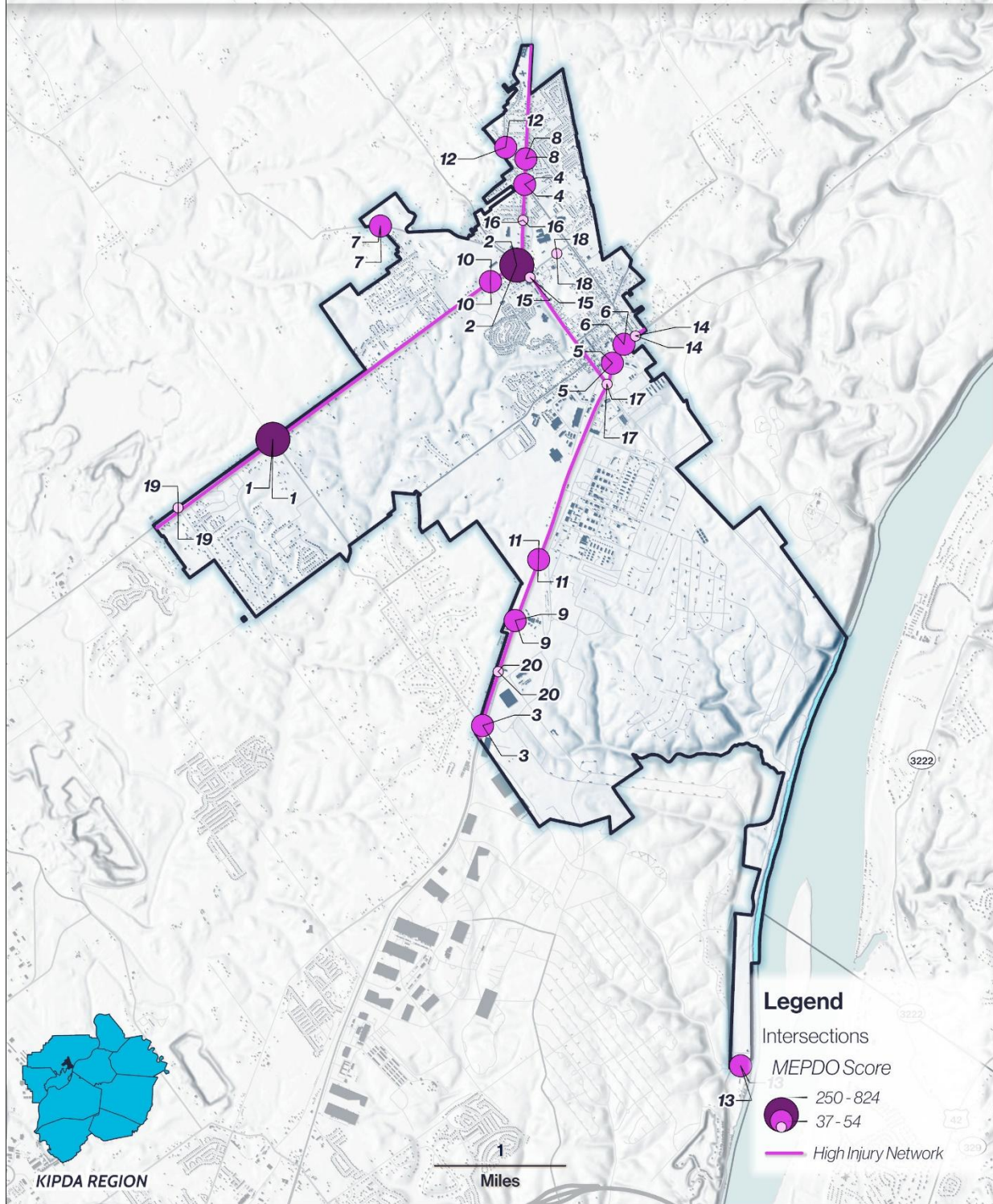


Figure 6-5: High Injury Network and Prioritized Intersections



## 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 the Safety Committee and the public, and are guided by 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>





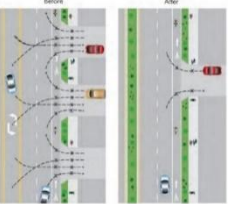





Example Segment Countermeasures							
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
<b>Enhanced Delineation for Horizontal Curves</b>				<b>Roadside Design Improvements at Curves</b>			
	High visibility markings and delineators around curves provide drivers with better information about curves.	Severe crashes ↓15-18%	<a href="#">FHWA</a>		Includes treatments that improve horizontal curves, giving drivers the opportunity to recover safely or reducing crash severity.	Single Vehicle or All Crashes ↓8-44%	<a href="#">FHWA</a>
<b>Access Management (segment treatments)</b>				<b>Medians and Pedestrian Refuge Islands</b>			
	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%	<a href="#">FHWA</a>		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%	<a href="#">FHWA</a> and <a href="#">FHWA</a>
<b>Roadway Reconfiguration (Right Sizing or Road Diet)</b>				<b>Shoulder Treatment – Safety Edge</b>			
	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%	<a href="#">FHWA</a>		Shoulder edge upgrades to improve recoverability for roadway departures.	Severe ↓11% Run-Off-Road ↓21% Head-On ↓19%	<a href="#">FHWA</a>
<b>Dynamic Speed Feedback Signs</b>				<b>Pavement Friction Management</b>			
	Provide positive and negative feedback to drivers regarding their speed.	All Crashes ↓5%	<a href="#">FHWA</a> (pg 5) <a href="#">FHWA</a> <a href="#">Clearing house</a>		High Friction Surface Treatment (HFST) can prevent roadway departure, intersection, and pedestrian-related crashes.	Severe Crashes at Curves ↓48% Crashes at Intersections ↓48%	<a href="#">FHWA</a>

Table 6-6: Example Segment Countermeasures


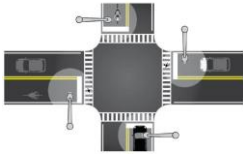





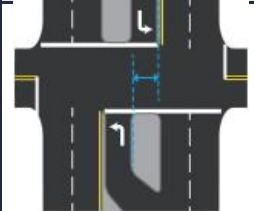
Example Intersection Countermeasures							
Countermeasure	Description	Safety Impact	Links	Countermeasure	Description	Safety Impact	Links
<b>Access Management (intersection treatments)</b>				<b>Intersection Lighting</b>			
	This refers to the design and control of access points including intersections which can enhance safety for all modes.	2-lane Rural Road Crashes ↓5- 23% Urban Severe Crashes ↓25- 31%	<a href="#">FHWA</a>		Increased visibility at nighttime can improve safety for all modes of travel.	Nighttime Ped Injuries ↓42% Nighttime Crashes ↓33-38%	<a href="#">FHWA</a>
<b>Crosswalk Visibility Enhancement</b>				<b>Reflective Backplates</b>			
	High-visibility crosswalks can reduce pedestrian injury crashes.	Pedestrian Injury Crashes ↓40%	<a href="#">FHWA</a>		Improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background.	Total Crashes ↓15%	<a href="#">FHWA</a>
<b>Low-Cost Countermeasures at Stop-Controlled Intersections</b>				<b>Modern Roundabouts (RAB)</b>			
	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%	<a href="#">FHWA</a>		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%	<a href="#">FHWA</a>
<b>Left and Right Turn Lanes</b>				<b>Positive Offset Left-Turn Lane</b>			
	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%	<a href="#">FHWA</a>		Provides increased visibility for drivers turning left. It prevents opposing left turning vehicles from blocking sightlines.	Severe crashes ↓36%	<a href="#">FHWA</a>

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													
		Dedicated Left Turn Lane(s)	Offset Left Turn Lanes	Cycle Length and Clearance Intervals	Tighten Up Intersection	Reflective Backplates	Alt. Intersection (RCUT & Other)	Roundabout	Enhanced Markings / Striping	Enhanced Signing	Lighting	Access Management / Raised Median	Tree Trimming	Crosswalk Visibility Enhancements	Re-Align Intersection
1	CR-403 & Bethany Rd	X			X			X	X	X	X	X			
2	CR-403 & CR-160 / Horton Dr				X	X	X		X	X	X		X		
3	SR-62 & Bethany Rd		X	X			X	X		X	X				
4	Monroe St & Market St								X	X	X	X			X
5	SR-62 & Grace Ave								X	X	X				
6	SR-62 & Level St	X							X	X	X		X		
7	Saddleback Dr & Charlestown Memphis Rd	X						X	X	X	X				X
8	Market St & 1st St / Brentview Dr								X	X	X	X			
9	SR-62 & Connecting Rd									X	X	X			
10	CR-403 & Gospel Rd	X							X	X	X	X			
11	SR-62 & Connecting Rd (see above)									X	X	X			
12	Edgewood Dr & Vienna Rd									X	X	X			X
13	Conservation Dr & Longview Beach Rd	<i>(per comments, not in Charlestown's primary area)</i>													
14	SR-62 & Monroe St	X							X	X	X	X			
15	Market St & Park St			X			X			X	X	X			
16	Market St & Birch Dr								X	X	X	X		X	

Intersections – Reactive Approach														
Ranking	Intersection	Potential Countermeasures												
		Dedicated Left Turn Lane(s)	Offset Left Turn Lanes	Cycle Length and Clearance Intervals	Tighten Up Intersection	Reflective Backplates	Alt. Intersection (RCUT & Other)	Roundabout	Enhanced Markings / Striping	Enhanced Signage	Lighting	Access Management / Raised Median	Tree Trimming	Crosswalk Visibility Enhancements
17	SR-62 & Market St			X	X		X	X		X	X	X		
18	Level St & Park St				X			X	X	X	X			X
19	CR-403 & Stacy Rd	X						X	X	X	X			
20	SR-62 & Lentz Ave/20 <sup>th</sup> St				X		X		X	X		X		X

Table 6-8: Potential Intersection Strategies



## Potential High Injury Network Corridor Strategies

The following table 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	Old Indiana 403 (CR-403)	Locust Drive and Market St (IN-3)	0.7	Innovative intersections, left turn lanes or center turn lane, enhanced pedestrian facilities, access management
2	Ohio River Scenic Byway (IN-62)	Market St (IN-3) / Landing Road and Jefferson St	0.5	Innovative intersections, turn lanes, pedestrian facilities, enhanced pedestrian crossings, lighting <a href="#">Recent improvements with new left turn lanes</a>
3	Market St (IN-3)	CR 403 and 5th St	1.13	Innovative intersections, enhanced pedestrian crossings, lighting, rightsizing
4	Old Indiana 403 (CR-403)	Stoney Point Rd / Bethany Rd and Locust Drive	1.65	Innovative intersections, enhanced signing, edgeline rumble strips, pedestrian facilities
5	Old Indiana 403 (CR-403)	Clark County Highway Garage and Stoney Point Rd / Bethany Rd	1.08	Innovative intersections, enhanced signing, edgeline rumble strips
6	E 10th St - Ohio River Scenic Byway (IN-62)	Bethany Rd / Paul Garrett Ave and Market St (IN-3) / Landing Road	2.78	RCUT Corridor, offset turn lanes, lighting, innovative intersections
7	Charlestown Memphis Road	CR 160 and Saddlebrook Drive	0.91	Enhanced signing and striping, improve sight distance, curve signage, realign intersection
8	Market St (IN-3)	Pleasant St and CR 403	0.58	Innovative intersections, enhanced pedestrian crossings, lighting, access management, speed management
9	Market St (IN-3)	Ohio River Scenic Byway (IN-62) and Pleasant St	0.55	Innovative intersections, enhanced access management, enhanced pedestrian crossings

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 Charlestown'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 such as Highway 62 and Highway 3. There were not many fatal or serious injury crashes on these roadways, so they were not flagged as part of the HIN. However, they 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. They include Monroe Street, High Jackson Road, High Street, Water Street, Park Street, Charlestown-Memphis Road, and others like those.

The analysis also highlighted failure to yield right-of-way and following too closely at intersections as being major issues.

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 – 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 2 – Intersection Upgrades

Given the driver errors that are leading to severe crashes in Charlestown, it is recommended that the city 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 citywide implementation of backplates on signals, upgraded intersection lighting, upgraded intersection striping, and smaller intersection turning radii (with truck aprons where needed).

## 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
<b>Short Term (0 to 4 years)</b>	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
<b>Mid Term (4 to 8 years)</b>	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
<b>Long Term (9+ years)</b>	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
<b>Ongoing</b>	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. Progress and Transparency

The City of Charleston, 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***

Annually, crashes involving vulnerable road users will be monitored, 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 across Charlestown, 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**

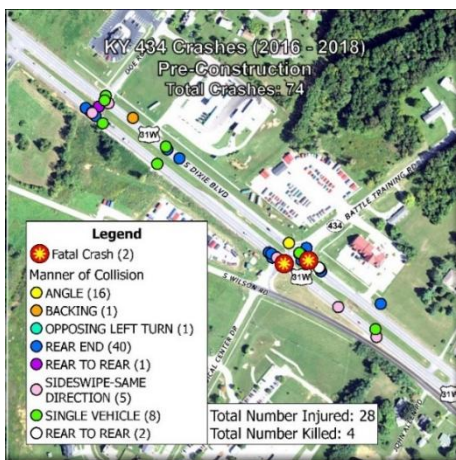
This performance measure tracks the number of safety-focused improvement projects constructed from the potential improvements listed in **Chapter 6**. The total number of safety improvements implemented at the intersection and along the corridors identified on the HIN would be recorded annually.

### **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

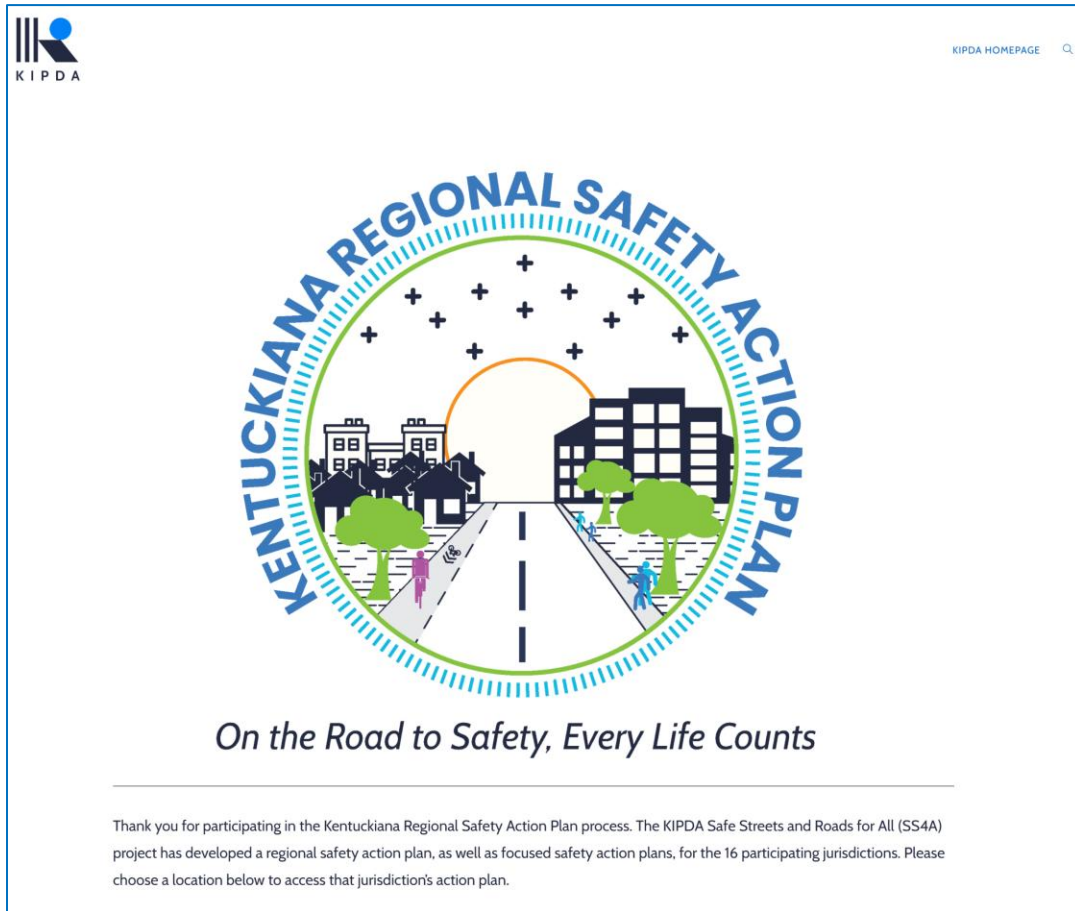


POST-CONSTRUCTION

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 Charlestown 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

		Cost Percentages ==>										(7%/yr compounded)			
		5%	15%	20%	10%	12%			15%	50%			61%	61%	
		Design and Environmental					Construction			Low Planning Level	High Planning Level	Low Total 2025	High Total 2025	Low Total 2032	High Total 2032
Project	Unit	Planning	Permitting	Right-of-Way	Utilities	Inspection	Construction	Subtotal	Contingency	Contingency	Cost	Cost	Cost	Cost	
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 (multiline)	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 ==>												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

