

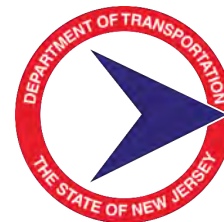
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# New Jersey Complete Streets Training

Oct 10, 2022 (North)

Oct 20, 2022 (Central)

Oct 27, 2022 (South)



**Michael Baker**  
INTERNATIONAL



**N | V | 5**

# Course Overview

You are here!



WHY

## Module 1: Benefits

- Basics
- Costs & Benefits
- Emerging Trends

WHAT

## Module 2: Planning

- Engagement & Visioning
- Planning & Zoning
- Policies
- Performance Measures

HOW

## Module 3: Design

- Assessment
- Typologies & Design Elements
- Group Exercise

## Wrap-Up

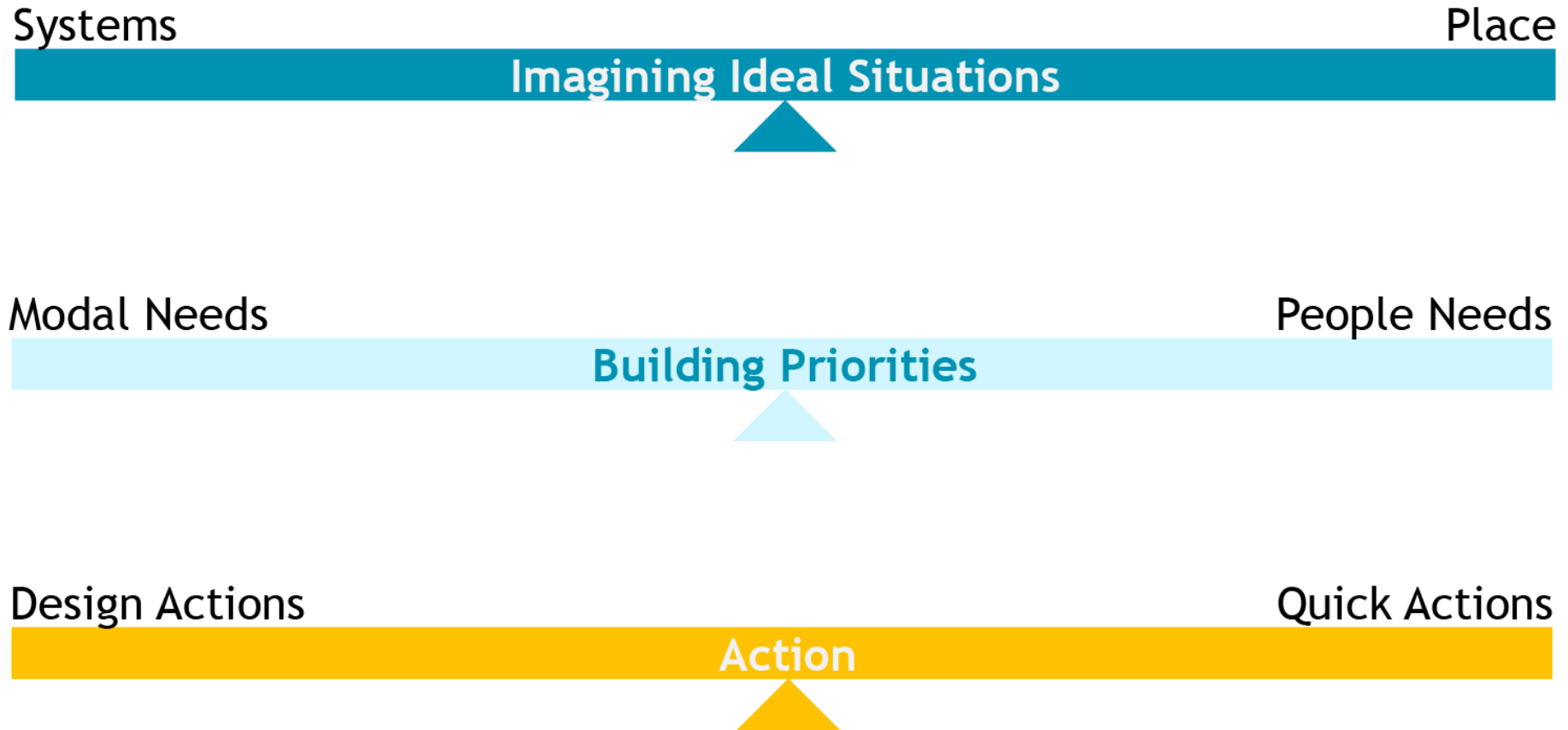
# A Balanced Approach to Action



# A Balanced Approach to Action



# A Balanced Approach to Action



# Objectives

By the end of today's training, you will better understand:

- The benefits of implementing Complete Streets.
- The evolution of Complete Streets as a safety strategy, policy, planning and design concept, including emerging trends that are informing how we think about Complete Streets.
- The integration of planning and placemaking with Complete Streets and the vast opportunities to make places safer and more livable through these synergies.
- Best practice Complete Streets design guidance.

# Meet the facilitators



Susan G. Blickstein  
AICP/PP, PhD



Laura Torchio  
AICP



Corey Hannigan



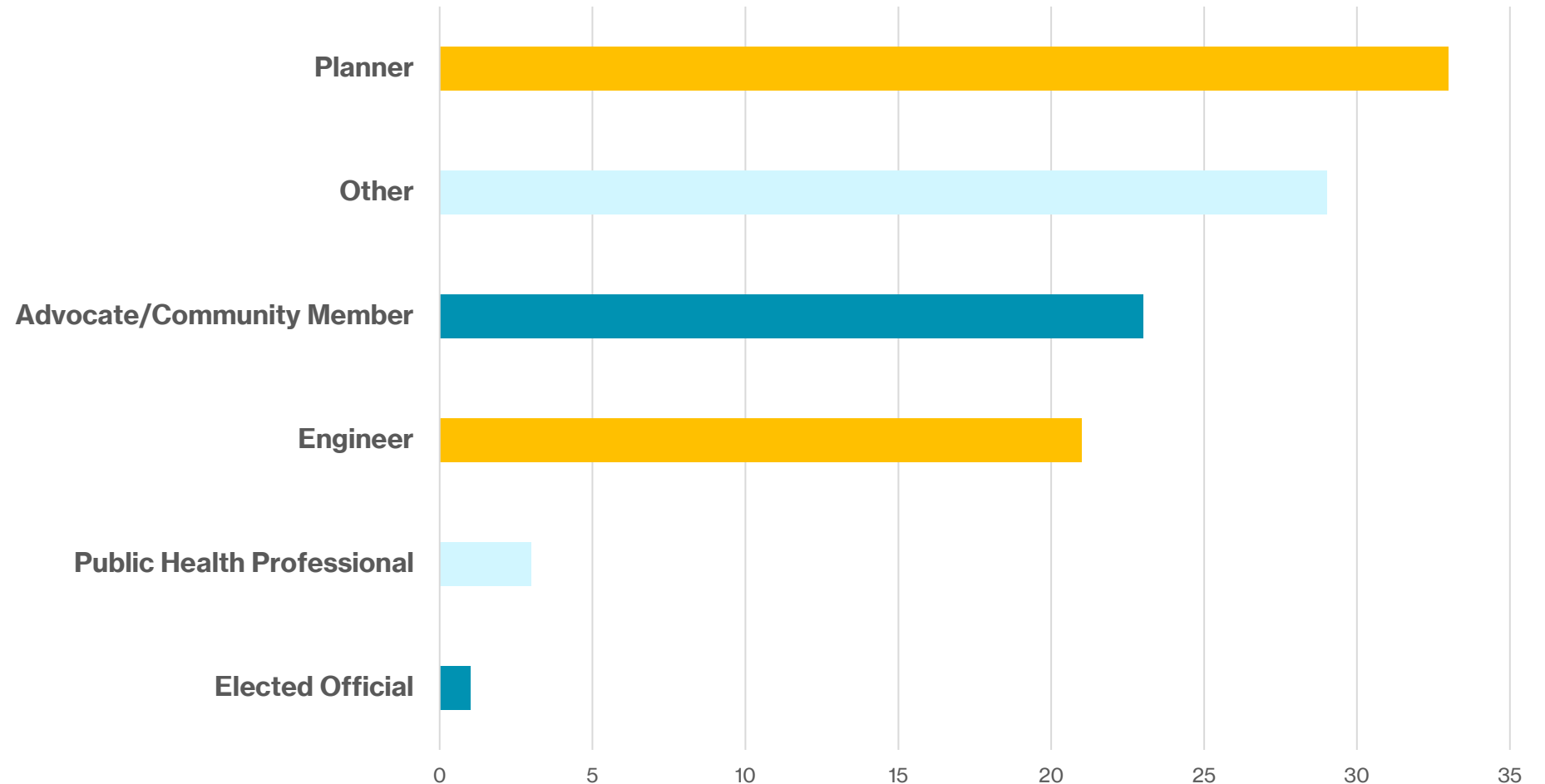
Matt Ludwig  
PE, AICP, WEDG



# Survey Says:



## How would you describe yourself?

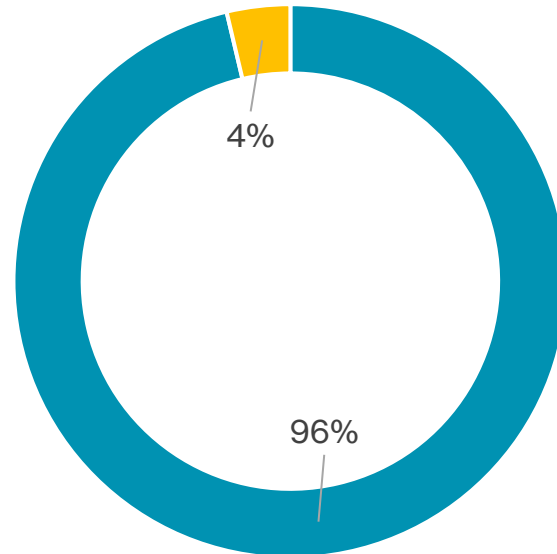




# Survey Says:

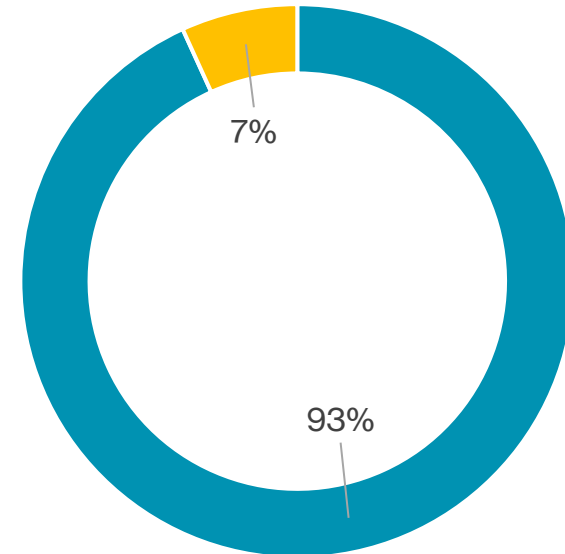


## Live in Jersey



■ NJ ■ Other State

## Work in Jersey

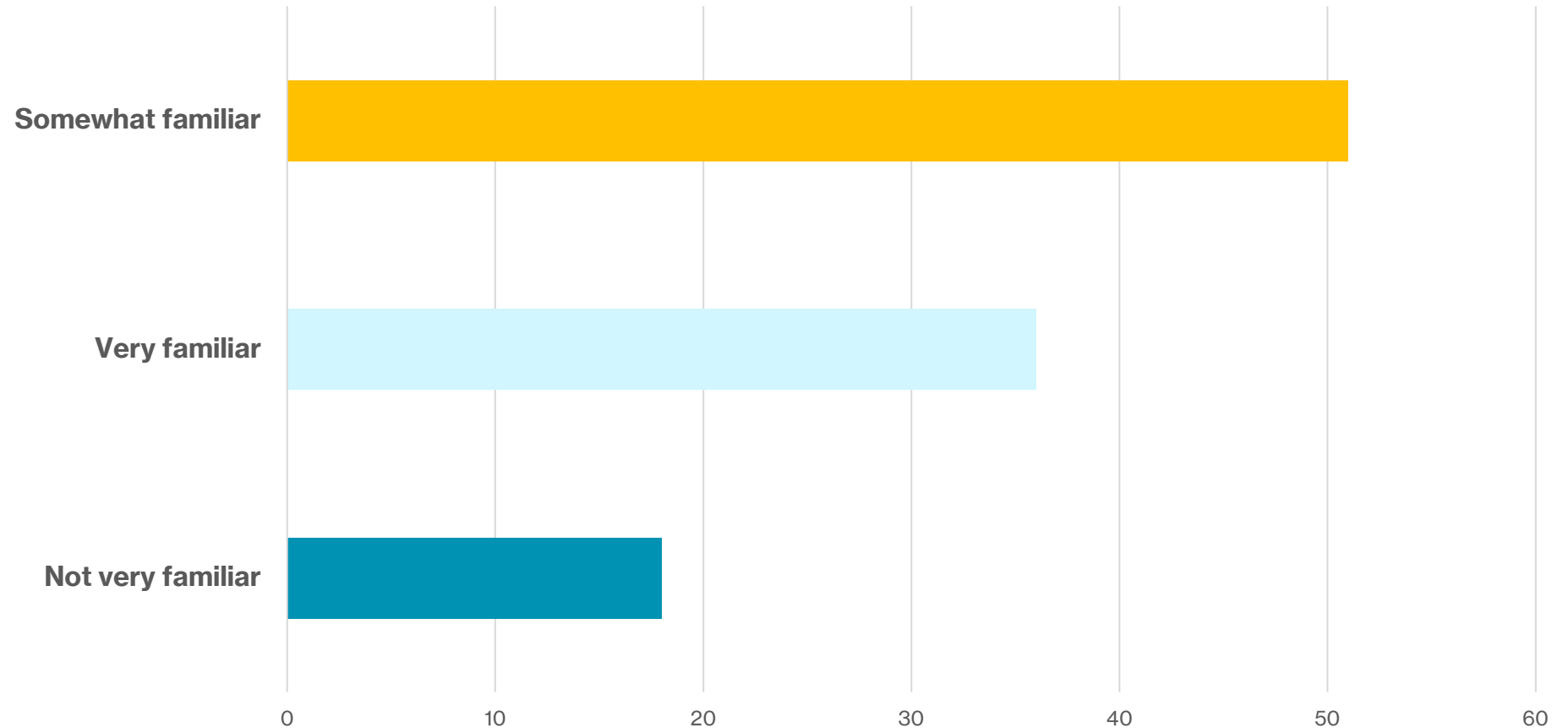


■ NJ ■ Other State

# Survey Says:



## How familiar are you with Complete and Green Streets?



# Ground Rules

- Be ready to interact
- Turn your phones ON!
- Take your work hats off for a sec
- Avoid "Yes, but"  
(Stick with "Yes, and")
- Think about WHO is using  
the space before WHAT should  
be designed
- Assume positive intent



# Poll Time



## What makes a great place?

Go to [menti.com](https://menti.com)

Type code: **6580 7797**

Please give up to **three** one-word or short phrase answers.

# Poll Time



**What are your biggest concerns in balancing Great Places with Transportation?**

**Go to [menti.com](https://menti.com)**

**Type code: 6580 7797**

Please give up to **three** one-word or short phrase answers.

# Module 1: Benefits

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**Basics**

Costs & Benefits

Emerging Trends



## What are Complete Streets?



# The Evolution of Complete Streets

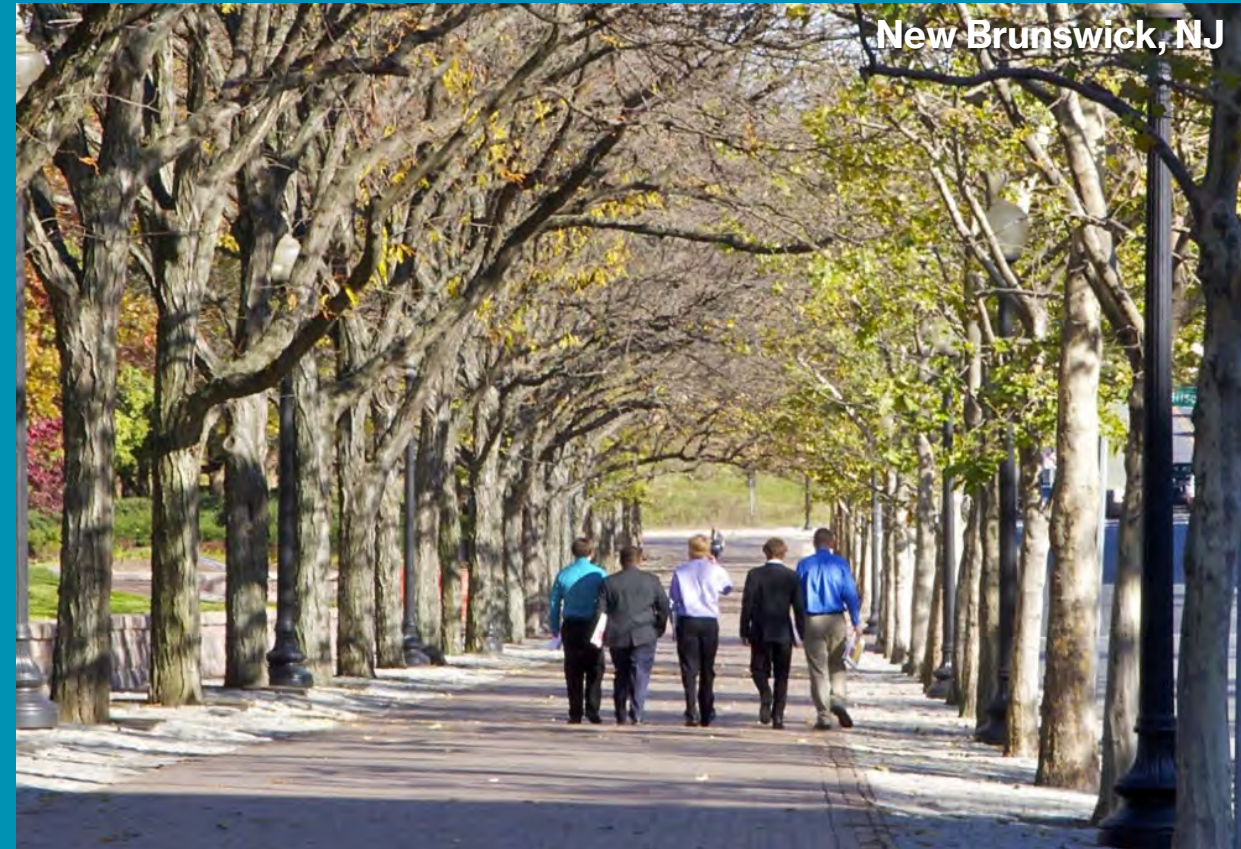
- Safe access by all *users*, all travel *modes*, all *abilities*
- Always based on local context
- Has evolved into being a **safety strategy**





# Complete Streets Support Local Context

- Who uses the street?
- How is it used?
- What land use types, settlement patterns, and densities are prevalent?
- How can Complete Streets support the local economy and broader community?
- **Not** a “One size fits all” approach





# Creating Complete Streets is an Iterative Process

- Understand the community and street system/network context
- Identify safety, connectivity and equity concerns
- Implement improvements over time
- Evaluate and monitor impacts/progress over time
- Refine as needed

# Module 1: Benefits

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Basics

**Costs & Benefits**

Emerging Trends



## The High Cost of *Incomplete* Streets

# High cost of incomplete streets

- Exposure to risk
- Crashes
- Fatalities
- Limited mobility
- Negative health impacts



Lacey Township, NJ



Plainsboro, NJ



Paterson, NJ



Lambertville, NJ

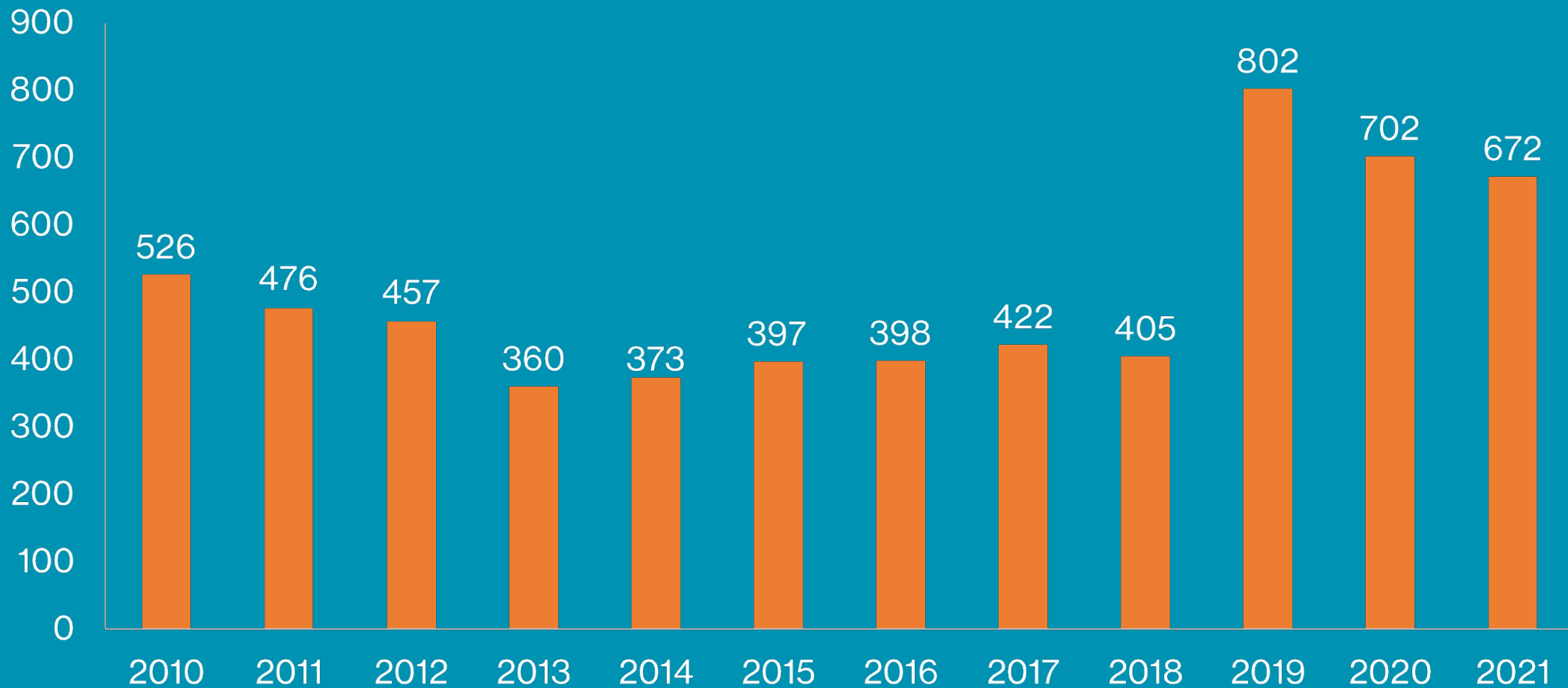


Trenton, NJ



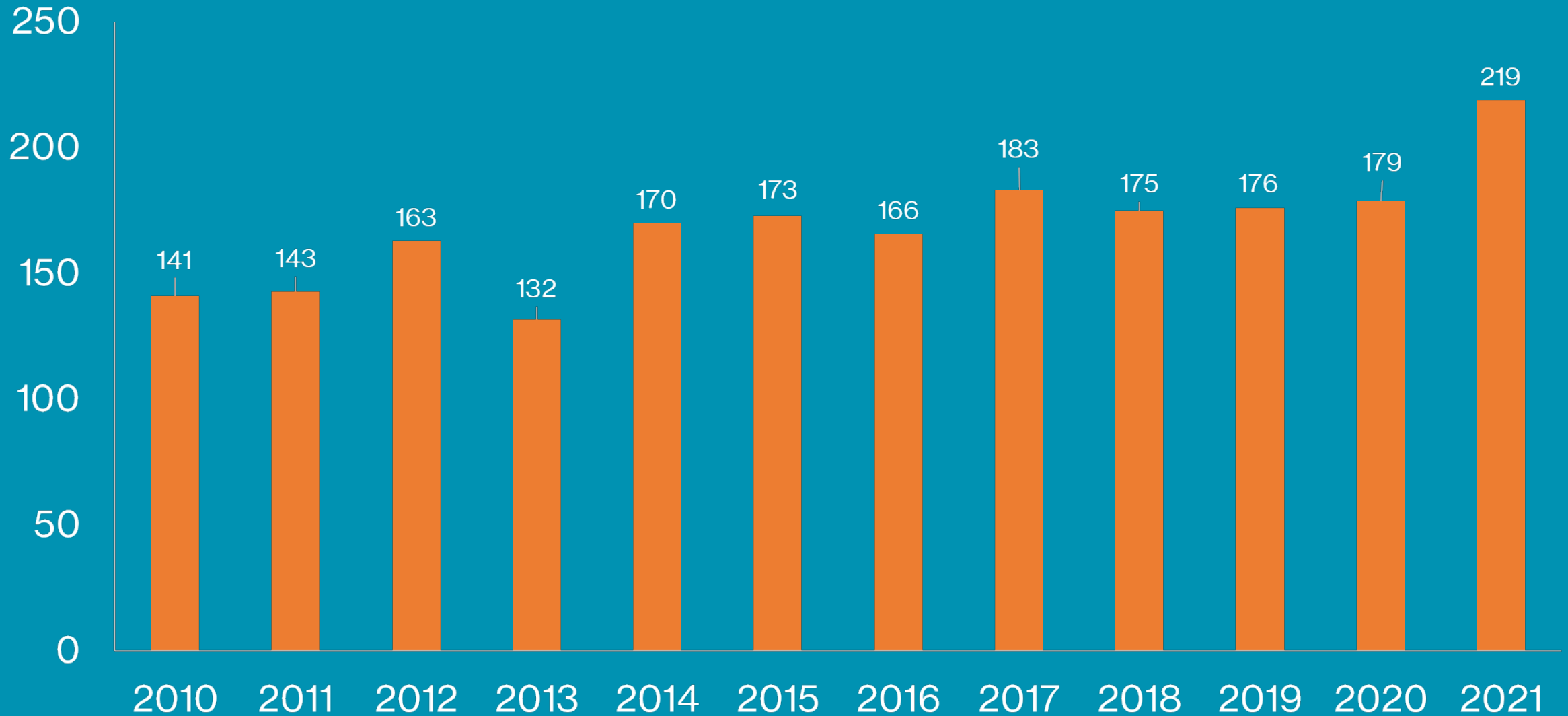
Linden, NJ

# NJ pedestrian and cyclist fatalities and serious injuries, 2010-2021



Serious injury crashes were redefined in 2019, causing an increase in total fatalities and serious injuries 2019-2021

# New Jersey pedestrian fatalities, 2010-2021





# Not statistics ... people

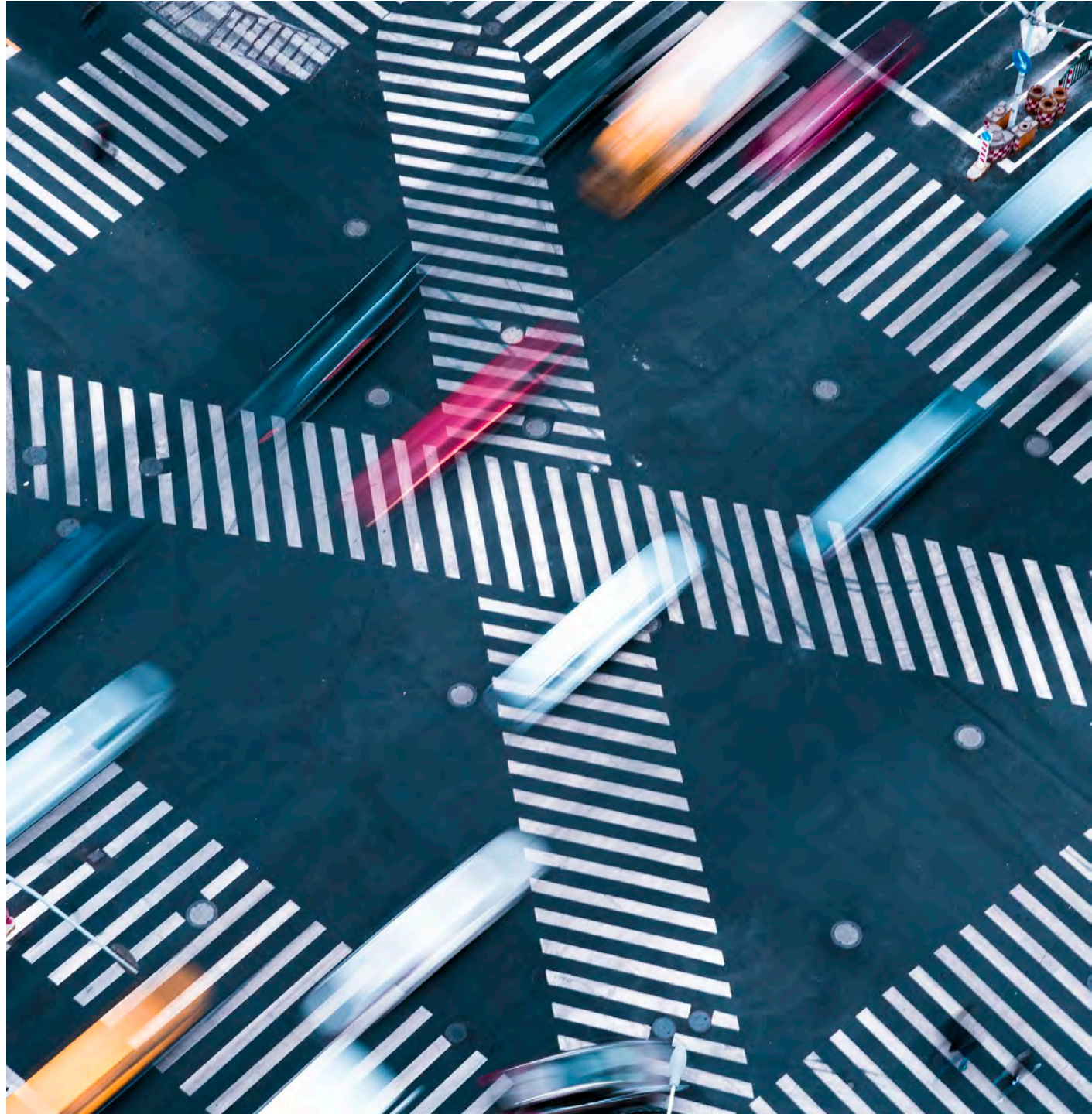




# Interactive poll

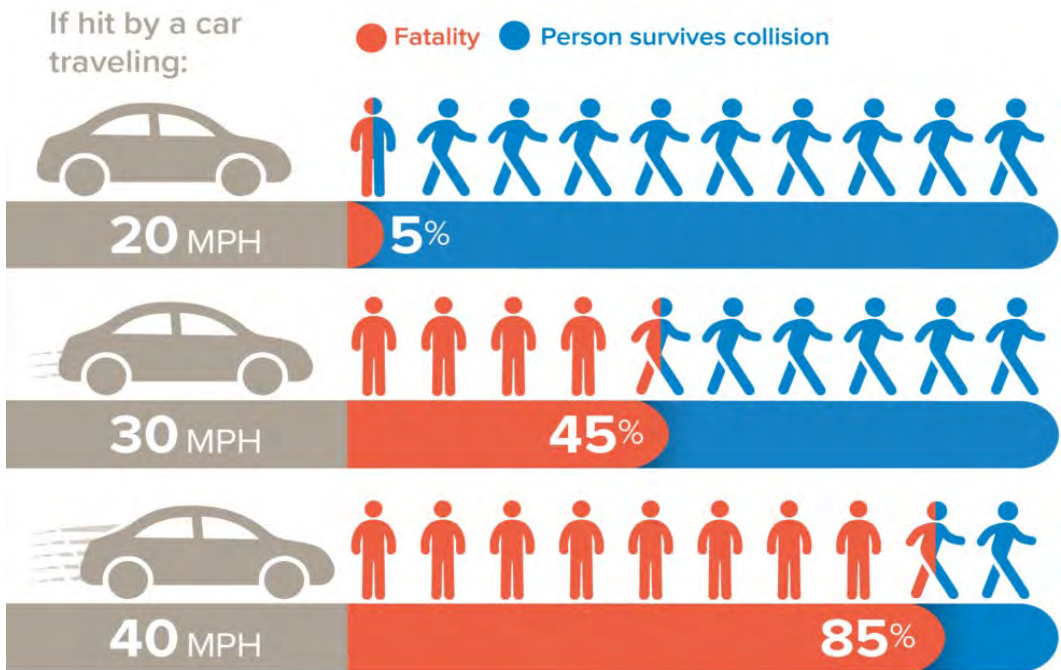
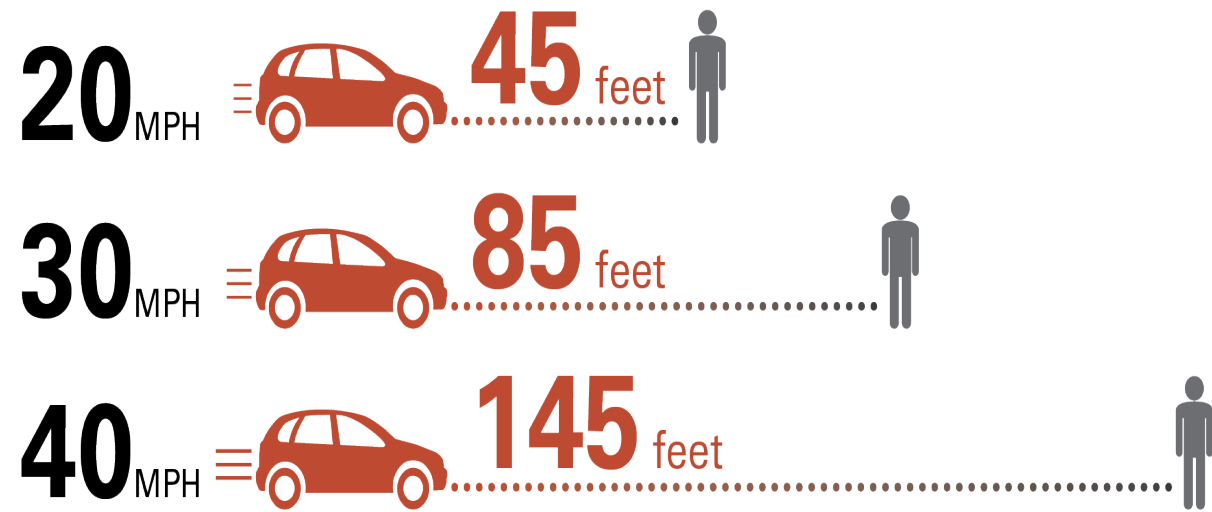
Driving at 30 mph, how far does the average car travel to reach a full stop?

- 10 ft
- 25 ft
- 40 ft
- 70 ft
- 85 ft



# Driving speed is the critical factor in crash severity & survival

## STOPPING DISTANCE FOR A VEHICLE TRAVELING AT...





# Driving speed & visibility

What a driver can see when traveling at

**10–15**  
MPH



**20–30**  
MPH



**30–40**  
MPH



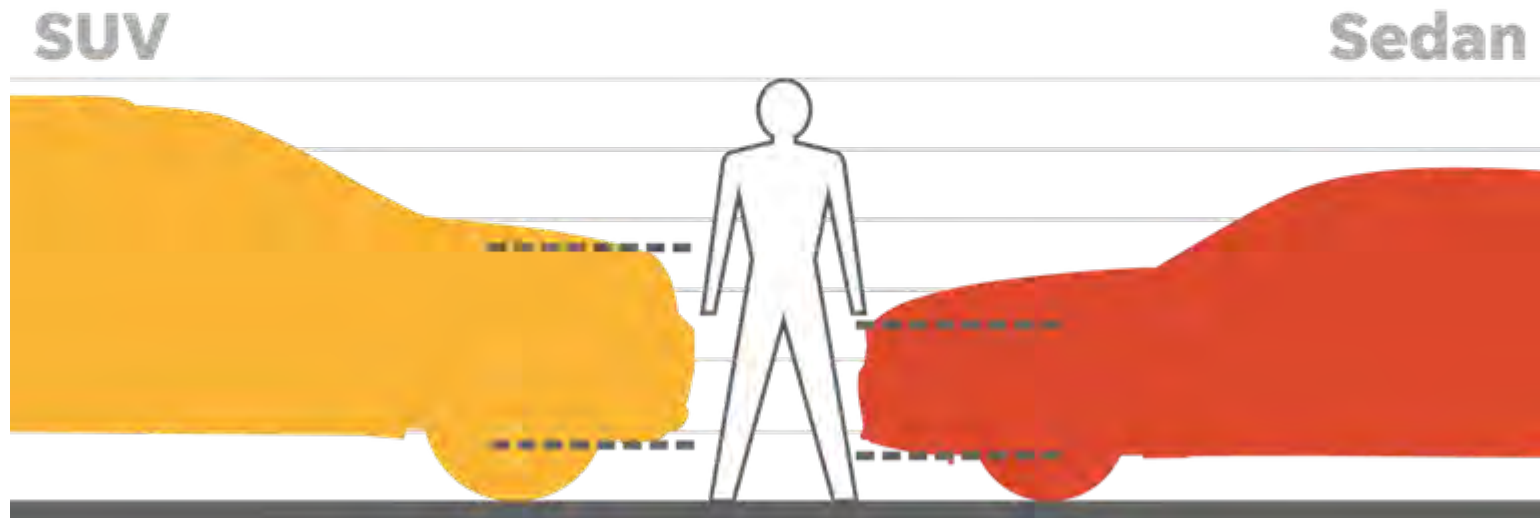
**45+**  
MPH



# Vehicle size and pedestrian visibility

- Pedestrians are two to three times 'more likely to die when struck by an SUV or pickup than by a passenger car' (NHTSA)

SUV front ends are taller, so they strike pedestrians higher on their bodies. That means they are more likely to kill a pedestrian than a car that would strike a person's leg.



# Exposure to safety risk:

*Where are New Jersey's fatal and serious injury (FSI) crashes occurring?*

- 54% occur at intersections
- 27% on roads with a speed limit of **25 mph**
- 31% on roads with speed limits **50 mph or greater**
- 45% in **low-light** conditions

# Exposure to safety risk:

## *Where are New Jersey's fatal and serious injury (FSI) crashes occurring?*

- 54% occur at intersections
  - 68% of pedestrian+bicycle FSI crashes occur **at intersections**
- 27% on roads with a speed limit of **25 mph**
  - 45% of pedestrian+bicycle FSI crashes occur with a **speed limit of 25 mph**
- 31% on roads with speed limits **50 mph or greater**
  - 15% of pedestrian+bicycle FSI crashes occur with a **speed limit of 50 mph or greater**
- 45% in **low-light** conditions
  - 59% of pedestrian+bicycle FSI crashes occur in **low-light conditions**
  - Only 29% of all crashes occur in low-light conditions

*Source: NJDOT Safety Voyager, 2016-2020*

# Mobility, Safety, and Equity

- Many NJ residents are too young, elderly, or physically unable to drive
- For some, vehicle ownership is cost prohibitive
- Many rely on walking and transit for basic mobility

**21.8%**  
under 18



**11.5%**  
no vehicle



**16.6%**  
over 65



**33.8%**  
one vehicle  
household



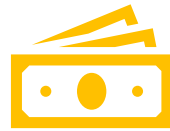
**10.3%**  
have a disability



**11.7%**  
take transit to  
work



**9.2%**  
poverty rate



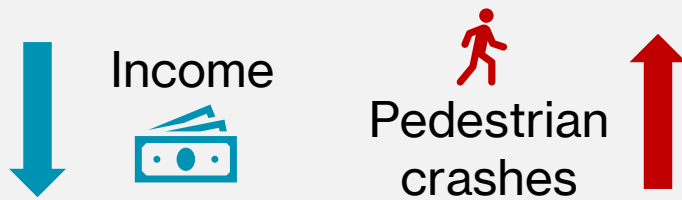
**36%**  
housing cost  
burdened





# Who is most at risk?

## In New Jersey

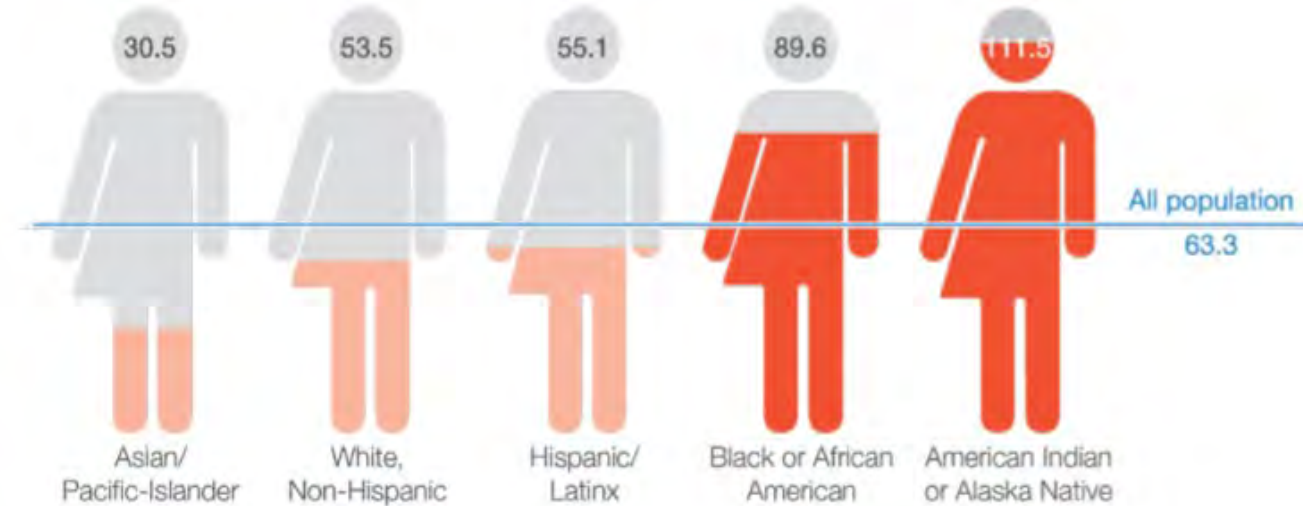


## People over 65

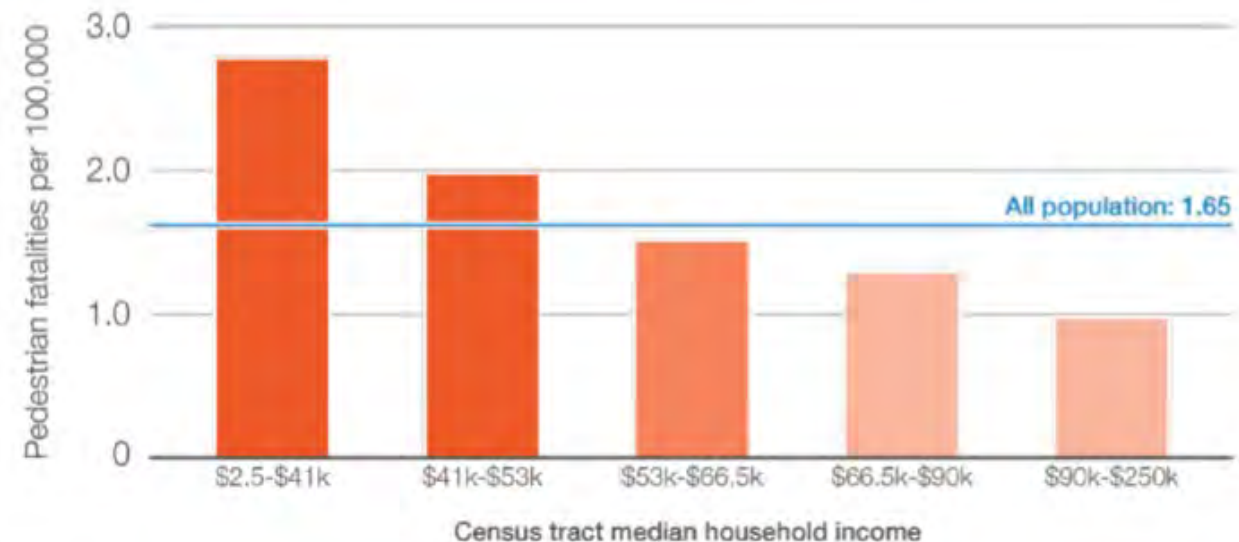
**16.6%** of the population

**26.7%** of pedestrian fatalities

## Pedestrian Safety Risk by Race (2010-19)



## Pedestrian Fatalities by Household Income (2010-19)



# Module 1: Benefits



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Basics

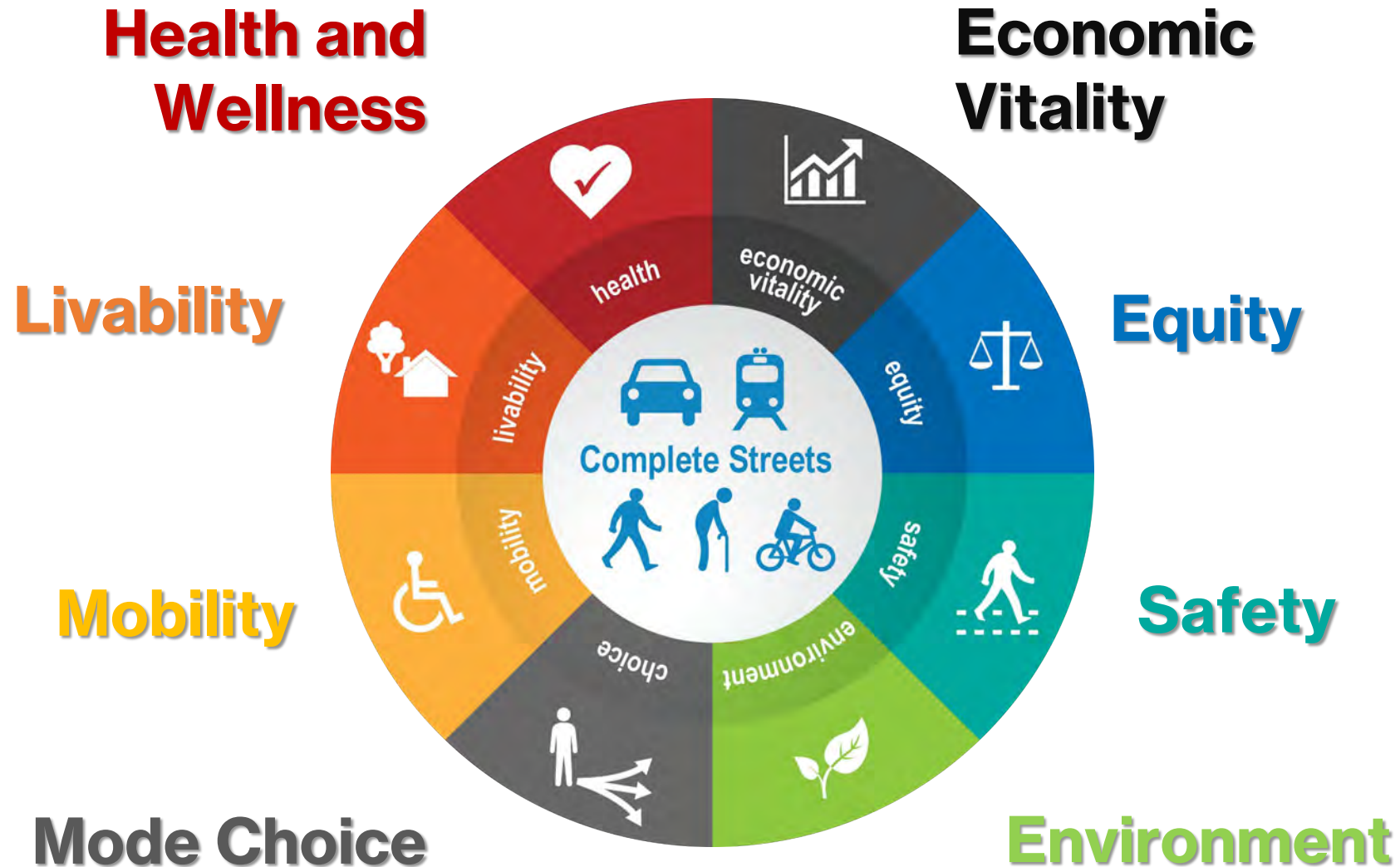
**Costs & Benefits**

Emerging Trends



## The Benefits of Complete Streets

# Benefits of Complete Streets/Networks

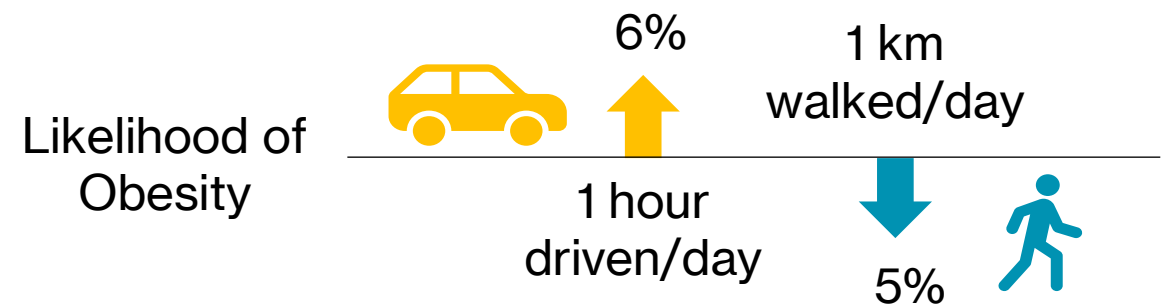






# Better health outcomes

- 25% of U.S. adults are not active enough
- About 42% of adults and 20% of children are obese
- Having Complete Streets can encourage more physical activity
  - Residents are 65% more likely to walk with sidewalks





# Access to opportunity

- Spatial mismatch between jobs and housing impacts job accessibility
- Inequitable transportation and transit investment leaves lower-income areas devoid of safe options
- Safe first/last mile options



Train Station  
Madison, NJ



# Delivery driver safety

- Drivers at risk when making deliveries
  - Parking in the shoulder
  - Crossing busy streets





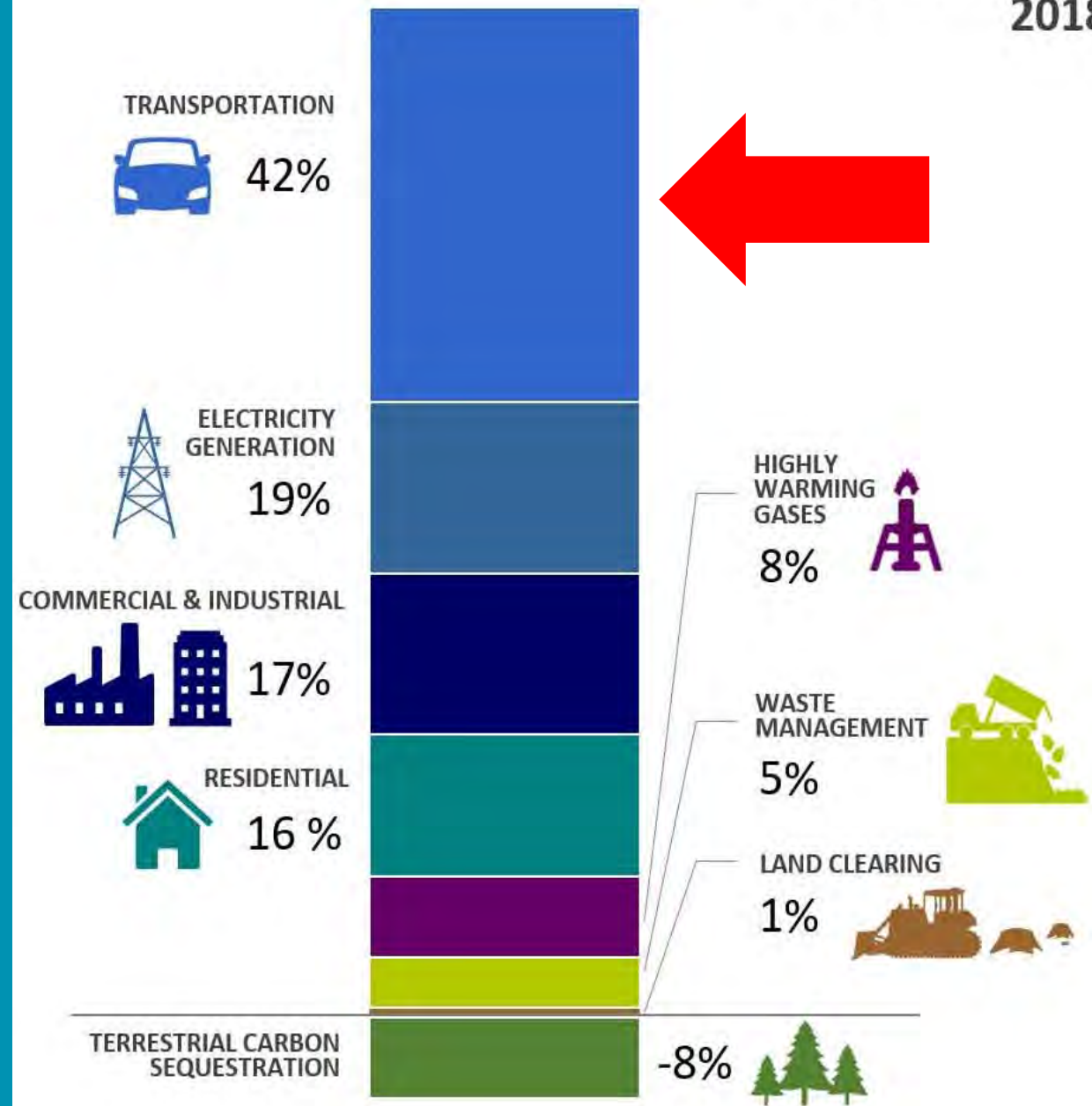
# Healthy environment

Nationally, most short trips are made by car:

- 21.4% of trips  $\leq$  1 mile
- 54.4% of trips  $\geq$  3 miles

An individual replacing a car trip with a bike or walk trip, once per day, ***reduces their transportation carbon emissions by 67%***

## NJ GREENHOUSE GAS SOURCES & SINKS 2018





# Street Trees



Lower average speed



Reduced stormwater runoff



Improved air quality and health



Increased property values



Lower crime rates



Reduced urban heat island effect



# Economic benefits

- Active transportation spending (infrastructure projects, business activity, spending by NMT users) **contributed \$500 million to New Jersey economy (2012)**





# Division Street

## Pedestrian Plaza, Somerville, NJ

- Retail vacancies **dropped from 50% to near zero**
- Business owners **invested \$1.7 million** in property upgrades



Somerville, NJ





# Safety is fiscally sound

Societal loss of **\$8.2 billion** due to traffic fatalities in NJ (2021)

Loss of **\$2.5 Billion** due to pedestrian fatalities in NJ (2021)

Loss of **\$21.7 Billion** over 3 years (2019-2021)



# Low cost of creating Complete Streets



New Brunswick, NJ



Hoboken, NJ

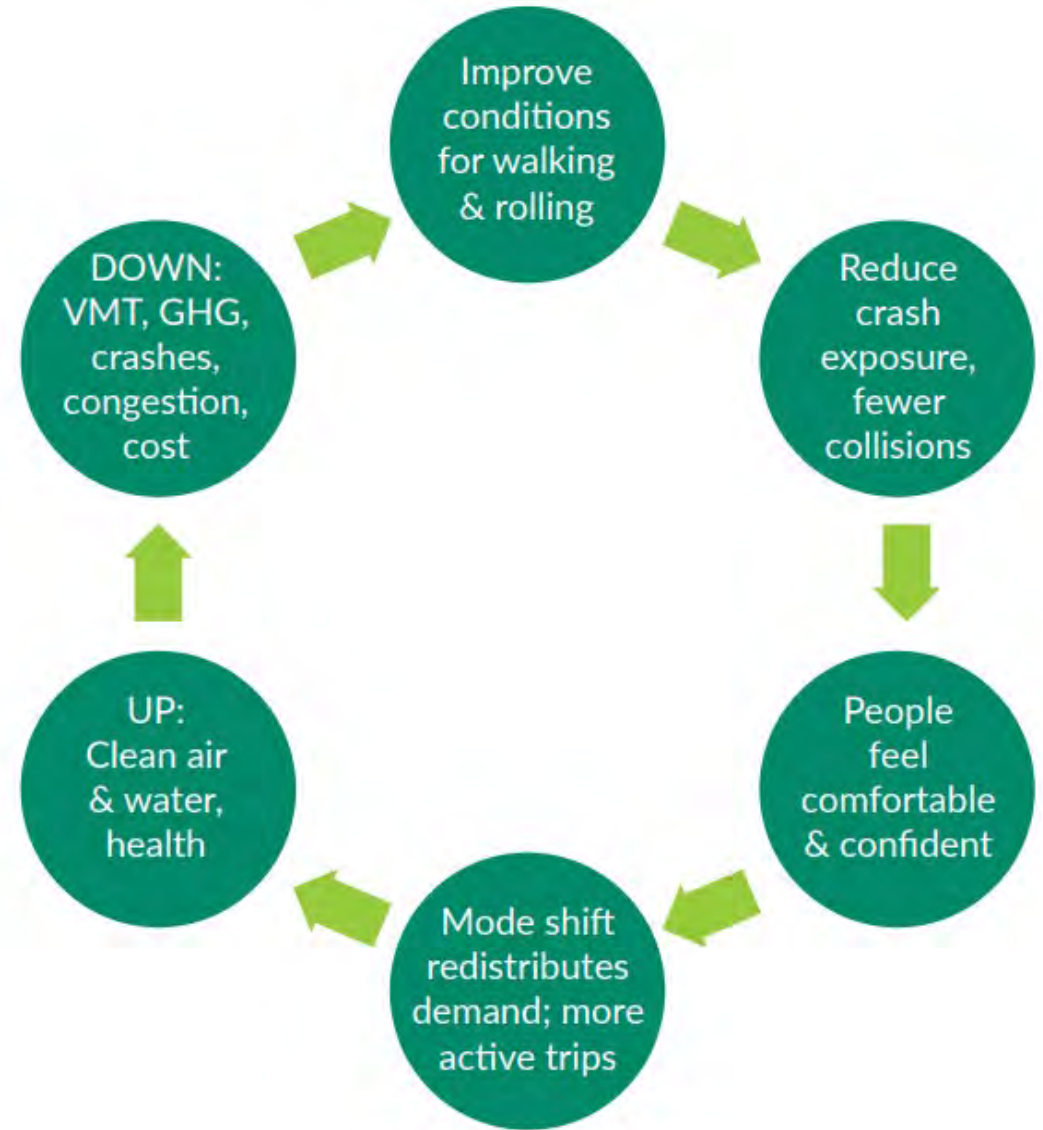


Bordentown, NJ

Compared to traditional transportation projects,  
**Complete Streets projects are inexpensive**

# Complete Streets benefit all users

- reduce traffic
- reduce parking demand
- improve safety, not only for vulnerable roadway users, but for all roadway users





# Module 1: Benefits



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Basics

Costs & Benefits

**Emerging Trends** ←

## Emerging Trends in Complete Streets

# Safe System

Recommendations of the  
Safe System Consortium



## Principles of the Safe System Approach



**Humans Make Errors**



**Humans Are Vulnerable to Injury**



**Responsibility Is Shared**



**No Death or Serious Injury is Acceptable**



**Proactive vs. Reactive**



# Safe System Strategies for Bicyclists and Pedestrians Toolkit

## Safe System Approach to Road Safety:

The Safe System Approach focuses on saving lives, with the understanding that humans make mistakes and bodies are fragile. Attention is focused on reducing fatal and serious injuries when a crash occurs through ways a street is designed, the ways we manage our streets and their infrastructure, and engaging and educating communities on how to use streets safely.

The Community Pedestrian and Bicycle Safety Training (CPBST) team adapted the [Federal Highway Administration \(FHWA\) Safe System elements and principles](#) to make them impactful for the communities we work with. Specifically, we include community engagement as a key element in a Safe System, and make equity a central component. We also acknowledge the key role of collaboration between transportation professionals and the communities they work with in order to create safe streets for all.

Within the Safe System Approach, the CPBST team:

1. Reviews pedestrian and bike crash data and safety strategies;
2. Facilitates walking and biking assessments;
3. Strategizes with communities to define specific pedestrian and bike safety goals and actionable next steps; and
4. Empowers communities to strengthen collaborations to implement specific walking and biking safety recommendations.

We've created a table of potential community improvements that can help you create a safer community with the Safe System Approach. There are many ways to plan a bikeable and walkable community, this toolkit is just a starting point.

Within our table of potential community improvements, we've tagged them with keywords we found relevant to the specific strategy. These keywords include:

- Community Engagement/Partnerships - allow opportunities to engage with the community and create partnerships with community-based organizations, local businesses, and others.
- Data - strategies that collect, analyze, and provide data for projects.
- Encouragement and Education - encourage communities to walk, bike, or use public transportation and/or provide educational opportunities to learn how to safely walk, bike, or roll in communities.
- Infrastructure - infrastructure-specific and change the layout of the roadway.
- Safe Routes to School (SRTS) - encourage and support SRTS efforts in communities.
- Speed Management - help manage speeds on the roadway to make communities safer for those walking and biking.
- Vulnerable Populations - create safer streets and communities for our most-vulnerable populations such as seniors, people with disabilities, and children.

## About the CPBST

The Community Pedestrian and Bicycle Safety Training (CPBST) program is a statewide active transportation and community engagement project of UC Berkeley SafeTREC and California Walks. It uses the Safe System Framework to engage residents and advocates to develop an action plan to improve active transportation safety in their communities, support complete streets planning, and strengthen collaboration with local officials and agency staff.



Funding for this program was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration.



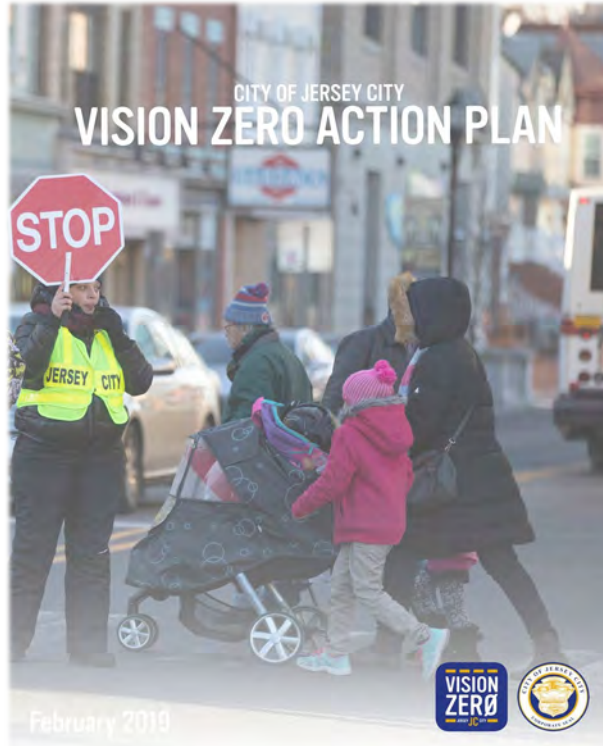
## PRIMER ON SAFE SYSTEM APPROACH FOR PEDESTRIANS AND BICYCLISTS



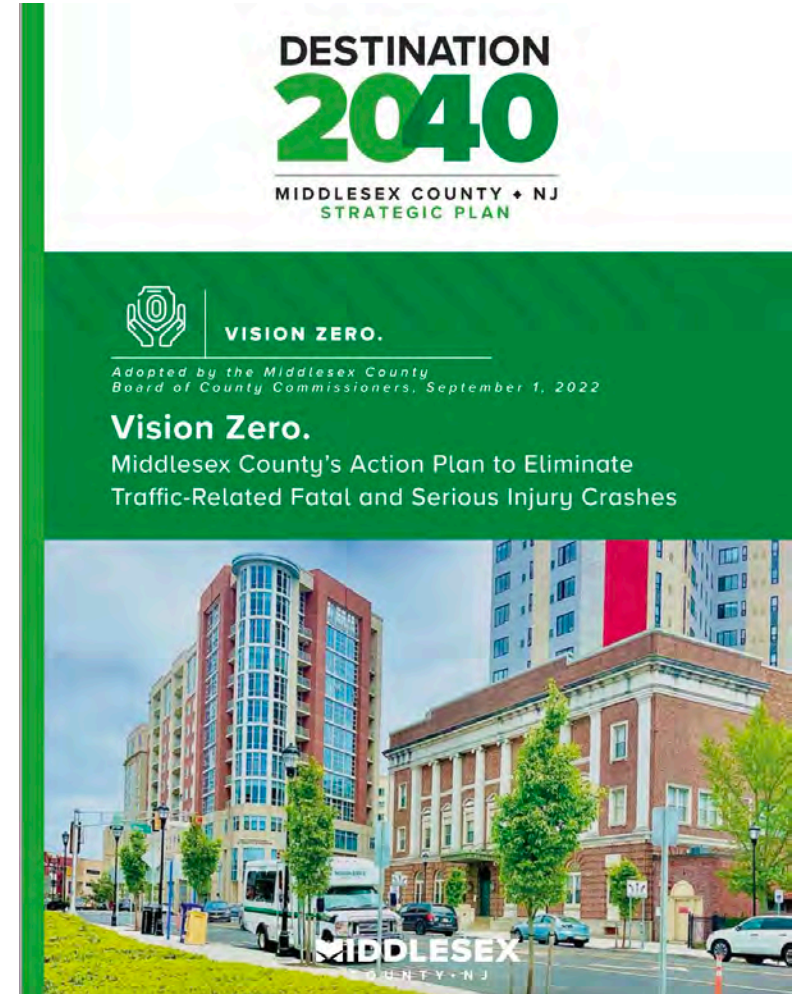
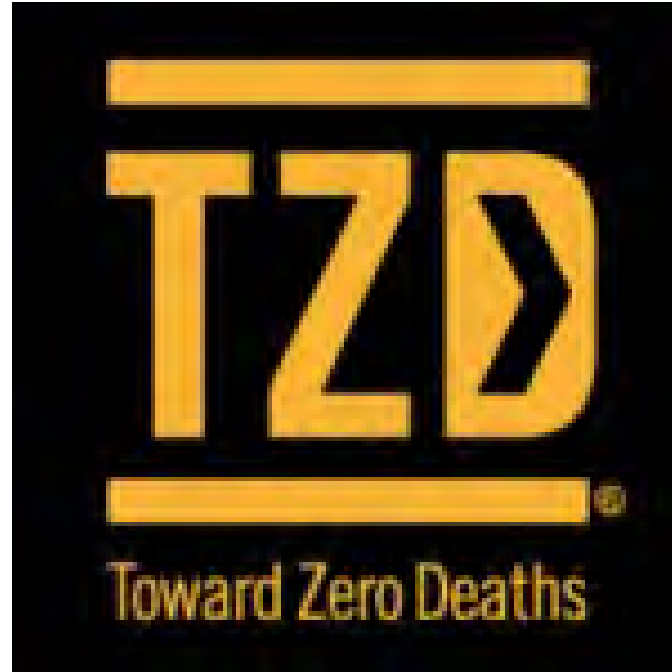


# Vision Zero

#roadtozero, #safety, #zerodeaths



***Vision Zero is based on a universal value – that no loss of life is acceptable***



# Emphasis on Equity

- Ensure fair and safe access for all people
- Disinvested areas typically experience higher safety risks
- State guidance requires enhanced consideration of equity impacts



Elizabeth, NJ



# Climate Resiliency

- Green stormwater features can mitigate the impacts of climate change
- CS projects are opportunities for multi-functional systems that mitigate stormwater runoff in addition to their primary purpose
  - Rain gardens for landscaping
  - Public spaces that absorb stormwater



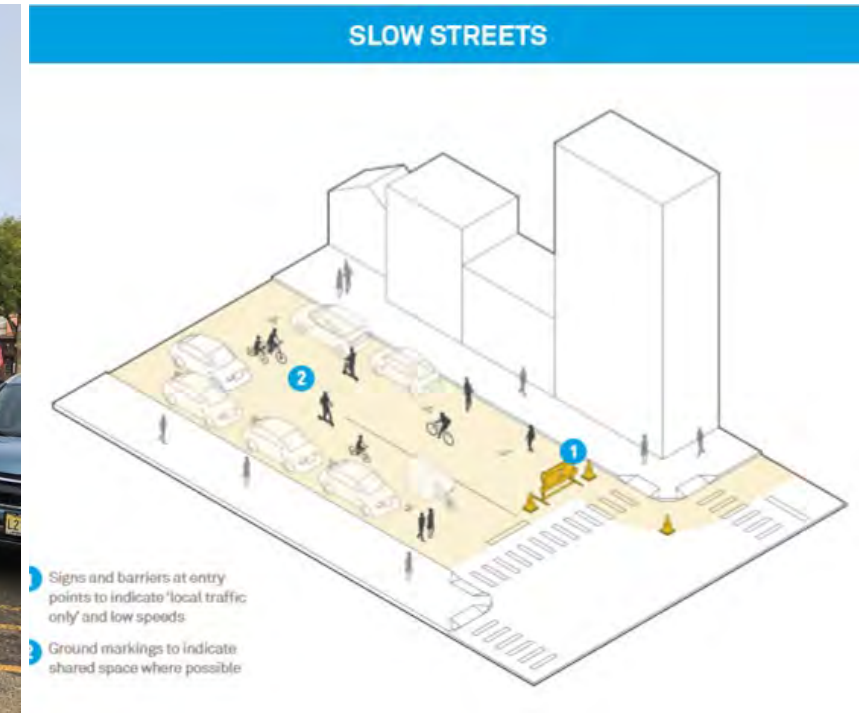
# Pandemic & public health



More people bicycled and walked for all reasons during COVID.



Creative configuration and use of public realm.



New guidance (NACTO)



# E-commerce & freight

- The growth of e-commerce and deliveries impacts congestion, air quality, and safety
  - Lack of safe walking routes to access warehouses
  - Drivers at risk when making deliveries
  - Parking in the shoulder or on a curb obstructs cyclists and pedestrians





# Micromobility

- Small, human- or electric-powered mobility options
- Shared systems
  - Enables users to have short-term access on an as-needed basis.
- Provides *first/last mile* connections to transit, reducing travel demand





# Placemaking

- Multi-faceted planning, design, and use of public spaces for all ages and abilities
- Capitalizes on a local assets, inspirations, and potential
- Creates safer, more equitable and successful communities



# Context Classification/Street Typology

- Integrate transportation and land use functions in the planning, design, and operation of roadways
- Context-based approach increasingly integrated into CS policy language, design manuals and scoping processes

**LAND USE PATTERNS**



**TRANSPORTATION NEEDS**





# Module 1: Benefits



## Q&A & a-ha!

**Please type your questions into the chat.**

Our facilitators will answer them in the chat, or during the remaining presentations and group exercises.