

District 5 FDOT Office of Safety and Target Speed



Metroplan Committees and Boards
June and July 2022

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Why?



ONE LIFE LOST IS **TOO MANY**

8



FATALITIES



SERIOUS INJURIES

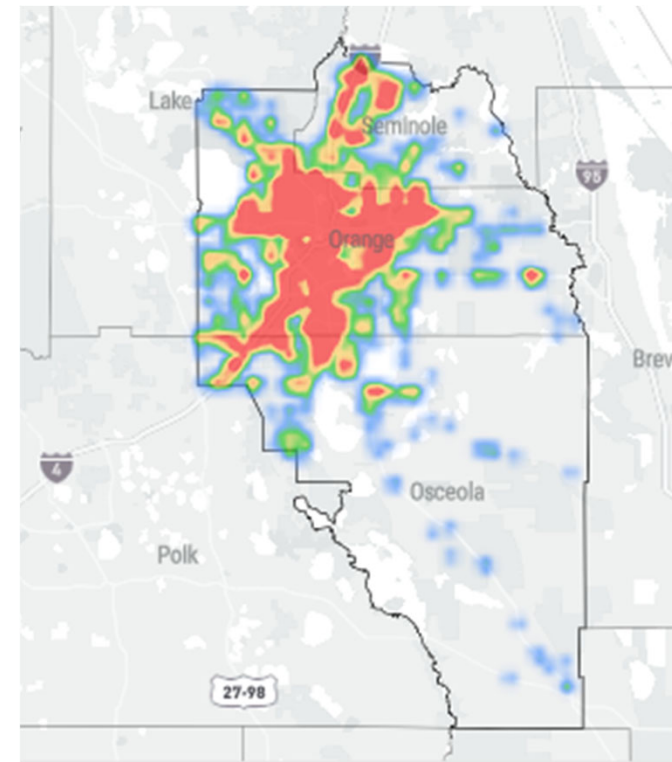
ON FLORIDA'S ROADS **EACH DAY**



Why is Safety a focus?

2021 Metroplan Orlando – Seminole-Orange-Osceola

- 318 Fatalities on roadways (local and state)
 - 105 were people walking or biking (33%)
 - 32 were attributed to speeding or aggressive driving
 - Lane Departures and Intersections are issues as well
- 280 Fatalities on average from 2016-2020
- All roadways – Local and State



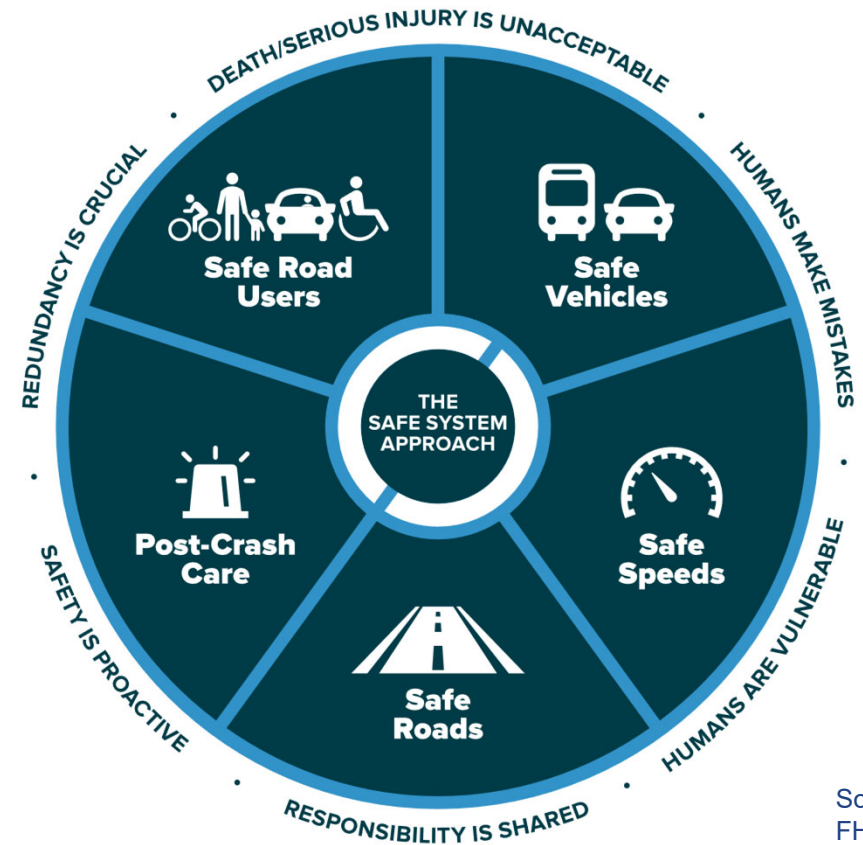
Safe System Approach

Principles

- Death/Serious Injury is Unacceptable
- Humans Make Mistakes
- Humans are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

Elements

- Safe Road Users
- Safe Vehicles
- Safe Speeds
- Safe Roads
- Post Crash Care



Source:
FHWA

Safe System Approach vs Traditional Approach

Traditional approach

Prevent crashes →

Improve human behavior →

Control speeding →

Individuals are responsible →

React based on crash history →

Safe System approach

Prevent death and serious injuries

Design for human mistakes/limitations

Reduce system kinetic energy

Share responsibility

Proactively identify and address risks

Safe System Approach vs Traditional Approach

Traditional approach

Prevent crashes →

Improve human behavior →

Control speeding →

Individuals are responsible →

React based on crash history →

Safe System approach

Prevent death and serious injuries

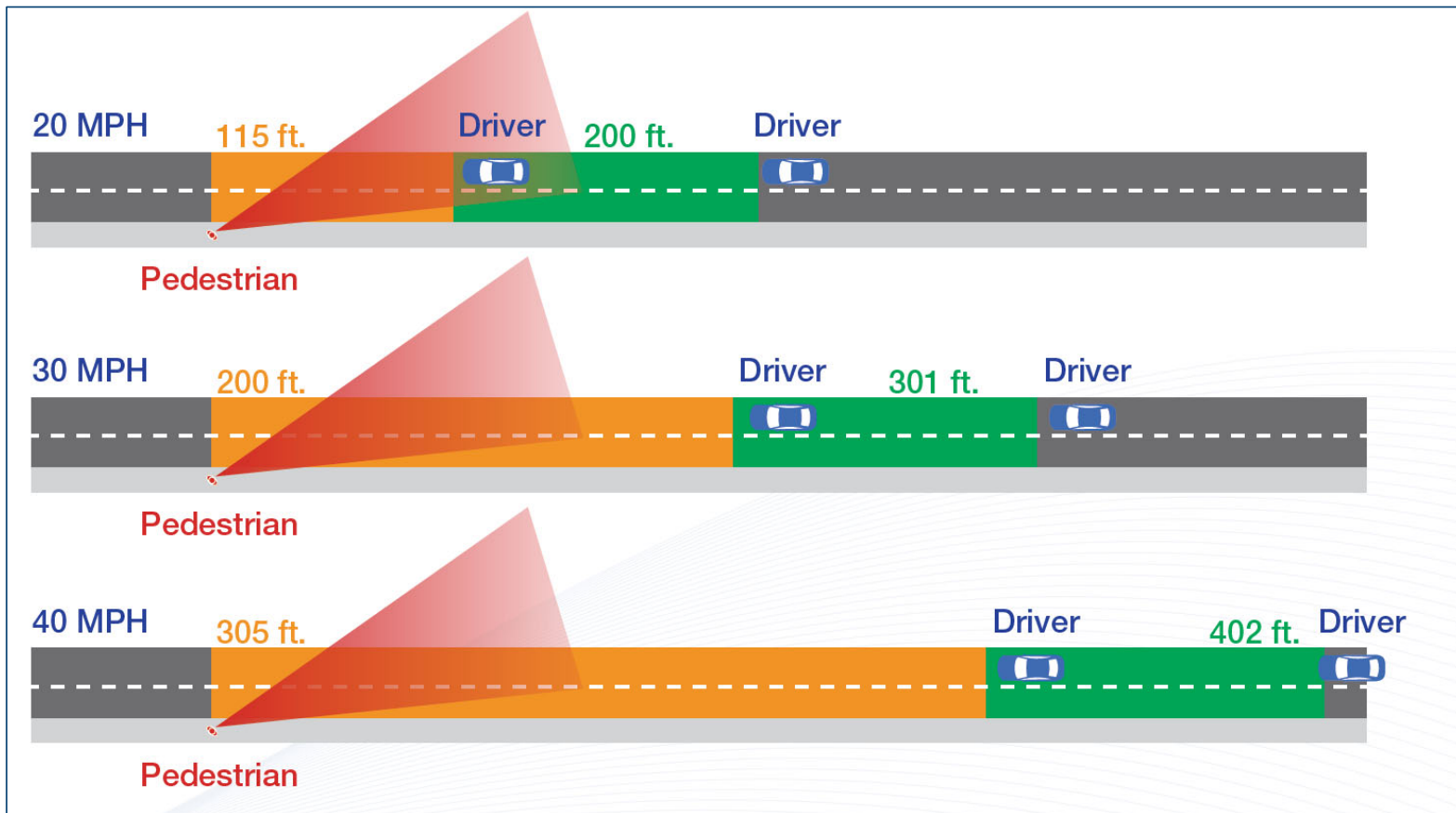
Design for human mistakes/limitations

Reduce system kinetic energy

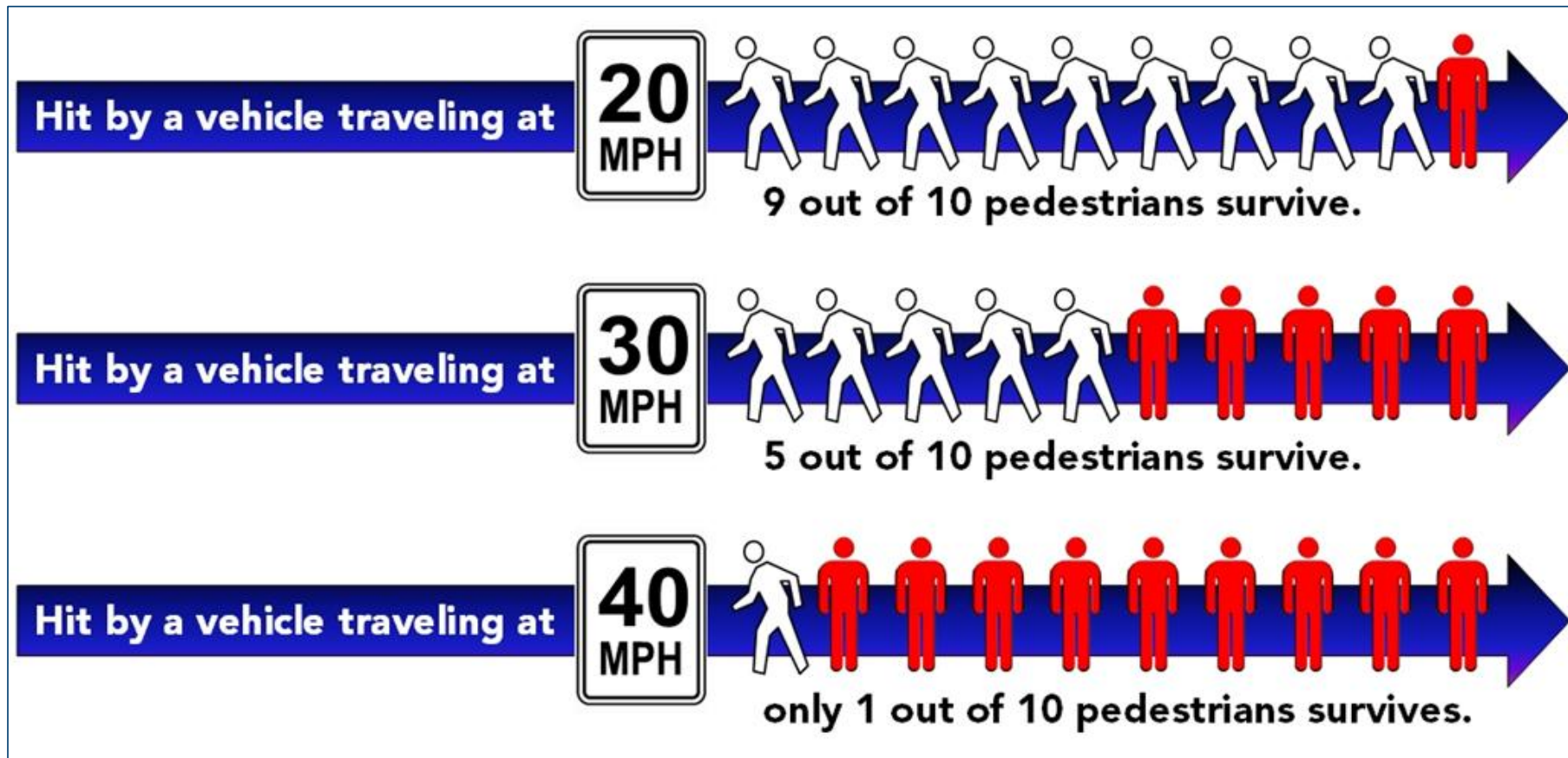
Share responsibility

Proactively identify and address risks

Why slower speeds?



Why slower speeds?



FDOT DESIGN MANUAL

Topic #625-000-002
FDOT Design Manual

January 1, 2019

202 Speed Management

Figure 202.3.1 Concept Sketch - Midblock Chicane



Figure 202.3.4 Concept Sketch – Terminated Vista Example



Table 202.3.1 Strategies to Achieve Desired Operating Speed

Context Classification	Design Speed (mph)	Strategies
C1	55-70	Project-specific; see FDM 202.4 .
C2	55-70	Project-specific; see FDM 202.4 .
C2T	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFBs and PHBs
	35	Techniques for 40-45 mph, plus On-street Parking, Street Trees, Short Blocks, Median Islands at Crossings, Road Diet, Bulbouts, Terminated Vista
	30	Techniques for 35-45 mph, plus Chicanes, Median Islands in curved sections, Textured Surface
	≤ 25	Techniques for 30-45 mph, plus Vertical Deflection
C3R, C3C	50-55	Project-specific; see FDM 202.4 .
	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Median Islands in crossings, Road Diet, RRFB and Hawk, Terminated Vista
C4	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
	35	Techniques for 40-45mph plus On-Street Parking, Street Trees, Short Blocks, Median Islands at Crossings, Bulbouts, Terminated Vista
	30	Techniques for 35-45 mph plus Chicanes, Median Islands in Curve Sections, Textured Surface
C5	35	Roundabout, On-street Parking, Street Trees, Short Blocks, Speed Feedback Signs, Median Islands in Crossings, Road Diet, Bulbouts, RRFB and HAWK, Terminated Vista
	30	Techniques for 35 mph plus Chicanes, Median Island in Curve Sections, Textured Surface
	25	Techniques for 30-35 mph plus Vertical Deflection
C6	30	Roundabout, On-Street Parking, Horizontal Deflection, Street Trees, Median Islands in Curve Sections, Road Diet, Bulbouts, Terminated Vista, Textured Surface
	25	Techniques for 30 mph plus vertical deflection

SETTING SPEED

Design Speed

- A principal design control that regulates the selection of many of the project standards and criteria used to design a roadway project.

Posted Speed

- Maximum speed allowed in a speed zone as designated by a sign within the zone.

Target Speed

- Highest speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multi-modal activity generated by adjacent land uses, to provide both mobility for motor vehicles and a supportive environment for pedestrians, bicyclists, and public transit users.



APPROACHES TO SETTING SPEED

Previous Approach

- **Determine the Design Speed**
 - Context based range
- **Select Posted Speed**
 - approx. 5 mph below Design Speed
- **Anticipated Driver behavior**
 - 85th percentile matches Posted Speed

Current Approach

- **Determine Target Speed: (Design=Posted=Target Speed)**
 - Consider Context Classification
 - Consider all Users: cyclists, and pedestrians, and vehicles
 - Strategic Intermodal System (SIS) facility or Evacuation Route
- **Compare to Design and Posted Speeds**
 - All at once
 - Incremental
 - Speed management techniques



Publication No. FHWA-SA-10-001

TARGET SPEED

- **Established by the Planning Office**
- **Must be within the range of Design Speeds for the context classification**
- **Must reflect the needs of safety, equity, quality of life, and economic development of the corridor**
- **Approved by a multi-disciplined team that includes Design, Traffic Operations, Safety, Planning, and Program Management**
- **Collaboration meetings**

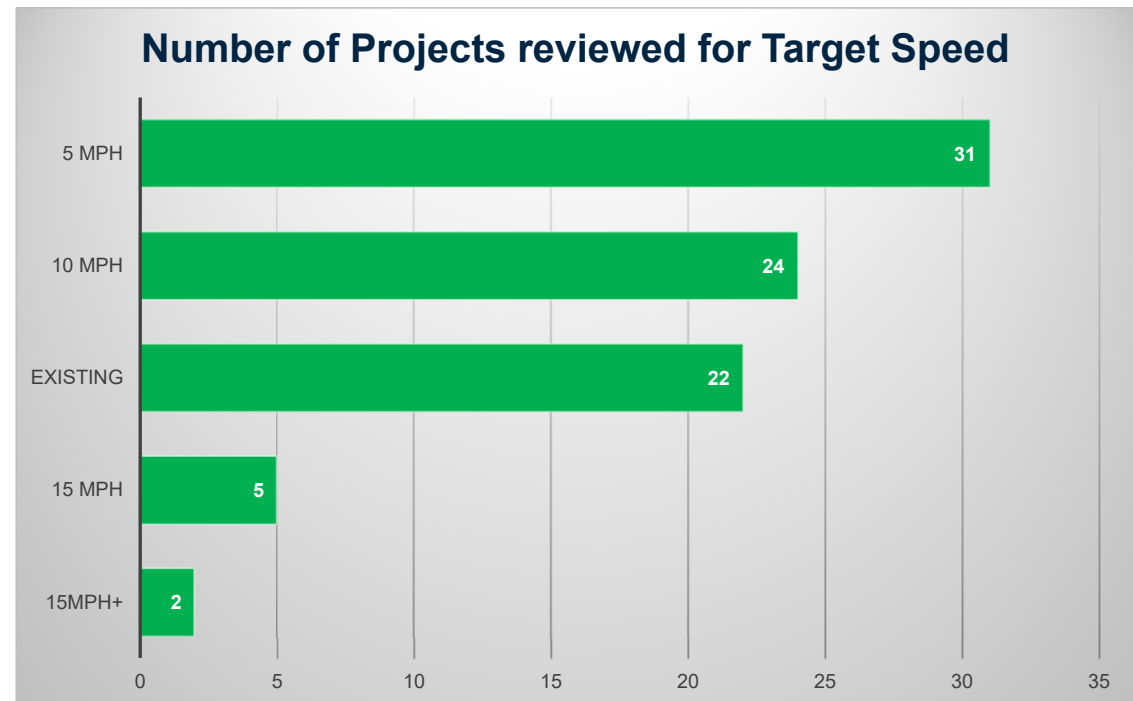
SPEED MANAGEMENT TECHNIQUES

- Roundabouts
- On-Street Parking
- Chicanes
- Lane Narrowing
- Horizontal Deflection
- Street Trees/ Landscaping
- Short Blocks
- Midblock Crossings
- Speed Tables
- And More!



TARGET SPEED REVIEWS

- Target Speed Reviews
 - Reviewed over 80 projects already in design from October 2021 to March 2022.
 - New projects are assigned a Target Speed during scoping
 - Office of Safety to do observational studies as these projects go to construction and complete



Vision Zero vs Target Zero

Vision Zero

- Vision Zero sets the goal of eliminating all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all, in a set period with clear, measurable strategies.
- Traffic deaths are PREVENTABLE.
- Acknowledge HUMAN BEHAVIOR influences crashes
- Multidisciplinary approach
- <https://visionzeronetwork.org>



FDOT's Target Zero

- Target Zero is a parallel effort that plans programs and projects, both infrastructure and behavioral related, to help achieve zero fatalities and serious injuries.



Opportunities for Safety Plans



- **Apply for a Federal Grant, Safe Streets and Roads for All (SS4A) Grant Program**

- **Local Road Safety Plans (LRSP)**

- *While local roads are less traveled than State highways, they have a much higher rate of fatal and serious injury crashes.*
- Prioritized list of issues, risks, actions, and improvements that can be used to reduce fatalities and serious injuries on local roads.
- Support the goals of a State's overall Strategic Highway Safety Plan (SHSP)
 - <https://www.fdot.gov/safety/shsp2016/>
- Do-It-Yourself Website created by FHWA
 - https://safety.fhwa.dot.gov/provencountermeasures/local_road_s.cfm



JUNE IS NATIONAL SAFETY MONTH



Over 3,000 lives are lost every year to PREVENTABLE CRASHES in Florida.

TOGETHER, we can bring this number down to ZERO.

Let's Get Everyone Home



TargetZeroFL.com



Safety begins with ME... Safety begins with YOU!

Thank you!

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