



DRIVE SAFE > ROLL SAFE > WALK SAFE 

*Delaware County 3<sup>rd</sup> Annual Sustainability Conference*

## Designing for Safety & Sustainability

May 30, 2024



# Agenda

Welcome

What is Vision Zero

Regional Vision Zero

Vision Zero Delco

Tools and Grants for Safety

Getting Hands on with Design

# What is Vision Zero?



Inherent problem or target

Causes of the problem

Who is responsible?

Underlying intervention approach

What is the safety goal?

Crashes

Human Behavior

Individual road users

Incremental, reactive treatments where crashes have occurred

An optimal reduction in fatalities and serious injuries based on previous trends

Fatalities and serious injury crashes

Larger system of factors leading to the context and conditions

Those who create the system: Engineers, policymakers, planners

Proactive, systemic approach based on data to create a safe road network and system

Zero fatalities and serious injuries is the only morally acceptable target

# Vision Zero in practice

## Not Just Roads!

- Driver Education
- Enforcement
- Policies, Laws, PSA's
- All of US



# REGIONAL VISION ZERO



 **dvrpc**

*Working Together for Safer Streets*



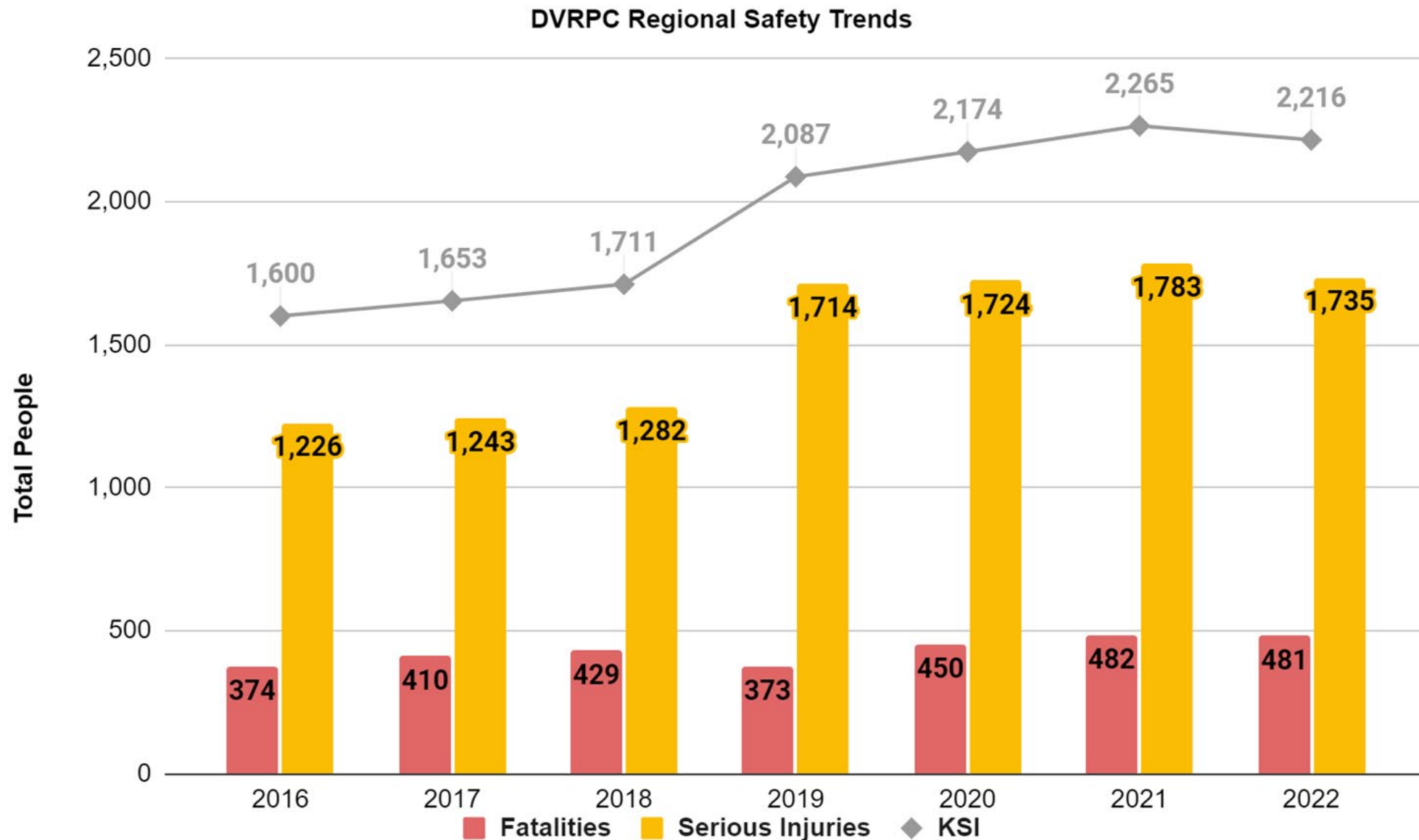
May 30, 2024 | 2:00 pm  
Delaware County Sustainability Conference



# Regional Vision Zero Municipal Collaboration

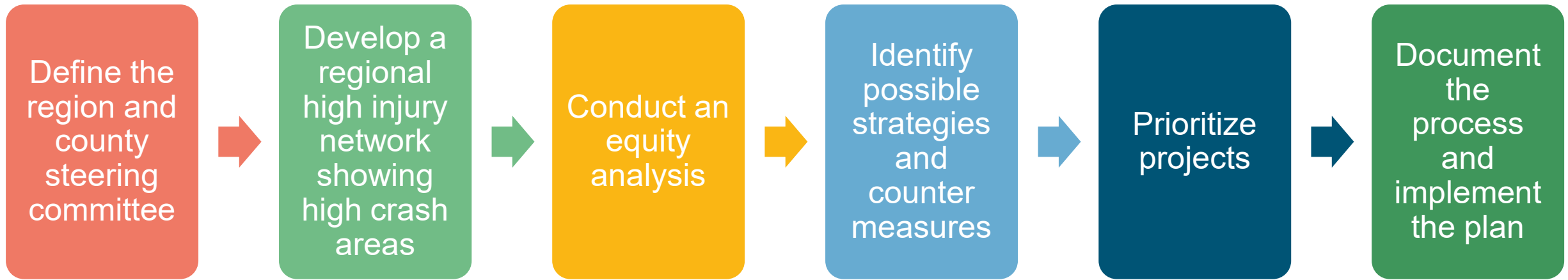
Delaware County

# Background Data



If the 2020 numbers were evenly applied across the year: someone was killed or serious injured every 4.5 hours.

# Regional Vision Zero Action Plan



Collaboration and feedback throughout

# Safe System Approach



**Death/Serious Injury is Unacceptable**



**Humans Make Mistakes**



**Humans Are Vulnerable**



**Responsibility is Shared**



**Safety is Proactive**



**Redundancy is Crucial**

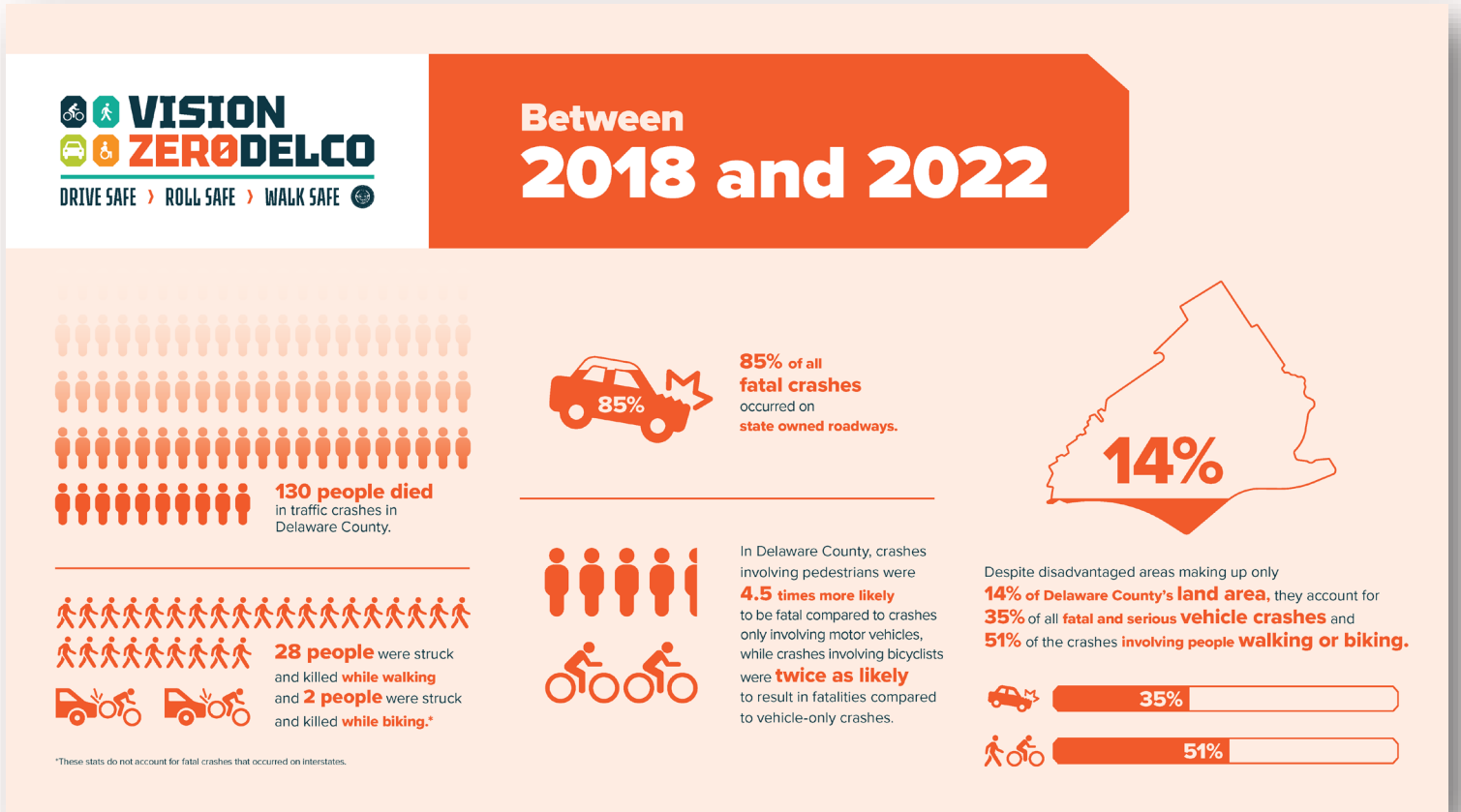




# Overview of Vision Zero Delco

# Why Vision Zero?

- Delco DOES NOT own any roads
- Unlock Federal Dollars
- Facilitation
- Collaboration
- Data gathering and sharing
- Guide for funding
- Traffic Safety is the foundation



# Does Vision Zero Work?

*Philadelphia committed to Vision Zero in 2015.*

*Since then, the city and its partners have been able to reduce fatal and serious injury crashes by 34%.*

*Yes. Vision Zero Works.*

**VISIONZERODELCO**

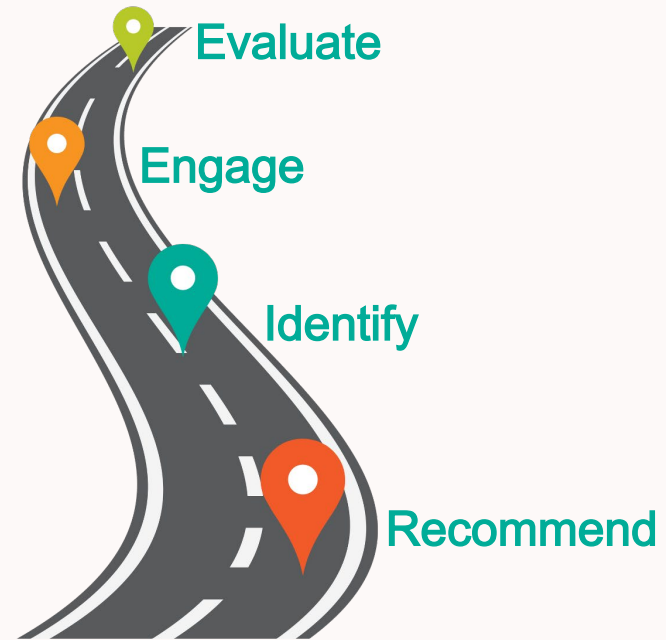


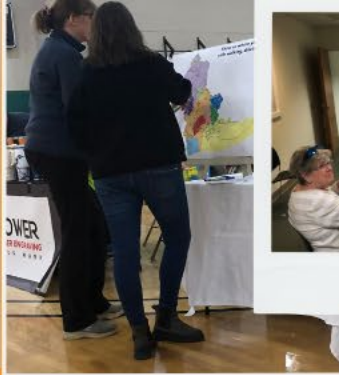
# Vision Zero Delco Action Plan



*COMMUNITY ENGAGEMENT & OUTREACH*

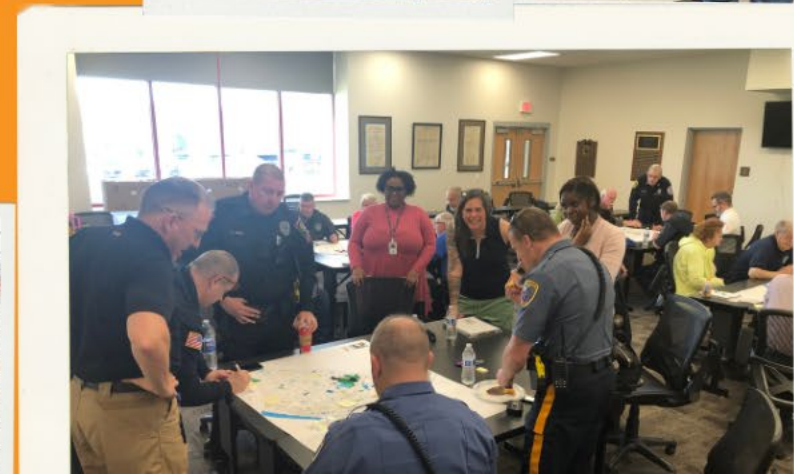
The Action Plan is the **road map** to achieve Vision Zero





# VISION ZERO DELCO

*Community Engagement*



# Safety Ambassadors



Alexis Washington,  
Media



Linda McIsaac,  
Newtown Square



Ed Kline, Ridley



Arnita DeShields,  
Upper Darby



Tamika Jenkins,  
Colwyn



Lyn Hedrick,  
Collingdale



Justin Wilson,  
Chester City



Dave Schwartz,  
Haverford



Crystal Peterkin,  
Parkside



Amanda Johnson,  
Chester City



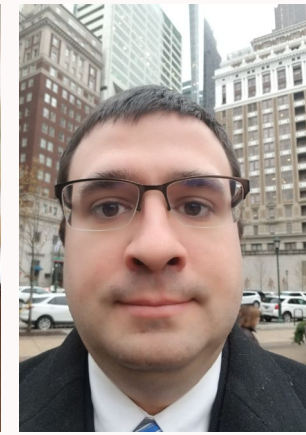
Rosie Grayburn,  
Springfield



Tomaka Gardner,  
Upper Darby



Christen Rexing,  
Upper Providence



Kevin Voit,  
Concord



Doreen  
McGettigan, Upland

# Next Steps

## Crash Profiles & Countermeasures Developing recommendations matrix

- Time frame
- Collaboration needs
- Implementation needs

### Systemic Safety Solutions



#### Crash Profile 2: People injured while walking along the road where sidewalks are missing

**ICON**  
explaining the  
crash profile  
risk factor: TBA

Pedestrian-related crashes along local or collector roads without sidewalks. Approximately five percent of all vulnerable road user involved injury crashes match this profile.

**Mode:** Walking

**Location:** Roadways

#### Percent of Profile Crashes by Roadway Ownership:

PennDOT Maintained Owner	Local Jurisdiction Owner
11%	89%

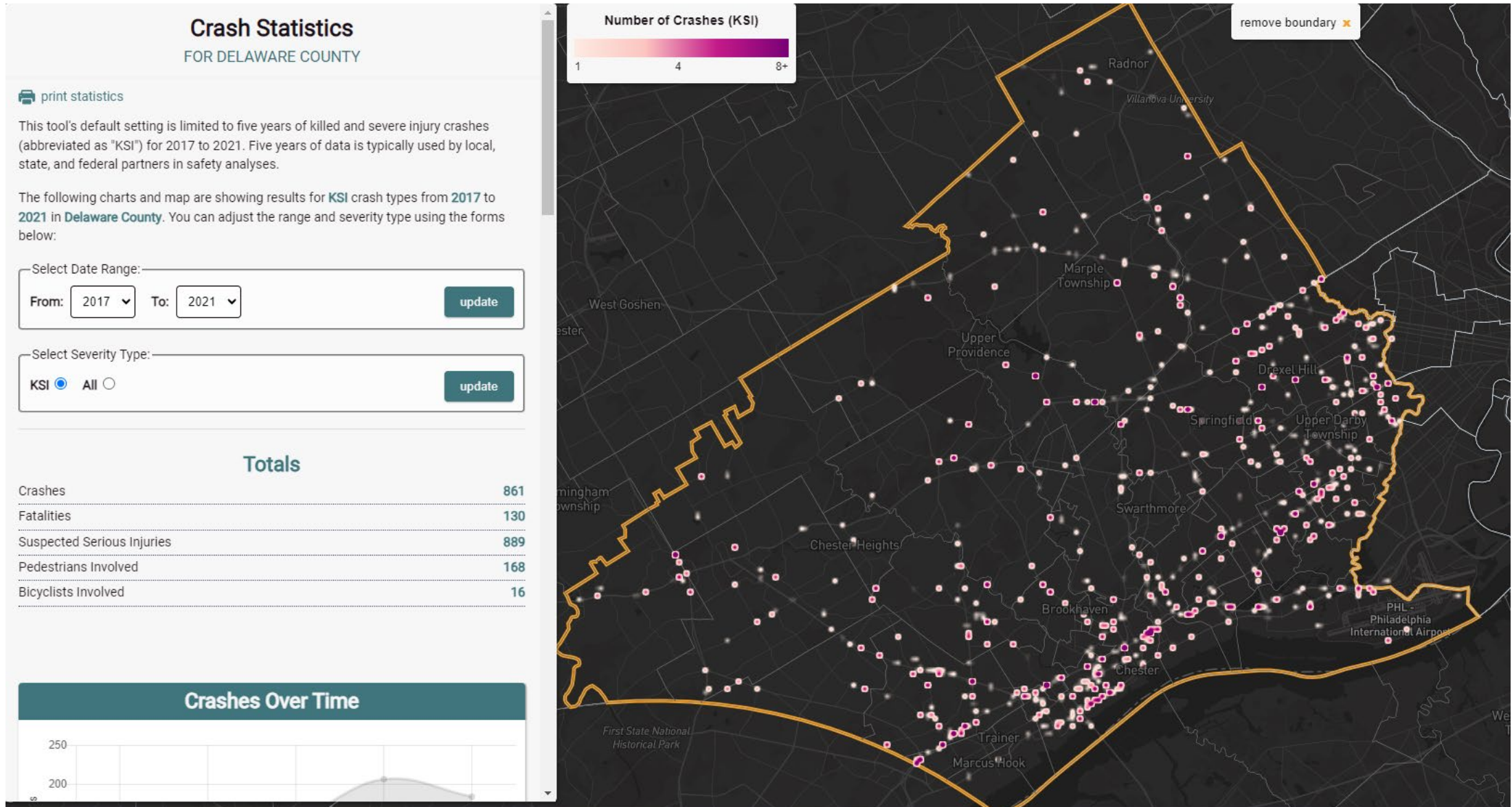
45 crashes <i>4.5% of all VRU injury crashes fit this profile.</i>	<b>Countermeasures:</b>				
	Countermeasure	Crash Reduction Factor	Complexity to Implement	Construction Cost	Quick Build Opportunity?
	Walkways (Sidewalks)	40.2%	Low	\$\$	x
	Rectangular Rapid Flashing Beacons (RRFBs)	70.0%	Low	\$	x
	Median Islands, Pedestrian Refuges/ Crossing Islands with/without marked	31.5%	Med	\$\$	x
	Road Diet (CMF and CRF are for Convert 4-lane undivided road to 2-lanes plus turning	38.0%	High	\$\$	x
	Improved Corridor Lighting	37.0%	Med	\$\$	
	Advance Stop/Yield Lines	25.0%	Low	\$	x
	Grade-Separated Crossings	13.0%	High	\$\$\$-\$\$\$	
	Parking Restrictions at Crossing Locations/ Daylighting	30.0%	Med	\$	x
	Raised Crossings	46.0%	Med	\$	
	On-Street Parking (Traffic calming)	52.0%	Med	\$	x
	Speed Hump (Traffic calming)	40.0%	Low	\$	x
	Automated Speed Enforcement Cameras	14.3%	High	\$	



# Getting Hands on with Design



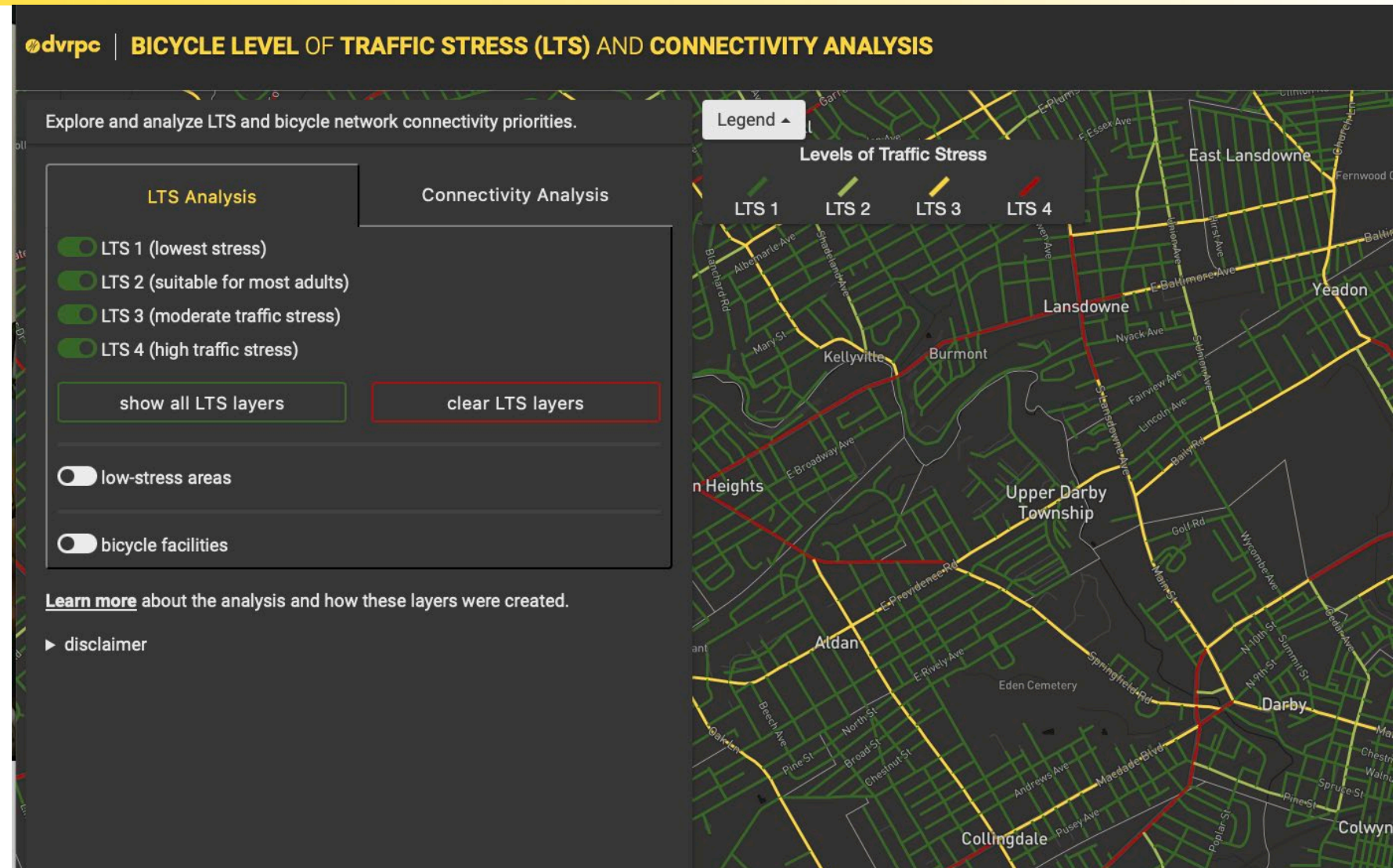
# DVRPC Crash Data Viewer



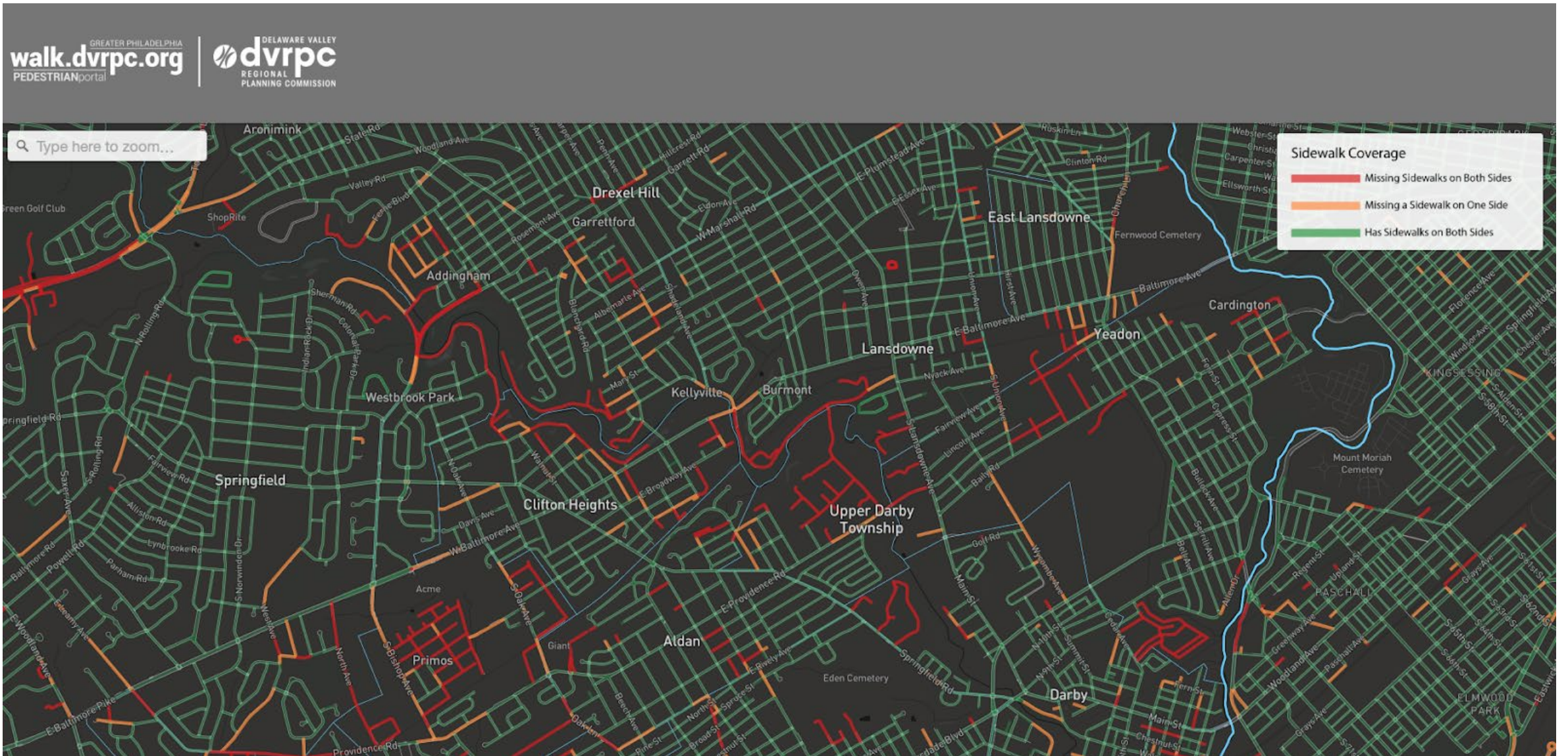
# DVRPC Bicycling Level of Traffic Stress

Have you looked at your transportation network for bicyclists?

How about for pedestrians?



# DVRPC Sidewalk Gap Analysis



# Tools in the Toolbox

TRUCK ROUTE TREATMENTS	<h3>SEPARATED BIKE LANE</h3>  <p>1</p> <p>A separated bike lane is within the street right-of-way and separated from motor vehicle traffic by a physical barrier, such as planters, flexible delineator posts, parked cars, landscape median, or a mountable curb.</p>	<h3>SHARED USE PATH / TRAIL</h3>  <p>2</p> <p>This facility is shared between people biking and walking. A shared use path (SUP) or trail provides the highest level of separation and the lowest level of traffic stress for cyclists.</p>	<h3>GREEN PAINT</h3>  <p>3</p> <p>Green and/or white pavement markings draw attention to cyclists moving through or past conflict areas, including intersections and driveways.</p>	<h3>BICYCLE SIGNAL</h3>  <p>4</p> <p>Bicycle signals indicate when bicyclists can cross. They also restrict conflicting vehicle movements. Bicycle-only signals can be used at intersections to provide a separate signal phase that is dedicated to bicyclists.</p>
	<h3>ROAD DIET</h3>  <p>5</p> <p>A road diet involves reducing or repurposing lanes to change the purpose, width, directionality, or other characteristics of the roadway. This can slow vehicles and make room for a bicycle facility.</p>	<h3>RAISED MEDIAN</h3>  <p>6</p> <p>A raised median provides horizontal deflection to slow vehicles along a roadway. Raised medians provide an opportunity to incorporate a pedestrian refuge or green stormwater infrastructure.</p>	<h3>CURB EXTENSION / BULBOUT</h3>  <p>7</p> <p>Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.</p>	<h3>INTERSECTION VISIBILITY</h3>  <p>8</p> <p>Marking off areas using pavement markings, flexible delineator posts, or other visual or physical elements delineates space where on-street parking is restricted. This maintains visibility at driveways and intersections.</p>
SIGNALS & INTERSECTIONS	<h3>SPEED / RED LIGHT CAMERAS</h3>  <p>9</p> <p>Speed or red light running cameras can reduce motorist speeds and impact driver behavior where physical infrastructure is less feasible or effective. Additional legislation and certification might be needed to implement.</p>	<h3>SPEED LIMIT MARKINGS &amp; SIGNS</h3>  <p>10</p> <p>Painted speed limit markings and more speed limit signs provide a visual reminder of the desired and allowable roadway speed. Speed limits can also be reduced where appropriate.</p>	<h3>BUFFERS &amp; RUMBLE STRIPS</h3>  <p>11</p> <p>Buffers and/or rumble strips can be used to separate different modes of traffic traveling in opposite directions. These treatments can enforce separation between fast-moving traffic and a parking lane, bike lane, or turn lane.</p>	<h3>SIDEWALK WIDENING</h3>  <p>12</p> <p>A complete and connected sidewalk network increases pedestrian access and safety. Along an urban corridor, the sidewalk clear width should be at least 6-ft wide, or ideally wider.</p>
MULTIMODAL ACCESS	<h3>PEDESTRIAN REFUGE</h3>  <p>13</p> <p>A pedestrian median refuge island provides added protection for pedestrians and bicyclists crossing at an intersection or mid-block. The refuge improves pedestrian visibility, reduces conflict points, and reduces crossing distance.</p>	<h3>MARKED CROSSWALK</h3>  <p>14</p> <p>High visibility reflective crosswalk markings should be incorporated at controlled intersections and at priority mid-block crossings. According to FHWA, "a high-visibility marked crosswalk can reduce pedestrian crashes up to 40%."</p>	<h3>CROSSWALK VISIBILITY</h3>  <p>15</p> <p>Signage and warning beacons can be used in advance of marked pedestrian crossings to increase driver yielding.</p>	<h3>INTERSECTION MARKINGS</h3>  <p>16</p> <p>Pavement markings visually separate modes to reduce pedestrian and bicyclist exposure. Separate signal phases for bicyclists and pedestrians eliminate conflict points.</p>
TRAFFIC CALMING				
GREENWAY TREATMENTS				

# Tools in Action



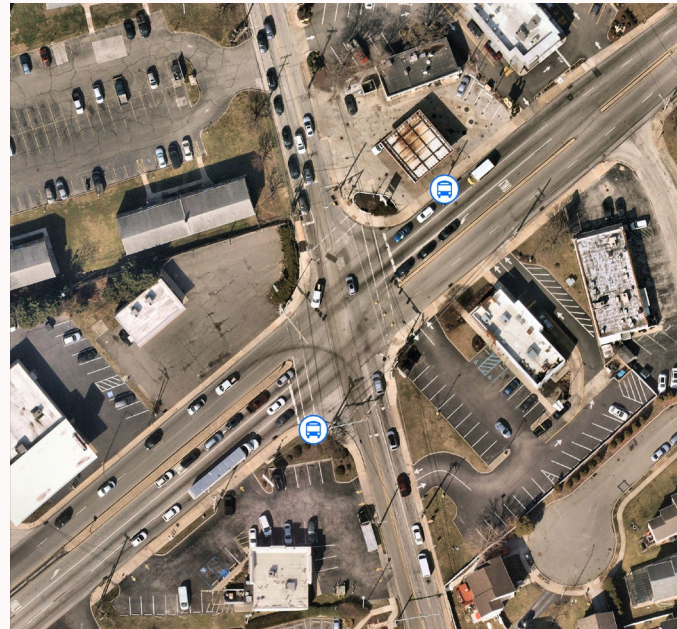
# The Scenario

- **Calming Road**
  - One lane each direction
  - Dedicated, signalized left turn lane
  - AADT 8,500, 5% trucking
- **Relaxing Road**
  - Four lanes each direction with dedicated, signalized left turn lane
  - AADT 14,000, 5% trucking
- **Numerous crashes**
  - 2018-2022: 16 crashes
  - 3 pedestrians hit
- **Must keep bus stops**
- **Problem cards**



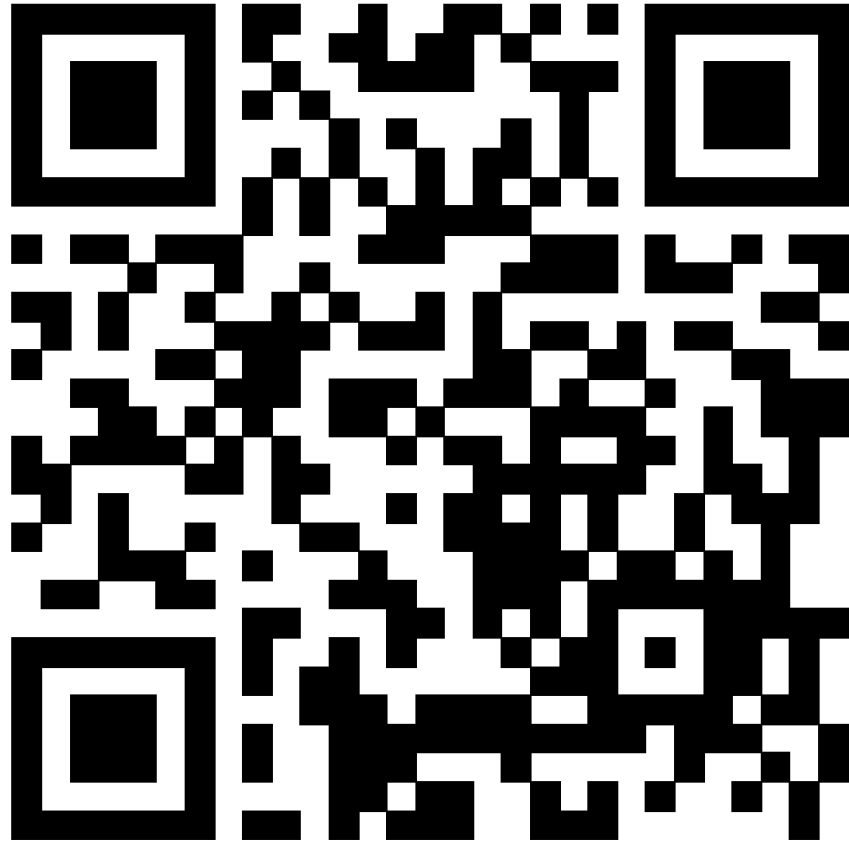
# Time to Design

- Map of an intersection
- Scenario description
- Bus stops must stay
- Legos
- Markers
- Road Safety Toolkit Flashcards
- 20 minutes to make it safe for ALL road users!



# Next Step: Outreach

## How Can You Get Involved?



### Municipal Contact for Regional Vision Zero

tom.stanuikynas@gmail.com [Switch account](#)

Not shared

County Name

Your answer

Municipality Name

Your answer

#### PRIMARY CONTACT

Name (First and Last)

Your answer

[https://docs.google.com/forms/d/e/1FAIpQLSd\\_3N68B\\_-ulcGwn9FkmLig0ci2Pxx0B0vqghh9Em7zAjChlw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSd_3N68B_-ulcGwn9FkmLig0ci2Pxx0B0vqghh9Em7zAjChlw/viewform)



  **VISION**  
  **ZERO DELCO**

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**Questions?**

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