

Metro Orlando Pedestrian Fatality Trends & Issues



April 2021

This Presentation

Dangerous By Design

- Pedestrian Danger Index
- Scenarios

Safe System Approach

Crossing Law

Crash Factors



Pedestrian Danger Index

Pedestrian Fatalities

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(Population X 100,000)

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% Walking to Work

Dangerous By Design includes Lake
County for the Orlando metro area



Scenarios



Accounting for Visitor Population

Without Visitor Population	With Visitor Population	Change
PDI = 284	PDI = 259	-9%

From 2012-13 Study of Metro Orlando Residence of Pedestrians Involved in Fatal Crashes	Pedestrians Fatalities	
	Number	Percent
Reside in Orlando Metro	77	79%
Florida, Outside Metro Orlando	14	14%
USA, Outside Florida	4	4%
Foreign	-	0%

Scenarios



Only Increase Walking to Work

Average PDI 2011-13	Average PDI 2017-19	Change
245	282	15%
Walk-to-Work 1.1%	Walk-to-Work 1.7%	+21%

Walk-to-Work 2011-13 1.1%	Walk-to-Work 2017-19 +100% 2.2%	Change
PDI = 245	PDI = 178	-27%

Scenarios



Only Decrease Fatalities 20%

Average Yearly Fatafs 2011-13 60	Average Yearly Fatafs 2017-19 Reduced 20% = 48	Change
PDI = 235	PDI = 136	-42%

A New Safety Principle



New 2021 Florida Highway Safety Plan introduces the **Safe System** approach ...

*“... which acknowledges that **humans make mistakes**, the human body is vulnerable, and that we should design and operate our transportation system to ensure that if crashes do occur they do not result in serious human injury.”*

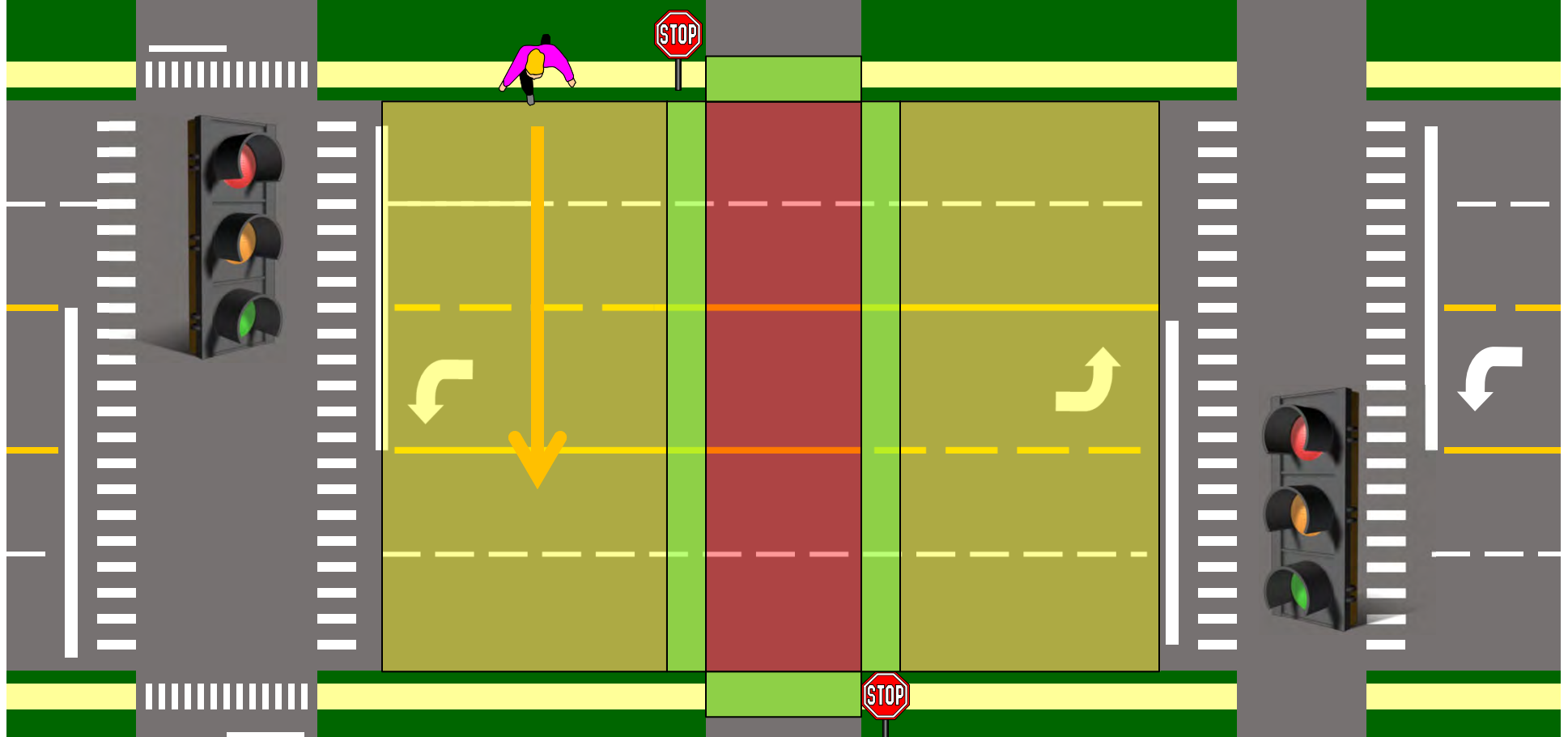


Pedestrian Fatality Factors

- Failure to Yield
- Darkness
- Distraction
- Speed

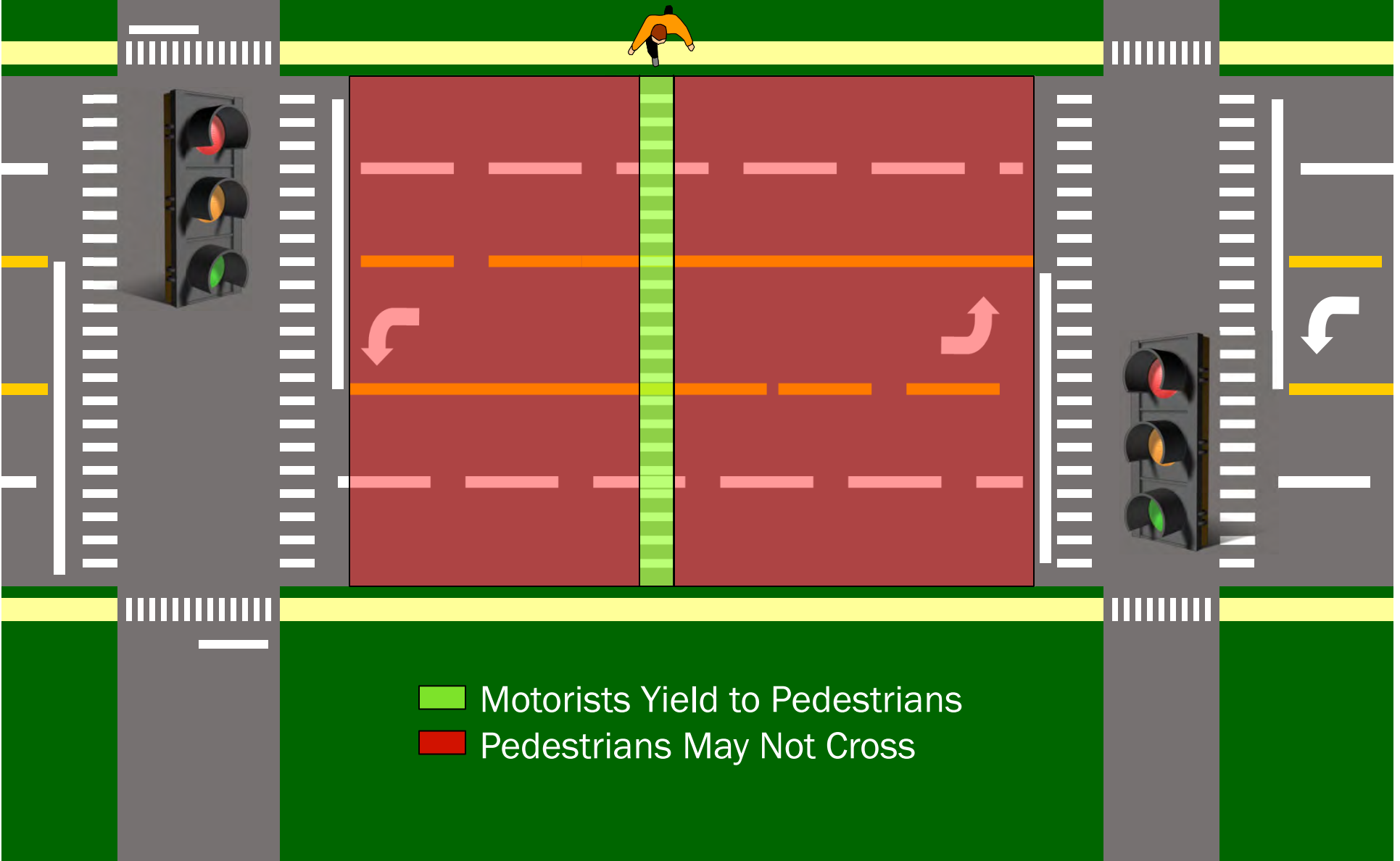


When at least one of the nearest intersections are not signalized, pedestrians may cross mid-block, provided they yield to traffic.



A crosswalk is the continuation of the lateral lines of the sidewalk across the roadway.
Most crosswalks are unmarked.

Between adjacent signalized intersections, pedestrians may only cross in marked crosswalks.



“...humans make mistakes...”



Pedestrian Fatality Factors



Night Versus Daytime

Night		Avg. 2011-13	Avg. 2017-19	Change
	All Crashes	277	316	+14%
	Fatals	38	65	+71%
	% Fatal	14%	21%	
Day		Avg. 2011-13	Avg. 2017-19	Change
	All Crashes	360	382	+6%
	Fatals	8.7	9.3	+7%
	% Fatal	2%	2%	Pop. +14%

Pedestrian Fatality Factors



Pedestrian Failure to Yield, Mid-Block

Night		Avg. 2011-13	Avg. 2017-19	Change
	All Crashes	98	103	+5%
	Fatals	15	27	+84%
	% Fatal	15%	26%	
Night, With Street Lighting +148%				
Day		Avg. 2011-13	Avg. 2017-19	Change
	All Crashes	72	63	-13%
	Fatals	1.7	2.3	40%
	% Fatal	2%	4%	
Pedestrian Failure to Yield as % of All		29%	25%	

Pedestrian Fatality Factors



Distracted Driving

Pedestrian Crash Factor (All Injury Levels)	Avg. 2011-13	Avg. 2017-19	Change
All Pedestrian, Public ROW, No Freeway	691	741	+7%
Motorist Failure to Yield, Distracted (All Lighting)	17	38	+119%
Night, Distracted Driving	18	23	+27%
Smart Phone Ownership*	44%	78%	+77%

* Pew Research

Pedestrian Fatality Factors



Alcohol & Drugs, Hit & Run

Pedestrian Crash Factor (All Injury Levels)	Avg. 2011-13	Avg. 2017-19	Change
All Pedestrian Public ROW, No Freeway	691	741	+7%
Alcohol or Drugs	61	43	-29%
Hit & Run	145	174	+21%



Pedestrian Fatality Factors



Motorist Failure to Yield

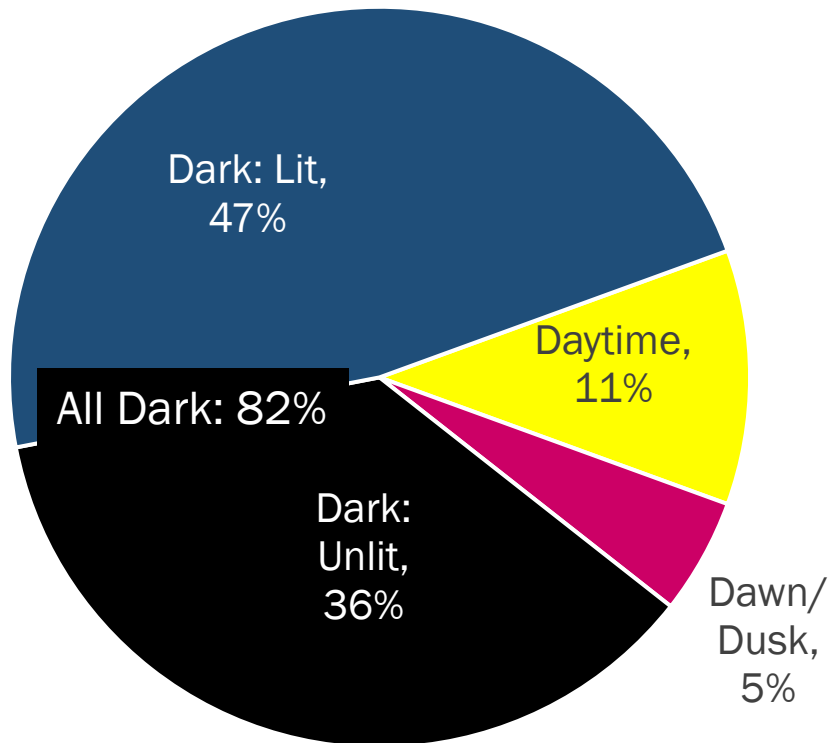
Motorist Failure to Yield		Avg. 2011-13	Avg. 2017-19	Change
	All Crashes	158	197	+25%
	Daytime Only	73	135	+85%
	Fatals	5.7	6	+5%
	% Fatal	4%	3%	



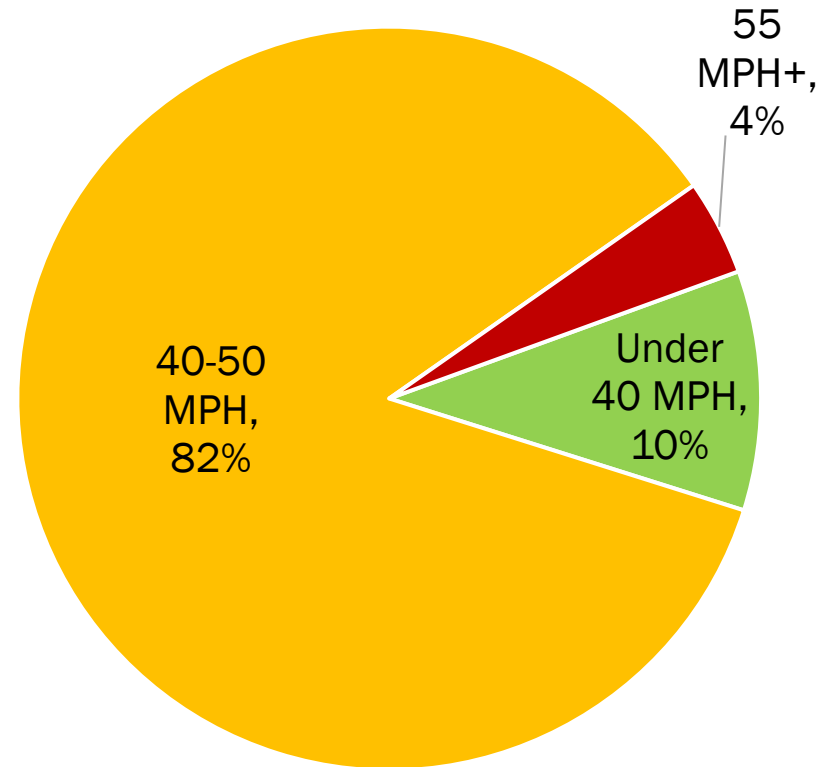
Pedestrian Fatalities: Lighting & Speed

Crossing Roadway – Vehicle Not Turning

Lighting



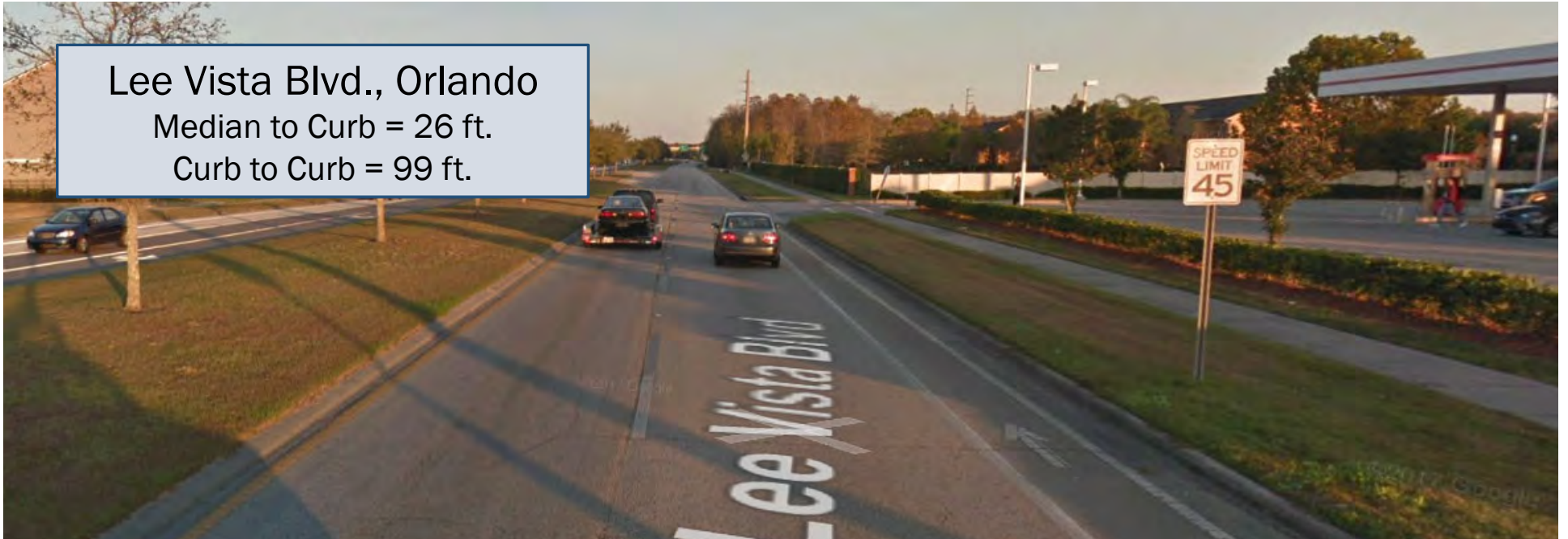
Posted Speed



Lee Vista Blvd., Orlando

Median to Curb = 26 ft.

Curb to Curb = 99 ft.



Oak Street, Bozeman, MT

Median to Curb = 28 ft.

Curb to Curb = 88 ft.



US 441,
Apopka
Curb to Curb = 62 ft.



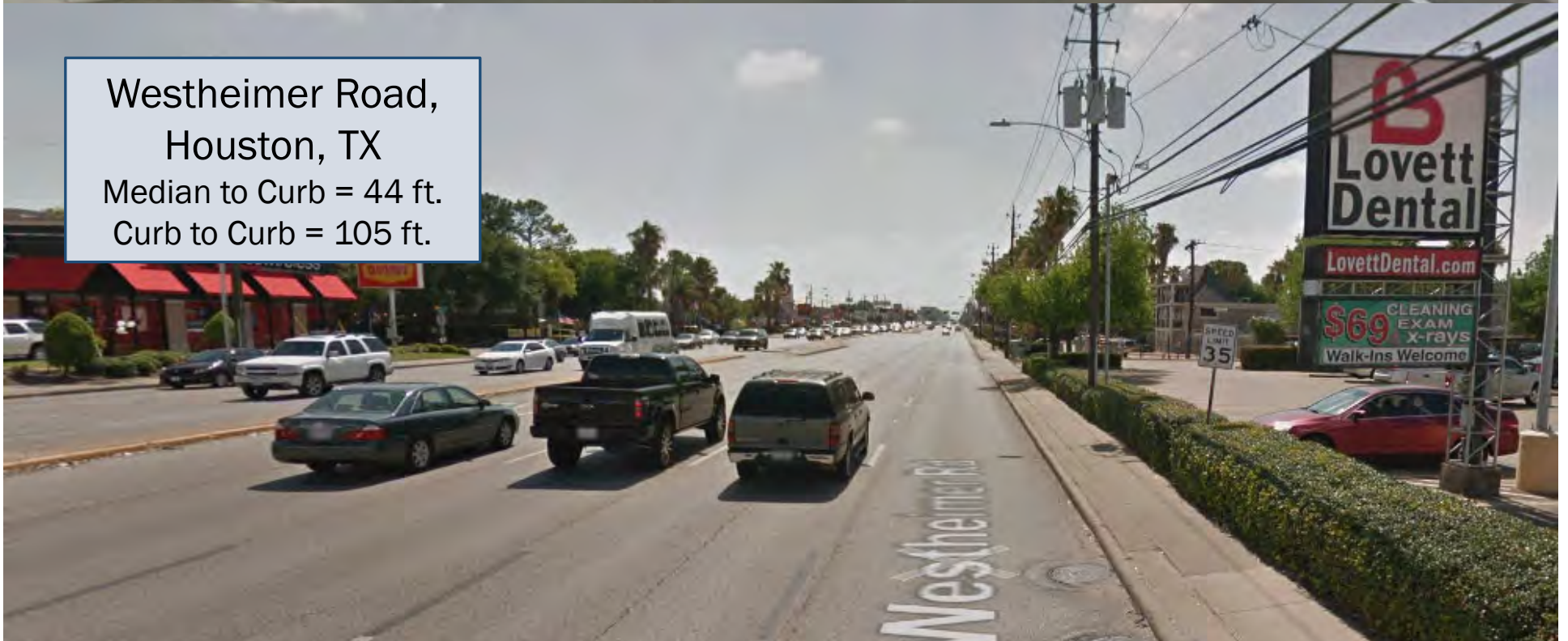
US 12,
Missoula, MT
Curb to Curb = 86 ft.



US 192,
Kissimmee
Median to Curb = 42 ft.
Curb to Curb = 96 ft.



Westheimer Road,
Houston, TX
Median to Curb = 44 ft.
Curb to Curb = 105 ft.



The Deadly Trio

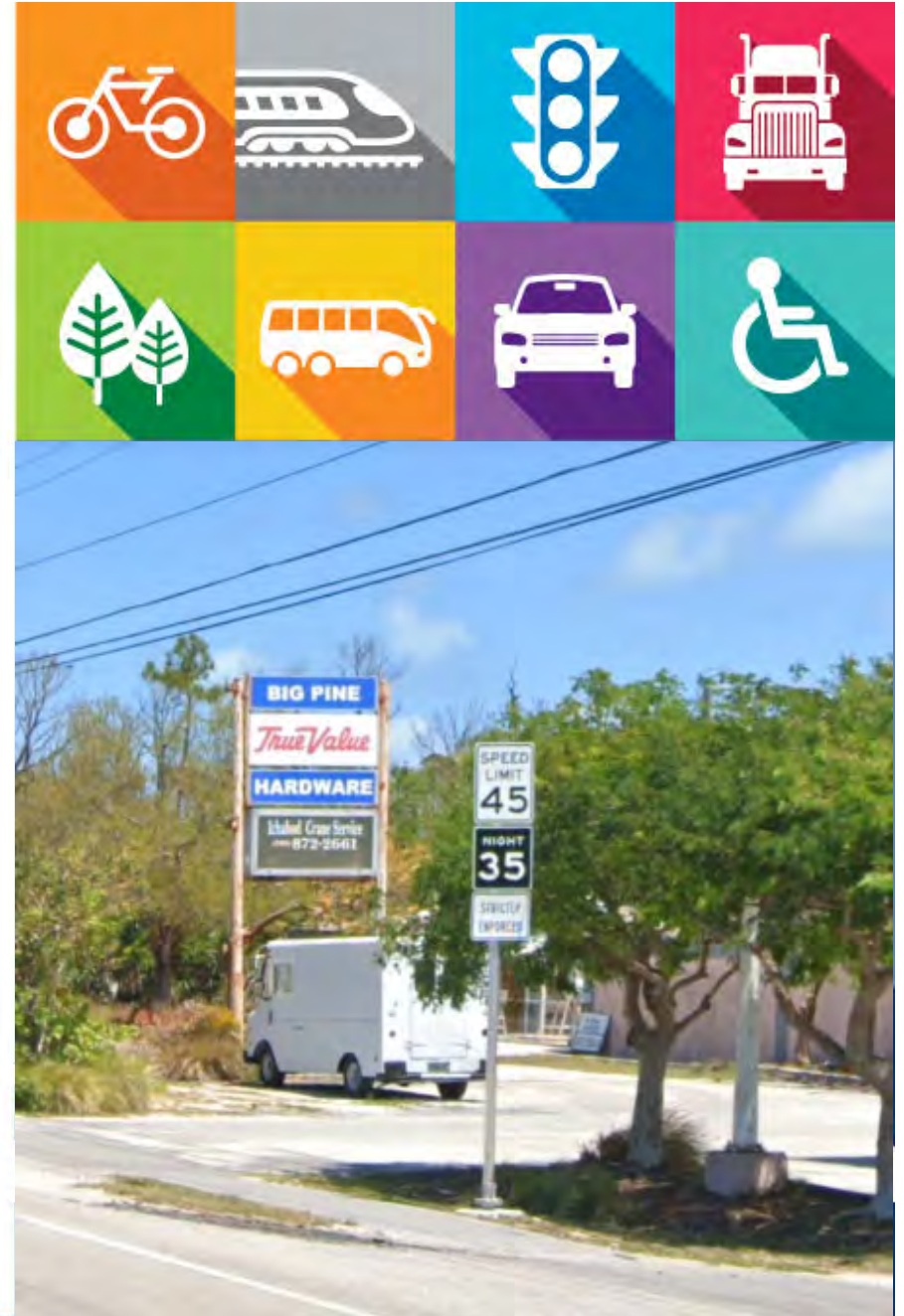
Darkness
+
Distraction
+
Speed

+ Fewer Regular Passenger Cars
More Trucks and SUVs



Reduced Night-time Posted Speed

- US 1 on Big Pine Key
- 45 MPH Daytime
- 35 MPH Night-time
- To protect endangered key deer



Pedestrian Fatalities By Jurisdiction



Pedestrian Fatalities 2011-2019

Jurisdiction	# of Pedestrian Fatalities	% of Total
Unin. Orange	308	49%
Orlando	95	15%
Unin. Osceola	87	14%
Unin. Seminole	42	7%
Kissimmee	16	3%
Apopka	15	2%
Sanford	14	2%
All Others	48	8%
Unin. Orange - North/West	122	19%
Unin. Orange - South	98	15%
Unin. Orange - East	85	13%
Orlando - Central/East	66	10%

Thank You

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