



VISION ZERO

SAFE STREETS IN CHAPEL HILL

CRASH REPORT 2023



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Vision & Resolution

VISION

Vision Zero is a global strategy to eliminate all traffic deaths and serious injuries, while increasing safe, healthy, and equitable mobility for all. Any loss of life on Chapel Hill streets is unacceptable. Vision Zero recognizes that while people make mistakes, these mistakes should not be fatal.

RESOLUTION

The Chapel Hill Town Council adopted a Vision Zero Resolution in 2021, committing to eliminate all traffic deaths and serious injuries on its roads by 2031. This resolution also committed the Town to prioritizing safety over vehicle speeds and efficiency in all transportation decisions.

Annual Vision Zero Report

The Annual Vision Zero Report offers a snapshot of roadway safety in Chapel Hill, and the Town's efforts in 2023 to support the Vision Zero Resolution. It provides valuable insights into the conditions of Chapel Hill roadways for pedestrians and bicyclists, through annual crash data and five-year crash trend analysis. It also highlights the steps the Town of Chapel Hill took in 2023 to improve road safety, connectivity, and accessibility for road users of all ages and abilities.



Why Vision Zero



Addressing the Problem

From 2019 to 2023, there were **219** pedestrian and bicyclist-involved crashes in the Town of Chapel Hill. This is a **9 percent increase** from the previous five-year total of 199 crashes.

In 2023, there were **57** pedestrian and bicyclist-involved crashes, **13 more crashes** than the 44 crashes in 2022.

From 2022 to 2023 the number of fatal crashes **decreased** from two to **one** and the number of serious injuries **increased** from two to **three**.

Crash Data Analysis

Annual crash data analysis is a key component of the Town's *Pedestrian Safety Action Plan*. The Town of Chapel Hill, in collaboration with the Chapel Hill Police Department and UNC-CH Police, collects data on the timing and location of crashes, street characteristics, and victim demographics. The Vision Zero staff analyzed crash data from 2023, as well as trends over the five-year period from 2019 to 2023. This analysis examines the impact of environmental factors, such as speed limits and street ownership, as well as temporal trends related to the month, day, and time of crashes. Ultimately, this data informs Vision Zero Chapel Hill's approach to improving street safety

VISION **ZERO**

2019-2023 Crash Snapshot

80%

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES OCCURED ON STREETS WITH **35+ MPH SPEED LIMITS**

84%

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES OCCURED ON **STATE-OWNED STREETS**

59%

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES OCCUR AFTER **7:00 PM AND BEFORE 8 AM** (NIGHTTIME HOURS)



Crash Data

High Injury Network



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Any street with at least one bike or pedestrian crash resulting in a fatality or serious injury over this five-year period is included on the High Injury Network.

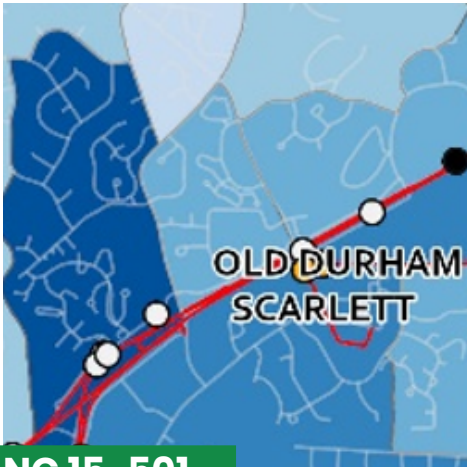
This High Injury Network directs the Town's efforts and resources towards areas of Chapel Hill that are most dangerous for bicyclists and pedestrians.

Street Name	# Crashes (2023)	# Crashes (2019-2023)	Serious Injuries/ Fatalities (2019-2023)
MLK, Jr. Blvd	9	12	6
NC 54	1	4	2
N Columbia St	1	9	1
N Estes Dr	-	3	1
Old Durham Rd	-	2	1
Ephesus Church Rd	1	4	1
E Franklin St	3	18	1
W Franklin St	7	13	1
Westminster Dr	-	1	1
Homestead Rd	1	3	1
Scarlett Dr	-	1	1

The High Injury Network of 11 streets (12% of Chapel Hill streets) accounts for 70, or 32%, of the 219 pedestrian and bicyclist-involved crashes in Chapel Hill from 2019 to 2023.



Communities of Concern

**NC 15-501****Fordham Blvd.****NC 54**

The Communities of Concern (CoC) analysis identifies census block groups where specific vulnerable or under-served populations are concentrated. These communities statistically are more dependent on non-auto travel, are disproportionately involved in pedestrian or bicyclist crashes, or both. This approach was adapted from the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) [2020 Environmental Justice Report](#), which analyzes five communities of concern: racial minority population, elderly population, low-income households, limited English proficiency (LEP) households and zero-car households. The Town of Chapel Hill uses the same five metrics, but bases the analysis on local thresholds. Identifying crashes in Communities of Concern helps the Town prioritize and plan safety improvements in corridors where crashes are highest and communities are most vulnerable.

While there are multiple census block groups in Chapel Hill that exhibit one or some of these characteristics, three census block groups were identified that include all five Communities of Concern. These communities are represented in the darkest shade of blue below.

Fordham Boulevard**NC 15-501****NC 54**

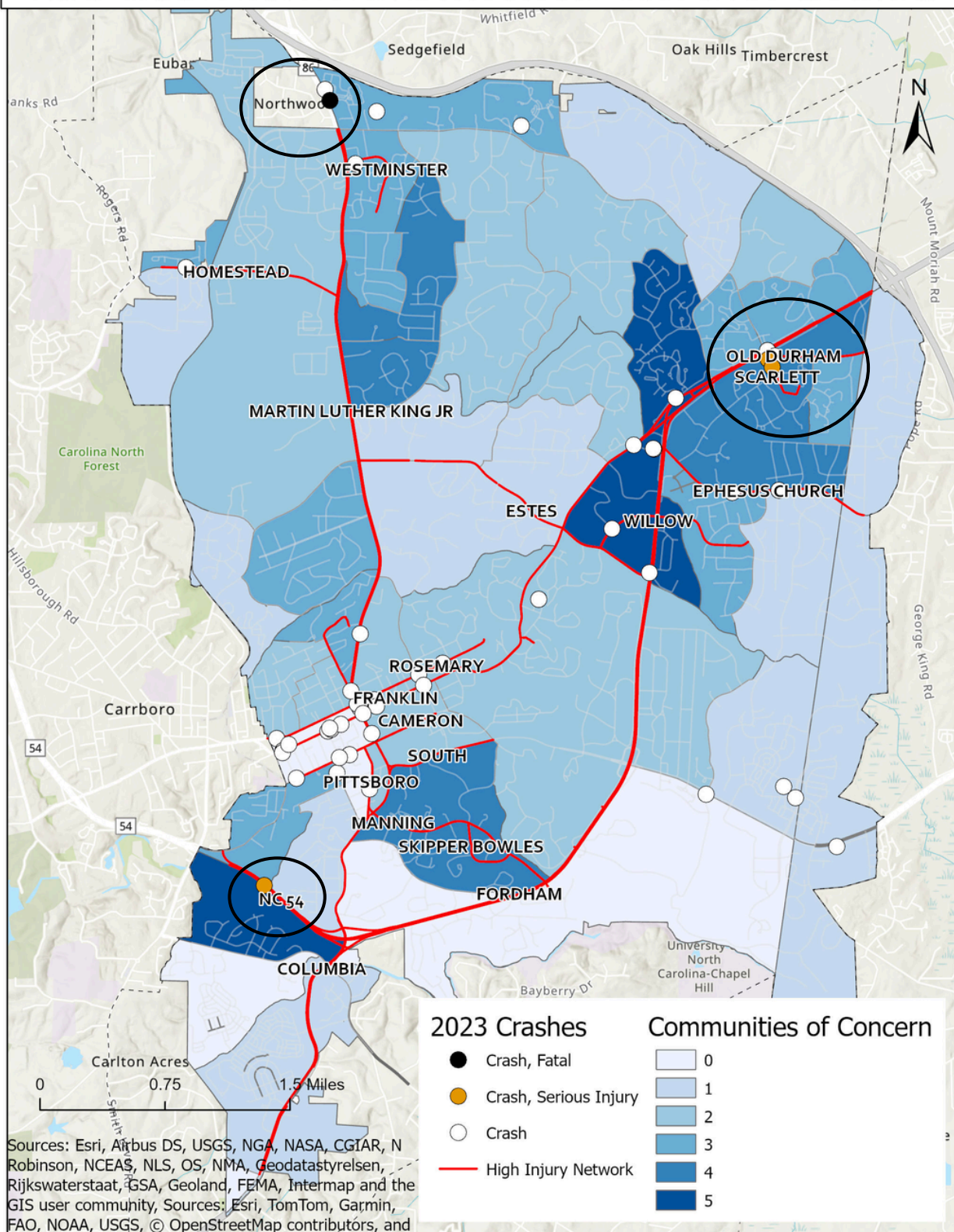


Crash Data



07

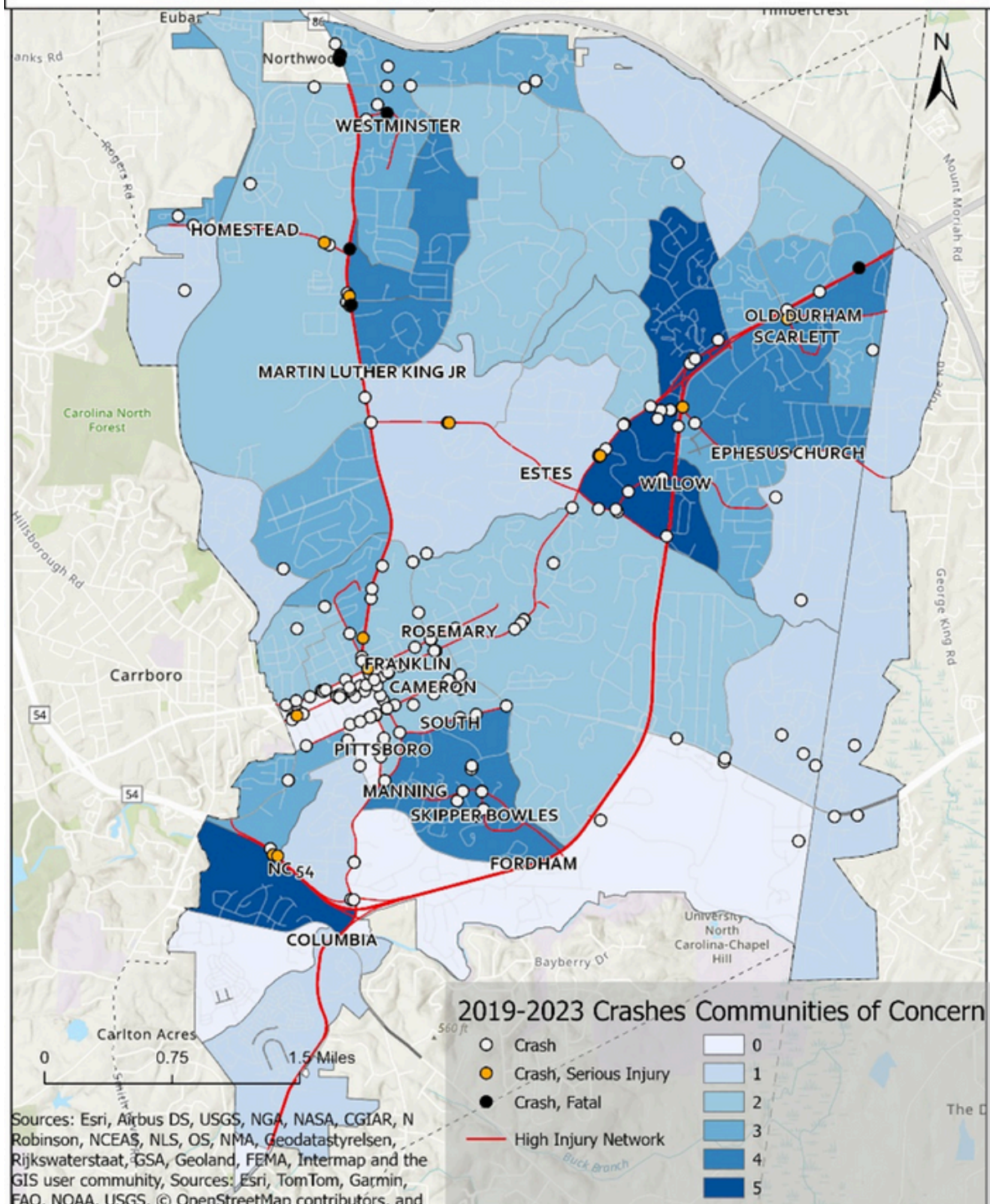
2023 CHAPEL HILL PEDESTRIAN AND BICYCLIST CRASHES





Communities of Concern

CHAPEL HILL PEDESTRIAN AND BICYCLIST CRASHES 2019-2023





Crash Data

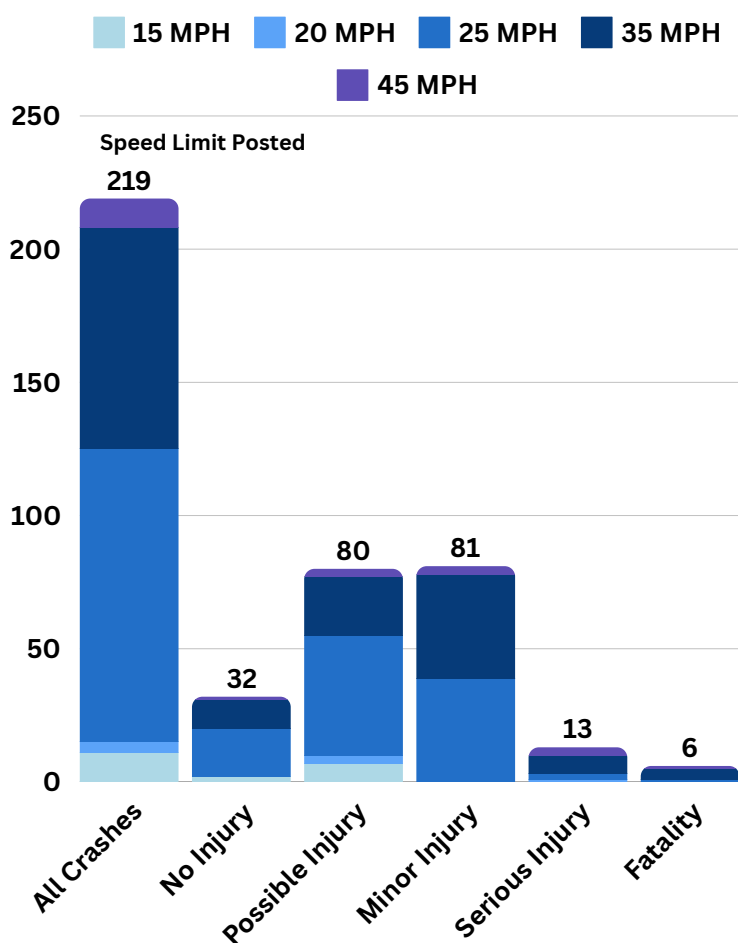
Posted Speed Limits

General Trends-Environment

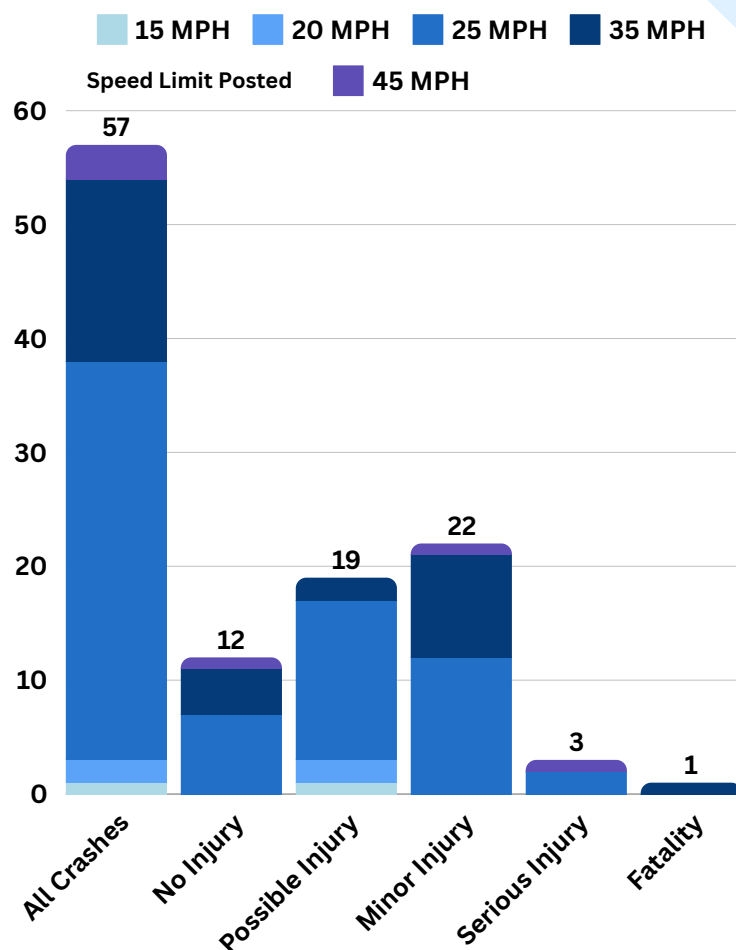


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**Crash Severity by Speed Limit
2019-2023**



**Crash Severity by Speed Limit
2023**



Speed Limit Analysis

Over a five-year period, **about 43% of all crashes and 79% of serious injury or fatal crashes** consistently occurred on **35+ MPH streets**.

In 2023, **33% of all crashes and half, or 50%, of serious injury and fatal crashes** occurred on streets **35 MPH or higher**.



Crash Data

Jurisdiction



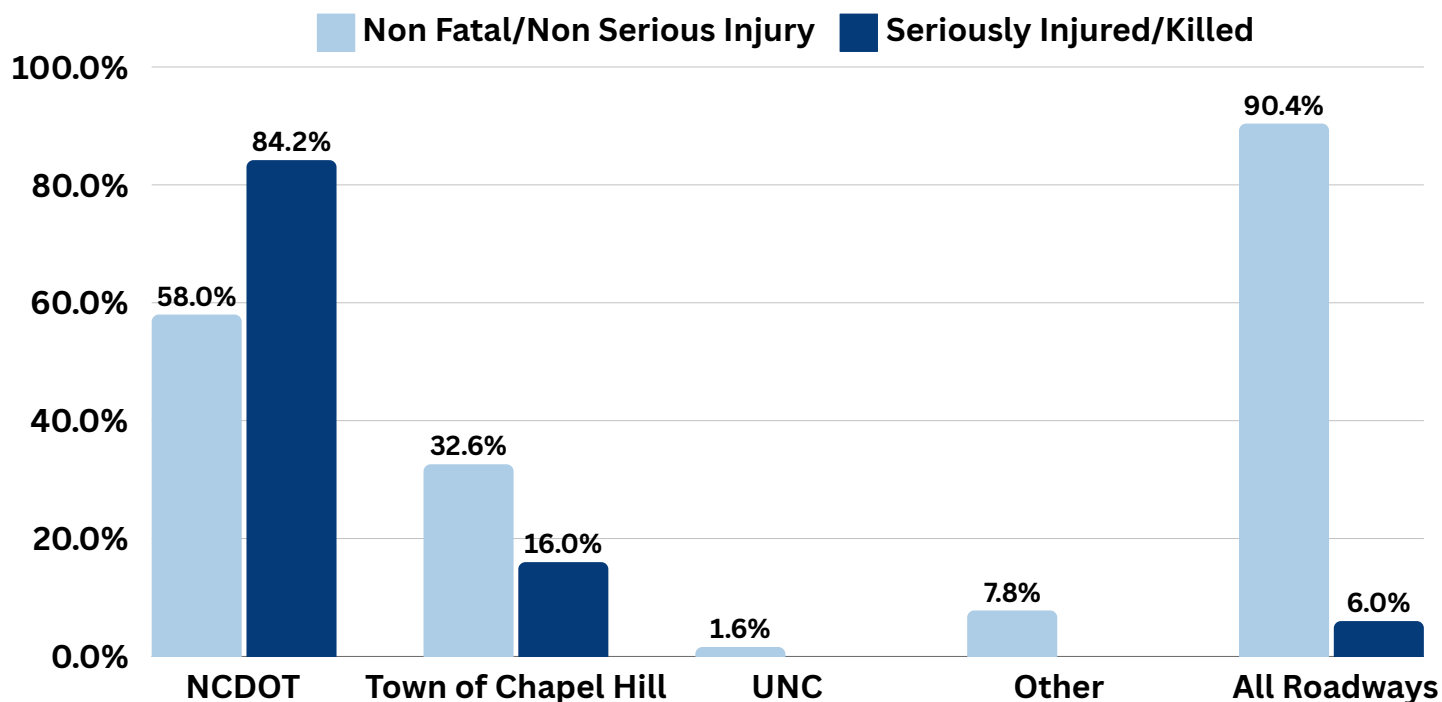
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General Trends-Road Ownership

The Town owns 56% of road miles in Chapel Hill. From 2019 to 2023.

5 out of the 6 fatal crashes in Chapel Hill from 2019 to 2023 occurred on road miles maintained by NCDOT.

Crashes by Jurisdiction 2019-2023



60%

of all crashes
occur on State owned
roads

31%

of all crashes occur
on Town owned
roads

90%

of all crashes are
nonserious/
nonfatal

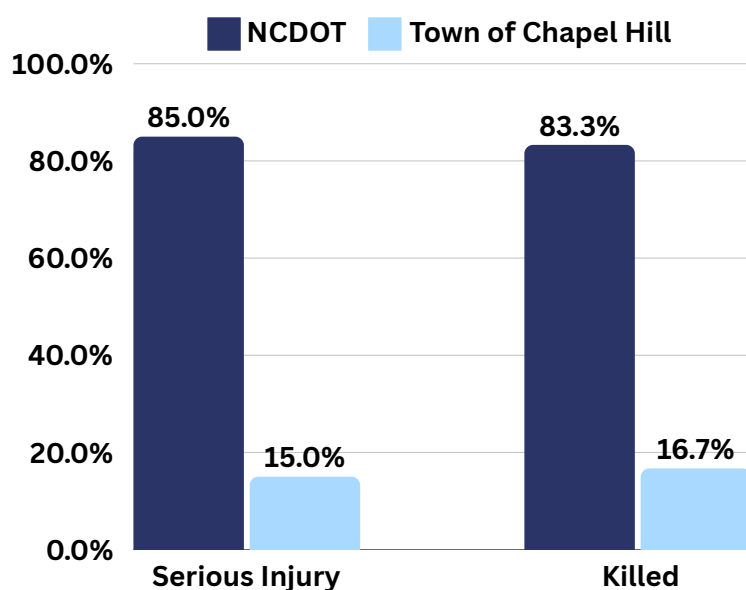


Crash Data

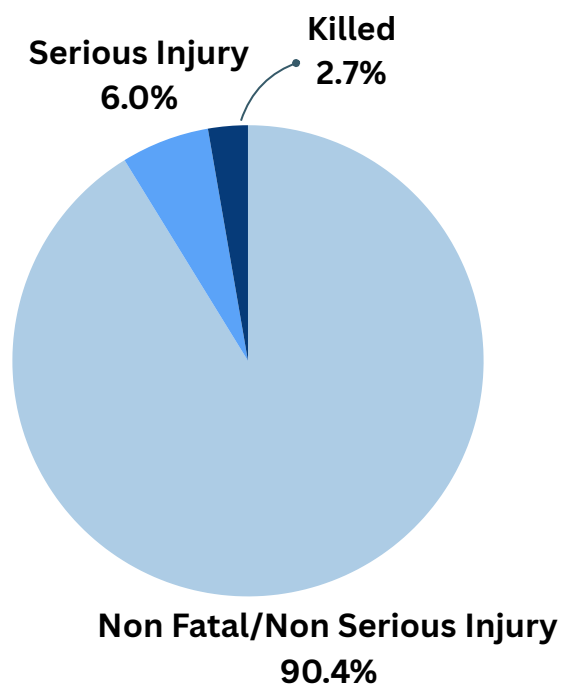
Jurisdiction



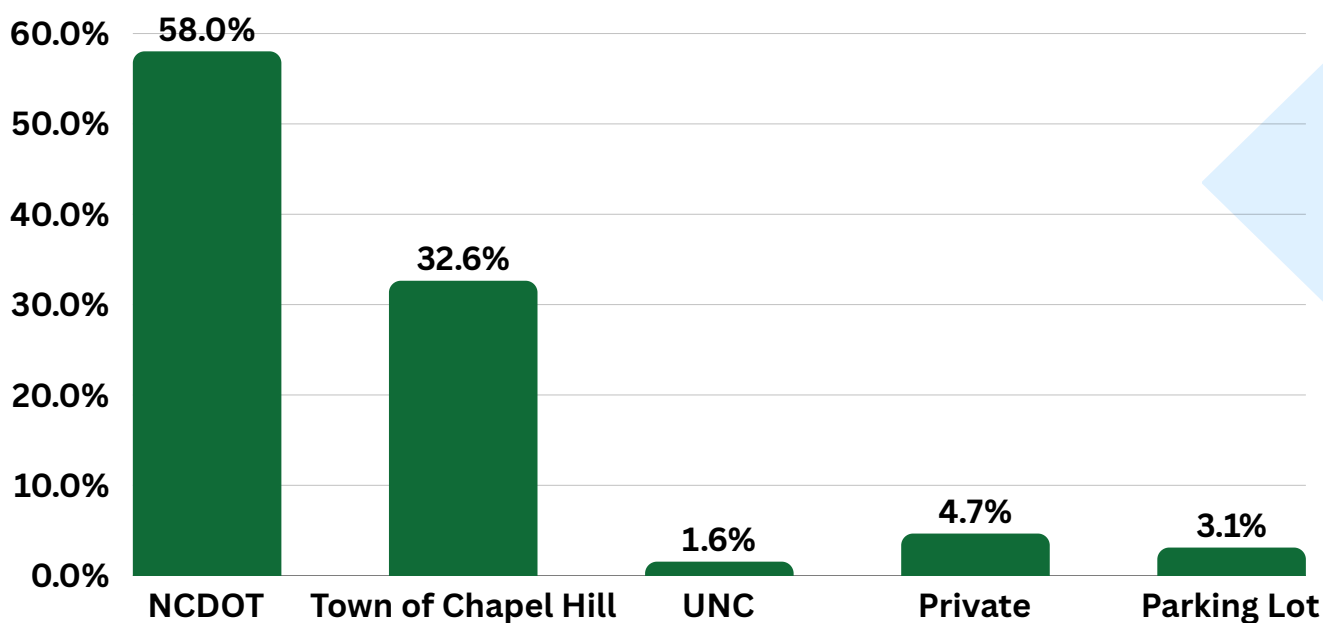
Fatal and Serious Injury Crashes by Jurisdiction 2019-2023



All Crashes by Severity 2019-2023



Non-Fatal and Non-Serious Injury Crashes by Jurisdiction 2019-2023





Crash Data

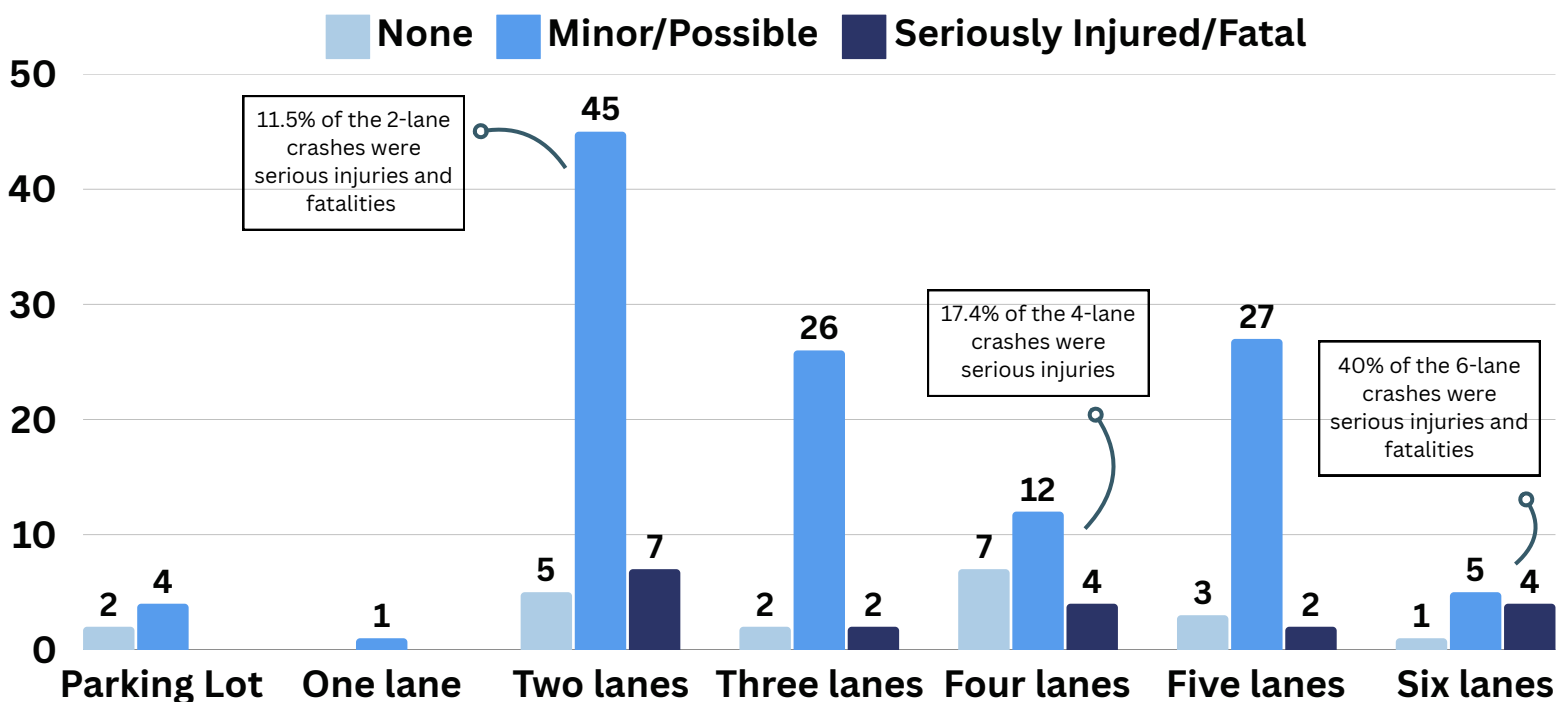
Road Character

General Trends- Severity

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Nearly **41%** of non-severe injury and nonfatal crashes occurred on roadways with two lanes or less. The severity of the crash injury increases on roadways with four or more lanes.

All Crashes: Severity by Roadway Character 2019-2023



Serious Injury and Fatal Crashes 2019-2023



52%

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES OCCURED ON ROADS WITH FOUR OR MORE LANES.



37%

OF PEDESTRIAN AND BICYCLIST DEATHS AND SERIOUS INJURIES OCCURED ON TWO-LANE ROADS



Crash Data

All Crashes- Temporal



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TIME OF DAY AND MONTH

The total of all pedestrian and bicyclist-involved crashes occurred frequently between commute hours of 8 AM-10 AM and 4 PM-7 PM.

All Crashes by Month and Time of Day

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Jan	1	3									2	2	1			2	3	1	1	1		3	2	2
Feb									1	4	3			1		1		3	1	4		1	2	
Mar			1				1			2	1		4	2	1	1			1	1	1	1		
Apr			1						2	2	1	1			3		1	3	1	1	1	2	1	
May	1	1	1											1	1				2					
Jun									3	1	1	1		1	1			2	1		1			
Jul							1			1	1				1	1	2	1						1
Aug			1			1	1		2	1	1	2	1		1	2	4	1	1	1		1	1	1
Sep								1	1	3	2		2		1	1		1	1	2		1	1	
Oct	1		1	1			2	2		1	2		1		2		7			1		2		
Nov				1					2				1	2	1	4	3	5	2	3				
Dec			1						1	2	1	3					4	4	2	3			2	

71%

OF CRASHES
OCCUR DURING
DAYTIME HOURS,
FROM 7AM-6PM

41%

OF CRASHES
OCCUR DURING
THE MONTHS OF
NOVEMBER-
FEBRUARY

Monthly Crash Total

	Total
Jan	22
Feb	21
Mar	17
Apr	20
May	8
Jun	12
Jul	9
Aug	23
Sep	17
Oct	23
Nov	24
Dec	23

Crash Time	Total
12 AM	3
1 AM	4
2 AM	6
3 AM	2
4 AM	0
5 AM	1
6 AM	5
7 AM	3
8 AM	13
9 AM	18
10 AM	13
11 AM	9
12 PM	10
1 PM	7
2 PM	12
3 PM	12
4 PM	26
5 PM	19
6 PM	13
7 PM	17
8 PM	4
9 PM	11
10 PM	7
11 PM	4

SUMMARY

The majority of non-serious/fatal crashes occur during daylight hours during the winter months and August.



Crash Data

Fatal and Serious Injury Crashes- Temporal

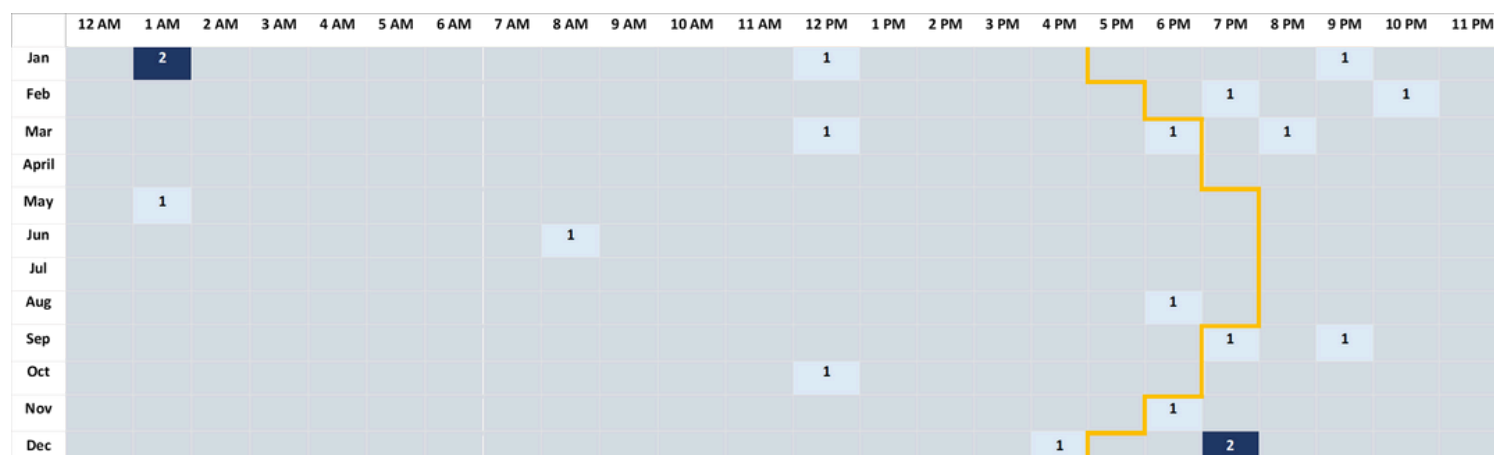


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FATALITIES AND SERIOUS INJURY CRASHES

Pedestrian and bicyclist-involved **fatal and serious injury** crashes occurred most frequently between nighttime hours, 5:00 PM- 1:00 AM. The winter spike in crashes may be attributed to shorter days with less daylight and longer nights.

Fatal/Seriously Injured Crashes Month and Time of Day



Crash Time	Total
12 AM	0
1 AM	3
2 AM	0
3 AM	0
4 AM	0
5 AM	0
6 AM	0
7 AM	0
8 AM	1
9 AM	0
10 AM	0
11 AM	0
12 PM	3
1 PM	0
2 PM	0
3 PM	0
4 PM	1
5 PM	0
6 PM	3
7 PM	4
8 PM	1
9 PM	2
10 PM	1
11 PM	0

TIME OF DAY

The concentration of fatal and serious injury crashes during evening hours may be attributed to dark conditions and limited visibility.

MONTH

Pedestrian and bicyclist-involved crashes are the highest in late fall and winter months with spikes in April and August.

Monthly Crash Total	
Jan	4
Feb	2
Mar	3
Apr	0
May	1
Jun	1
Jul	0
Aug	1
Sep	2
Oct	1
Nov	1
Dec	3

58%

OF FATAL AND SERIOUS
INJURY CRASHES
OCCUR FROM **7PM-6AM**



Crash Data

All Crashes- Day of Week



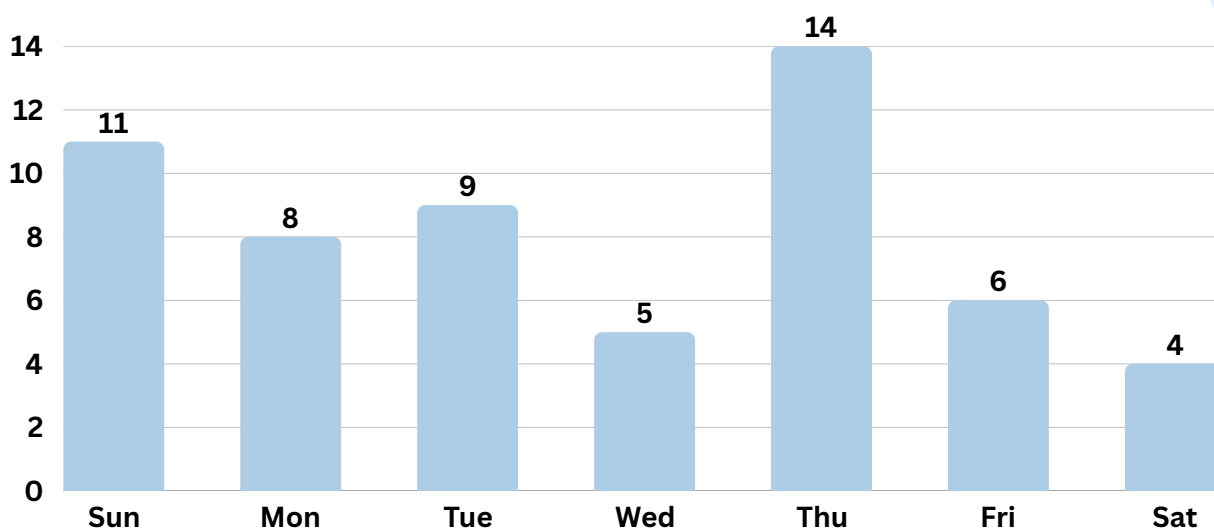
15

DAY OF WEEK

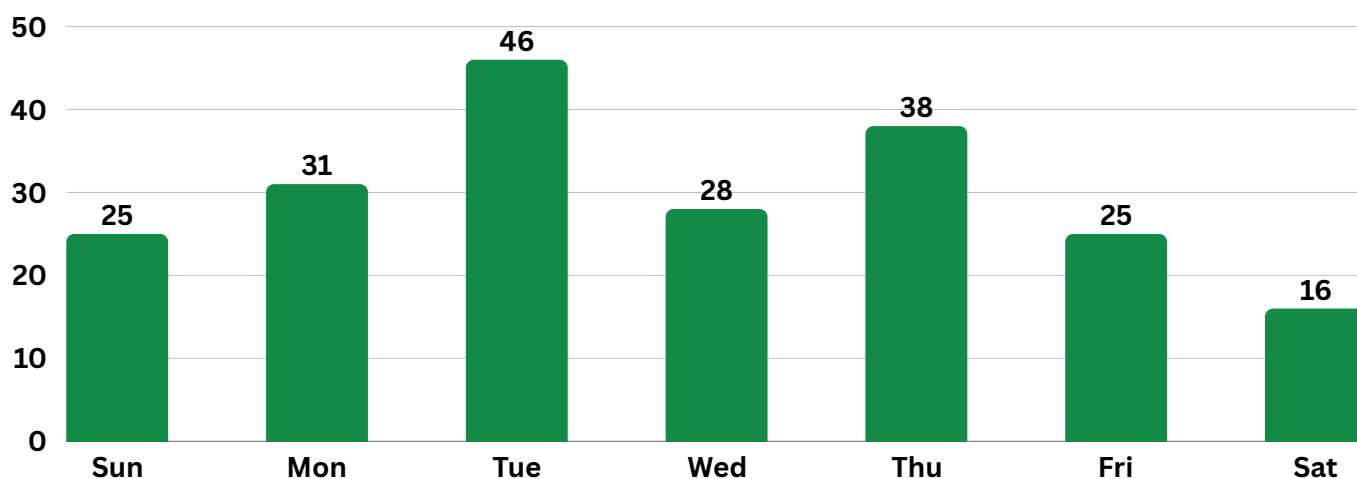
Mid-week crashes are much more frequent than weekend crashes in the 5-year average.

	SUN	MON	TUE	WED	THU	FRI	SAT
2023	11	8	9	5	14	6	4
5-YEAR	25	31	46	28	38	35	16

2023 Crash Total by Week



2019-2023 Crash Total by Week





2023

Accomplishments and Highlights



Safety Data



Safe Streets



Safe People

In 2023, the Vision Zero Task Force looked for opportunities to advance the Town's Vision Zero goals and improve roadway safety in Chapel Hill for all users.

While 2023 saw an increase in crashes compared to 2022, we saw a 3% decrease in **FATALITIES** and a 12% increase in **ZERO INJURY** crashes.

2023 American Association of Retired Persons (AARP) Community Challenge Demonstration Grant.

- Innovative Pilot Infrastructure Projects
- Education and Community Outreach Initiatives.



VISION ZERO

SAFE STREETS IN CHAPEL HILL

SAFE STREETS: CONNECTING COMMUNITIES AND INFRASTRUCTURE



TRAFFIC CALMING PROJECTS



Traffic calming is the process of slowing speeds and improving safety by introducing physical elements to change the design and feel of the road. While permanent infrastructure projects can take years to implement, temporary, flexible materials can be used to calm traffic in the short-term, and may be tweaked and adjusted as needed.

In 2023, the AARP Community Challenge Demonstration Grant allowed the Town to purchase materials and trial new traffic calming measures at locations where data indicated high speeds and safety concerns. The Town implemented three pilot projects near the Hargraves Community Center in the Northside neighborhood, on Brookview Drive, and at the intersection of Rosebud Lane and Honeysuckle Road. Staff collected before and after speed data, observed the roads in question, and gathered resident feedback to craft solutions to address unsafe conditions on residential roads. In all locations staff have seen a reduction in speeds and continue to adjust placement and monitor these improved conditions.



SAFE STREETS

WALK AUDITS:

- MARTIN LUTHER KING JR. BLVD.
- WEST FRANKLIN ST.



The walk audit is a tool the Town uses to gather on-the-ground knowledge of safety issues bicyclists and pedestrians face in order to find potential improvements. To streamline processes, staff has developed a walk audit kit to be used in future monthly walk audits. The first walk audit was conducted along Martin Luther King Jr. Blvd on December 6th, 2022, falling under the 2023 Grant Year. Along with the audit, Vision Zero staff also created a safe condition scoring template and checklist.

On November 14, 2023, the Town conducted a walk audit along W. Franklin Street with a task force of fifteen staff and residents. This task force highlighted infrastructure that was working well for pedestrians and bicyclists, and also offered feedback on ways the Town can improve the safety and experience. Feedback from this walk audit informs future improvements to W. Franklin Street and other streets in Town that receive increasing foot and bike traffic.

Following the completion of the W. Franklin Street walk audit, the feedback was incorporated into a report. Recommendations in the report to increase crosswalk visibility were addressed by repainting crosswalk markings.



SAFETY DATA: USING DATA TO ENHANCE SAFETY

DATA COLLECTION AND ENFORCEMENT



Crash Data: Annual and monthly crash statistics analyzed and summarized

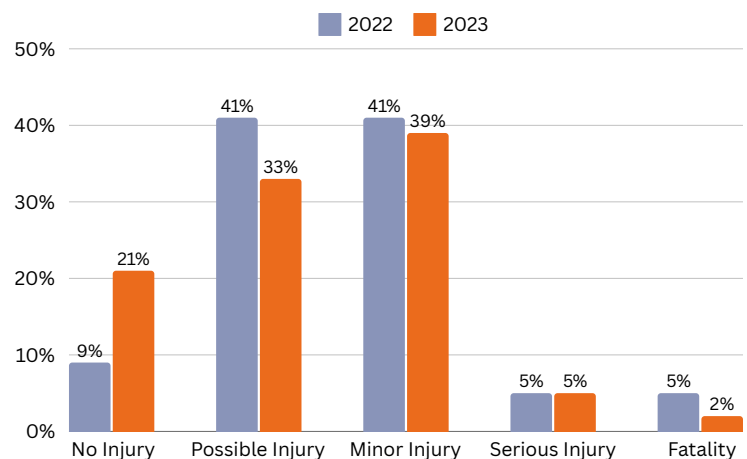
Speed Data Collection: The Town collected speed data on thirty-five roads in Chapel Hill. This data is used to identify areas most in need of traffic calming measures.

High-Visibility Enforcement Projects: Chapel Hill Police Department conducted 300 hours of crosswalk and traffic signal enforcement and education. Chapel Hill Police additionally issued 86 citations for traffic and speed offenses.

Enforcement: Vision Zero and Chapel Hill Police Partnerships

- ✓ Process and analyze crash data statistics.
- ✓ Seatbelt initiatives
- ✓ Impaired driving checkpoints
- ✓ School zone enforcement during high volume times (start of school year, post winter break)
- ✓ Teen driver education

2022-2023 Crash Type Comparison





SAFE PEOPLE: PROMOTING SAFE ACTIVE TRAVEL

OUTREACH, EDUCATION, AND COMMUNITY ENGAGEMENT



2023 was an important year for the Town's Vision Zero outreach efforts. On August 26th, the Town hosted its inaugural Vision Zero Community Safety Festival. This provided the opportunity to educate residents on the Vision Zero program and initiatives, and build community around shared values of safety and dignity in active travel. Twenty-eight Town Staff and community volunteers ensured the festival was a success, reaching 107 Chapel Hill residents.

The Vision Zero Team also engaged with more than 200 UNC students at the Cyclicious Bike Event, sharing how the Town is working to improve safety on the roads and distributing Vision Zero safety gear, such as reflective vests and bike lights.