Appendix E: Huntsville Vision Zero Plan

The purpose of the Huntsville Vision Zero Plan is to identify actions to reduce and eliminate fatal and serious injury crashes. These crashes represent people that live, work, visit, and play in Huntsville and even one life lost is too man. As an appendix to the NWA Vision Zero Plan, this plan identifies specific strategies and actions that Huntsville should consider within the next ten years. As a living document, this Plan must be dynamic to address safety in the City of Huntsville and recognize that increasing safety is an ongoing commitment. The recommended actions included are meant to be a starting point, not an all-encompassing list. Over time, the City of Huntsville, should evaluate if and to what degree actions are reducing fatal and serious injuries within the community. The following sections are included in the Huntsville Vision Zero Plan:

A System Approach to Safety – an overview of how this plan has developed strategies that consider the larger roadway network in addition to historic crash sites.

Roadway Safety in Huntsville - a summary of crash analysis conducted over a 5 year period along with the High Injury Network (HIN) for Huntsville.

Community Safety Concerns - results of public engagement during the development of the Vision Zero Plan.

Goals and Actions - a path forward to safer streets in Huntsville through key goals and strategic next steps.

Huntsville, AR

A SYSTEM APPROACH TO SAFETY

People in the City of Huntsville have experienced the pain of losing loved ones as a result of crashes on roadways in their community at the Crossroads of the Ozarks. Between 2017 and 2021, the county seat of Madison County has witnessed two fatalities and sixteen other people that were seriously injured in roadway crashes. These are more than statistics and the City of Huntsville is responding with this action plan that considers a Safe System Approach to saving lives. Using this approach and this Plan as a guide, the City of Huntsville is setting a target to eliminate all killed and serious injury (KSI) crashes that occur on the local roadway network by 2038. Although the horizon is 15 years from the development of this Plan, action starts now.

This Plan is Huntsville's roadmap to achieving Vision Zero. It is grounded in the Safe System Approach, which aims to eliminate fatal and serious injuries by anticipating human mistakes and minimizing impacts on the human body when crashes do occur.

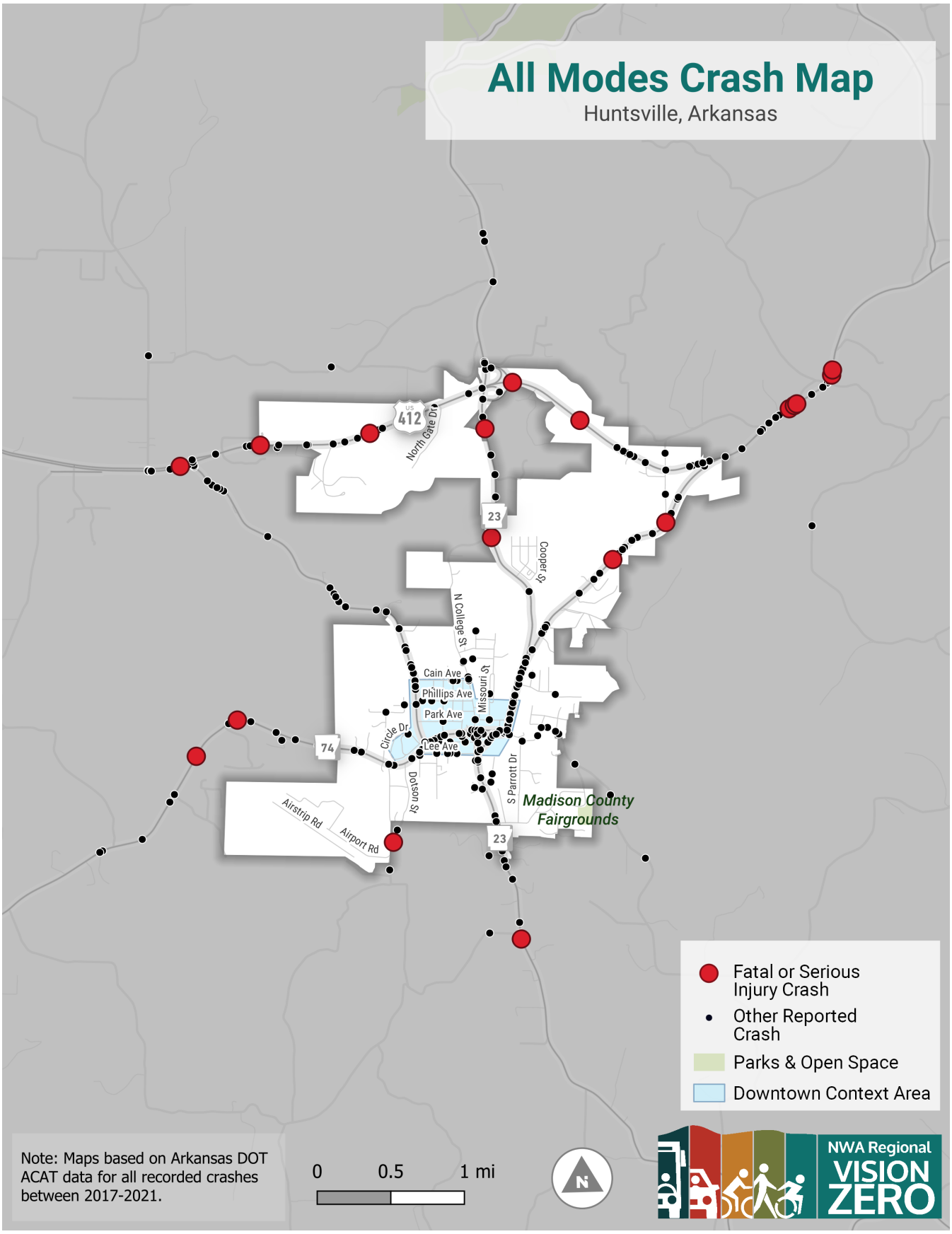
The six Safe System Principles shown around the outside ring are the fundamental beliefs that the approach is built on while five elements inside the circle are the elements through which the Safe System Approach is implemented. All of these elements lead to the Safe System Framework that will guide roadways safety in Huntsville.

Figure 1: The Safe System Approach: Principles and Elements

Vision Zero is a traffic safety philosophy rooted in the belief that nothing on our roadways is more important than a human life. Vision Zero lays out a new set of principles for engineering roads, educating travelers, and creating a sense of collective responsibility for ourselves and our fellow travelers. While all crashes in Huntsville impact daily life, this Plan focuses on addressing KSI crashes through actions that prevent the most heartbreak outcomes—death and serious injury.

Figure 2: The Safe System Framework

All Modes Crash Map



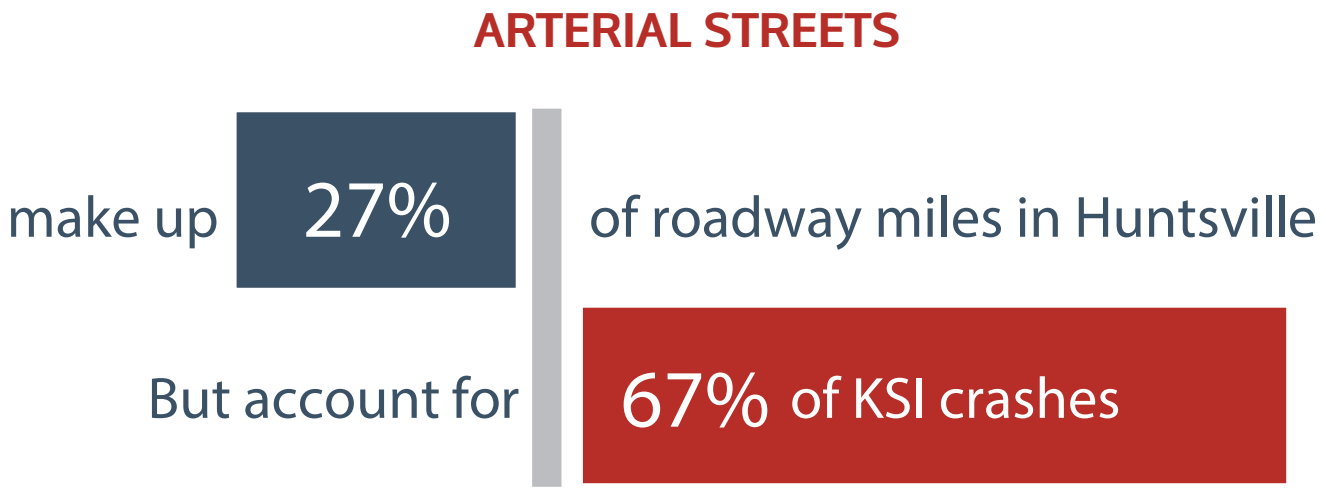
ROADWAY SAFETY IN HUNTSVILLE

Huntsville has already taken steps toward providing people safe places to walk, bicycle, and drive within their community. Along with City Codes on Subdivisions (Chapter 15) and Streets and Sidewalks (Chapter 9.04), the Walk Bike Huntsville Plan provides guidance and recommendations for sidewalk and bikeway infrastructure, policies, and programs. These efforts are essential building blocks for roadway safety in the community and should continue to be assessed and updated.

Crash Analysis Findings

Crashes occur because of a variety and often a combination of contributing factors. These factors may include excessive speed, roadway conditions, equipment failure, inexperience, environmental conditions (e.g., weather, lighting, glare), and human behaviors, including distraction, impairment, and not complying with traffic laws. In Huntsville, a few of key findings related to crashes (2017-2021) include:

- 50% (9 of 18) KSI crashes in Huntsville occurred in 2020
- The only pedestrian crash reported resulted in a fatality
- Speeding accounted for only 8% (33 of 398) of all crashes; however, speeding crashes resulted a fatality or serious injury 33% of the time (6 of 33)
- Alcohol was noted in only 4% (15 of 398) of crashes; however, alcohol related crashes resulted in a fatality or serious injury 40% of the time (6 of 15)
- Arterial streets account for 44% (175 of 398) of crashes but 67% (12 of 18) of KSI crashes including both fatalities (US 412)
- 96% of all crashes and 89% of KSI crashes occurred in Areas of Persistent Poverty as defined by the USDOT
- 97% of all crashes and 89% of KSI crashes occurred in Historically Disadvantaged Communities as defined by the USDOT



The following tables provides summaries of crash data based on several factors including transportation severity, mode, crash type, location (intersection/segment), and functional class. While the total number of crashes analyzed was 398, some attributes were not available for all crashes; therefore, an "unknown" is present and represents unclassified crashes for each factor. Information in the tables relates to crash codes used by ARDOT. The abbreviation KA is equivalent to KSI crashes.

Table 1: Huntsville - Crashes by Injury Severity, 2017-2021

Injury Severity	# Crashes	% Crashes
Fatal injury (K)	2	1%
Suspected serious injury (A)	16	4%
Suspected minor injury (B)	39	10%
Possible injury (C)	38	10%
No apparent injury (O)	303	76%
TOTAL	398	100%

Table 2: Huntsville - Crashes by Mode, 2017-2021

Mode	Total # of Crashes	% Share of Crashes	Total # of KA Crashes	% KA crashes by Mode	% Crashes resulting in KA
Pedestrian	1	0%	1	6%	100%
Motorcycle	11	3%	3	17%	27%
Motor Vehicle	385	97%	14	78%	4%
Unknown	1	0%	0	0%	0%
Total	398	100%	18	100%	5%

Table 3: Huntsville - First Harmful Event by All Modes, 2017- 2021

Cause of Crash	# of Crashes	% of Crashes	# of KA	% KA	% of Crashes that Resulted in KA
cargo shift or loss	1	0%	0	0%	0%
collision with animal	19	5%	0	0%	0%
collision with fixed object	64	16%	5	28%	8%
collision with non-fixed object	7	2%	0	0%	0%
collision with parked vehicle	11	3%	0	0%	0%
collision with pedestrian	1	0%	1	6%	100%
collision with vehicle in transport	262	66%	8	44%	3%
fell or jumped from vehicle	1	0%	0	0%	0%
jackknife	1	0%	0	0%	0%
other non-collision	3	1%	1	6%	33%
over turn or rollover	24	6%	3	17%	13%
unknown	4	1%	0	0%	0%
TOTAL	398	100%	18	100%	5%

Table 4: Huntsville - Crashes by Location, All Modes, 2017-2021

Crash Location	# of Crashes	% of Crashes	# of KA	% KA	% of Crashes that Resulted in KA
Intersection	218	55%	5	28%	2%
Segment	175	44%	13	72%	7%
Unknown	5	1%	0	0%	0%
TOTAL	**398**	**100%**	**18**	**100%**	**5%**

Table 5: Huntsville - Crashes by Functional Classification, All Modes, 2017-2021

Functional Classification	# of Crashes	% of Crashes	# of KA	% KA	% of Crashes that Resulted in KA
Local	68	17%	1	6%	1%
Minor Collector	4	1%	0	0%	0%
Major Collector	146	37%	5	28%	3%
Minor Arterial	82	21%	2	11%	2%
Major Arterial	93	23%	10	56%	11%
NULL	5	1%	0	0%	0%
TOTAL	**398**	**100%**	**18**	**100%**	**5%**

Developing a High Injury Network

This analysis used crash data to establish a High Injury Network (HIN)—representing the corridors in Huntsville with the highest number and density of fatal and serious injury crashes. Mapping specific roadway segments used a sliding window analysis and set specific thresholds to identify corridors for the City's HIN (see Appendix A of the NWA Vision Zero Plan for more detail related to methodology). Thresholds were modified for the City of Huntsville to ensure that analysis responded to the context and crash history in the area. Threshold scores for each mode are noted below and resulted in the following Huntsville HIN map.

- Pedestrian – #4
- Bicycle – # (no bicycle crashes were represented in the data)
- Motorcycle – #6
- Motor Vehicle - #8

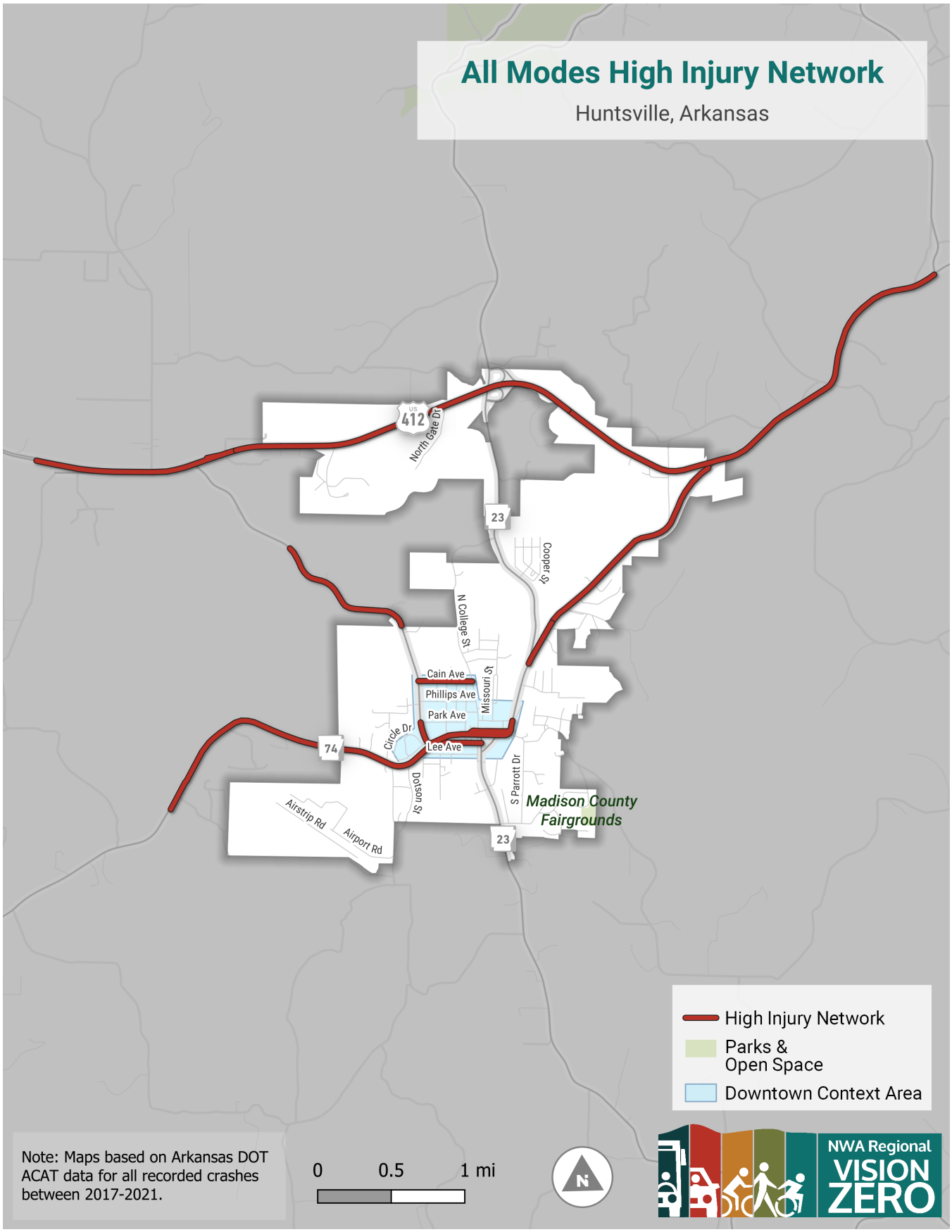
Huntsville Analysis

While there are several roadways within the City of Huntsville's municipal boundary, safety for corridors within Huntsville must consider crashes surrounding the community as well. Crash analysis included a one-mile buffer around the City of Huntsville to understand crash types and characteristics that influence travel to and through the City.

Downtown Context Area

Increasing safety throughout Huntsville will require projects, policies, and programs that address historical crashes and existing risk. The Downtown Context Area represents the heart of the community that should be safe for all roadway users and characterized by slower vehicular speeds. Actions are recommended for this area specifically to catalyze change and protect Huntsville residents and particular students in the Downtown and near local schools.

High Injury Network Map



COMMUNITY SAFETY CONCERNS

Digital engagement tools included an online survey and map. Participants that provided feedback on the interactive map were asked to identify the following:

- Locations where they feel unsafe
- Locations where they feel safe
- Places where a roadway improvement could be made

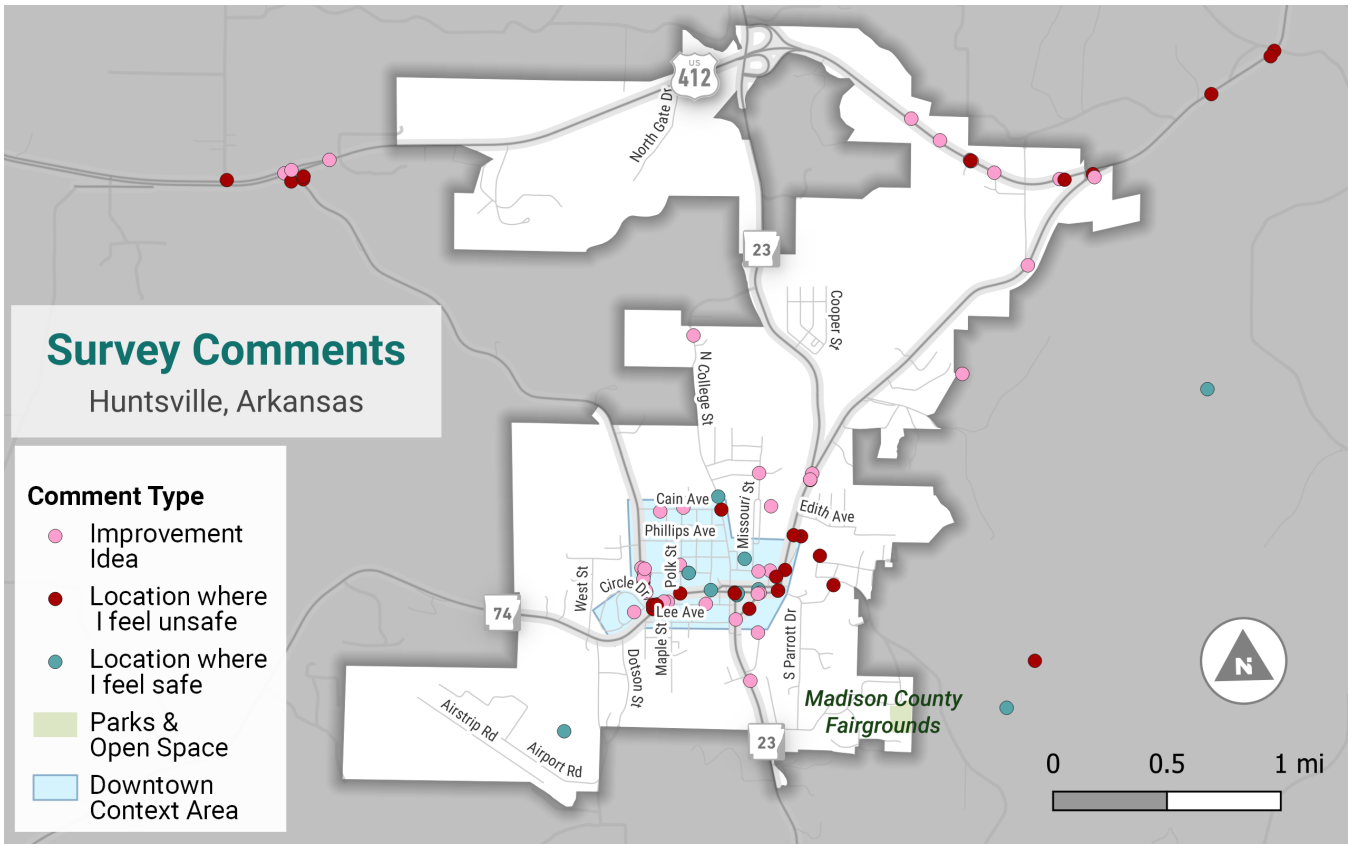
Overall, 316 people responded to the survey, placing over 600 points on the interactive map. The map below highlights the 86 comments for the Huntsville area.

When asked what the major issues are affecting your safety on the roadways in Huntsville, community members responded that people driving too fast, lack of sidewalks and/or continuous sidewalks, and a lack of safe crossings were the top three major issues.

Key areas where people identified feeling unsafe were:

- Intersection of US 412 and US 412 Business
- Intersection of US 412 Business and W Main Street
- East of downtown along Lee Street and N Parrott Drive (AR23)

Map 1: Huntsville Online Engagement Results



GOALS AND ACTIONS

Goals

The mission of Vision Zero—to Save Lives—requires changing how we design and operate our transportation system. The Safe System Approach is the foundation for this change that prioritizes human life above everything else. For Huntsville's Plan analysis, a High Injury Network has been established based on severity of crashes, roadway characteristics, individual behaviors, and unsafe speeds that are unique to this community. The HIN highlights key corridors where fatal and serious crashes are overrepresented on the regional roadway network.

This Plan establishes four goals for addressing roadway safety and implementing Vision Zero in the City of Huntsville. While the goals of this plan are the same as the larger NWA Vision Zero Plan, the action items have been tailored to the City of Huntsville based upon the crashes that have occurred and the results of analysis and public input:

1. Promote a culture that prioritizes people's safety

2. Reduce conflicts between roadway users

3. Establish policies, practices, and programs that focus on safety at all levels

4. Slow vehicle speeds

Actions

Huntsville's goals are supported by actions to be considered as policies and programs are developed. By breaking overarching goals into specific actions, this Plan builds a context-specific list of efforts that will help achieve the target of zero roadway fatalities by 2038. All actions consider and support the five Safe System Elements.

What you'll see here...

A. Action items - Each is a discrete, specific effort that can be advanced by a Vision Zero partner.

B. Asterisk (*) - Items followed by an asterisk represent systemic safety countermeasus that can be installed on the HIN or proactively throughout Huntsville where similar conditions exist for crashes to potentially occur.

C. Timeframe - Action items are assigned general timeframes to help action leaders prioritize their efforts. Although the timeframes note a number of years, these timeframes align with the level of effort for completing these actions. Timeframes include:

   a. Immediate: 0-2 years;

   b. Short: 2-5 years; or

   c. Medium-Long: 5-10 years.

D. Cost - There is an anticipated annual cost level listed with each step based on the following ranges:

   a. $ - low (less than $100k)

   b. $$ - medium (between $100k-$500k)

   c. $$$ - high ($500k and above)

E. Action Leader and Supporting Partners - Each action item is led by an action leader and supported by various agency partners when applicable.

The Actions that follow are understood to be general recommendations. For some Actions, implementation would only occur when and where appropriate based on further analysis, engineering design, and environmental assessment. Other Actions may require policy changes in alignment with other agency goals. Due to staffing, financial, and other constraints, each agency will need to consider how to prioritize implementation of these Actions in support of Vision Zero.

1. Promote a culture that prioritizes people's safety

Ongoing communication along with projects that put safety first are critical to culture change. Culture is more than messaging; it is a set of behaviors and a way of life that values the safety of fellow roadway users by every person during every trip.

2. Reduce conflicts between roadway users

Anticipating human error means providing more space and/or time between users to minimize crash severity if and when it happens. Reducing conflicts is rooted in designing streets that consider how different users move in time and space and using effective strategies and best practices to increase safety.

3. Establish policies, practices, and programs that focus on safety at all levels

Accomplishing zero fatal and serious injury crashes requires changes at every level. Policy sets the stage for daily decisions to change and can influence practices, programs, and mindsets that are essential for the Safe System Approach to be effective.

4. Slow vehicle speeds

Excessive speed is at the heart of fatal and serious injury crashes. Getting people to drive slower will take more than just a lower speed limit. Reducing vehicle speeds will require several tools and strategies to work together for the safety of all roadway users.

	Action	Timeframe	Safe System Elements	Action Leader	Supporting Partners
1-1	Enhance training for law enforcement and emergency service personnel responsible for crash reporting to address the unique attributes required to accurately report crash circumstances involving people walking and bicycling	**Immediate**	$ - $$	Huntsville	NWARPC
1-2	Develop branded Vision Zero signage to be deployed with Vision Zero infrastructure projects during construction	**Immediate**	$	Huntsville	NWARPC
1-3	Convene a community safety advisory committee of civic, religious, education, and youth leaders to inform safety efforts and engage residents and stakeholders	**Immediate**	$	Huntsville	
1-4	Partner with youth organizations to create peer-to-peer anti-distraction messaging campaigns	**Short**	$	Huntsville	
1-5	Promote Street Networks and Land Use Patterns that Reduce Trip Distances and Automobile Dependence	**Short**	$	Huntsville	NWARPC
1-6	Conduct roadway safety audits after every KSI crash	**Short**	$ - $$	Huntsville	ARDOT
1-7	Support DUI/DWI court programs that focus on education and treatment over punishment	**Medium-Long**	$	Huntsville	Madison County
1-8	Install pedestrian-scale lighting along the HIN, especially at trail crossings and Downtown Context Area*	**Medium-Long**	$$ - $$$	Huntsville, ARDOT	
1-9	Install lighting on arterial roadways, starting with the HIN *	**Medium-Long**	$$$	Huntsville, ARDOT	NWARPC
1-10	Conduct ongoing safety campaigns and events with the community	**Medium-Long**	$ - $$	Huntsville,	NWARPC
2-1	Build sidewalks on both sides of streets connecting neighborhoods to schools, parks, and Polk Square	**Medium-Long**	$$$	Huntsville, ARDOT	
2-2	Implement no right-turns on red on the HIN or high-volume pedestrian routes	**Short**	$	ARDOT, Huntsville	
2-3	Standardize crosswalk design standards including ladder spacing and widths	**Short**	$	NWARPC, ARDOT	Huntsville
2-4	Identify walking zones for schools, recreation centers, and other community identified priorities for connectivity	**Short**	$	ARDOT, Huntsville	School Board
2-5	Reduce distances between crossings along arterials with long distances between signalized intersections	**Medium-Long**	$$ - $$$	ARDOT	NWARPC, Huntsville
2-6	Implement road diets along the HIN where applicable	**Medium-Long**	$$$	Huntsville	ARDOT
2-7	Close gaps in bicycle and pedestrian networks	**Medium-Long**	$$ - $$$	Huntsville	

	Action	Timeframe	Safe System Elements	Action Leader	Supporting Partners
2-8	Close slip lanes where applicable, starting with the HIN	Medium-Long	$ - $$$	Huntsville	
2-9	Daylight intersections (removing obstacles that impair sight lines) in town centers and in high-volume pedestrian areas	Medium-Long	$	ARDOT, Huntsville	
2-10	Provide buffers to sidewalks and sidepaths (paint, greenspace, trees, etc.)	Medium-Long	$$ - $$$	ARDOT, Huntsville	
3-1	Update Subdivisions Regulations to require sidewalks on Arterials streets (15.04.05 B 7 and Appendix 06a detail)	Immediate	$	Huntsville	
3-2	Adopt Complete Streets policies	Immediate	$	Huntsville	NWARPC, ARDOT
3-3	Establish program and procedures to conduct roadways safety audit after KSI crash	Immediate	$	Huntsville	NWARPC, ARDOT
3-4	Create regional and local roadway safety education program for practitioners, boards, and elected officials	Immediate	$ - $$	NWARPC, Huntsville	
3-5	Publish annual report on crashes and other safety metrics for transparency and accountability	Immediate	$	Huntsville	NWARPC, ARDOT
3-6	Establish multidisciplinary crash response teams to evaluate and address fatal and serious injury crashes at crash locations	Short	$	Huntsville	NWARPC, ARDOT
3-7	Develop and begin implementing a city-wide Sidewalks Master Plan to increase connectivity and meet ADA standards starting with project is Downtown Context Area *	Short	$$	Huntsville, ARDOT	
4-1	Post nighttime speed limits *	Immediate	$ - $$	Huntsville, ARDOT	
4-2	Reduce speed limits on local streets to 20 mph *	Short	$	Huntsville	
4-3	Design and implement traffic calming and road reconfigurations to reduce traffic speeds in the Downtown Context Area *	Short	$$	Huntsville, ARDOT	
4-4	Implement traffic controls and safety projects near schools, including safe crosswalks and mid-block crossings, walkways and bikeways, and enforcing school zone speed limits *	Short	$$	Huntsville, ARDOT	
4-5	Tighten turning radii to reduce turning speeds and include truck aprons on freight routes *	Medium-Long	$$	Huntsville, ARDOT	
4-6	Consider a roundabout as a proven safety countermeasure to reduce speeds at US 412 BUS / 74 near Huntsville Middle School	Medium-Long	$$$	ARDOT	Huntsville

Map 2: Huntsville Prioritized HIN Corridors

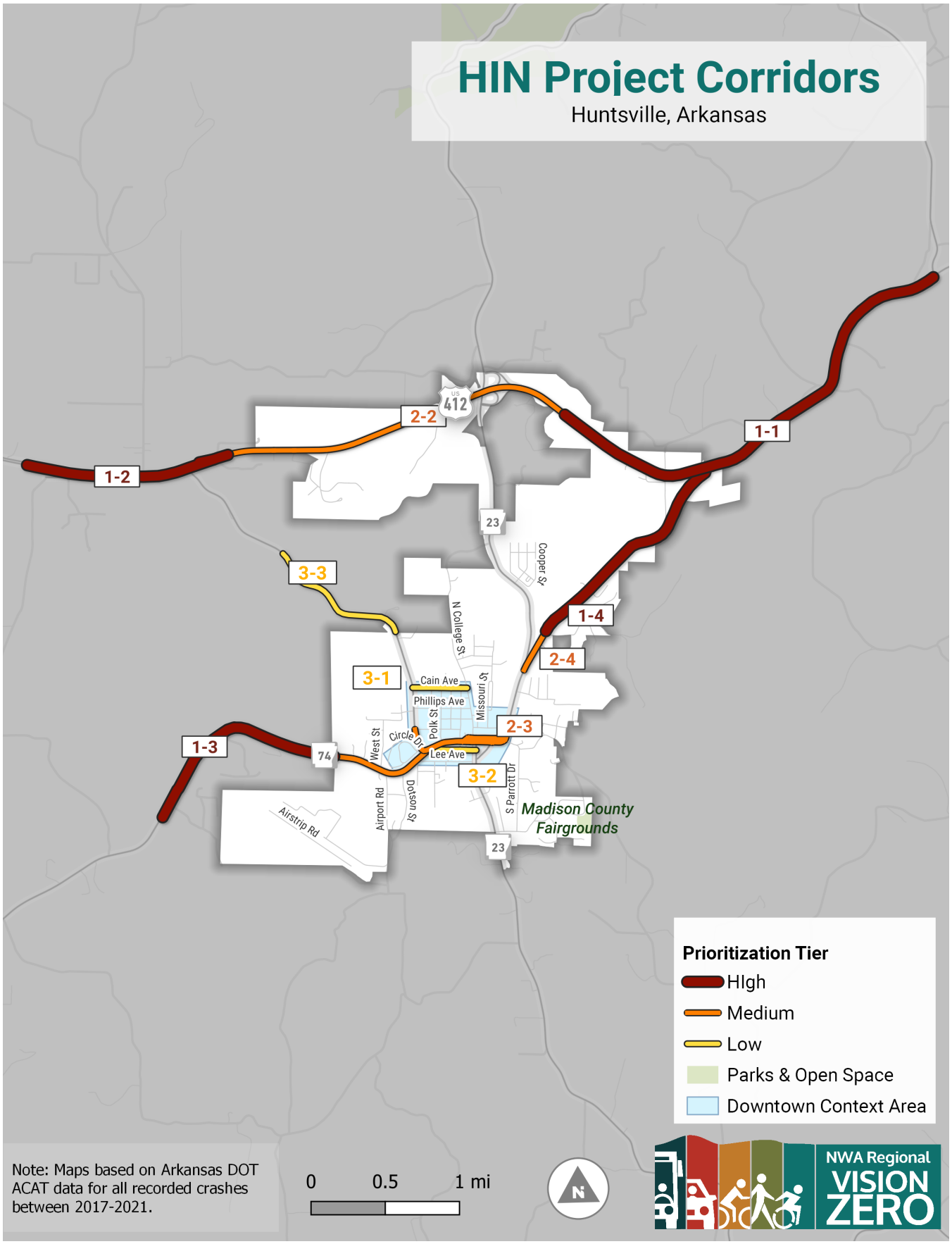


Table 6: Huntsville HIN Prioritized Corridors

ID	Corridor	From Extent	To Extent	Municipality	Length (mi)	Project Tier	Total Score	KSI Score	KSI Density	All Crash Score	All Density	Equity Score	HIN Score	Public Score
1-1	US 412	East of AR 23	AR 127	Huntsville	3.20	1	2.75	3	5.62	2	58.44	3	3	2
1-2	US 412	East of Madison 8633	East of US 412 Business	Huntsville	1.48	1	2.75	3	12.15	2	126.25	3	3	2
1-3	AR 74	West of Madison 6501	West of Grace Way	Huntsville	1.50	1	2.45	3	8.67	2	55.33	3	3	0
1-4	US 412 Business	Hawn Avenue	US 412	Huntsville	1.59	1	2.45	2	1.26	2	21.44	3	3	2
2-1	N Gaskill Street / W Main Street / War Eagle Avenue	Park Avenue	LaBarge Avenue	Huntsville	1.13	2	2.40	1	0.00	3	51.46	3	3	3
2-2	US 412	West of US 412 Business	East of AR 23	Huntsville	2.39	2	2.35	3	1.26	1	7.12	3	3	0
2-3	W AR 74	West of Grace Way	W Main St	Huntsville	0.73	2	2.15	1	0.00	2	20.41	3	3	2
2-4	US 412 Business	N Parrott Drive (AR 23)	Hawn Ave	Huntsville	0.32	2	2.15	1	0.00	2	43.92	3	3	2
3-1	Cain Avenue	N Gaskill Street	N College Street	Huntsville	0.37	3	2.15	1	0.00	2	24.58	3	3	2
3-2	Church Avenue	W Main Street	S Harris Street	Huntsville	0.30	3	1.85	1	0.00	2	23.07	3	3	0
3-3	US 412 Business	East of US 412	North of Jamie Street	Huntsville	1.00	3	1.75	1	0.00	1	8.00	3	3	0

Placeholder page for Optional
Letter from the Mayor

Safety Action Plan