



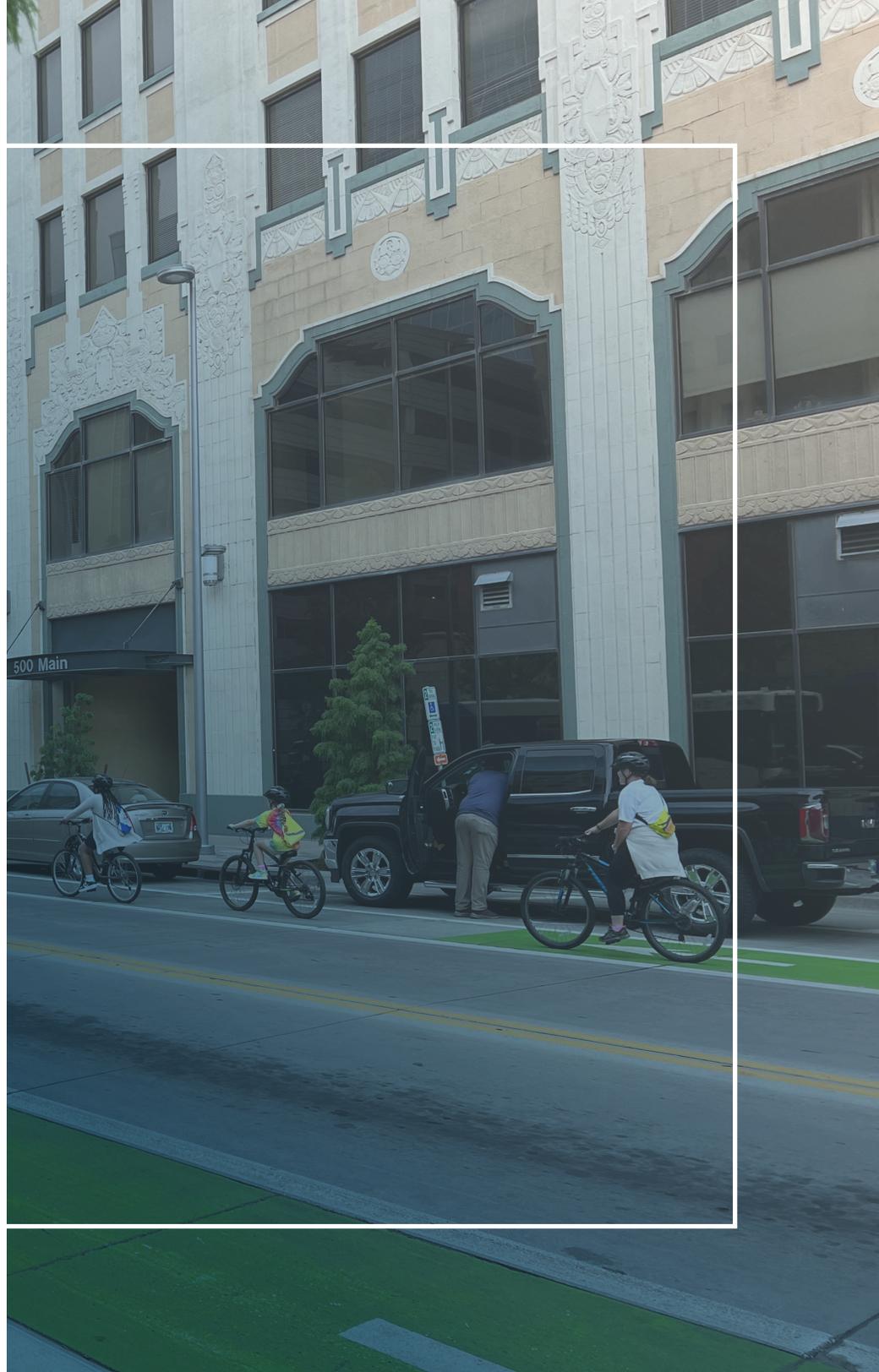
**Vision Zero**  
Action Plan  
OKLAHOMA CITY

# CITY OF OKLAHOMA CITY VISION ZERO ACTION PLAN

---

PUBLIC DRAFT

December 2024



Prepared For:



**Vision Zero**  
Action Plan  
OKLAHOMA CITY

Prepared By:

**Kimley»»Horn**  
Expect More. Experience Better.





## ACKNOWLEDGMENTS

### OKLAHOMA CITY COUNCIL

- David Holt, Mayor
- Bradley Carter, Ward 1
- James Cooper, Ward 2
- Barbara Peck, Ward 3
- Todd Stone, Ward 4
- Matt Hinkle, Ward 5
- JoBeth Hamon, Ward 6
- Lee Cooper Jr., Ward 7
- Mark K. Stonecipher, Ward 8

### VISION ZERO ADVISORY BOARD

- Richard McCubbin, PE, RSC
- Brock Miner, PE, OKC Public Works
- Geoff Butler, AICP, OKC Planning
- Chip Nolen, EMBARK
- Jaclynn Todd, OSHSO
- Keith Wilkinson, General Services
- Kelly Williams, PhD, Innovation Office
- Paul Fredrickson, Police
- Barney Semtner, COTPA
- Marek Cornett, Traffic Commission

- Daniel Nguyen, Traffic Commission, ODOT
- John Sharp, AICP, ACOG
- Chelsea Banks, Uptown 23rd
- Jeremy Morrison, State Health Department
- Tony Carfang, Bike Oklahoma
- Jennifer Nakayama, DOKC
- James Cooper, City Council
- Barbara Peck, City Council
- Nate Clair, Planning Commission
- Janis Powers, Planning Commission
- Jennifer Sebesta, ACOG
- Jerimy Meek, Planning Commission

### CITY STAFF

- Justin Henry, AICP
- Maxton Harris, AICP
- Sasha Tepedelenova McCrone

### KIMLEY-HORN

- Brian Shamburger, PE, PTOE
- Monica Powell, AICP, RSP<sub>1</sub>
- Raul Orozco Jr., AICP
- Luke Shmidt, PE, PTOE

- Daniel Murphy, PE
- Reid Cleeter
- Leanne Nunez
- Mason Shoaf, EIT
- Wesley Sprott
- Venkat Muthukumar, EIT
- Lizbeth Juarez-Bartolo
- Courtney Morgan
- Melody Mathews
- Ingrid Phillips
- Jose Silva, GISP
- Garrett Perkins, GISP
- Tanner Hansard

### GOODEN GROUP

- Meg Shea
- Katy Gustafson

### NELSON\NYGAARD

- Drusilla van Hengel, PhD, RSP
- Asif Haque
- Laura Lopez Cardenas
- Sandra Narh, AICP-C

**TABLE OF CONTENTS**

**Acknowledgments** ..... iii

**Executive Summary** ..... ix

**Part I** ..... 2

**Chapter 1: Creating a Vision** ..... 3

*Safety Guiding Principles* ..... 3

**Chapter 2: Engaging the Community** ..... 7

*Introduction* ..... 7

*Project Timeline* ..... 7

*Vision Zero Advisory Board* ..... 8

*Internal Worksessions* ..... 9

*Public Events* ..... 9

*Online Engagement* ..... 12

**Part II** ..... 18

**Chapter 3: Understanding the Problem** ..... 19

*Crash Analysis* ..... 19

*Crash Profiles* ..... 35

*Critical Crash Rate Method* ..... 45

*High-injury Network (HIN) Development & Results* ..... 47

*Measuring Equity* ..... 49

**Part III** ..... 60

**Chapter 4: Designing the Solution** ..... 61

*Systemic Countermeasures* ..... 62

*Targeted Countermeasures* ..... 74

*Countermeasure Exhibits* ..... 107

**Chapter 5: Getting to Zero** ..... 133

*Past Plans Review* ..... 133

*Plan Review* ..... 135

*Policy Recommendations* ..... 135

*Implementation Program* ..... 152



## LIST OF FIGURES

<b>Figure 1:</b> Oklahoma City Total Crash Summary (2017-2021) .....	xii	<b>Figure 31:</b> Enhanced Delineation for Horizontal Curve.....	69
<b>Figure 2:</b> The Safe System Approach .....	5	<b>Figure 32:</b> Retroreflective Backplates .....	70
<b>Figure 3:</b> OKC VZAP Timeline.....	7	<b>Figure 33:</b> Speed Limit Sign .....	70
<b>Figure 4:</b> VZAB Meeting #3 .....	8	<b>Figure 34:</b> Pedestrian Hybrid Beacon .....	71
<b>Figure 5:</b> Oklahoma City and ACOG Regional Safety Summit Photos...	9	<b>Figure 35:</b> Leading Pedestrian Interval.....	71
<b>Figure 6:</b> Scissortail Park Pop-up Event .....	10	<b>Figure 36:</b> Corridor Access Management.....	72
<b>Figure 7:</b> Photos from Public Workshops .....	11	<b>Figure 37:</b> Wider Edge Lines .....	72
<b>Figure 8:</b> Project Website Landing Page.....	12	<b>Figure 38:</b> Yellow Light at Signal.....	73
<b>Figure 9:</b> Top Safety Concerns Identified Through Written Survey .....	13	<b>Figure 39:</b> Missing pedestrian infrastructure on Mustang Road and Northwest Expressway .....	77
<b>Figure 10:</b> Top Safety Concerns Identified Through Map Survey.....	14	<b>Figure 40:</b> NE 23rd Street Recommendations.....	80
<b>Figure 11:</b> TV Station filming during a Public Workshop.....	16	<b>Figure 41:</b> NW 23rd Street Recommendations .....	85
<b>Figure 12:</b> KAB Crash Summary (2017-2021).....	20	<b>Figure 42:</b> S Mustang Road Recommendations.....	89
<b>Figure 13:</b> Top Contributing Factors (2017-2021).....	21	<b>Figure 43:</b> SW 44th Street Recommendations .....	93
<b>Figure 14:</b> Top Manners of Collision (2017-2021).....	22	<b>Figure 44:</b> S Pennsylvania Avenue Recommendations.....	97
<b>Figure 15:</b> Total Crashes v. Distracted Driving Crashes Severity Comparison .....	31	<b>Figure 45:</b> NW 10th Street Recommendations.....	101
<b>Figure 16:</b> Total Crashes v. Impaired Driving Crashes Severity Comparison .....	33	<b>Figure 46:</b> NW Expressway Recommendations .....	105
<b>Figure 17:</b> Critical Crash Rate Inputs.....	45	<b>Figure 47:</b> Dashboard .....	153
<b>Figure 18:</b> Median & Pedestrian Refuge Island.....	63		
<b>Figure 19:</b> Median Barrier.....	63		
<b>Figure 20:</b> Rectangular Rapid Flashing Beacon .....	64		
<b>Figure 21:</b> Bike Lane .....	64		
<b>Figure 22:</b> Dedicated Left- and Right-Turn Lanes .....	65		
<b>Figure 23:</b> Roadway Reconfiguration .....	65		
<b>Figure 24:</b> Roundabout.....	66		
<b>Figure 25:</b> Sidewalk.....	66		
<b>Figure 26:</b> Corridor Lighting.....	67		
<b>Figure 27:</b> Reduced Left-Turn Conflict Intersection Example .....	67		
<b>Figure 28:</b> Stop-Controlled Intersection.....	68		
<b>Figure 29:</b> Crosswalk Visibility Enhancement.....	68		
<b>Figure 30:</b> Longitudinal Rumble Strips.....	69		

**LIST OF TABLES**

<b>Table 1:</b> Crash Profile 1.....	xiii	<b>Table 26:</b> Countermeasure Crash Modification Factors for S Pennsylvania Avenue .....	96
<b>Table 2:</b> Crash Profile 2 .....	xiii	<b>Table 27:</b> Countermeasure Crash Modification Factors for NW 10th Street.....	100
<b>Table 3:</b> Crash Profile 3 .....	xiii	<b>Table 28:</b> Countermeasure Crash Modification Factors for NW Expressway .....	104
<b>Table 4:</b> Crash Profile 4 .....	xiii	<b>Table 29:</b> VZAP Policy Review .....	133
<b>Table 5:</b> Crash Profile 5 .....	xiii	<b>Table 30:</b> Actions for Safer People.....	137
<b>Table 6:</b> Study Corridors.....	xiv	<b>Table 31:</b> Actions for Safer Roads.....	140
<b>Table 7:</b> Countermeasures Summary.....	xv	<b>Table 32:</b> Actions for Safer Speeds .....	144
<b>Table 8:</b> Total Crashes by Severity (2017-2021) .....	20	<b>Table 33:</b> Actions for Safer Vehicles .....	147
<b>Table 9:</b> Breakdown of Crash Severity (2017-2021) .....	23	<b>Table 34:</b> Actions for Post-Crash Care.....	150
<b>Table 10:</b> Intersection Crashes by Year (2017-2021) .....	25	<b>Table 35:</b> Plan Updates and Timeframes.....	154
<b>Table 11:</b> High Crash Intersections (2017-2021).....	25	<b>Table 36:</b> Performance Measures.....	154
<b>Table 12:</b> Pedestrian and Bicycle Crashes (2017-2021) .....	27		
<b>Table 13:</b> Crash Profile 1 .....	35		
<b>Table 14:</b> Crash Profile 2 .....	37		
<b>Table 15:</b> Crash Profile 3 .....	39		
<b>Table 16:</b> Crash Profile 4 .....	41		
<b>Table 17:</b> Crash Profile 5 .....	43		
<b>Table 18:</b> KA Crashes and HIN Miles in Justice40 Areas Compared to Non-Qualifying Areas and Citywide.....	53		
<b>Table 19:</b> Fatal Crash Involvement by Race/Ethnicity Between 2013-2021 Compared to ACS 5-Year Estimates* .....	55		
<b>Table 20:</b> Systemic Countermeasures .....	62		
<b>Table 21:</b> Study Corridors.....	75		
<b>Table 22:</b> Countermeasure Crash Modification Factors for NE 23rd Street.....	79		
<b>Table 23:</b> Countermeasure Crash Modification Factors for NW 23rd Street .....	83		
<b>Table 24:</b> Countermeasure Crash Modification Factors for S Mustang Road.....	88		
<b>Table 25:</b> Countermeasure Crash Modification Factors for SW 44th Street .....	92		



## LIST OF EXHIBITS

<b>Exhibit 1:</b> Interactive Map Comments .....	15	<b>Exhibit 23:</b> N Meridian Ave & NW 23rd St – Roundabout .....	112
<b>Exhibit 2:</b> Crash Heat Map (2017-2021).....	24	<b>Exhibit 24:</b> NW 23rd St – Access Management.....	114
<b>Exhibit 3:</b> High Crash Intersections (2017-2021) .....	26	<b>Exhibit 25:</b> S Mustang Rd & SW 5th St – Signalized Intersection.....	116
<b>Exhibit 4:</b> Pedestrian Related Crashes (2017-2021).....	28	<b>Exhibit 26:</b> S Pennsylvania Ave & SW Grand Blvd/SW 36th St – Roundabout .....	118
<b>Exhibit 5:</b> Bicycle Related Crashes (2017-2021).....	29	<b>Exhibit 27:</b> S Pennsylvania Ave & U.S. Grant High School – Signalized Intersection.....	120
<b>Exhibit 6:</b> Distracted Driving Crashes (2017-2021) .....	32	<b>Exhibit 28:</b> S Pennsylvania Ave & SW 51st St – Signalized Intersection.....	122
<b>Exhibit 7:</b> Impaired Driving Crashes (2017-2021) .....	34	<b>Exhibit 29:</b> NW 10th St – Trail & Road Reconfiguration.....	125
<b>Exhibit 8:</b> Crash Profile 1.....	36	<b>Exhibit 30:</b> NW Expressway & N Council Rd – Signalized Intersection.....	132
<b>Exhibit 9:</b> Crash Profile 2.....	38		
<b>Exhibit 10:</b> Crash Profile 3.....	40		
<b>Exhibit 11:</b> Crash Profile 4.....	42		
<b>Exhibit 12:</b> Crash Profile 5.....	44		
<b>Exhibit 13:</b> Critical Crash Rate Ratio Results .....	46		
<b>Exhibit 14:</b> High-Injury Network.....	48		
<b>Exhibit 15:</b> Justice40 Disadvantaged Communities and Non-Qualifying Areas, by Hex Grid.....	50		
<b>Exhibit 16:</b> OKC Equity Score Among Justice40 Disadvantaged Communities.....	52		
<b>Exhibit 17:</b> Top 5% Percentile Index of OKC Equity Scores, Number of All Crashes of All Crashes, Number of KA Crashes, and Length of HIN Miles.....	54		
<b>Exhibit 18:</b> Composite Index Score Greater Than or Equal to 90% and Intersection Projects Along Selected Corridor Segments.....	56		
<b>Exhibit 19:</b> Intersection Projects along Corridors Overlaying the Top 20% of Hex Grids with Populations 65 Years or Older or Who Rely on Alternate Transportation.....	58		
<b>Exhibit 20:</b> Study Corridors.....	76		
<b>Exhibit 21:</b> NE 23rd St & N Coltrane Rd – Signalized Intersection.....	108		
<b>Exhibit 22:</b> NW 23rd St & N Sterling Ave – PHB Pedestrian Crossing .....	110		

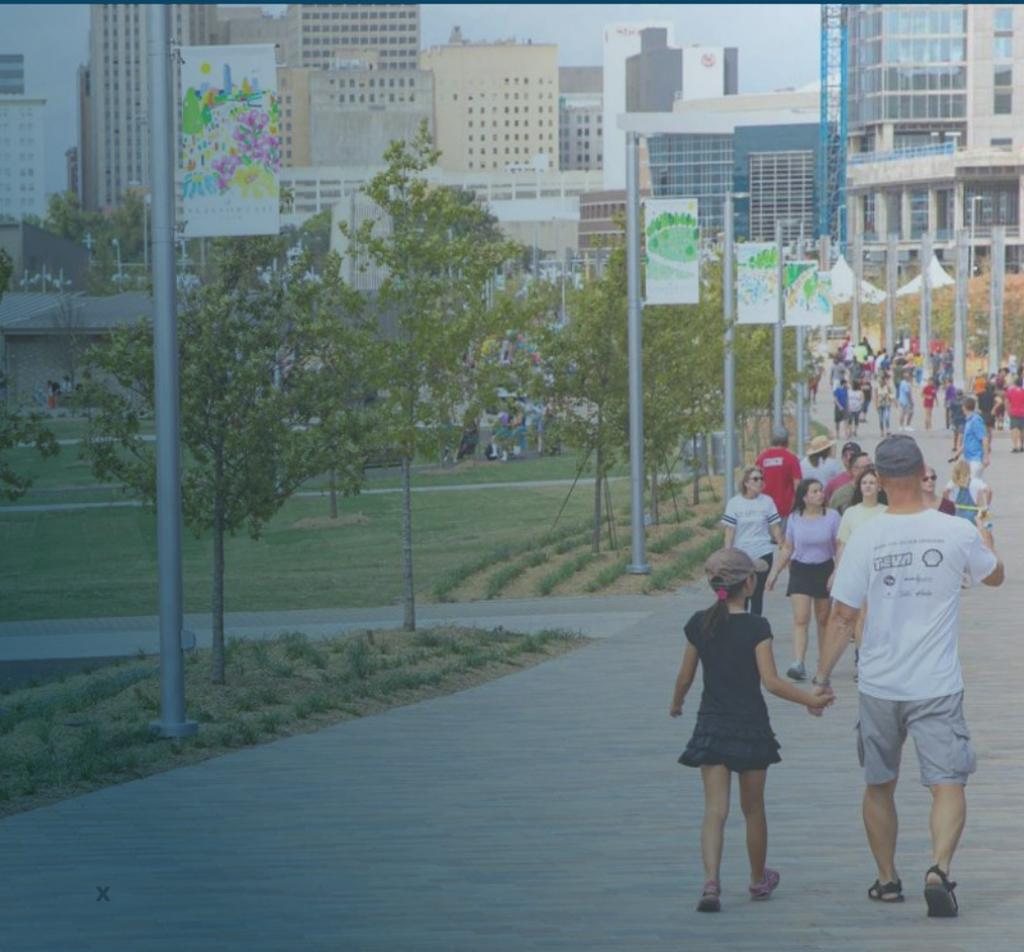


**ES**

**EXECUTIVE  
SUMMARY**

---

# Vision Zero Action Plan OKLAHOMA CITY



## EXECUTIVE SUMMARY

Oklahoma City was awarded the Safe Streets and Roads for All (SS4A) grant through the US Department of Transportation to develop a Vision Zero Action Plan (VZAP). The VZAP provides an analysis of the City's roadways and recommends countermeasures to reduce transportation-related fatalities and serious injuries on the City's most dangerous roadways. This three-phase project approach kicked off in January 2024 and will run through adoption in February 2025.

This Plan is organized into three parts, each containing a purpose statement and listing of chapters contained within. The parts of the plan correspond to the various phases of the planning process:

### Part I: Background and Purpose

- **Chapter 1:** Creating a Vision
- **Chapter 2:** Engaging the Community

### Part II: Oklahoma City State of Safety

- **Chapter 3:** Understanding the Problem

### Part III: Vision Zero Action Plan

- **Chapter 4:** Designing the Solution
- **Chapter 5:** Getting to Zero



The Safe Streets and Roads for All (SS4A) program is a primary driving force behind the VZAP, which is characterized and guided by the Federal Highway Administration's (FHWA) Safe Systems Approach. The guiding principles for this plan are viewed through a safety lens, which aims to eliminate all traffic fatalities and severe injuries, prioritizing the principles of safer road design, enforcement, education, and community engagement to achieve this goal. The guiding principles of the Safe Systems Approach and this document are detailed in **Chapter 1**, but can more generally be summarized as follows:



With these safety guiding principles in mind, the Vision Zero Advisory Board (VZAB) worked together to establish a mission that clearly communicates and guides how this Plan serves the community and stakeholders into the future. This vision for Oklahoma City's Vision Zero Action Plan is:

*The City of Oklahoma City aims to **eliminate road fatalities** through strategic infrastructure enhancements, policy advocacy, and inclusive education. The City is dedicated to **protecting all road users** and promoting a **sustainable, vibrant community**.*

To make this mission a reality, Oklahoma City's Council, along with the Vision Zero Advisory Board and staff commit to the overall goal of improving safety in Oklahoma City by adopting a Vision Zero resolution in February 2025. The Vision Zero Resolution is provided in **Appendix Item A**.

**Part II** of the Plan, Oklahoma City State of Safety, establishes an empirical understanding of existing conditions and key safety considerations, laying the foundation for **Part III** of the Plan. **Chapter 3** analyzes the Citywide crash history, details safety emphasis areas, and reviews the equitable state of safety throughout the City.

Citywide crash trends, shown to the right in **Figure 12**, revealed that from 2017-2021, there were 75,747 total crashes and 385 fatal crashes in the City of Oklahoma City. During this period, crashes throughout the City peaked in 2017 at 17,029. Total crashes decreased slightly over 2018 and 2019 but remained consistent near the mark of 15,500 annual crashes. 2020 presented a low for the period with 12,347 crashes, which presumably correlated with the COVID-19 pandemic. Like the trend of decreasing crashes that can be observed, the number of fatalities per 100,000 population has generally increased on an annual basis from a low of 9.4 fatalities per 100,000 population in 2018 to a high of 14.1 fatalities per 100,000 population in 2021.

The Crash Profiles seen in Tables 1-5 in the executive summary identify the top 5 combinations of roadway design and environmental characteristics that yield the highest percentages and severities of crashes. Crash severities are listed as “KABs” indicating fatal injuries (K), suspected serious injuries (A), and suspected minor injuries (B). For example, Crash Profile 1 identifies 25% of all KAB crashes from 2017 to 2021 to be within a Disadvantaged Census Tract and near a school. The crash profiles provides the City of Oklahoma City with another level of analysis assisting in the future selection of safety countermeasures and policy recommendations.

FIGURE 1: OKLAHOMA CITY TOTAL CRASH SUMMARY (2017-2021)

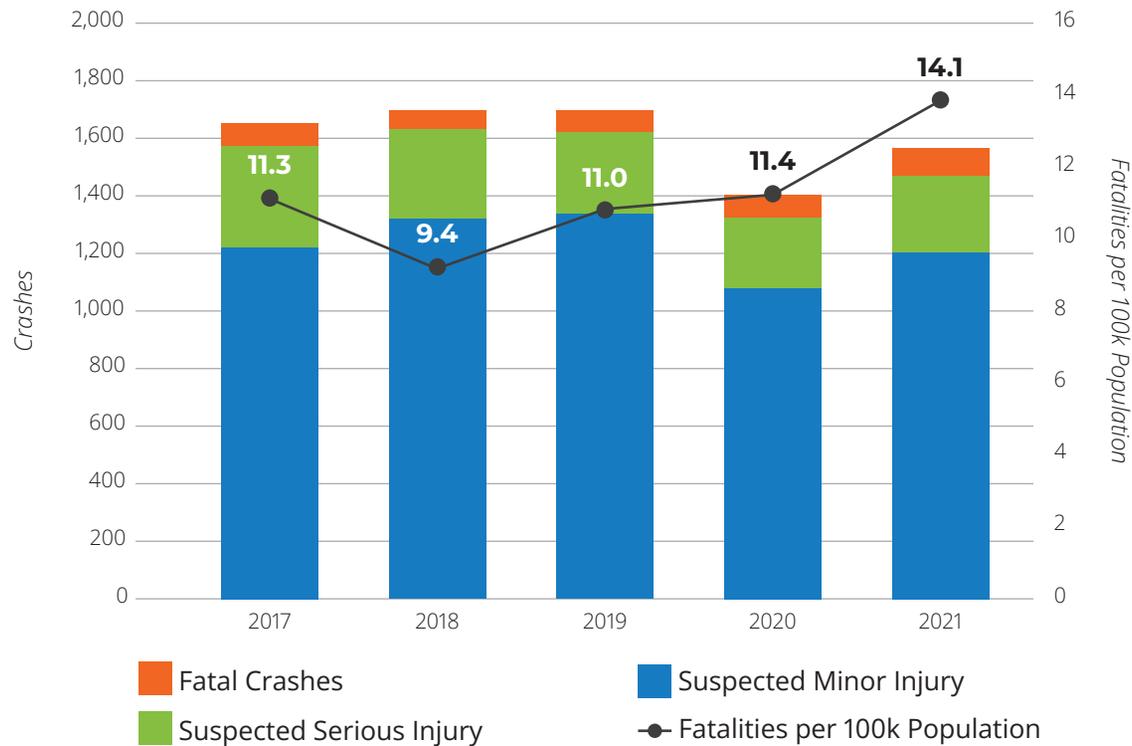




TABLE 1: CRASH PROFILE 1

Crash Profile 1		
	Within a Disadvantaged Census Tracts	Near School (<0.5 mile)
	Number of Crashes	Percentage of KABs
K	51	23%
A	252	25%
B	1,047	26%
<b>Total KABs</b>	<b>1,350</b>	<b>25%</b>

TABLE 2: CRASH PROFILE 2

Crash Profile 2		
	Within a Disadvantaged Census Tract	4 Lanes
	Number of Crashes	Percentage of KABs
K	66	30%
A	255	26%
B	916	22%
<b>Total KABs</b>	<b>1,237</b>	<b>23%</b>

TABLE 3: CRASH PROFILE 3

Crash Profile 3		
	Not Near Streetlight (<75 ft)	4 Lanes
	Number of Crashes	Percentage of KABs
K	63	28%
A	216	22%
B	913	22%
<b>Total KABs</b>	<b>1,192</b>	<b>22%</b>

TABLE 4: CRASH PROFILE 4

Crash Profile 4		
	35-40 MPH	4 Lanes
	Number of Crashes	Percentage of KABs
K	45	20%
A	244	25%
B	903	22%
<b>Total KABs</b>	<b>1,192</b>	<b>22%</b>

TABLE 5: CRASH PROFILE 5

Crash Profile 5		
	Within a Disadvantaged Census Tracts	Not Near Streetlight (<75 ft)
	Number of Crashes	Percentage of KABs
K	71	32%
A	240	24%
B	875	21%
<b>Total KABs</b>	<b>1,186</b>	<b>22%</b>

**Chapter 2** Discusses the equity review done to ensure that transportation investments and safety improvements are distributed equitably. This is accomplished through using USDOT’s Equitable Transportation Community (ETC) Explorer to assess how communities experience disadvantage using five components: Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability.

**Chapter 3** discusses the results of the high-injury network (HIN) study. A high-injury network is a network of roads, intersections, or other transportation infrastructure that experiences an above average rate of KABs. The identification and prioritization of these networks is foundational in the success of a Vision Zero Action Plan. The HIN will be essential in allowing the City to:

- Prioritize safety improvements
- Allocate and distribute resources
- Implement and monitor improvements
- Continuously review and update with the most recent crash data

**Chapter 4** presents seven (7) roadway segments on the HIN selected as priority locations to make targeted recommendations to improve the City’s most unsafe roadway locations. These segments were selected with input from City staff and scored based on equity, engagement, and feasibility.

**Chapter 5** of the plan details countermeasures and recommendations for the study corridors, as well as systemic recommendations as a part of the Vision Zero Action Plan. This includes policies, programs, strategies, and actions formed using Oklahoma City’s guiding principles.

TABLE 6: STUDY CORRIDORS

Study Corridors								
Study Corridor	Limits		Length (mi)	Crashes				Daily Volume
	From	To		K	A	B	Total KABs	
1. NE 23rd Street	I 35	N Bartell Rd	1.82	8	5	23	36	15,136
2. NW 23rd Street	N Ann Arbor Ave	N I 44 Hwy	1.75	3	6	27	36	15,132
3. Mustang Road	Reno Ave	SW 59th St	4	7	10	50	67	24,425
4. SW 44th Street	I-44 NBFR	Johnston Dr	1.77	3	9	32	44	10,705
5. S Pennsylvania Avenue	SW Grand Blvd	SW 59th St	1.49	3	3	25	31	12,415
6. NW 10th Street	County Line Rd	N Rockwell Ave	1.96	3	6	16	25	8,689
7. NW Expressway	N Council Rd	N Wilshire Blvd	2.1	0	12	30	42	18,006
<b>Total</b>			<b>14.89</b>	<b>27</b>	<b>51</b>	<b>203</b>	<b>281</b>	<b>14,930</b>



The High Injury Network (HIN) identifies road segments where the fatal or serious injury crashes occur on the at a higher frequency than expected. The HIN displays the corridors within the City of Oklahoma City transportation network that experience a higher risk of injury or fatality.

Targeted recommendations at study corridors provide detailed and crafted recommendations for specific areas of Oklahoma City that have varying crash history, road geometry, intersection control, and land use context. Additionally, systemic recommendations are organized by safety emphasis area and provide a countermeasure toolbox to make Citywide improvements wherever needed.

Systemic countermeasures are designed to be implemented in all areas of the City to improve safety, in addition to the targeted recommendations and study corridors. The corresponding toolbox in **Chapter 4** provides a comprehensive collection of strategies and interventions designed to address specific traffic safety issues and challenges. There is a summary of these countermeasures in **Table 7**. Each Countermeasure will have an associated Crash Modification Factor (CMF) that indicates the expected rate of crashes a community can observe after the associated countermeasure has been implemented. Countermeasures with lower CMFs typically exhibit the highest reduction in crashes. These figures are derived from the CMF Clearinghouse.

**Chapter 5** outlines the action plan, which is comprised of policies and programs to create solutions for systemic issues and are organized by the 5 safety emphasis areas (Safer People, Safer Speeds, Safer Vehicles, Safer Roads, and Post Crash Care) and focus on eliminating deaths on Oklahoma City roads. To make goals easier to achieve for each emphasis area, each goal has strategies and actions outlines. The corresponding table provides each strategy outlined in the action plan for each emphasis area. The implementation of these actions will be a collaborative effort between city departments including Planning, Public Works, EMBARK, Police, and Fire; and external stakeholders such as the ODOT, ACOG, OSHO, and the Department of Health. All under the direction and support of the Mayor and City Council.

TABLE 7: COUNTERMEASURES SUMMARY

Countermeasures	CMF	Context (Urban/Rural)
Medians and Pedestrian Refuge Islands	0.29	Urban
Median Barriers	0.29	Both
Rectangular Rapid Flashing Beacons (RRFB)	0.31	Both
Bike Lanes	0.435	Both
Dedicated Left- and Right-Turn Lanes at Intersections	0.52 – 0.86	Both
Roadway Reconfiguration	0.53	Urban
Roundabouts	0.59	Both
Sidewalks	0.598	Both
Lighting	0.68	Both
Reduced Left-Turn Conflict Intersections	0.7029	Both
Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections	0.732	Both
Crosswalk Visibility Enhancements	0.732	Both
Longitudinal Rumble Strips	0.745	Rural
Enhanced Delineation for Horizontal Curves	0.82	Rural
Retroreflective Backplates	0.85	Both
Appropriate Speed Limits	0.856	Both
Pedestrian Hybrid Beacons	0.883	Urban
Leading Pedestrian Interval	0.9	Urban
Corridor Access Management	0.93	Both
Wider Edge Lines	0.97	Both
Yellow Change Intervals	0.99	Both