Safe Streets for All

in New Castle County

A Partnership of WILMAPCO, New Castle County, Municipal, and State Agencies, and Community Stakeholders

Agency/Public Review Timeline:

- 7/5-7/26 – Committee review
- 7/26-7/31 – Document edits from committee comments
- 8/1-8/31 – Public review
- 8/17 – WILMAPCO Technical Advisory Committee
- 9/1-9/7 – Document edits from public review
- 9/14 – WILMAPCO Council

OUR GOAL:

50 percent fewer fatal and serious crashes by 2030 and eliminate them by 2040

Draft July 3, 2023

SAFE STREETS FOR ALL NEW CASTLE COUNTY COMMITTEE

Agency	Jurisdiction Type
New Castle County Emergency Management	County
New Castle County Emergency Medical Services	County
New Castle County Executive's Office	County
New Castle County Land Use	County
US DOT Motor Carrier Safety Admin	Federal
WILMAPCO	MPO
Arden	Municipal
Ardencroft	Municipal
Ardentown	Municipal
Bellefonte	Municipal
City of New Castle	Municipal
City of New Castle	Municipal
City of Wilmington	Municipal
Delaware City	Municipal
Elsmere	Municipal
Middletown	Municipal
Town of Newport	Municipal
Town of Odessa	Municipal
Town of Townsend	Municipal
Appoquinimink School District	School Transportation
Brandywine School District	School Transportation
Christina School District	School Transportation
Colonial School District	School Transportation
Red Clay School District	School Transportation
Department of Health and Social Services	State of Delaware
Delaware Governor's Office	State of Delaware
Delaware Office of Highway Safety	State of Delaware
Delaware Office of State Planning	State of Delaware
Delaware Transit Corporation	State of Delaware
DelDOT	State of Delaware
Division of EMS	State of Delaware
Delaware Center for Transportation	University of Delaware
Institute for Public Administration	University of Delaware
League of Local Government	University of Delaware
AAA Mid-Atlantic	Nonprofit
AARP	Nonprofit
DelDOT	State of Delaware

DEFINITIONS

Crash/Collision – Preventable intersecting movements of roadway users that may result in injury or loss of life, trauma, and property damage.

Safe Streets for All - A collaborative initiative to eliminate roadway deaths and severe injuries in our communities.

Serious Injury - A serious (or severe) injury involves one or more of the following:

- Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest, or abdominal injury other than bruises or minor lacerations
- Significant burns (second and third degree burns over 10% or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis

Systemic Safety - A systemic approach to safety involves widely implemented improvements based on high-risk roadway features correlated with specific severe crash types. The approach helps agencies broaden their traffic safety efforts at little extra cost.

Transportation Equity – A recognition that transportation-related externalities, such as traffic deaths and injuries, and environmental impacts caused by transportation systems, are disproportionately experienced by some community groups and transportation network users more so than others.

Vision Zero – A road safety philosophy which states that no loss of life due to traffic collisions is acceptable.

Vision Zero NCC Goal – A goal to end fatalities and serious injuries caused by traffic crashes in New Castle County by 2040 and cut the number in half by 2030 compared to 2022.

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INTRODUCTION

WHAT IS SAFE STREETS FOR ALL IN NEW CASTLE COUNTY

Safe Streets for All in New Castle County (SS4A) is a cooperative effort to eliminate roadway deaths and serious injuries in our communities. WILMAPCO, local governments, state agencies, and community stakeholders have developed this action plan to identify how we can collectively achieve zero fatalities. The action plan outlines strategies and actions that should be taken to reverse the rising number of serious crashes. It is simply a starting point—a living document that will respond to data trends and continue to incorporate safety innovations and opportunities to eliminate traffic fatalities and injuries. This new approach will need to go beyond "business as usual." Solutions will require action by policymakers, engineers, planners, first responders, enforcement agencies, and the traveling public.

In other words, SS4A is a plan to make our roads safer for everyone. It will require cooperation from everyone involved in transportation, from policymakers to the traveling public. We can all do our part to help make our roads safer for everyone.

MORE THAN ONE PERSON DIES EACH WEEK ON OUR STREETS FOUR PEOPLE EXPERIENCE LIFE-ALTERING SERIOUS INJURIES.

In 2022, a record 86 people died on New Castle County streets; between 2015 and 2021 there were 1,573 serious injuries and 361 deaths. This loss is unacceptable.

SS4A examines the locations, causes, and trends surrounding these crashes to determine a comprehensive approach to reducing and eliminating these tragedies. Until now, transportation systems have focused disproportionately on moving vehicles as efficiently as possible and safety planning has relied on enforcement and roadway user behavior.

Those lost or harmed are far more than points on a map.
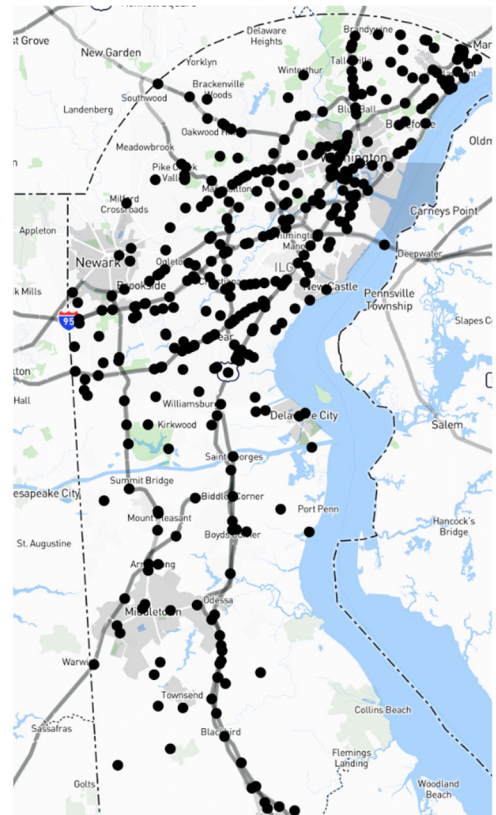
Serious Injuries/Fatalities, 2015-2021

Zero
is the only acceptable number of deaths and severe injuries on New Castle County streets.
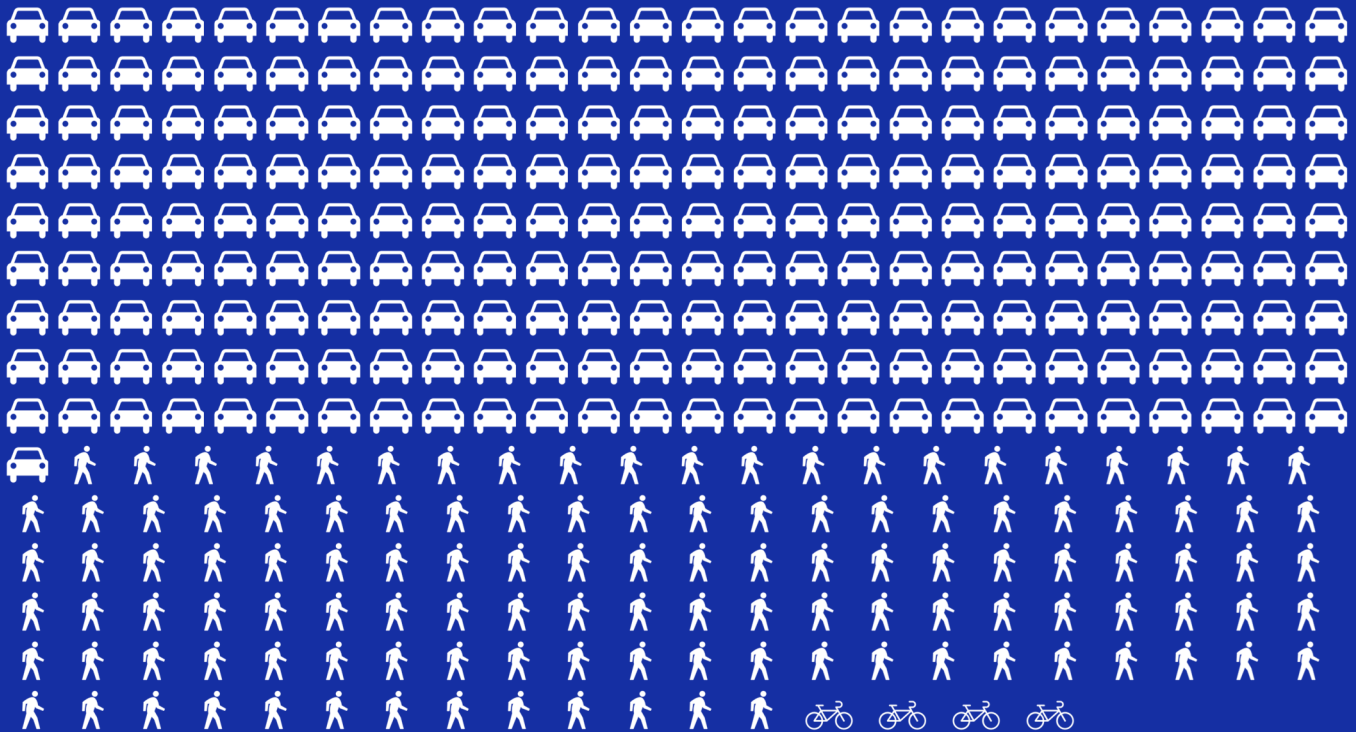
CRASH HISTORY: A CALL TO ACTION

Between 2017 and 2021 the loss and harm to life was tragic and significant. On average, crashes resulted in:

1   **Fatalities per week**

4   **Severe injuries per week**

Over those seven years, people died in 235 vehicle crashes, 122 pedestrian crashes, and four bicycle crashes. People were seriously injured in 1,320 vehicle crashes, 229 pedestrian crashes, and 24 bicycle crashes.

In 2022, a record 86 people died.

Better transportation design could have prevented or reduce the severity of many of these crashes.

Our Goal: Serious Injuries and Deaths reduced by 50% by 2030 and eliminated by 2040.

These are mothers, fathers, sons, daughters, husbands, wives, friends, neighbors, and colleagues. Their loss exacts a serious toll, including emotional trauma, healthcare expenses, wage and productivity losses, and significant taxpayer spending on emergency response.

One life lost on our streets is one too many.

THIS ACTION PLAN IS DEDICATED TO THOSE THAT HAVE LOST THEIR LIVES ON STREETS IN NEW CASTLE COUNTY.

OUR APPROACH, GUIDING PRINCIPLES, AND CORE VALUES

A SAFE SYSTEMS APPROACH

SS4A adopts the Safe System Approach to achieve Vision Zero, which aims to eliminate all fatal and serious injury crashes. The Safe System Approach has been embraced by the U.S. Department of Transportation and has proven to be effective in preventing serious crashes. It is a comprehensive and holistic approach that builds and layers strategies to both prevent crashes from occurring in the first place and minimize the severity of crashes when they do occur.

This is a shift from a conventional safety approach because it focuses on both human mistakes and human vulnerability, putting in place layers of redundancies to protect everyone. For years, a traditional approach has been used in New Castle County, implementing many excellent education and enforcement programs. However, serious crashes have continued to rise, proving that more is needed. Therefore, with SS4A, we are shifting from a traditional approach to a safe system approach.

Traditional	Safe System Approach
Prevent crashes	Prevent deaths and serious injuries
Improve human behavior	Design for human mistakes/limitations
Control speeding	Design for appropriate speeds
Individuals are responsible	Share responsibility
Enforce traffic laws	Design self-enforcing facilities
React based on crash history	Proactively identify and address risks

OUR GUIDING PRINCIPLES

Deaths and serious injuries are unacceptable: We must have zero tolerance for traffic deaths and serious injuries.
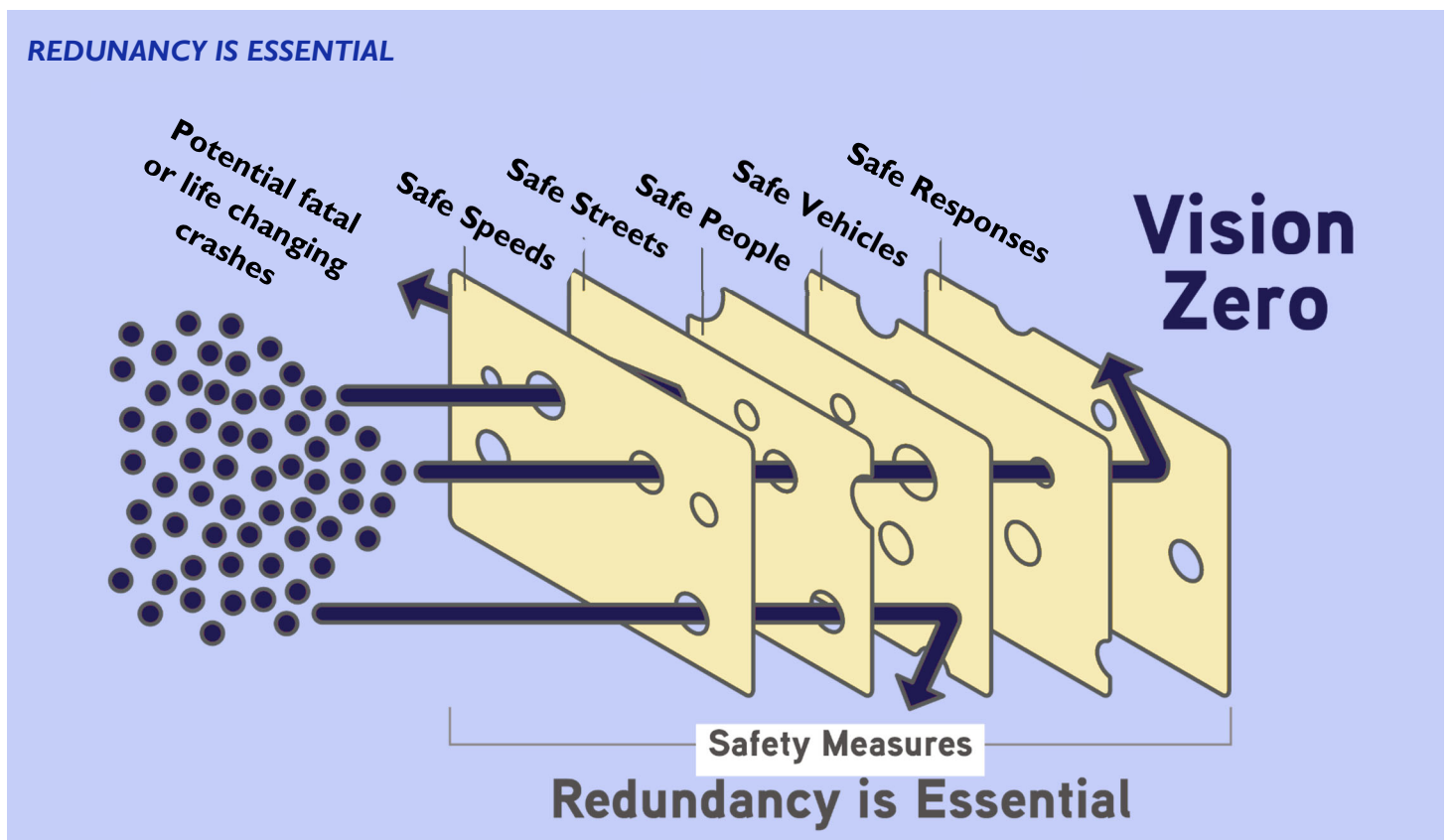
People make mistakes: We can design and operate our roads to accommodate human mistakes and prevent death and serious injury.

The human body is fragile: Pedestrians and bicyclists are particularly vulnerable to death and injury, and this risk decreases on slower-speed streets.

We share responsibility: Decision-makers must prioritize safety, engineers and planners must build safer communities, educators must instill safe behavior, and first responders must provide the best possible response.
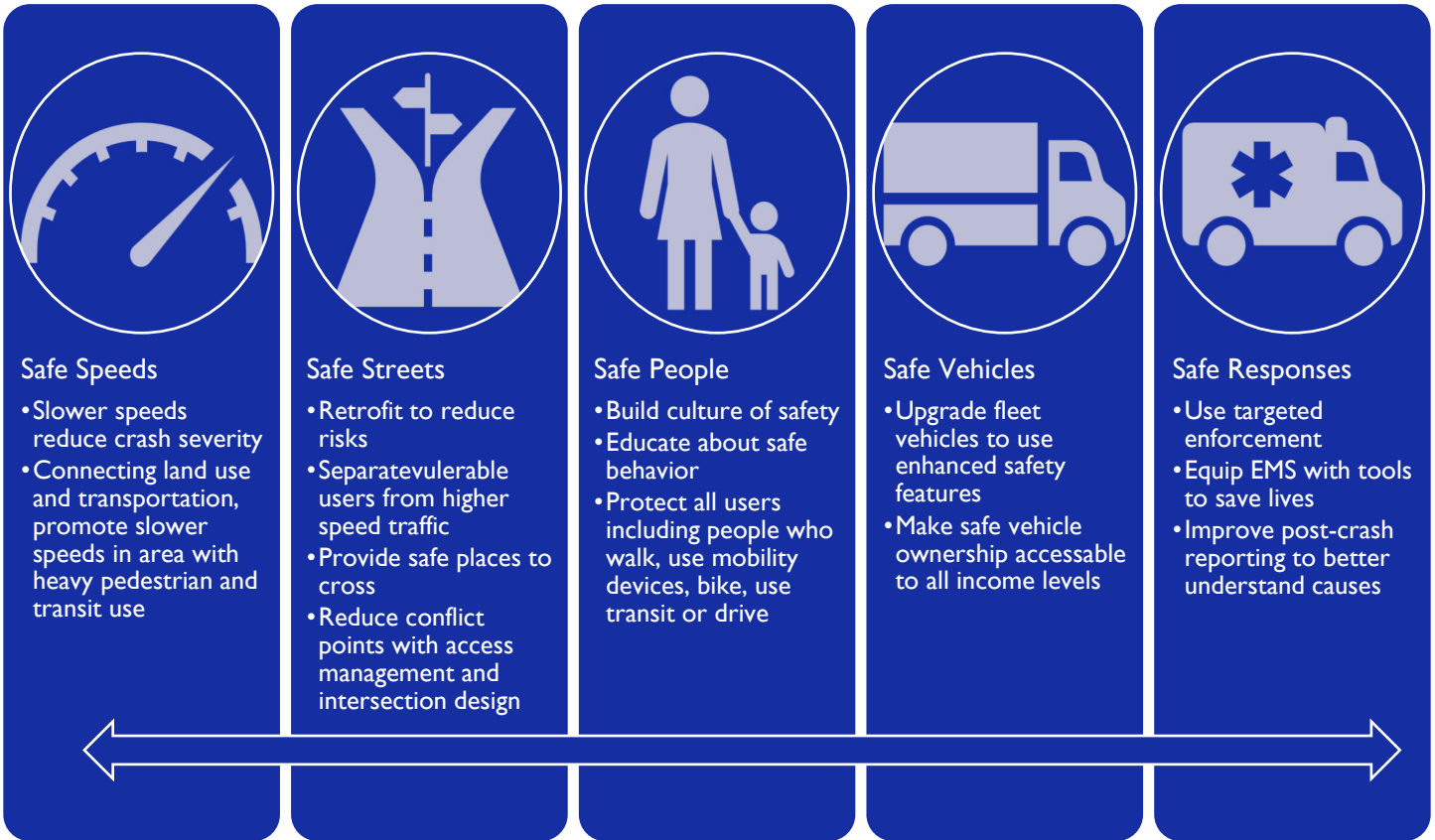
We must be proactive in our approach to traffic safety: We should use crash data and other tools to identify and mitigate risks, rather than waiting for crashes to happen and then reacting.

Redundancy is crucial: It is crucial to reduce risks by strengthening all parts of the roadway system so that if one part fails, people are still protected. The Safe System approach includes the following elements: Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and First Response / Post-Crash Care.

REDUNANCY IS ESSENTIAL

LAYERS OF REDUNDANCY

Safer streets must strengthen all aspects of road safety. Five focus areas are:

Safe Speeds
- Slower speeds reduce crash severity
- Connecting land use and transportation, promote slower speeds in area with heavy pedestrian and transit use

Safe Streets
- Retrofit to reduce risks
- Separatevulerable users from higher speed traffic
- Provide safe places to cross
- Reduce conflict points with access management and intersection design

Safe People
- Build culture of safety
- Educate about safe behavior
- Protect all users including people who walk, use mobility devices, bike, use transit or drive

Safe Vehicles
- Upgrade fleet vehicles to use enhanced safety features
- Make safe vehicle ownership accessable to all income levels

Safe Responses
- Use targeted enforcement
- Equip EMS with tools to save lives
- Improve post-crash reporting to better understand causes

A sixth key element of our success is ongoing coordination, monitoring, and evaluation. The SS4A action plan is simply a starting point. Some actions can be implemented quickly, while others may take years. Some will achieve our desired results, while others may not. Continued coordination and tracking will allow us to adjust or add actions to stay on track toward our goal.

OUR CORE VALUES

Everyone--regardless of background, ability, or age--deserves a safe place to live in and travel around and no group should be disproportionately impacted by traffic crashes. We must prioritize and collaborate to make this happen using a proactive approach, guided by data and community engagement. Our quest for Vision Zero is not done until there are none.
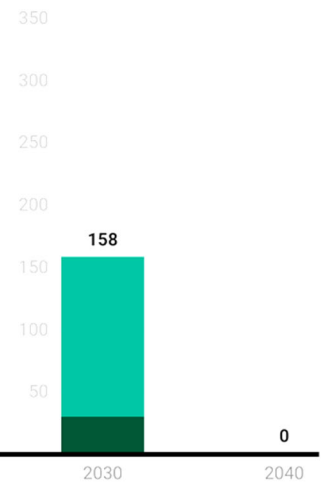
OUR GOAL

Serious injuries and deaths reduced by 50% by 2030 and eliminated by 2040 compared with 2021 numbers.

New Castle County Fatal and Serious Injury Crash Trends
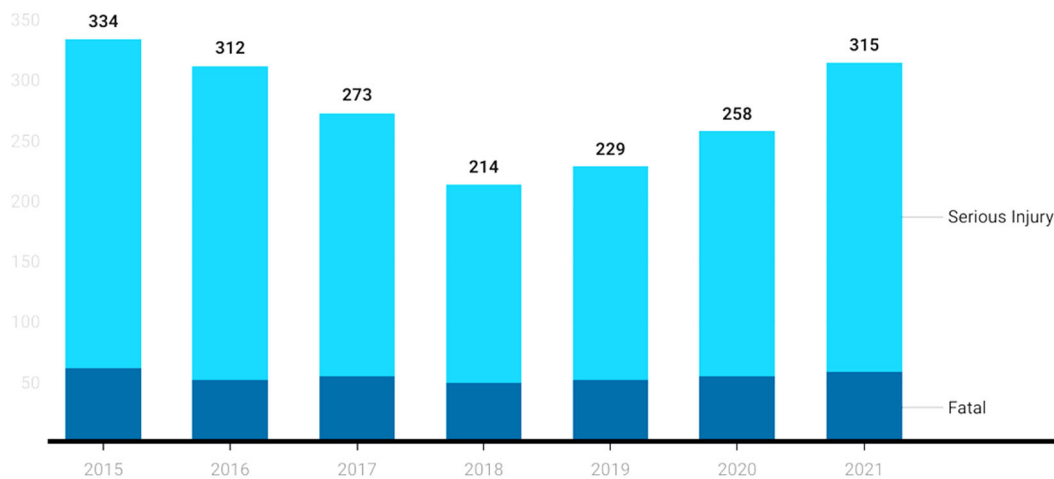
PLANNING PROCESS

Collaboration across jurisdiction, agency, and community partners is essential to achieving Vision Zero and thus a broad collaborative approach was undertaken to develop this plan. More details may be found in Appendix A. Our planning process engaged policy-makers, an Advisory Committee of professionals and community groups, and public outreach surveys. The Wilmington Area Planning Council (WILMAPCO) spearheaded the plan's development. As the Metropolitan Planning Organization for New Castle County, DE and Cecil County, MD, WILMAPCO is responsible for planning, financing, and coordinating the development of the best transportation system for the region.

POLICY-MAKERS

The following policymakers are essential for the plan's implementation: WILMAPCO's New Castle County representatives, which include an appointee by the Delaware Governor (currently the director of the Delaware Office of State Planning Coordination), the Secretary of the Delaware Department of Transportation, the CEO of Delaware Transit Corporation, the Mayor of the City of Wilmington, the County Executive of New Castle County, and New Castle County municipalities (currently represented by the Mayor of Elsmere).

ADVISORY COMMITTEE

The Advisory Committee consists of local governments, transportation planners and engineers, first responders and public safety planners, the University of Delaware, school transportation officials, and community groups. The Advisory Committee provided support and feedback to guide the plan development and will continue to support the implementation and monitoring of the recommendations.

PUBLIC ENGAGEMENT

Initial public engagement was done using an online survey, interactive map, and pop-up outreach at community events. We received feedback about people's experiences with crashes, how they get around, beliefs about the causes of crashes, preferred strategies for safety, and demographic backgrounds using an online survey. Between March 9 and May 15, 2023, 91 people completed the survey. During this period, we received 375 comments on an interactive map to crowdsource locations of concern. Pop-up outreach was done at the Southbridge, Wilmington Open Street Event, Newark Greenfest, and the Claymont Library. Pop-up outreach included an informational display, post-it note comment board, and a Selfie for Safety station.
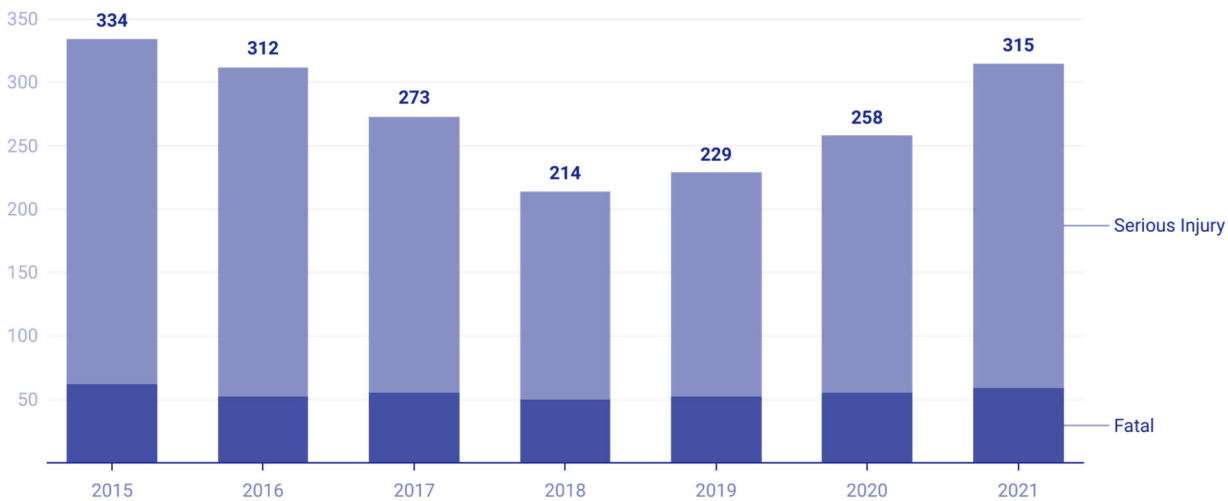
UNDERSTANDING SAFETY ISSUES IN NEW CASTLE COUNTY

CRASH ANALYSIS

DATA TRENDS

Serious and Fatal Crashes have been increasing since 2018 in New Castle County. In 2022, Delaware fatal crashes tied the record set in 1988. In New Castle County, 2022 fatal crashes soured to 74 and there were 3,115 total serious injury crashes.

New Castle County Crash Trends

Most common primary factors in crashes are driving aggressively, carelessly, or recklessly, failure to yield right of way, pedestrian-involved collisions, inattention or fatigue, and driving while under the influence of alcohol or drugs, with information drawn from the investigating officer's crash report. These Primary Contributing Circumstances are the factors that are most significant in causing a crash, but crashes often have multiple, overlapping behavioral, environmental, or roadway conditions that exacerbate the crash severity. In particular, excessive speeds often worsen the severity of crashes, regardless of their primary causes.

The Primary Contributing Circumstances for New Castle County fatalities and serious injuries, 2015-2021, are as follows:
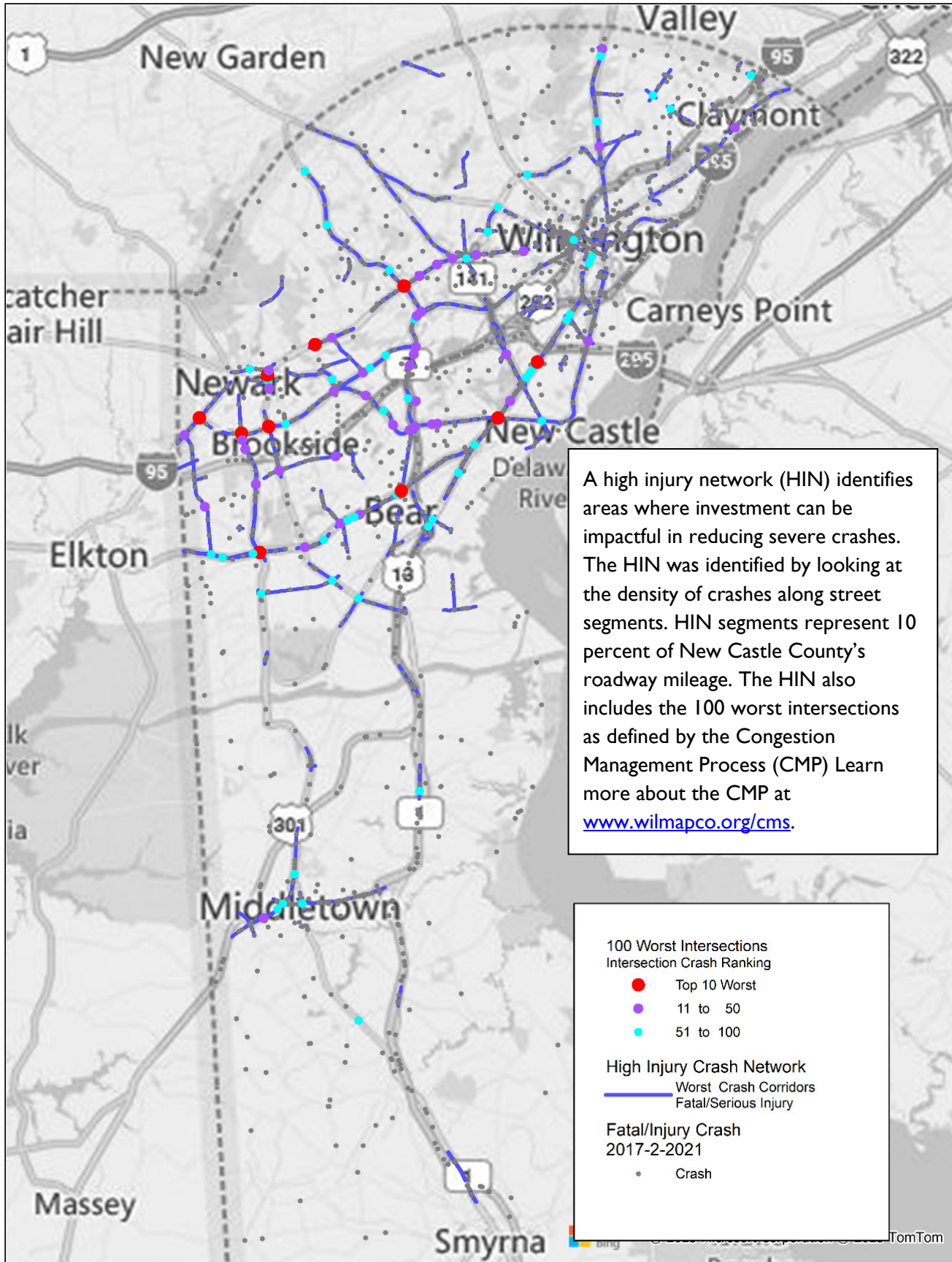
Primary Contributing Circumstances	Number	Percent
Unknown/Other	309	16%
Driving in an aggressive, careless or reckless manner	**255**	**13%**
Failed to yield right of way	**242**	**13%**
Pedestrian	**238**	**12%**
Driver inattention, distraction, or fatigue	**231**	**12%**
Driving under the influence	**165**	**9%**
Disregard Traffic Signal/Stop Sign	120	6%
Following too close	85	4%
Speeding	**69**	**4%**
Improper lane change	52	3%
Wrong side or wrong way	51	3%
Made improper turn	24	1%
Other environmental circumstances - weather, glare	22	1%
Animal in roadway	22	1%
Roadway circumstances - debris, holes, work zone,	18	1%
Mechanical defects	14	1%
Improper passing	12	1%
Improper backing	6	0%

60% of severe crashes fall within these categories. Recommendations will focus on these plus speeding.
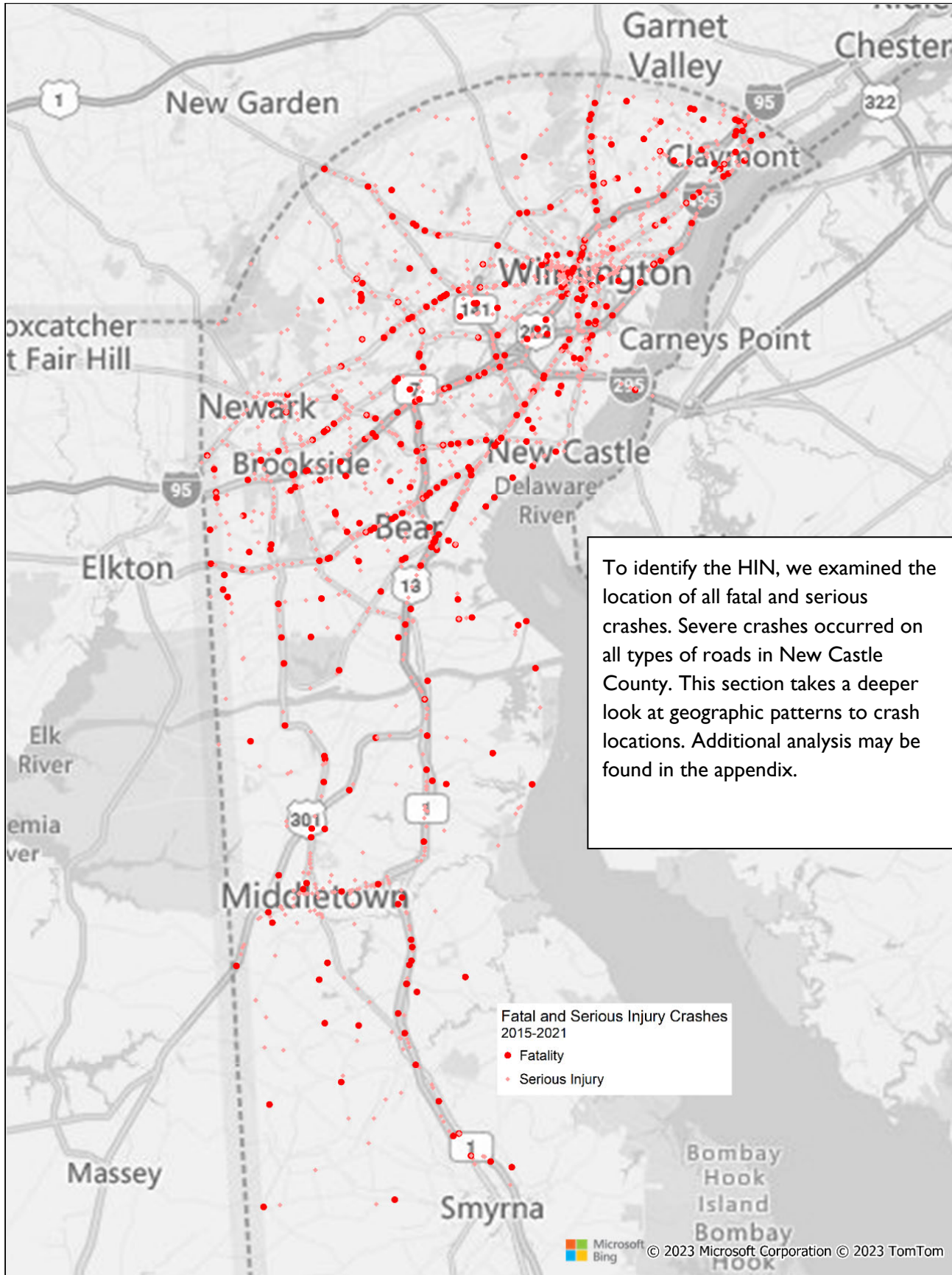
Recommendations in this plan will focus primarily on:

- Driving in an aggressive, careless or reckless manner
- Failed to yield right of way
- Pedestrian
- Driver inattention, distraction, or fatigue
- Driving under the influence
- Speeding

HIGH CRASH NETWORK

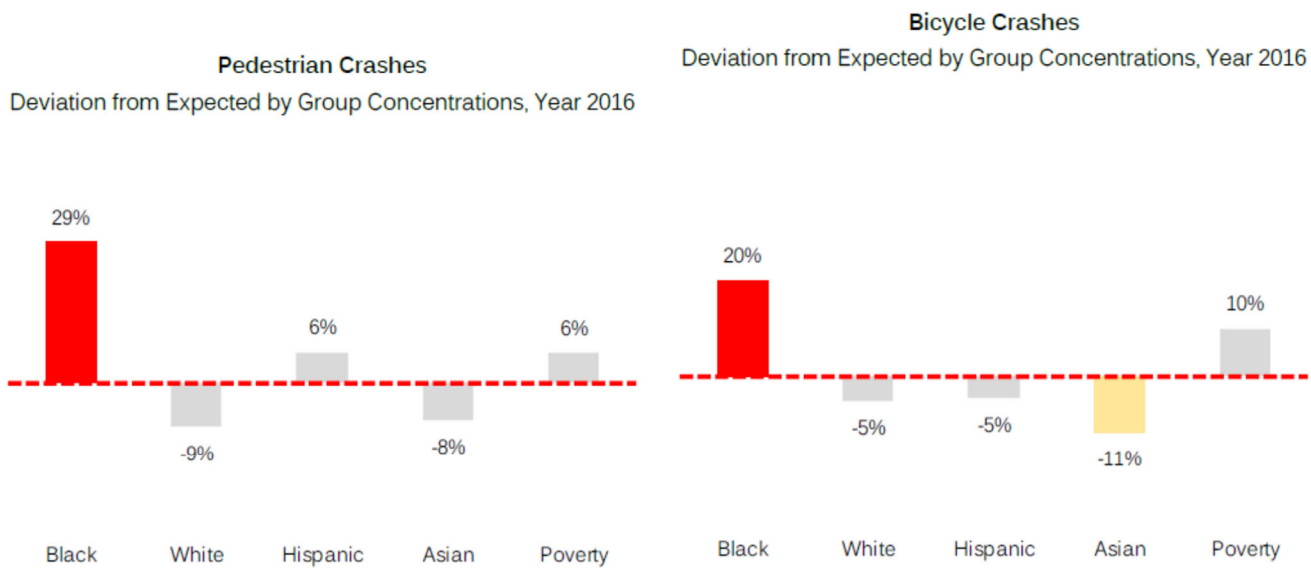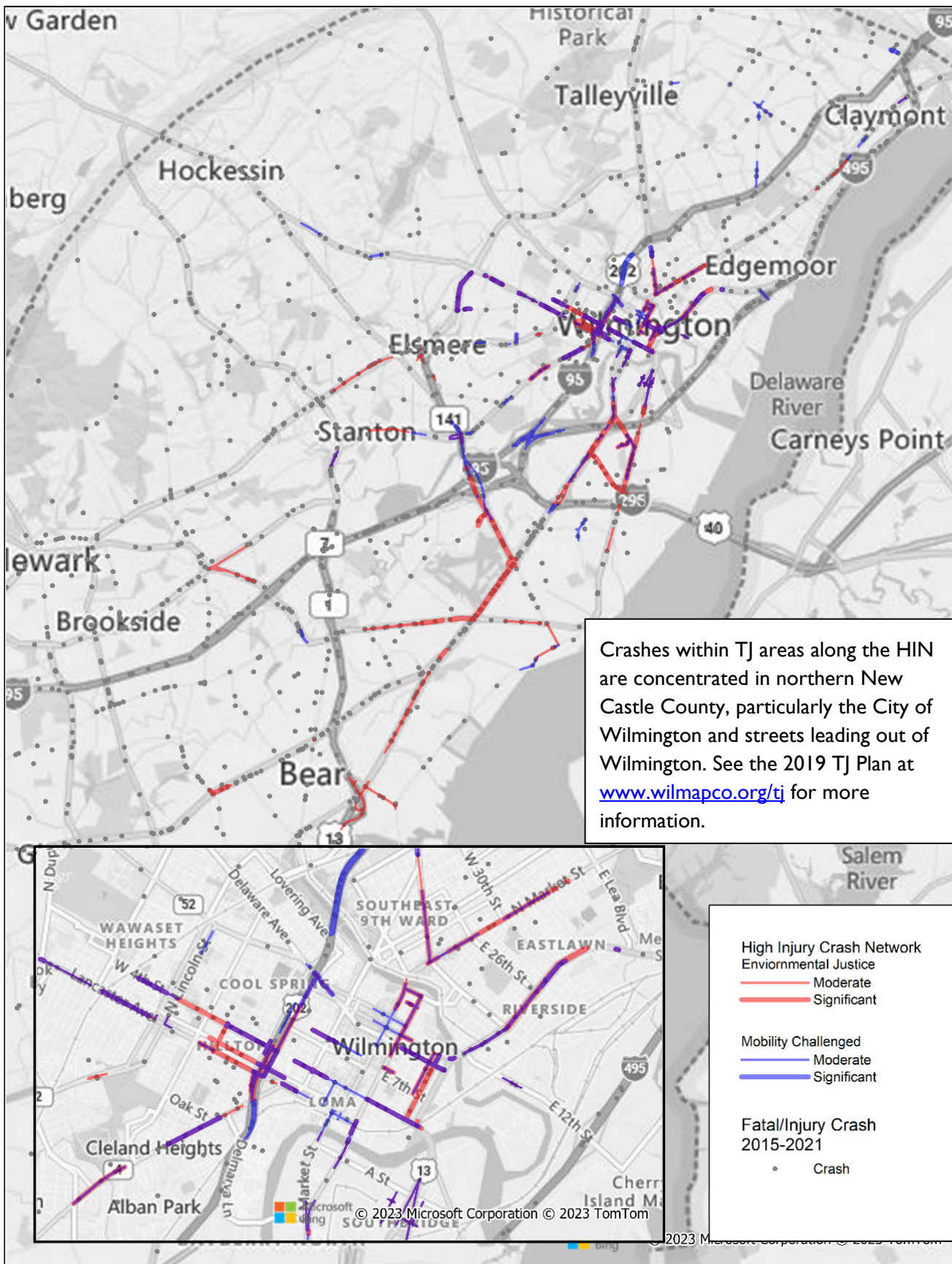A high injury network (HIN) identifies areas where investment can be impactful in reducing severe crashes. The HIN was identified by looking at the density of crashes along street segments. HIN segments represent 10 percent of New Castle County's roadway mileage. The HIN also includes the 100 worst intersections as defined by the Congestion Management Process (CMP) Learn more about the CMP at www.wilmapco.org/cms.

100 Worst Intersections
Intersection Crash Ranking
- 🔴 Top 10 Worst
- 🟣 11 to 50
- 🔵 51 to 100

High Injury Crash Network
— Worst Crash Corridors
Fatal/Serious Injury

Fatal/Injury Crash
2017-2-2021
· Crash

CRASH LOCATIONS

To identify the HIN, we examined the location of all fatal and serious crashes. Severe crashes occurred on all types of roads in New Castle County. This section takes a deeper look at geographic patterns to crash locations. Additional analysis may be found in the appendix.

Fatal and Serious Injury Crashes 2015-2021
- Fatality
- Serious Injury

EQUITY ANALYSIS

WILMAPCO's Transportation Justice (TJ) initiative identifies key social inequities in the region's transportation system. We examine the fairness and inclusivity of the existing and planned system, as well as our public engagement processes. Recommendations are made to overcome observed barriers and inequities. Two categories particularly impacted are included in our SS4A analysis:

- **Environmental Justice:** Environmental Justice (EJ) neighborhoods are concentrations of low income and minority populations. EJ neighborhoods also include affordable housing developments, as well as school feeder zones with high concentrations of low income or minority students.
- **Mobility Challenged:** Mobility Challenged (MC) neighborhoods are concentrations of seniors, people with disabilities, and households without an automobile.

These data are retrieved at the block group level. Non-residential areas of these block groups were clipped using the 2012 Delaware Land Use/Land Cover and 2010 Cecil County land use data.

The TJ initiative found that for all severities of crashes, pedestrian and bicycle crashes were more likely in areas with concentrations of black population.


Pedestrian Crashes
Deviation from Expected by Group Concentrations, Year 2016

Bicycle Crashes
Deviation from Expected by Group Concentrations, Year 2016

Crashes within TJ areas along the HIN are concentrated in northern New Castle County, particularly the City of Wilmington and streets leading out of Wilmington. See the 2019 TJ Plan at www.wilmapco.org/tj for more information.

High Injury Crash Network Enviornmental Justice
— Moderate
— Significant

Mobility Challenged
— Moderate
— Significant

Fatal/Injury Crash 2015-2021
• Crash

Percent of fatalities by race

Traffic crash fatalities disproportionately affect Black people.

■ Crash Percent   ■ Population Percent

White
54
54

Black
34
28

Hispanic
6
11

Other
5
7
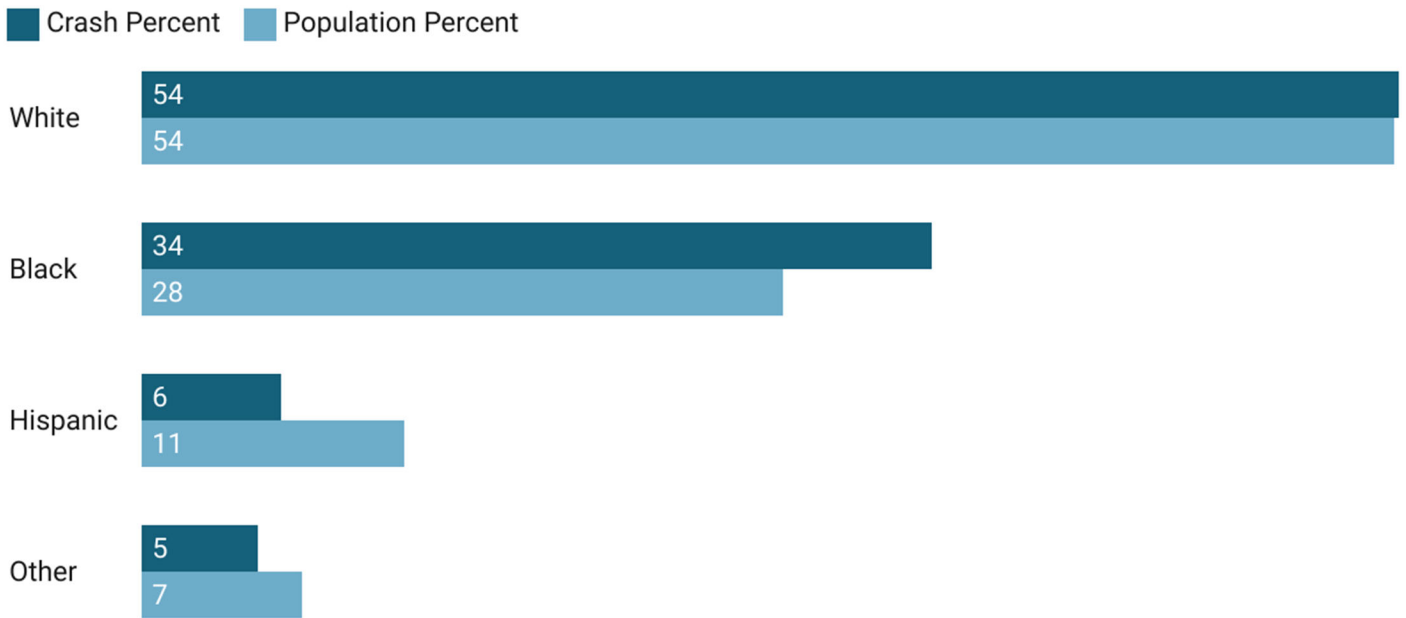
Source: 2015-2020 FARS, Census 2022 Population Estimates • Created with Datawrapper

Percentage of Fatal Crashes by Race and Year

The percentage of black fatalities has been increasing.
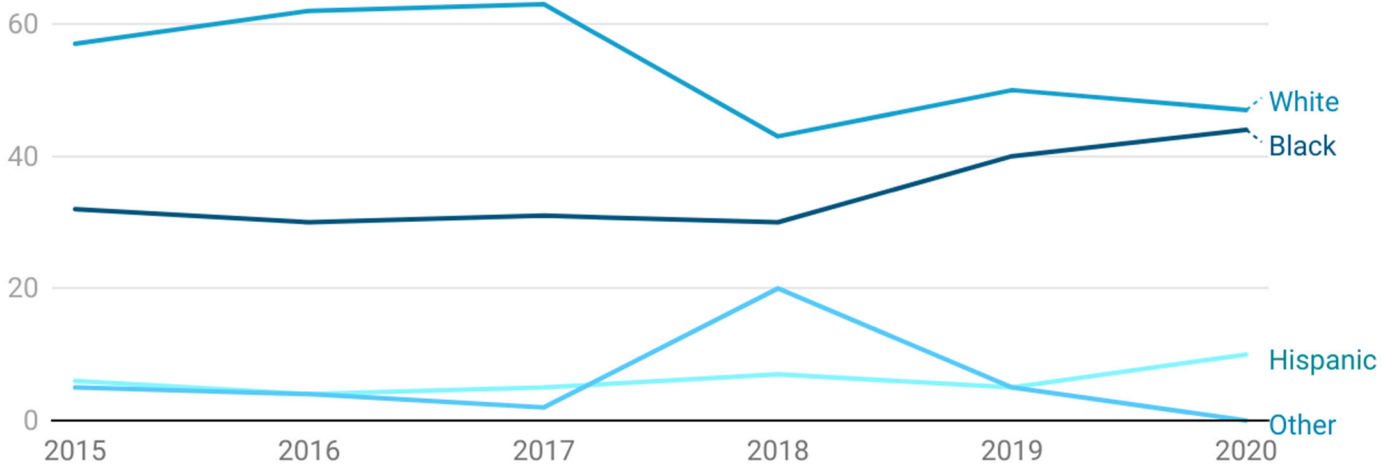
Source: FARS 2015-2020 • Created with Datawrapper

VULNERABLE ROAD USERS

A vulnerable road user is a person walking, bicycling or rolling, taking transit, and includes highway works on foot. Vulnerable users lack the layers of protection offered by a motor vehicle and are most at risk of dying or being seriously injured in a crash, particularly at higher traffic speeds. Vulnerable users are more likely to fall into a mobility challenged demographic, particularly for low-income commute trips. Likewise, low-income commutes to service jobs are more likely to be done during dark hours.

Pedestrians crashes account for an alarming share of total severe crashes in New Castle County.

Large share of severe crashes are pedestrian

Percent of Severity by Mode

Pedestrian and bike crashes are only 1% of crashes that do not result in deaths or serious injuries but comprise 35% of fatal crashes and 17% of serious injuries

■ Pedestrian   ■ Bike   ■ Motor Vehicle

Fatal	34% 65%
Serious Injury	15% 83%
Not Fatal/Serious	99%
Commute Mode Share	95%
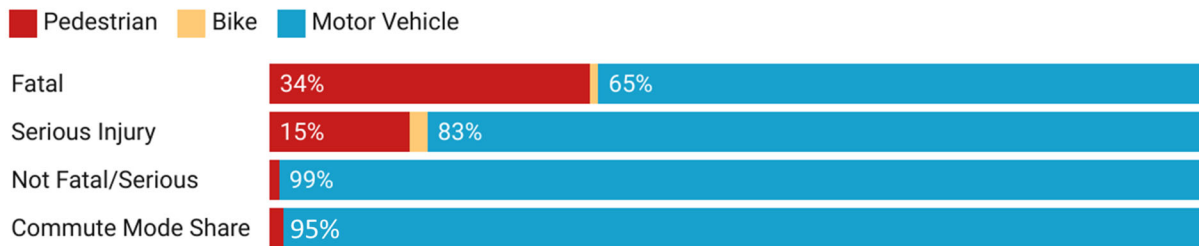
2015-2021

Less than 2% of commutes outside of the home are bicycle/pedestrian

Pedestrian and Bicycle severe crashes are more likely to occur in the New Castle County's largest cities and towns as well as the high-speed arterials surrounding Wilmington. Additional analysis is part of the Delaware Pedestrian Action Plan.

Pedestrian High Crash Network
4+ per half mile
Pedestrian High Crash Network

Fatal/Injury Crash
2015-2021

♦ Pedestrian

■ Bicycle

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STAKEHOLDER AND COMMUNITY ENGAGEMENT

In developing the SS4A plan, planners sought broad feedback from the community. We asked about people's personal travel experiences and how they've been impacted by crashes, their thought on the primary causes, and feedback about strategies to achieve vision zero.
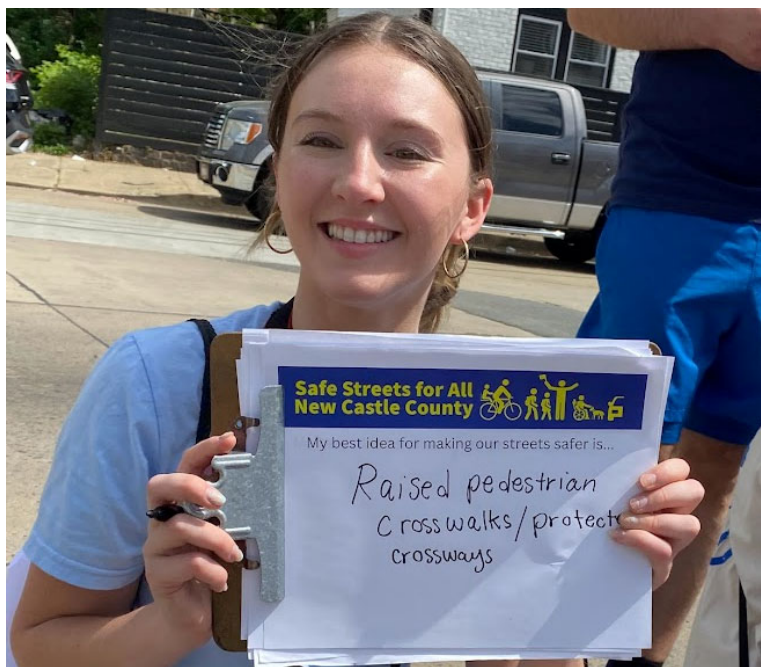
Pop-up events were held at the Southbridge Wilmington Open Street event, Newark Greenfest, and the Claymont Library.

91 people completed the online survey.
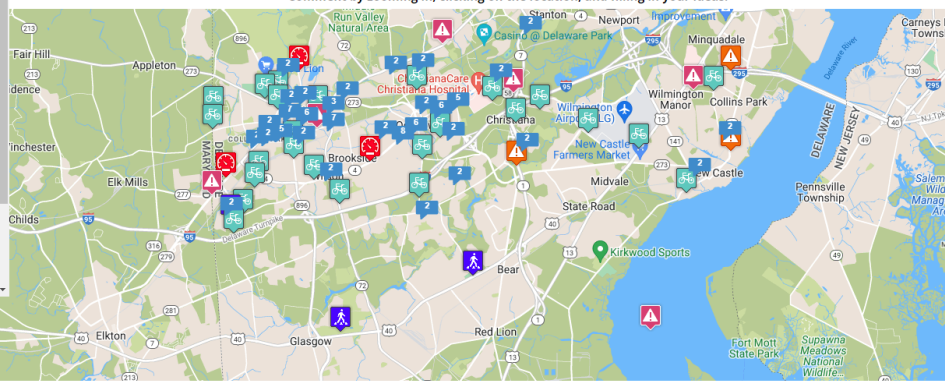
375 comments were added to our crowdsourcing map.

What types of transportation do you use to get around your community?

Legend: **Daily** ■ **Weekly** ■ **Monthly** ■ **Rarely/Never** ■

| Mode	Daily	Weekly	Monthly	Rarely/Never
Driving	61	18	5	
Walking	38	29	8	7
Passenger	32	9	13	15
Bicycling	17	16	12	25
Transit	4	4	16	39
Taxi, Uber, Lyft		16		47
Paratransit				56
Mobility devise			3	51
Motorcycle			3	55
Scooter/Skateboard				56
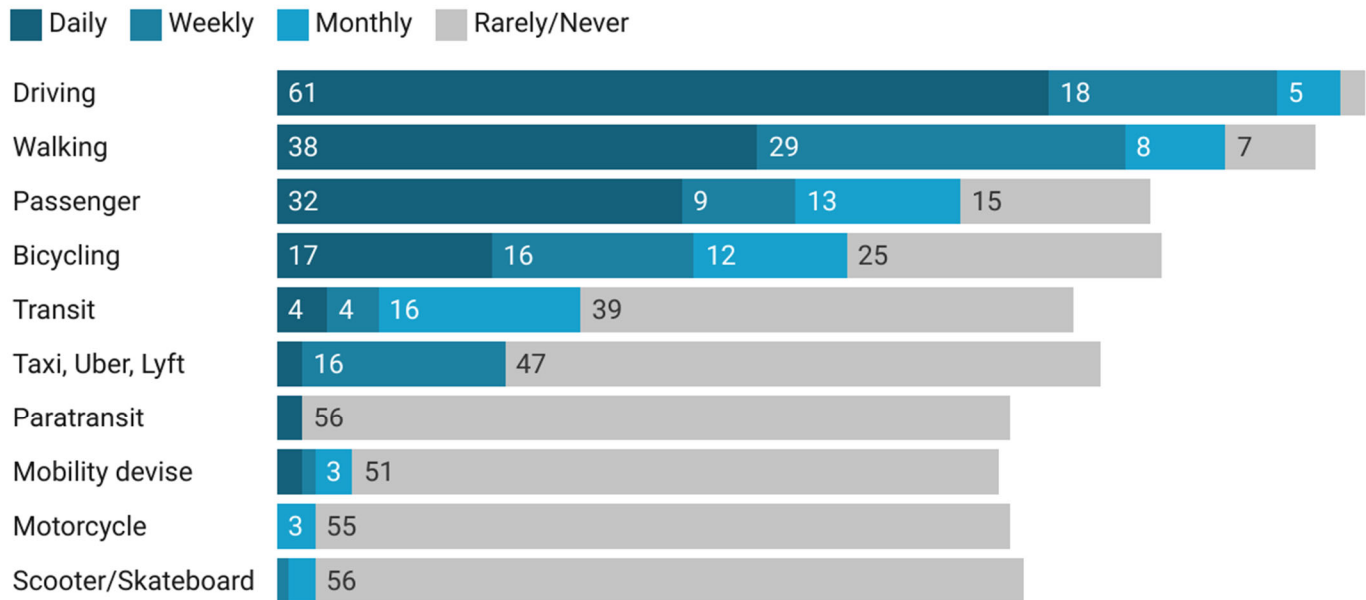
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Have you or someone you know been involved in a traffic crash in New Castle County? If so, how severe was the collision?

Number of Responses

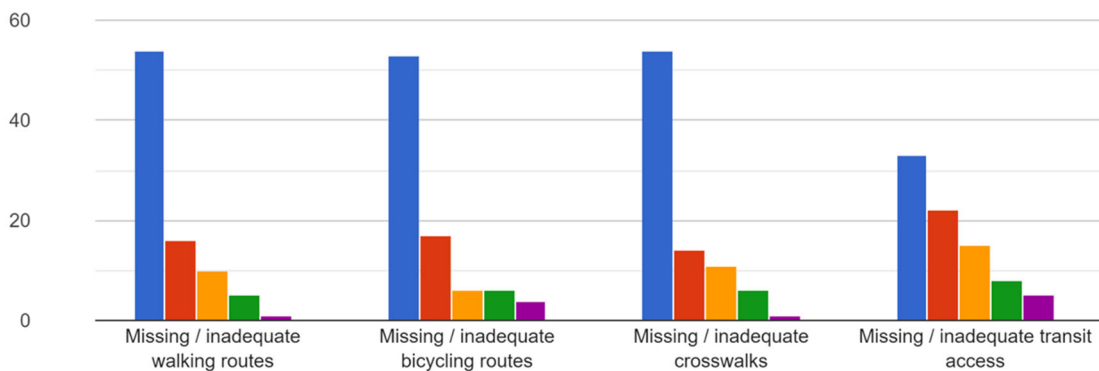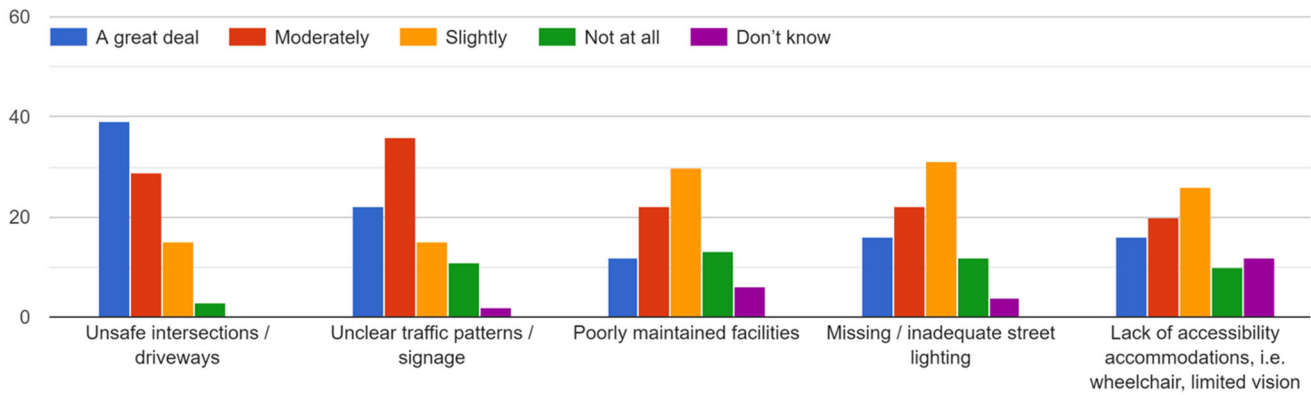| Response	Number
No	32
I was and experienced no or mild injuries	26
I was and was treated for injuries	9
I was and was treated for injuries that I still suffer from	3
Those involved experienced no or mild injuries	12
Those involved were treated for injuries	10
Those involved were treated for injuries that they still suffer from	12
Those involved died as a result of the crash	9
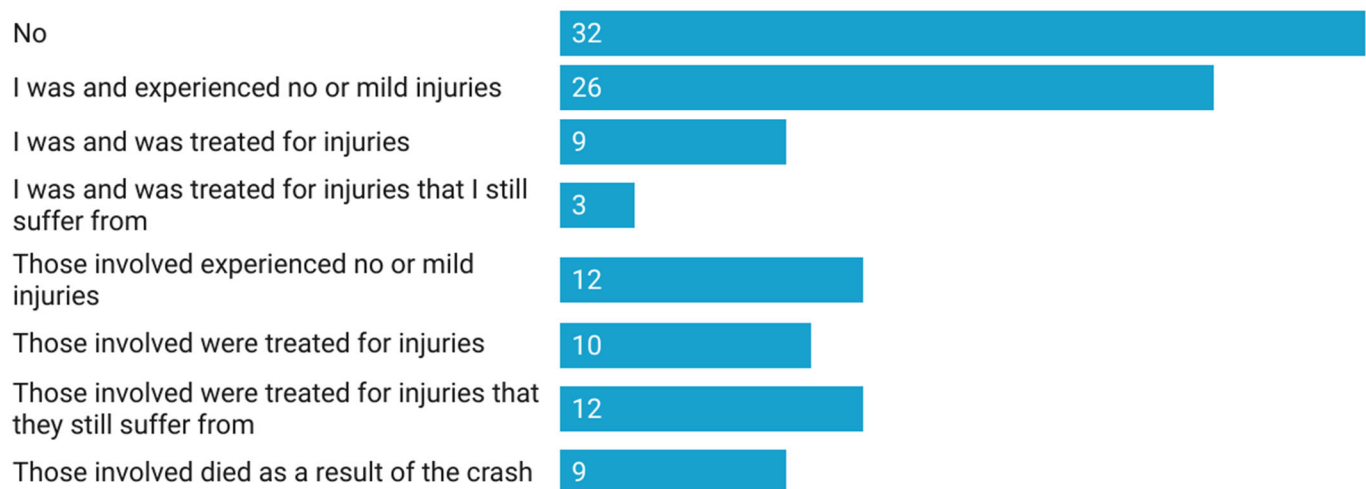
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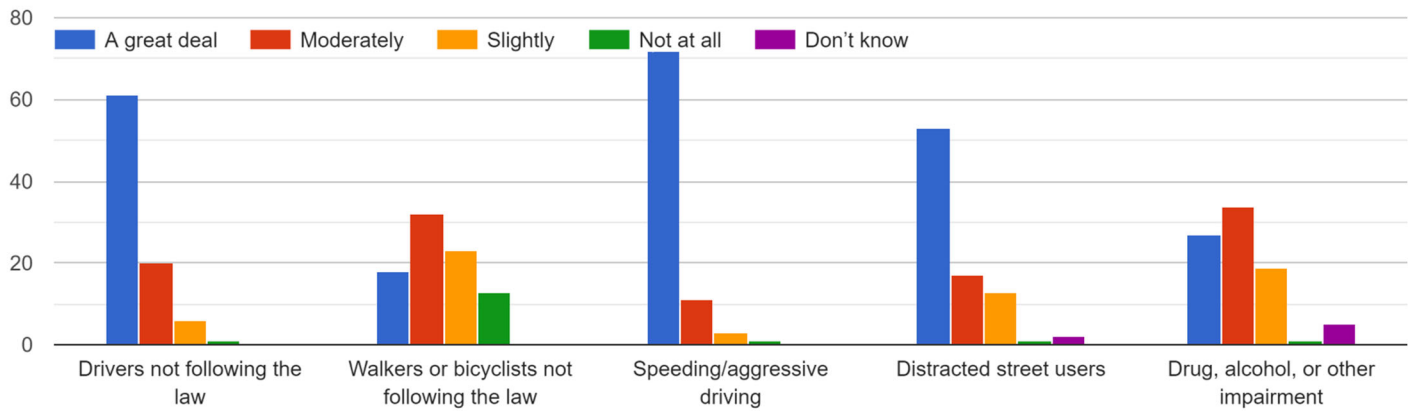How much do you think the following factors contribute to traffic crashes?
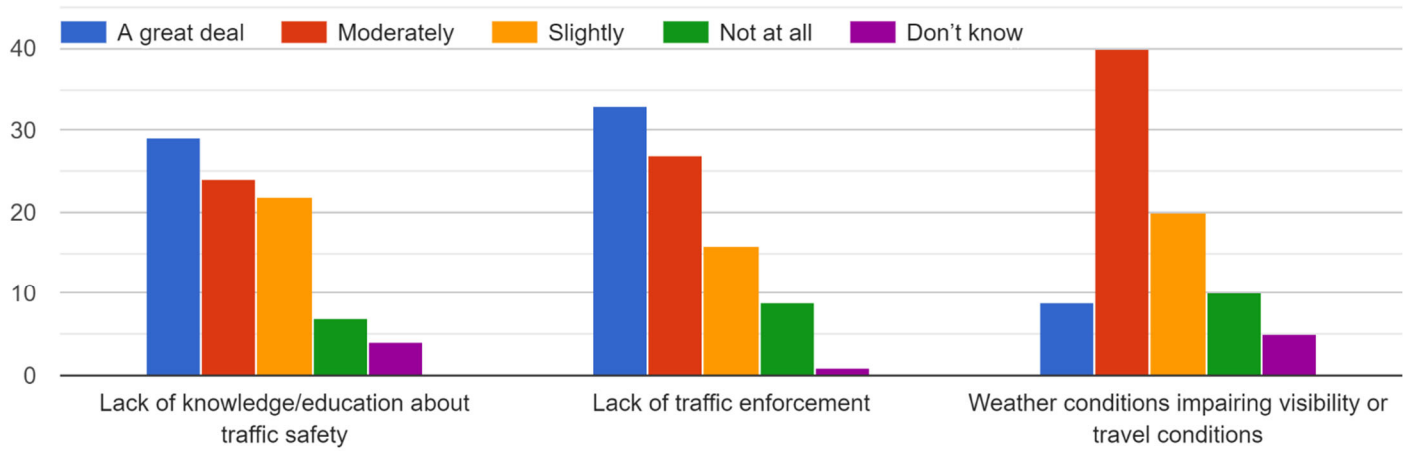
How much do you think the following conditions contribute to traffic crashes?
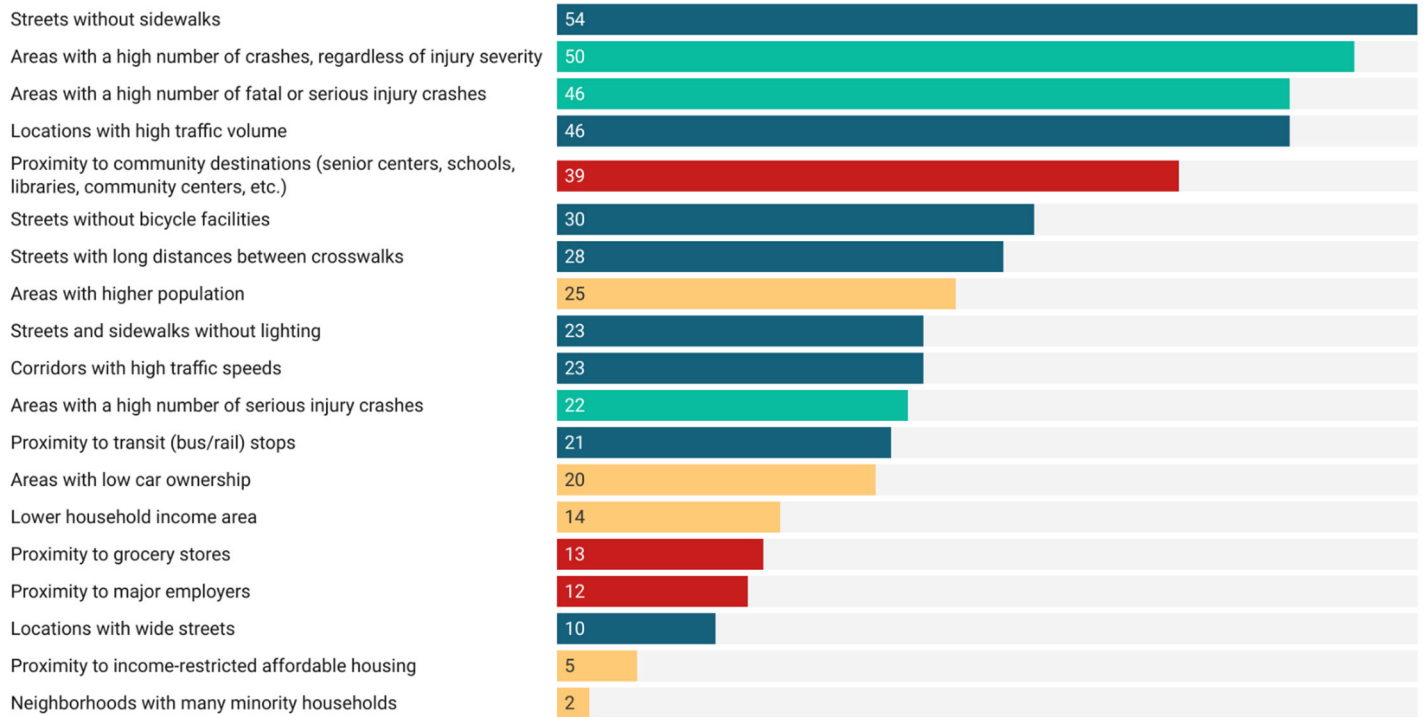
How much do you think the following behaviors contribute to traffic crashes?

Legend: ■ A great deal ■ Moderately ■ Slightly ■ Not at all ■ Don't know

Categories: Drivers not following the law · Walkers or bicyclists not following the law · Speeding/aggressive driving · Distracted street users · Drug, alcohol, or other impairment

Suggested Priority Criteria

Select the top six criteria that planners should use when identifying and prioritizing locations for safety improvements.
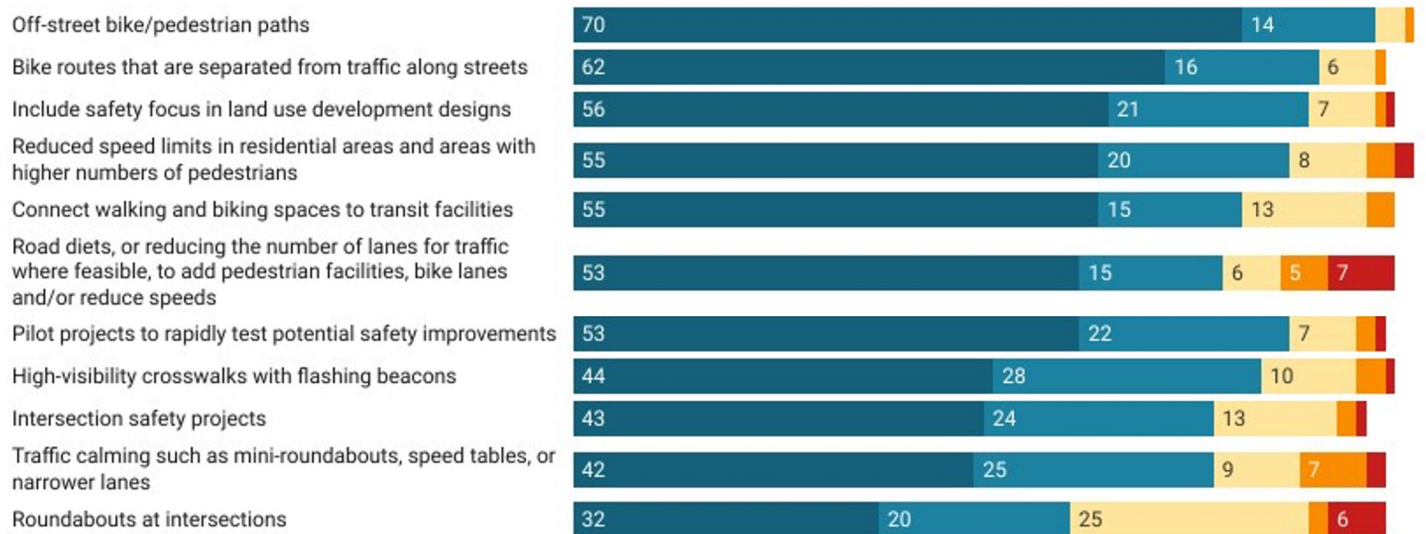
Legend: ■ Transport ■ Crash ■ Land Use ■ Demographic

Criteria	Number of responses
Streets without sidewalks	54
Areas with a high number of crashes, regardless of injury severity	50
Areas with a high number of fatal or serious injury crashes	46
Locations with high traffic volume	46
Proximity to community destinations (senior centers, schools, libraries, community centers, etc.)	39
Streets without bicycle facilities	30
Streets with long distances between crosswalks	28
Areas with higher population	25
Streets and sidewalks without lighting	23
Corridors with high traffic speeds	23
Areas with a high number of serious injury crashes	22
Proximity to transit (bus/rail) stops	21
Areas with low car ownership	20
Lower household income area	14
Proximity to grocery stores	13
Proximity to major employers	12
Locations with wide streets	10
Proximity to income-restricted affordable housing	5
Neighborhoods with many minority households	2

Number of responses
Created with Datawrapper

Support for Engineering Strategies

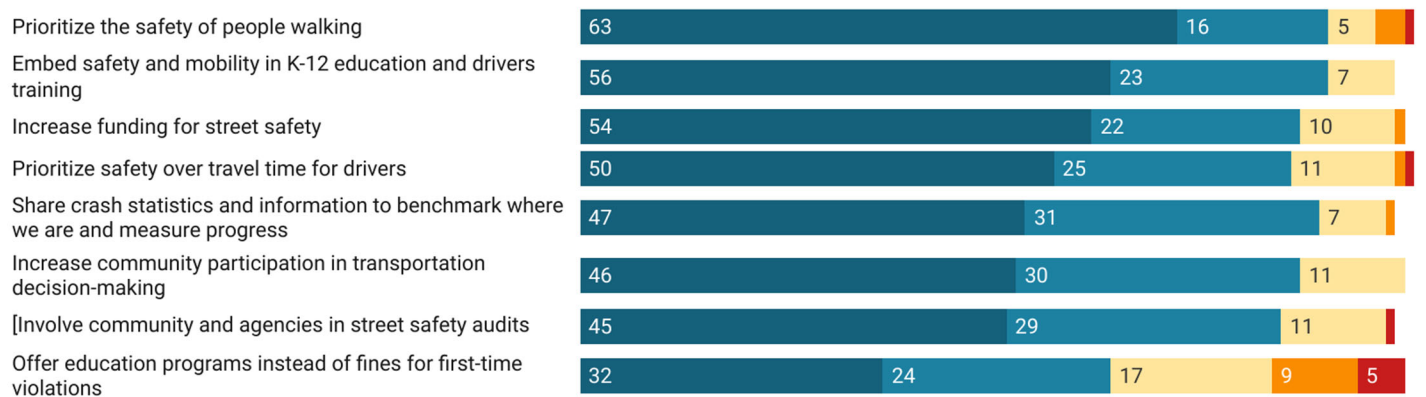■ Strongly support ■ Support ■ Neutral ■ Somewhat oppose ■ Strongly oppose

	Strongly support	Support	Neutral	Somewhat oppose	Strongly oppose
Off-street bike/pedestrian paths	70	14			
Bike routes that are separated from traffic along streets	62	16	6		
Include safety focus in land use development designs	56	21	7		
Reduced speed limits in residential areas and areas with higher numbers of pedestrians	55	20	8		
Connect walking and biking spaces to transit facilities	55	15	13		
Road diets, or reducing the number of lanes for traffic where feasible, to add pedestrian facilities, bike lanes and/or reduce speeds	53	15	6	5	7
Pilot projects to rapidly test potential safety improvements	53	22	7		
High-visibility crosswalks with flashing beacons	44	28	10		
Intersection safety projects	43	24	13		
Traffic calming such as mini-roundabouts, speed tables, or narrower lanes	42	25	9	7	
Roundabouts at intersections	32	20	25	6	

Support for Enforcement Strategies

■ Strongly support ■ Support ■ Neutral ■ Somewhat oppose ■ Strongly oppose

	Strongly support	Support	Neutral	Somewhat oppose	Strongly oppose
Automated cameras to ticket people who run red lights	44	16	17	7	3
Law enforcement ticketing people who run red lights	38	20	18	5	6
Law enforcement ticketing people speeding	33	24	18	5	6
[Automated cameras to ticket people speeding	32	19	17	14	5

Support for Safety Program Strategies

■ Strongly support ■ Support ■ Neutral ■ Somewhat oppose ■ Strongly oppose

	Strongly support	Support	Neutral	Somewhat oppose	Strongly oppose
Prioritize the safety of people walking	63	16	5		
Embed safety and mobility in K-12 education and drivers training	56	23	7		
Increase funding for street safety	54	22	10		
Prioritize safety over travel time for drivers	50	25	11		
Share crash statistics and information to benchmark where we are and measure progress	47	31	7		
Increase community participation in transportation decision-making	46	30	11		
[Involve community and agencies in street safety audits	45	29	11		
Offer education programs instead of fines for first-time violations	32	24	17	9	5

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HOW NEW CASTLE COUNTY WILL ACHIEVE VISION ZERO

Recommendations are organized according to the elements of a Safe Systems Approach. Priority Actions include transformational actions that can be taken quickly and have high community support. Supporting Actions may take longer to accomplish or have only moderate community support but are worth pursuing in the future. Rapid implementation Actions are policy measures or planning to jump-start change, or infrastructure that might be completed as a Quick Build Project or using Every Day Counts innovations.

PRIORITY ACTIONS

SAFE STREETS

Expand travel choices			
Lead(s): DelDOT, WILMAPCO, Local, DTC			
Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:

Everyone deserves the right to move through New Castle County safely by driving, walking, bicycling, and in some locations, by transit. According to the 2019 Transportation Justice Plan, many areas of the county lack access to basic goods and services by means other than private vehicle. Destinations evaluated include access to supermarkets, pharmacies, hospitals, libraries, low-wage employment centers, medical centers, community centers, senior Centers, and state service centers.

Land use policies should focus on promoting growth where good connectivity is in place while transportation funding policy should prioritize filling in connectivity gaps to promote travel choice.

Average Percentage of Households Connected to Destinations (Combined), by Mode
WILMAPCO Region

95% (car)
23% (bike)
19% (bus)
7% (pedestrian)

Land Use – Review Zoning to:			
• **Incorporate Safe Street Designs on Site Plans** • **Direct Growth into Planned Walkable, Transit-Oriented Areas** • **Use Mobility-Friendly Design to Maximize Pedestrian Safety and Comfort**			

Lead(s): Local			

Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High

Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes

Notes and Resources:
Review zoning and unified development codes and replace language that hampers safer communities with code that promotes them.
https://ihrp.uic.edu/using-zoning-regulations-to-foster-walkable-communities-best-practices/

Prioritize systematic safety improvements on HIN			

Lead(s): DelDOT, WILMAPCO, Local			

Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High

Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes

Notes and Resources:
Review and update MPO, DelDOT and local project prioritization processes to incorporate criteria related to HIN safety improvements.

Secure sufficient funding for identified improvements			
Lead(s): DelDOT, Local			
Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive: Yes	Yield: Yes	Pedestrian/Bike: Yes	Drugs/Alcohol: Yes	Distracted: Yes	Speeding: Yes

Notes and Resources:

Federal, state, and local funds as well as public/private partnerships should be set aside or secured through competitive grants. Local governments and some non-state agencies may seek competitive Safe Streets and Roads for All (SS4A) Grant Program funds for supplemental planning or implementation projects.
https://www.transportation.gov/grants/SS4A

The University of Delaware Biden School Grant Assistance Program may be a source of technical support for applicants.
https://www.bidenschool.udel.edu/ipa/serving-delaware/grant-assistance

Many other categories of federal funds in the Bipartisan Infrastructure Law may be used for safety improvements, some with reduced matching fund requirements. Examples of federal safety funding include:
- Highway Safety Improvement Program (HSIP)
- National Highway Freight Program (NHFP)
- Railway-Highway Crossings Program (RHCP)
- Surface Transportation Block Grant (STBG)
- Transportation Alternatives (TA)
- FTA Enhanced Mobility of Seniors and Individuals with Disabilities

https://www.fhwa.dot.gov/bipartisan-infrastructure-law/fact_sheets.cfm

Equity - Fund safety projects in Mobility Challenged Areas along the HIN			
Lead(s): DelDOT, Local			
Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike:	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:

Equity - Fund safety projects that enhance access community centers, employment, and essential services			
Lead(s): DelDOT, Local			
Category: Policy	**Subcategory:** Safe Streets	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike:	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:

Crosswalk Improvement Review for Gaps and High Stress						
Lead(s): DelDOT, WILMAPCO, Local						
Category: Supplemental Planning		**Subcategory:** Safe Streets		**Rapid Implementation:** Yes		**Community Support:** High
Addressed crash type:						
Aggressive:	**Yield:**		**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: https://nacto.org/publication/dont-give-up-at-the-intersection/						

Demonstration Project Program						
Lead(s): DelDOT, Local						
Category: Supplemental Planning		**Subcategory:** Safe Streets		**Rapid Implementation:** Yes		**Community Support:** High
Addressed crash type:						
Aggressive: Yes	**Yield:** Yes		**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes

Notes and Resources:
Demonstration projects can be set up for anywhere to hours to months. They use temporary, inexpensive materials to test designs and engage community feedback.

University of Delaware Living Lab program can provide support for community demonstration projects:
https://living-lab-1-udel.hub.arcgis.com/

Streets Plan Tactical Urbanism
Fast-Tracked: A Tactical Transit Study
People for Bikes
Alta Planning
San Francisco Quick Build Vision Zero

Lighting Safety Audit						
Lead(s): DelDOT, Local						
Category: Supplemental Planning		**Subcategory:** Safe Streets		**Rapid Implementation:** Yes		**Community Support:** NA
Addressed crash type:						
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike :** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes		**Speeding:** Yes
Notes and Resources:						

Fatal/Serious Injury Crashes	Pedestrian %	All Crash %	
Daylight	28%	53%	• 67% of fatal/serious pedestrian crashes were at night.
Dark, lighted	34%	23%	• 43% of all fatal/serious crashes were at night.
Dark, not lighted	33%	20%	• Many streets lack sufficient or any pedestrian lighting
Dusk/Dawn	4%	4%	

Road Diet - Systematic Evaluation					
Lead(s): DelDOT, WILMAPCO					
Category: Supplemental Planning		**Subcategory:** Safe Streets	**Rapid Implementation:** Yes		**Community Support:** High
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources:

Road diets are identified by the FHWA as a Proven Safety Countermeasure with a 19-47% reduction in total crashes. DelDOT has completed several road diets that have successfully reduced severe crashes. Working with the City of Wilmington, they looked systematically for potential road die corridors. This analysis should be expanded to assess other areas of New Castle County. https://deldot.gov/Programs/DSHSP/reports/Road-diet/

City of Wilmington Road Diets

LEGEND
- Completed
- In Design/Study
- Initial Consideration
- 2019 *Bike Plan* Recommendations
- City of Wilmington Boundary

Road safety audits and pedestrian safety audits on HIN					
Lead(s): DelDOT					
Category: Supplemental Planning		**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: Road safety audits are identified by the FHWA as a Proven Safety Countermeasure with a 10-60% reduction in crashes. Audits are a collaborative process effective at expediting the planning process. DelDOT has worked with stakeholders to conduct safety audits along several high crash areas. Learn about this program at https://deldot.gov/Programs/DSHSP/index.shtml?dc=project-pedestrian-safety-audit					

Walkable community workshops on HIN					
Lead(s): WILMAPCO					
Category: Supplemental Planning		**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Walkable Community Workshops are interactive events that bring together residents, elected officials, advocates, public agency staff, public health practitioners, educators, planners and engineers to focus attention on making communities safer and easier to walk in. Learn more about WILMAPCO's free program at http://www.wilmapco.org/walkable/.					

Transit - Evaluate bus stop locations and service along HIN corridors and upgrade connecting pedestrian infrastructure and/or adjust stop locations to maximize safe access to stops and efficiency of routes.					
Lead(s): DTC, DelDOT					
Category: Supplemental Planning		**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: NACTO guide: https://nacto.org/publication/transit-street-design-guide/ WILMAPCO Transportation Justice Connectivity Analysis: http://www.wilmapco.org/tj/					

Transit - Incorporate safety recommendations into DART Reimagined			
Lead(s): DTC			
Category: Supplemental Planning	Subcategory: Safe Streets	Rapid Implementation:	Community Support: NA
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike:	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:
https://www.dartreimagined.com/

Quick Build Project Delivery			
Lead(s): DelDOT, Local			
Category: Project	Subcategory: Safe Streets	Rapid Implementation: Yes	Community Support: High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike:	Drugs/Alcohol:	Distracted:	Speeding:
Yes	Yes	Yes	Yes	Yes	Yes

Notes and Resources:

Similar the demonstration projects, quick build project delivery uses inexpensive materials like rubber curbing and flexiposts to test designs and engage community feedback. Quick-built projects should be designed to last anywhere from several months to several years to give sufficient time to collect crash reduction benefits and work towards a permanent solution.

University of Delaware Living Lab program can provide support for community demonstration projects:
https://living-lab-1-udel.hub.arcgis.com/

Streets Plan Tactical Urbanism
Fast-Tracked: A Tactical Transit Study
Asphalt Art Guide
People for Bikes
Alta Planning
San Francisco Quick Build Vision Zero
NJTPA Quick Builds

Road Diets			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding: Yes

Notes and Resources:

A Road Diet, or roadway reconfiguration, involves narrowing or eliminating travel lanes to calm traffic and increase safety of all roadway users. The conversion typically occurs by reducing the cross section to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane (TWLTL).

https://deldot.gov/Programs/DSHSP/reports/Road-diet/
FHWA Road Diet Informational Guide

Bicycle - Buffered Bike Lanes			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding: Yes

Notes and Resources:

Buffered bike lanes provide greater visual separation for cyclists and can help slow speeding traffic by visually narrowing wide streets.

https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/buffered-bike-lanes/

Bicycle - Protected Bike Lanes			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources:
Protected bike lanes provide greater physical separation for cyclists and can help slow speeding traffic by narrowing wide streets.
NACTO Guide

FHWA Guide

Crosswalks – Use design(s) that increase visibility and decrease crossing distance.			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**

Notes and Resources:
Elements might include Curb Extensions, Refuge Islands, Raised Crosswalks, Crosswalk High Visibility Treatments, or a combination of options.

FHWA Pedestrian Accommodations at Intersections
NACTO Guide
FHWA High Visibility Crosswalks
ITE Guide

Protected Intersection					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets	**Rapid Implementation:** Yes	**Community Support:** High	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources:

A protected intersection is a type of at-grade road junction in which cyclists and pedestrians are separated from cars to make pedestrians and cyclists safer and slow turning vehicles.

NACTO Guide

https://altago.com/resources/evolution-of-the-protected-intersection/

Oakland Quick Build Protected Intersection

Signal - Rectangular Rapid Flashing Beacons or Pedestrian Hybrid Beacon					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** High
Addressed crash type:					
Aggressive:	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Supplementing a marked crosswalk or pedestrian warning sign with special signals can reduce crashes and increase drivers yielding to pedestrians. https://highways.dot.gov/sites/fhwa.dot.gov/files/RRFB_508.pdf https://highways.dot.gov/sites/fhwa.dot.gov/files/Pedestrian%20Hybrid%20Beacons_508.pdf					

Signal - Leading Pedestrian Interval					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Provides pedestrians with a head start to cross before motor vehicles. https://highways.dot.gov/sites/fhwa.dot.gov/files/Leading%20Pedestrian%20Interval_508.pdf					

Lighting Improvements					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: Enhance intersection and pedestrian scale lighting, particularly in locations with concentrations of nighttime crashes.In addition to reducing crashes, lighting has been show to reduce nighttime crime.					
Median Barrier of Higher Speed Corridors					
Lead(s): DelDOT					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive: Yes	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: Median barriers can reduce roadway departure crash severity. DelDOT is also using median barriers to reduce pedestrian midblock crashes on arterial roads; this approach should be combined with an analysis of crosswalks to provide sufficient spacing. https://deldot.gov/Programs/DSHSP/pdfs/projects/median-barrier/Median%20Barrier%20Program%20July%202018.pdf					

Complete Streets - Utilize Complete Streets Design Guide			
Lead(s): DelDOT, Local			
Category: Program	**Subcategory:** Safe Streets	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:
In April 2023, DelDOT published the Draft Complete Streets Design Guide to provide design guidance for state, county, and local transportation staff to create comfortable and viable Complete Streets transportation facilities. The guide includes tools and methodologies for designing Complete Streets in a variety of settings that can be customized to meet the needs of the surrounding communities and fit local context to support safer, more connected, and livable communities.
https://deldot.gov/Publications/pdfs/DelDOT-Complete-Streets-Design-Guide.pdf?cache=1681491358414

Pathways - Shared Use			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Streets	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding:

Notes and Resources:
Shared use paths provide greater separation on higher speed streets between motorized traffic and people walking and cycling.

Sidewalks - Fill Gaps				
Lead(s): DelDOT, Local				
Category: Project	**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** High
Addressed crash type:				
Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**

Notes and Resources:

Fill missing sidewalk gaps and ADA accessibility gaps using WILMAPCO priority as a guide.

WILMAPCO Pedestrian Priority Network Scoring Factors include:

- Land use factors:
    - Municipality or Hometown Overlay Zone
    - Trip generators: schools, commercial & community centers, libraries, parks
- Transportation factors
    - Pedestrian crashes (1-4 points)
    - Transit stop
    - Multi-use pathways
- Demographics
    - Population and Jobs Density
    - Special populations: Transportation Justice areas

SAFE SPEEDS

Speed Limit - Replace 85th Percentile Criteria with NACTO so that speeds limits are compatible with where the streets are located https://nacto.org/publication/city-limits			
Lead(s): DelDOT, Local			
Category: Policy	**Subcategory:** Safe Speeds	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources: https://nacto.org/safespeeds/

Speed Limit - Set 20 MPH Zone Criteria and Establish Slow Zones			
Lead(s): DelDOT, Local			
Category: Policy	**Subcategory:** Safe Speeds	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources: https://www.rospa.com/media/documents/road-safety/20mph-zones-and-speed-limits-factsheet.pdf https://www.20splenty.org/limits_or_zones

Speed - Evaluate Speed Compliance Systemically			
Lead(s): WILMAPCO			
Category: Supplemental Planning	**Subcategory:** Safe Speeds	**Rapid Implementation:** Yes	**Community Support:** NA
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources: WILMAPCO is using Streetlight data to compare 50th and 85th percentile speeds with posted limits.

Speed Limits - Synchronize Signals for Efficient Travel on Slower Corridors			
Lead(s): DelDOT			
Category: Project	**Subcategory:** Safe Speeds	**Rapid Implementation:** Yes	**Community Support:** NA
Addressed crash type:			

Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes

Notes and Resources:

Traffic Calming - Horizontal and Verticle Speed Control Elements			
Lead(s): DelDOT, Local			
Category: Project	**Subcategory:** Safe Speeds	**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:			

Aggressive:	Yield:	Pedestrian/Bike: Yes	Drugs/Alcohol:	Distracted:	Speeding: Yes

Notes and Resources:
https://deldot.gov/Publications/manuals/traffic_calming/pdfs/Delaware_TrafficCalmingDesignManual.pdf?cache=168850
3234089
https://www.ite.org/technical-resources/traffic-calming/
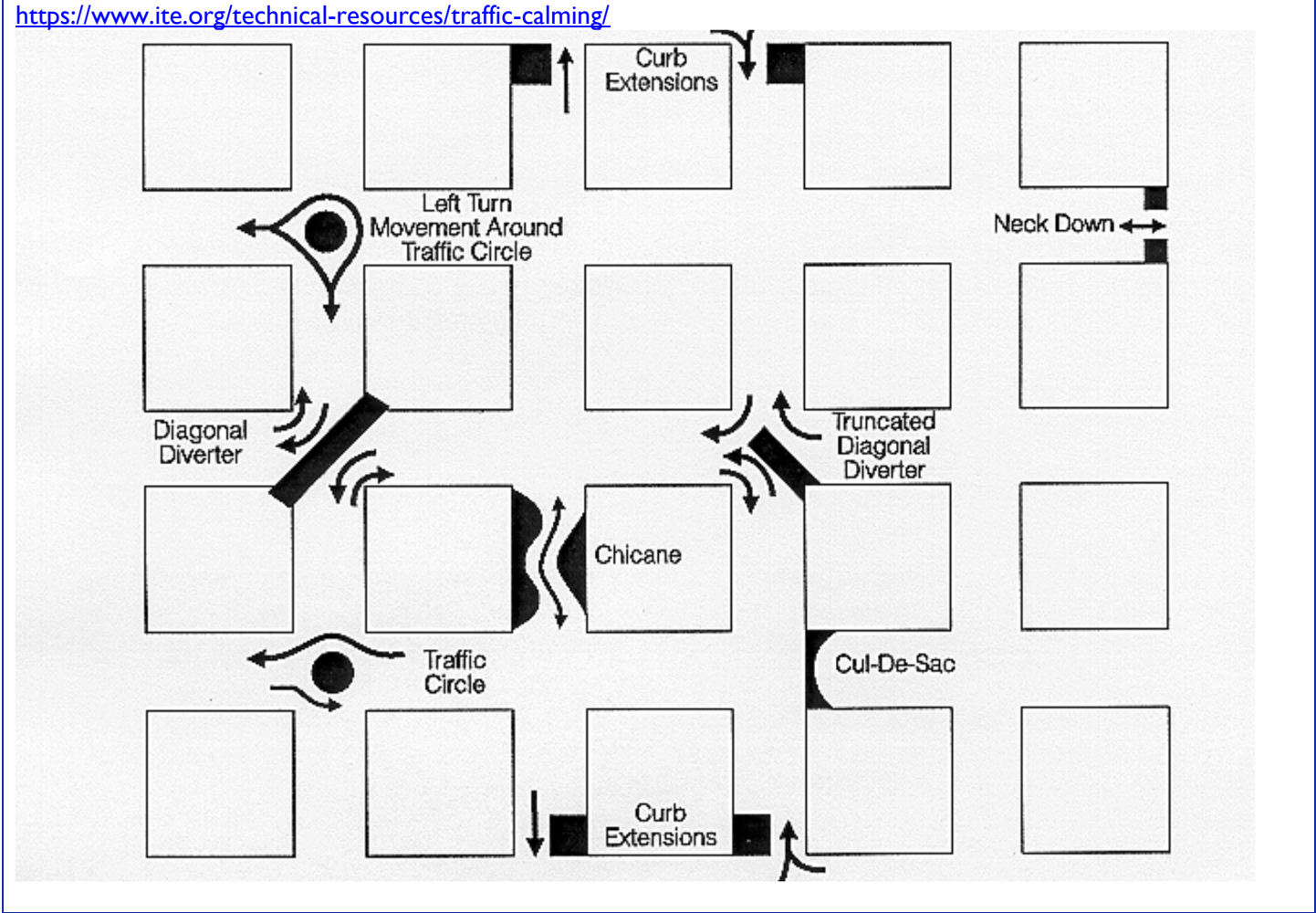
Lane Narrowing						
Lead(s): DelDOT, Local						
Category: Project		**Subcategory:** Safe Speeds		**Rapid Implementation:**		**Community Support:** High
Addressed crash type:						
Aggressive:	**Yield:**		**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources:						

SAFE PEOPLE

Education to build culture of safety - Engage Community Stakeholders in Development of Marketing and Education						
Lead(s): Office of High Safety						
Category: Program		**Subcategory:** Safe People		**Rapid Implementation:** Yes		**Community Support:** High
Addressed crash type:						
Aggressive:	**Yield:**		**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: https://ohs.delaware.gov/						

Ensure that vision testing is part of online drivers license applicaton/renewal process for older adults						
Lead(s): DelDOT						
Category: Program		**Subcategory:** Safe People		**Rapid Implementation:** Yes		**Community Support:** NA
Addressed crash type:						
Aggressive:	**Yield:**		**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: In the United States, up to 50% of traffic crashes involving older drivers are related to vision defects (Research Council, 1993). www.uv.es/intrastodos/Publicaciones/210113_visual_health.pdf						

Equity - Continue public outreach and education targeted towards vulnerable users and mobility challenged populations						
Lead(s): All						
Category: Program		**Subcategory:** Safe People		**Rapid Implementation:**		**Community Support:** High
Addressed crash type:						
Aggressive:	**Yield:**		**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: http://www.wilmapco.org/tj/						

SAFE VEHICLES

Vehicle Safety - Income-Based Incentives for Replacing Older Vehicles with Clean Energy Vehicles with Advanced Safety Features					
Lead(s): Delaware					
Category: Program	**Subcategory:** Safe Vehicles		**Rapid Implementation:** Yes	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Since many lower income drivers have older model cars, they do not have the collision avoidance system (CAS) technologies in newer vehicles.					

SAFE RESPONSE

Enforcement - Pass enabling legislation to expand use of radar camera speed enforcement					
Lead(s): Delaware					
Category: Policy	**Subcategory:** Safe Response		**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: https://www.cdc.gov/transportationsafety/calculator/factsheet/speed.html https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa1304/resources/Speed%20Camera%20Guidelines.pdf https://www.nhtsa.gov/book/countermeasures/countermeasures/21-automated-enforcement					

Equity - Offer education/community service alternatives to fines for first time violations					
Lead(s): Local					
Category: Policy	**Subcategory:** Safe Response		**Rapid Implementation:**	**Community Support:** Moderate	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:					

Post Crash Care - Registry					
Lead(s): EMS					
Category: Supplemental Planning	**Subcategory:** Safe Response		**Rapid Implementation:** Yes	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:					

Post Crash Care - Whole Blood					
Lead(s): EMS					
Category: Project	**Subcategory:** Safe Response		**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Paramedic transfusion of Whole Blood at scene of a serious motor vehicle crash can prevent loss of life. 					
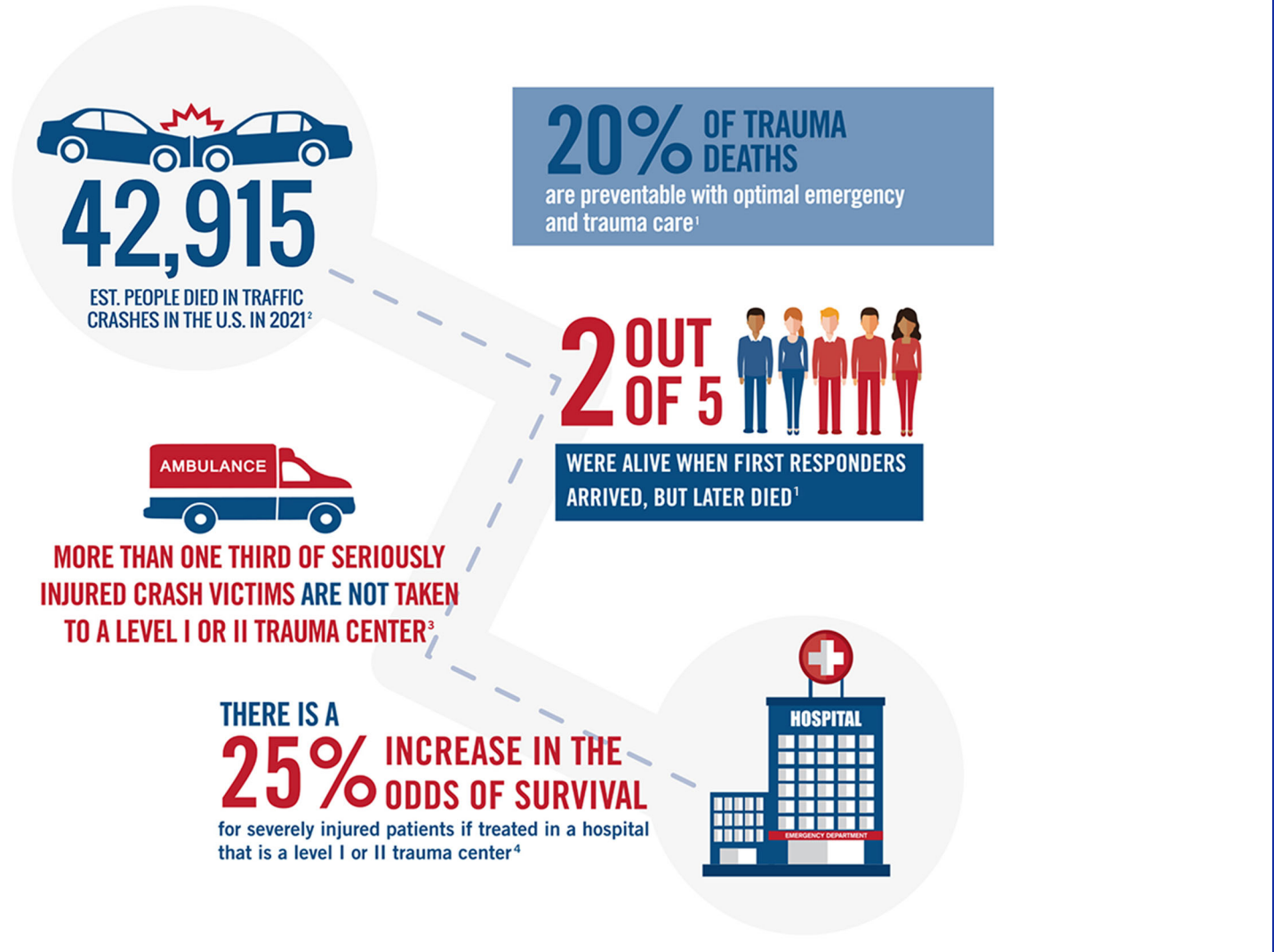
Enforcement - Supplement infrastructure changes with targetted enforcement					
Lead(s): State/Local Police					
Category: Program	**Subcategory:** Safe Response		**Rapid Implementation:** Yes	**Community Support:** Moderate	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources:					

Enforcement - Use automated red light cameras where red light running is a crash contributer					
Lead(s): State/Local Police					
Category: Program	**Subcategory:** Safe Response		**Rapid Implementation:** Yes	**Community Support:** Moderate	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: https://www.nhtsa.gov/book/countermeasures/countermeasures/21-automated-enforcement					

Enforcement - Utilize enforcement as stopgap measure in HIN areas without infrastructure imrovements yet					
Lead(s): State/Local Police					
Category: Program	**Subcategory:** Safe Response		**Rapid Implementation:** Yes	**Community Support:** Moderate	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes ✓	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources:					

Post Crash Care - Substance Abuse Treatment Enrollment					
Lead(s): EMS					
Category: Program	**Subcategory:** Safe Response		**Rapid Implementation:** Yes	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:** Yes	**Distracted:**	**Speeding:**
Notes and Resources:					

Enforcement - Prioritize roadway design retrofits over long-term enforcement so speeds are self enforcing					
Lead(s): DelDOT, Local					
Category: Program		**Subcategory:** Safe Response	**Rapid Implementation:**	**Community Support:** High	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources:					

Enforcement - Utilize automated speed cameras for enforcement in areas where infrastructure changes are not feasible or complete					
Lead(s): State/Local Police					
Category: Program		**Subcategory:** Safe Response	**Rapid Implementation:**	**Community Support:** Moderate	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: https://www.cdc.gov/transportationsafety/calculator/factsheet/speed.html https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa1304/resources/Speed%20Camera%20Guidelines.pdf https://www.nhtsa.gov/book/countermeasures/countermeasures/21-automated-enforcement					

Post Crash Care - Next-Generation Traffic Incident Management (NextGen TIM) technologies for traveler and responder safety and better trip reliability					
Lead(s): EMS, DelDOT, Office of Highway Safety, Police					
Category: Program		**Subcategory:** Safe Response	**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike:**	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:					

CROSSCUTTING

Local Government Adoption of Vision Zero Goal			
Lead(s): Local			
Category: Policy	**Subcategory:** Crosscutting	**Rapid Implementation:** Yes	**Community Support:** NA
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:			

Monitoring and Evaluation - Complete comprehensive review of implementation progress every four years as part of WILMAPCO Regional Progress Report			
Lead(s): WILMAPCO			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:			

Monitoring and Evaluation - Continue work with SS4A Committee for ongoing coordination and refinement of recommendations			
Lead(s): All			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:			

Monitoring and Evaluation - Improve public crash data dashboard and data sharing with local government / MPO partners			
Lead(s): DelDOT, Office of Highway Safety			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources:			

Monitoring and Evaluation - Update HIN analysis every two years			
Lead(s): All			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**: **Drugs/Alcohol:** **Distracted:**	**Speeding:**
Notes and Resources:			

Monitoring and Evaluaton - Complete annual review of performance measures			
Lead(s): All			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**: **Drugs/Alcohol:** **Distracted:**	**Speeding:**
Notes and Resources:			

SUPPORTING ACTIONS

Land Use - Use Access Management of Minimize Conflict Points					
Lead(s): DelDOT, Local					
Category: Policy		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: https://montgomeryplanning.org/wp-content/uploads/2023/05/Access-Management-Study-Report-072122_Final.pdf https://ppms.trec.pdx.edu/media/project_files/OTREC-RR-13-03%20Final.pdf https://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20574.pdf					

Bicycle/Pedestrian - Advisory Lanes					
Lead(s): DelDOT, Local					
Category: Supplemental Planning		**Subcategory:** Safe Streets		**Rapid Implementation:** Yes	**Community Support:** High
Addressed crash type:					
Aggressive:	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**

Notes and Resources:

Advisory Lanes create usable shoulders for nonmotorized use on a roadway that is otherwise too narrow to accommodate a pathway or bike lane. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no one is present and must overtake these users with caution due to potential oncoming traffic. Advisory Lanes are a new treatment type in the United States requires an MUTCD request to experiment. They are best suited for slow, low-volume streets.

Location: Morton Rd Yarmouth, ME
Speed: 25 MPH
ADT: 400
Photo: BikeMaine

https://transweb.sjsu.edu/research/1925-Safety-Edge-Lane-Roads
https://ruraldesignguide.com/mixed-traffic/advisory-shoulder

Diverging Diamond Interchange					
Lead(s): DelDOT					
Category: Project	**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:**	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources: Evaluate when designing interchange projects.					

Roundabouts					
Lead(s): DelDOT, Local					
Category: Project	**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** Moderate	
Addressed crash type:					
Aggressive:	**Yield:** Yes	**Pedestrian/Bike:**	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources: Evaluate when designing intersection projects.					

Dutch Left					
Lead(s): DelDOT, Local					
Category: Project	**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike:** Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources: Evaluate when designing intersection projects.					

Rumble Strips - Bicycle Friendly Shoulder					
Lead(s): DelDOT					
Category: Project	**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA	
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike:**	**Drugs/Alcohol:**	**Distracted:** Yes	**Speeding:**
Notes and Resources: Evaluate when completing pavement and rehabilitation and HEP projects.					

Rumble Strips - Centerline					
Lead(s): DelDOT					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:** Yes	**Speeding:**
Notes and Resources: Evaluate when completing pavement and rehabilitation and HEP projects.					

Safety Edge					
Lead(s): DelDOT					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:** Yes	**Speeding:**
Notes and Resources: Evaluate when completing pavement and rehabilitation and HEP projects.					

High Friction Surface Treatment					
Lead(s): DelDOT					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:** Yes	**Distracted:** Yes	**Speeding:** Yes
Notes and Resources: Evaluate when completing pavement and rehabilitation and HEP projects.					

Left Turn Reduced Conflict Designs					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**: Yes	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources: Evaluate when designing intersection projects.					

Offset Turn Lanes					
Lead(s): DelDOT, Local					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive: Yes	**Yield:** Yes	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:** Yes
Notes and Resources:					

Wider Edge Lines					
Lead(s): DelDOT					
Category: Project		**Subcategory:** Safe Streets		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:** Yes	**Speeding:**
Notes and Resources: Evaluate when completing pavement and rehabilitation and HEP projects.					

SAFE PEOPLE

Public agencies - offer defensive driving programs for employees					
Lead(s): All					
Category: Program		**Subcategory:** Safe People		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Research has shown modest benefits from defensive driving training.					

SAFE VEHICLES

Vehicle Safety - Upgrade Fleet Vehicles with Advanced Safety Features					
Lead(s): All					
Category: Project		**Subcategory:** Safe Vehicles		**Rapid Implementation:**	**Community Support:** NA
Addressed crash type:					
Aggressive:	**Yield:**	**Pedestrian/Bike**:	**Drugs/Alcohol:**	**Distracted:**	**Speeding:**
Notes and Resources: Complete with planned vehicle replacements.					

CROSSCUTTING

Monitoring and Evaluation - Update SS4A NCC at least every five years			
Lead(s): All			
Category: Supplemental Planning	**Subcategory:** Crosscutting	**Rapid Implementation:**	**Community Support:** High
Addressed crash type:			
Aggressive:	**Yield:**	**Pedestrian/Bike**: **Drugs/Alcohol:** **Distracted:**	**Speeding:**
Notes and Resources:			

IMPLEMENTATION AND ACCOUNTABILITY

MEASURING AND REPORTING PROGRESS

Type	Performance Measure	Description
Outcomes	Number of serious injuries	The number of serious injuries as the result of a vehicular crash
	Serious Injuries per 100 million vehicle miles traveled (VMT)	The rate of serious injuries
	Number of fatalities	The number of fatalities as a result of a vehicular crash
	Fatalities per 100 million VMT	The rate of fatalities
	Nonmotorized fatalities and serious injuries	The number of pedestrians killed and serious injuries as a result of a vehicular crash
	Percentage of people within NCC who have access to a low-stress pedestrian / bicycle facility	The portion of our region's population living close to a connected pedestrian/bicycle route.
Outputs	Construct safety improvements on the HIN	Completed projects.
	Construct safety improvements on the HIN in Mobility Challenged Areas	Completed projects.

Appendices: <mark>Under Development</mark>

A. Supplemental crash mapping and analysis
B. Public outreach results
C. Safety TIP/CTP Projects
D. Regional Transportation Plan Projects on HIN