



September 26, 2023

Town Council Presentation
Vision Zero 1-year Update



AGENDA

- Vision Zero overview & staffing
- Vision Zero Action Plan
- Coordination and outreach
- Crash data analysis
- Traffic safety projects
- Safe Streets & Roads for All
- Progress report



What is Vision Zero?

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

Vision Zero Timeline in Apex

August 2022
Plan
Adoption

September 2022
Safe Streets & Roads
for All Grant
Application

June 2023
Vision Zero
Leadership
Institute

July 2023
Safe Streets &
Roads for All
Grant
Application
(Round 2)

August 2023
Calendar Year
2018-2022
Crash Data
Analysis &
Mapping



Traffic Safety Engineer

- Sajid Hassan, PE (hired March 2023)
 - 15+ Years of transportation engineering experience
 - Formerly with NCDOT and other NC municipalities
- Manages:
 - Vision Zero Program
 - Traffic Calming Program
 - Traffic Safety Studies
 - Pedestrian Studies

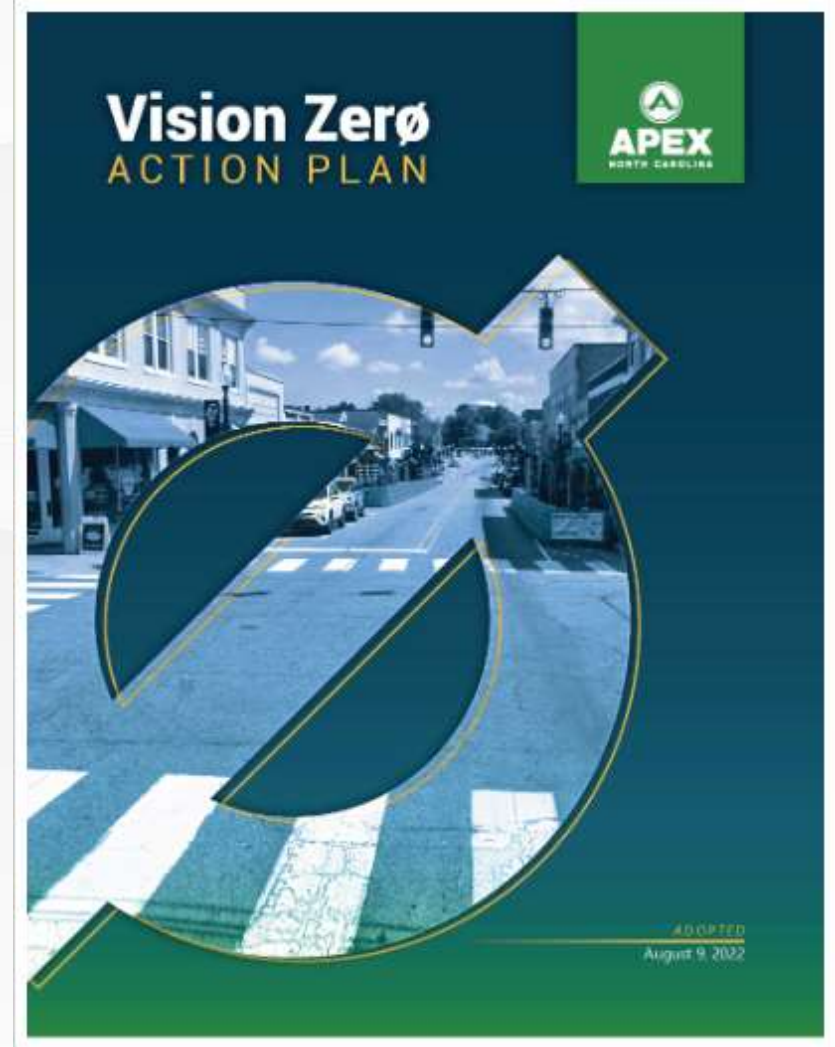


Vision Zero Task Force

- Traffic Services
- Long Range Planning/Transit Planning
- Police
- Communications
- Diversity, Equity & Inclusion
- Public Works Street Operations
- Fire Department

Interdepartmental and multi-disciplinary approach to traffic safety

The Vision Zero Action Plan is the Town's roadmap to reaching zero traffic-related fatalities and severe injuries by 2035



FIVE "E" APPROACH



Engineering



Education



Encouragement



Enforcement








Evaluation

GOALS

- 1** Promote a culture of traffic safety that prioritizes equity and inclusion.
- 2** Address collisions through infrastructure investments.
- 3** Enhance Town policies, processes, and evaluation to incorporate Vision Zero tenets.
- 4** Create and leverage partnerships to improve traffic safety and awareness.

28 Actionable Strategies under the Five E's

-  Engineering (7)
-  Education (5)
-  Encouragement (6)
-  Enforcement (4)
-  Evaluation (6)

Each Strategy identifies which of the 4 Goals are met, a Leading Department, Supporting Department(s), and a Timeframe

Statewide Program



- Facilitated by UNC Highway Safety Research Center (HSRC)
- Funded through Governor's Highway Safety Program (GHSP)
- Wilmington, Knightdale & Leland are current assigned community partners with Apex
- Quarterly meetings with all NC Vision Zero communities



Leadership Institute

The NC Vision Zero Leadership Institute is team training resource for North Carolina communities that have or are planning to start a Vision Zero initiative.

- Key takeaways (2023)
 - Encourage participation
 - Expand traffic safety/traffic calming countermeasures toolbox
 - Utilize modular pilots
 - Promote Safe Routes to School

Apex Vision Zero Website

Background

Programs & Initiatives

Stakeholders

Progress

The [Resolution to Support Vision Zero Apex](#) was approved by the Apex Town Council on July 21, 2020 affirming the Town's commitment to eliminating traffic deaths and serious injuries. It also provided a framework for Town departments and community stakeholders to work together to achieve this goal.

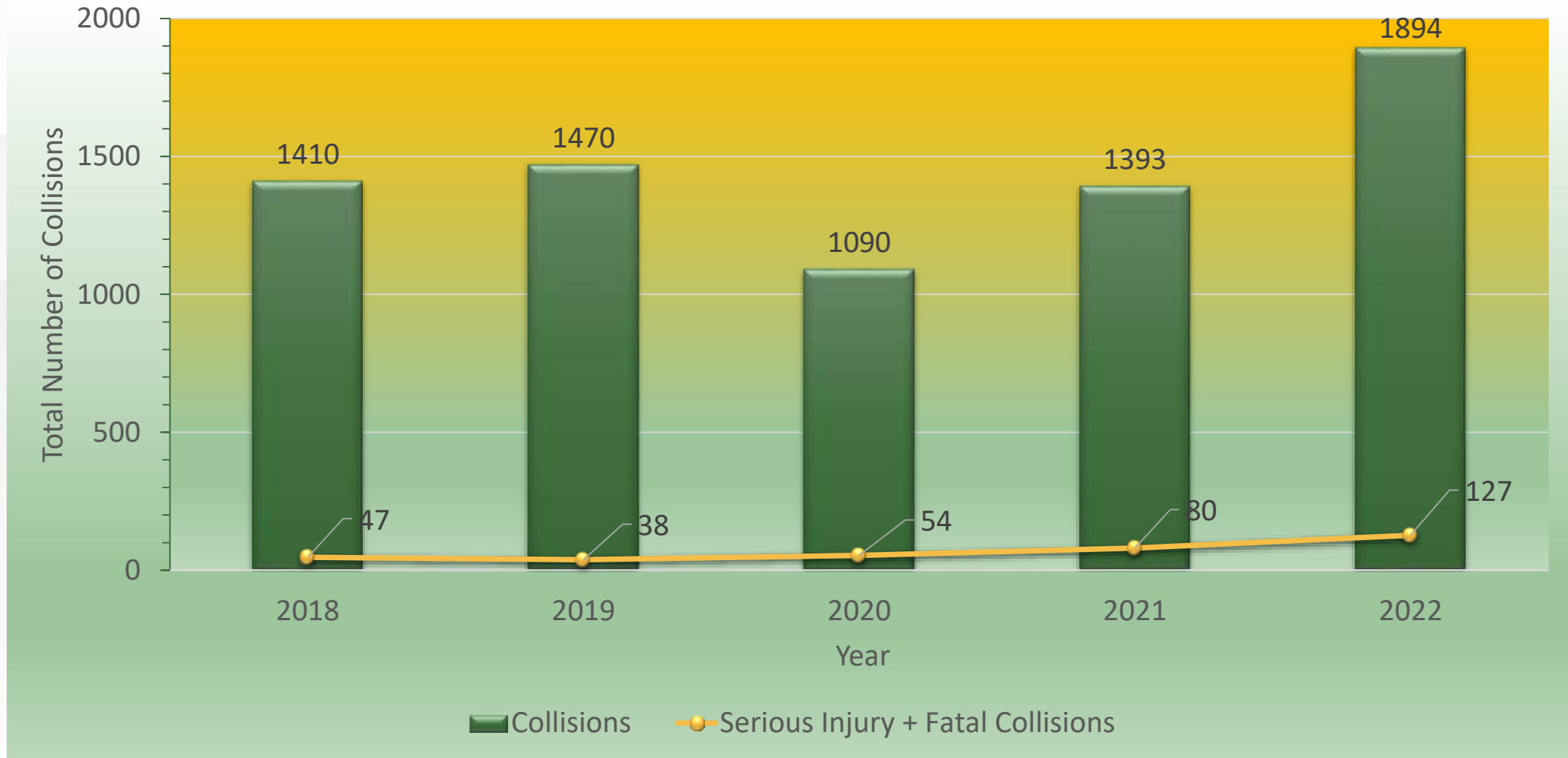
Vision Zero started in Sweden in the 1990s. It has been adopted by many countries around the world and cities within the United States. North Carolina adopted the Vision Zero program in 2015, and launched NC Vision Zero as a resource for municipalities.

Approximately 6,709 motor vehicle-related crashes occurred in Apex over a 5-year period from 2015-2019 resulting in 237 severe injury crashes and 4 fatalities. Crash data analysis and mapping will be updated and published annually as part of implementation of the Actionable Strategies outlined in the Action Plan.

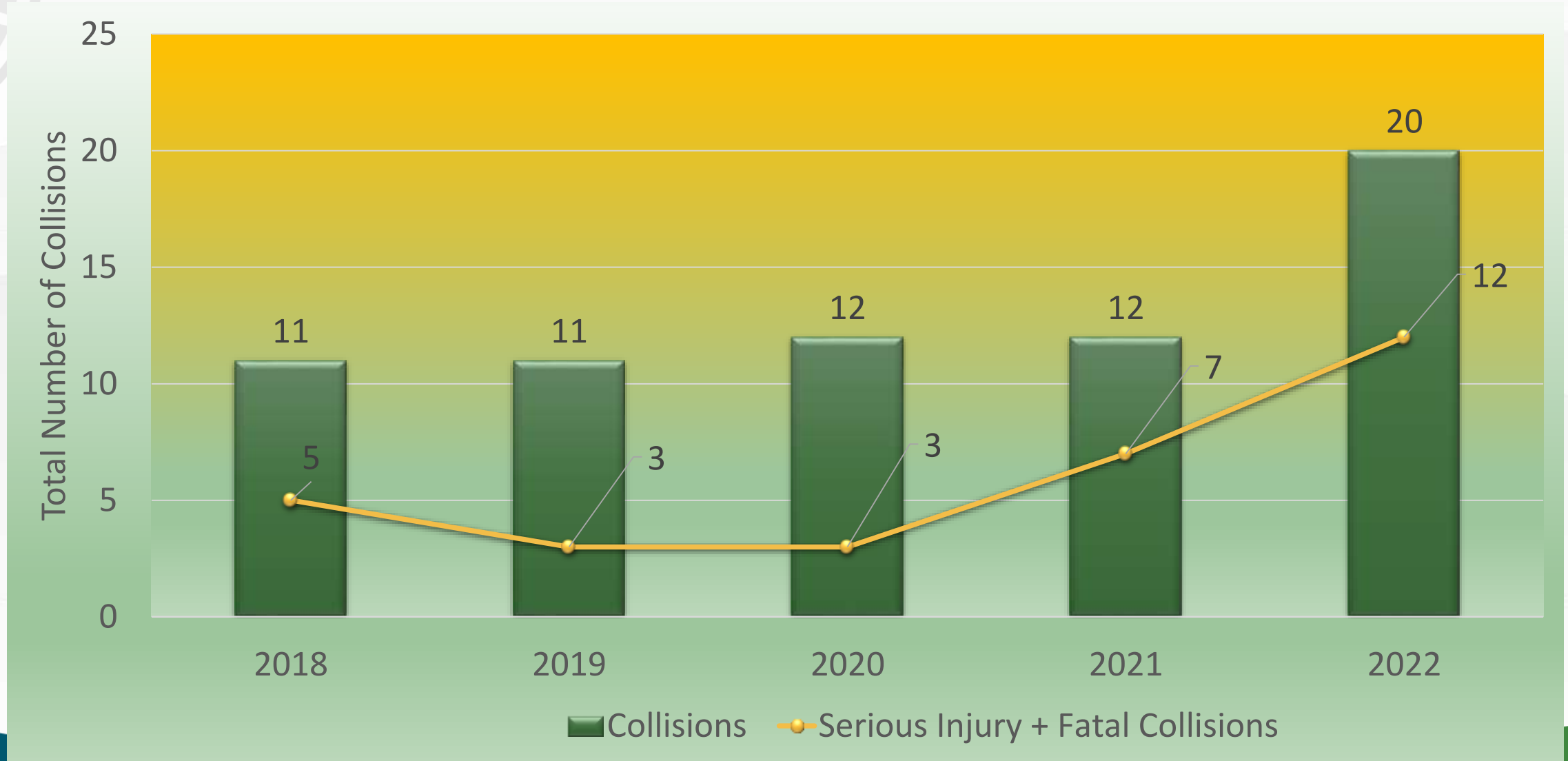
Crash Data Analysis

- Action Plan crash data was based on fiscal year (July 1-June 30)
- Timeframe was later revised to comply with calendar year grant application requirements
- Current 5-year crash data as of September 2023 is calendar year 2018-2022

Total Number of Crashes

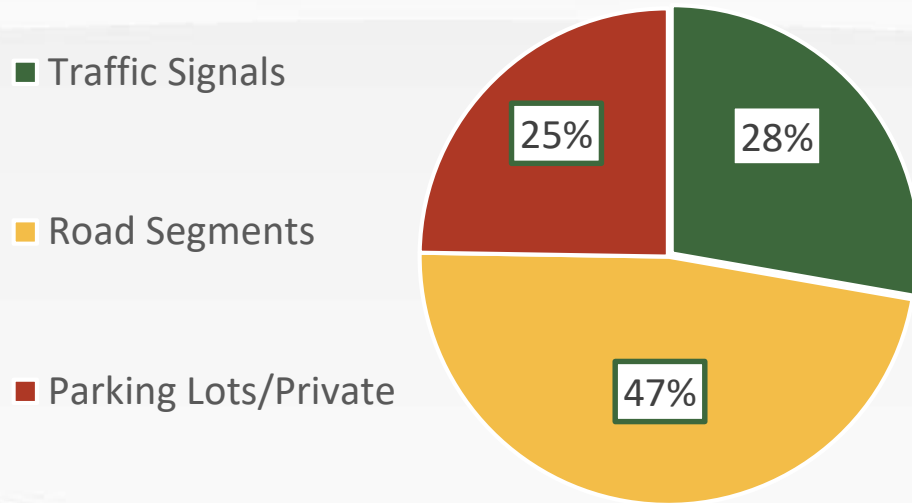


Number of Crashes Involving Cyclists and Pedestrians

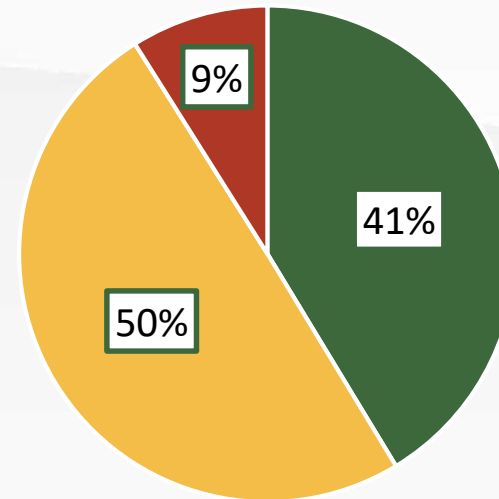


Where Crashes Occur

Where Do Crashes Occur?



Where Do Severe and Fatal Crashes Occur?



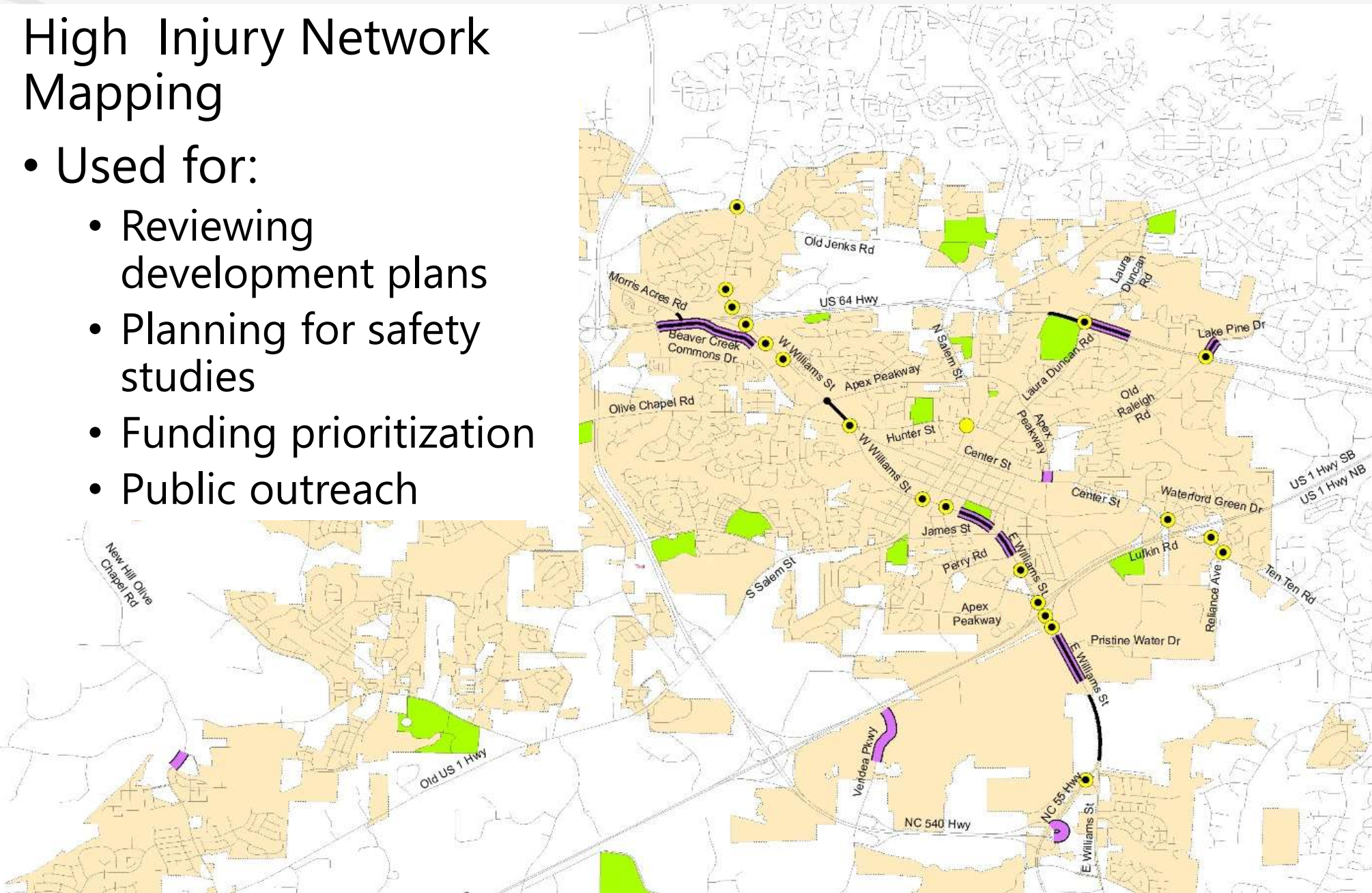
High Injury Network Mapping

- Used for:
 - Reviewing development plans
 - Planning for safety studies
 - Funding prioritization
 - Public outreach

DATA ANALYSIS RESULTS
MAP OF HIGH INJURY NETWORK
AND HIGH CRASH NETWORK
IN APEX (2022)

Legend

- High Crash Network - Signals
- High Injury Network - Signals
- High Crash Network - Segments
- High Injury Network - Segments
- Apex Schools
- Apex Streets 2023
- Corp Limits



NC 55 at Hughes St Pedestrian Safety Project



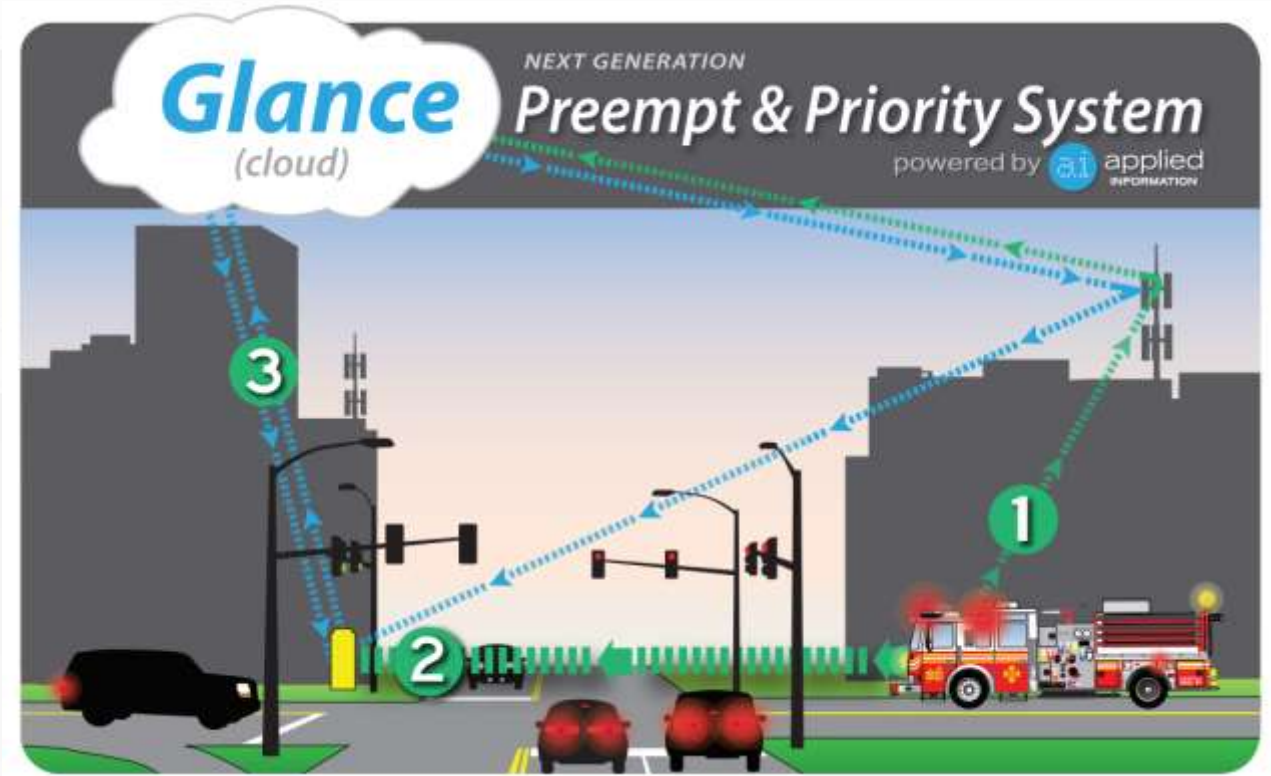
- Pilot study with UNCC (LIDAR unit & data processing)
 - Implemented Leading Pedestrian Interval
 - Adjusted Red Clearance Intervals
 - Installed turning vehicle yield to pedestrians signs
 - Restriped crosswalks and stop bars
 - Red light running violations highest on Fridays between 11 AM – 1 PM; targeted enforcement
 - Recommended Watch 4 Me NC and Safe Routes to School outreach at Apex Middle School



NC 55 at Hughes St (2023)

GPS Cellular Emergency Vehicle Preemption (EVP) Phase 1 Project

- Installation of equipment
 - Install at 10 traffic signals on NC 55 and Salem St
 - Five (5) other traffic signals have equipment pre-installed
 - Install equipment in fire trucks
 - Interoperability with Cary EVP
- VHB selected for signal design
- Next steps: NCDOT approval & equipment installation



Corridor Safety Studies (FY23)

- Two high injury network corridors
 - Beaver Creek Commons Drive, NC 55 to Creekside Landing Drive
 - Ten Ten Road, US 1 to Reliance Avenue
- RK&K selected to perform studies
- Preliminary recommendations include:
 - Signs and markings
 - Signal phasing and timing
 - Modifications to driveway access
 - Maintenance/clearing of vegetation
- Next steps: finalize reports late 2023 and conduct outreach



Beaver Creek Commons Dr at Zeno Rd (2023)



Ten Ten Rd at US 1/Lufkin Road (2023)

Safe Streets and Roads for All (SS4A) Grant Program



- Submitted grant application for FY24 grant funding (July)
 - Six (6) Supplemental Planning, Analysis & Demonstration Projects
 - 19 Implementation Projects
 - Six (6) of the 19 implementation projects address Low-Cost/High-Impact Improvements on the High Injury Network
 - Roadside issues/strike hazards
 - Advance warning signs, overhead signs and supplemental signs
 - Advance warning systems and driver information displays
 - Geometric design and pavement marking countermeasures
- Awards to be announced in December 2023

Engineering ★★★★★★



- 7 Actionable Strategies
- Progress on 6 out of 7
- Work toward a performance evaluation process for prioritizing projects based on safety needs
- Notable activities:
 - Crosswalk lighting standards
 - Safety studies on the High Injury Network
 - Updated standards for ADA-PROWAG compliance
 - Multiple Safe Routes to School Projects



North Salem Street Sidewalk (2023)

Education ★★★★★

- 5 Actionable Strategies
- Progress on 5 out of 5
- Notable activities:
 - Traffic Safety Presentation Outreach Programs
 - Power of Youth Educational Programs
 - Governor's Highway Safety Program & Watch for Me NC
 - Traffic Safety Campaigns
 - Dynamic Message Boards & Radar Speed Signs
 - Defensive Driving Cornerstone Modules



Encouragement ★★★★★★

- 6 Actionable Strategies
- Progress on 6 out of 6
- Notable activities:
 - Walk to School events & materials
 - Safe Routes to School and Vision Zero outreach at events
 - Vision Zero webpage and progress updates
 - Vision Zero Leadership Institute
 - Statewide Vision Zero coordination



Walk to School Day, Olive Chapel ES (2023)

Enforcement ★★★★★

- 4 Actionable Strategies
- Progress on 4 out of 4
- Notable activities:
 - Watch for Me NC targeted enforcement
 - Data-driven enforcement initiatives
 - Governor's Highway Safety Program DWI Grant Officer
 - "Move over" enforcement on US 1 & US 64
 - Training on biased policing issues



BAT mobile

Evaluation ★★★★★

- 6 Actionable Strategies
- Progress on 5 out of 6
- Work to establish performance measures for traffic enforcement campaigns
- Notable activities:
 - Draft policy and prioritization for bus stop improvements
 - Municipal speed limit and traffic calming policy review
 - 2018-2022 crash data analysis
 - Monthly Task Force meetings
 - Traffic Safety Engineer



Hughes St at NC 55 Bus Stop (2023)



Major Initiatives for 2024

- Capital Improvement Program
 - Phase 1 emergency vehicle preemption installation
 - Phase 2 emergency vehicle preemption prioritization
 - Safety improvements from FY24 high-injury network studies
 - Prioritize FY25 studies
- Third round of school principal updates & interviews for Safe Routes to School program
- Review of policies and ordinances for possible changes



Thank you!