June 19 - 20, 2025
Hollywood, FL

TRANSPORTATION SYMPOSIUM

4th Street Median Modification Safety Project FPIN: 439401-1

Tina Russo, LCI 395
Andrew Gray, EI, RSP2I

Transportation Symposium Website

SCAN ME

1

Agenda

- Project Goals & Background
- Midblock Pedestrian Signals
- Proven Safety Countermeasures
- Education & Outreach
- Behavioral Analysis
- Lessons Learned

2

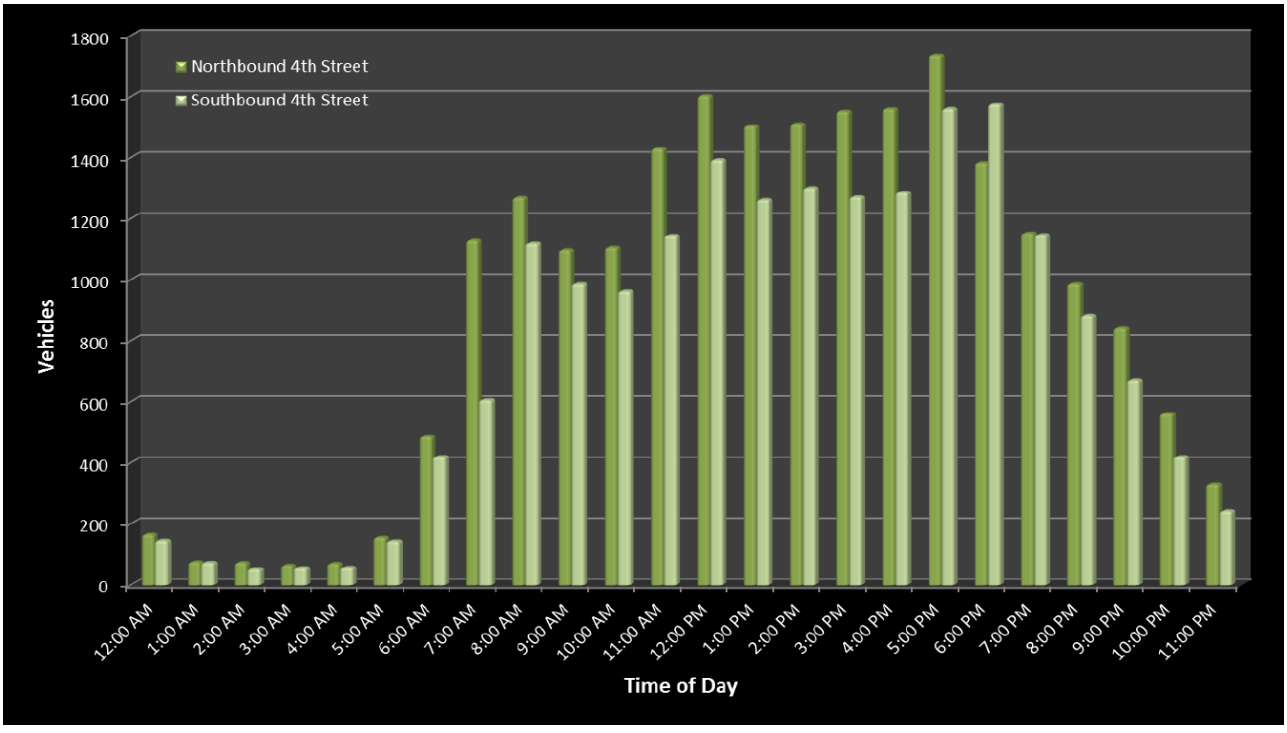
3

Project Goals

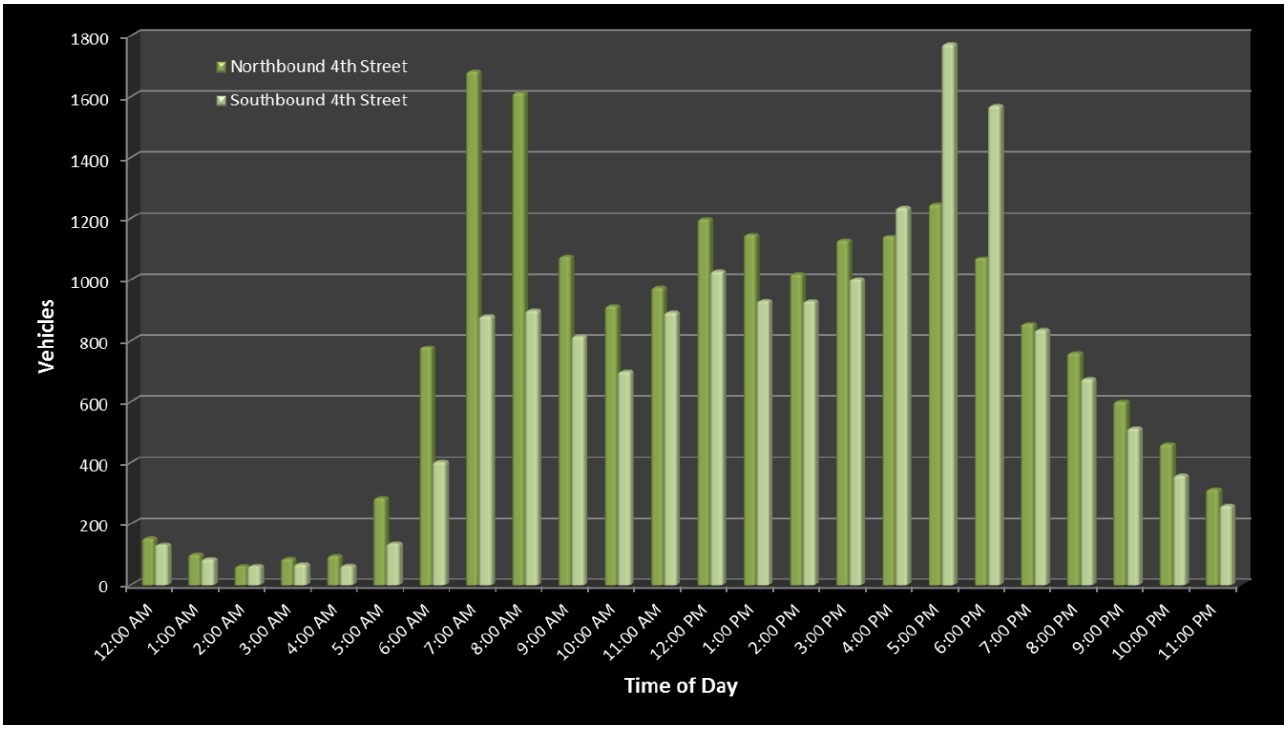
- Implement the comprehensive access management plan
- Reduce collisions at unsignalized median openings
  - Focus on right-angle and left-turn crashes resulting in fatal and serious injuries
- Improve safety and operations for pedestrian and bicyclists
  - Add midblock crosswalks
- Improve traffic conditions with operational improvements

TRANSPORTATION SYMPOSIUM

4


Northbound 4th Street
Southbound 4th Street
Vehicles
Time of Day
0
200
400
600
800
1000
1200
1400
1600
1800
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM

5


Northbound 4th Street
Southbound 4th Street
Vehicles
Time of Day
0
200
400
600
800
1000
1200
1400
1600
1800
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM

6

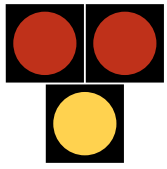

June 19 - 20, 2025
Hollywood, FL
TRANSPORTATION SYMPOSIUM
Midblock Pedestrian Signals
Transportation Symposium Website
SCAN ME

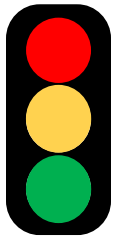
7

8

Midblock Pedestrian Signals Vs. Pedestrian Hybrid Beacon

- Both Midblock Pedestrian Signals (MPS) and Pedestrian Hybrid Beacons (PHB) enhance pedestrian safety at midblock crossings by stopping traffic when activated, but each use different signal head configurations on the mast arm.

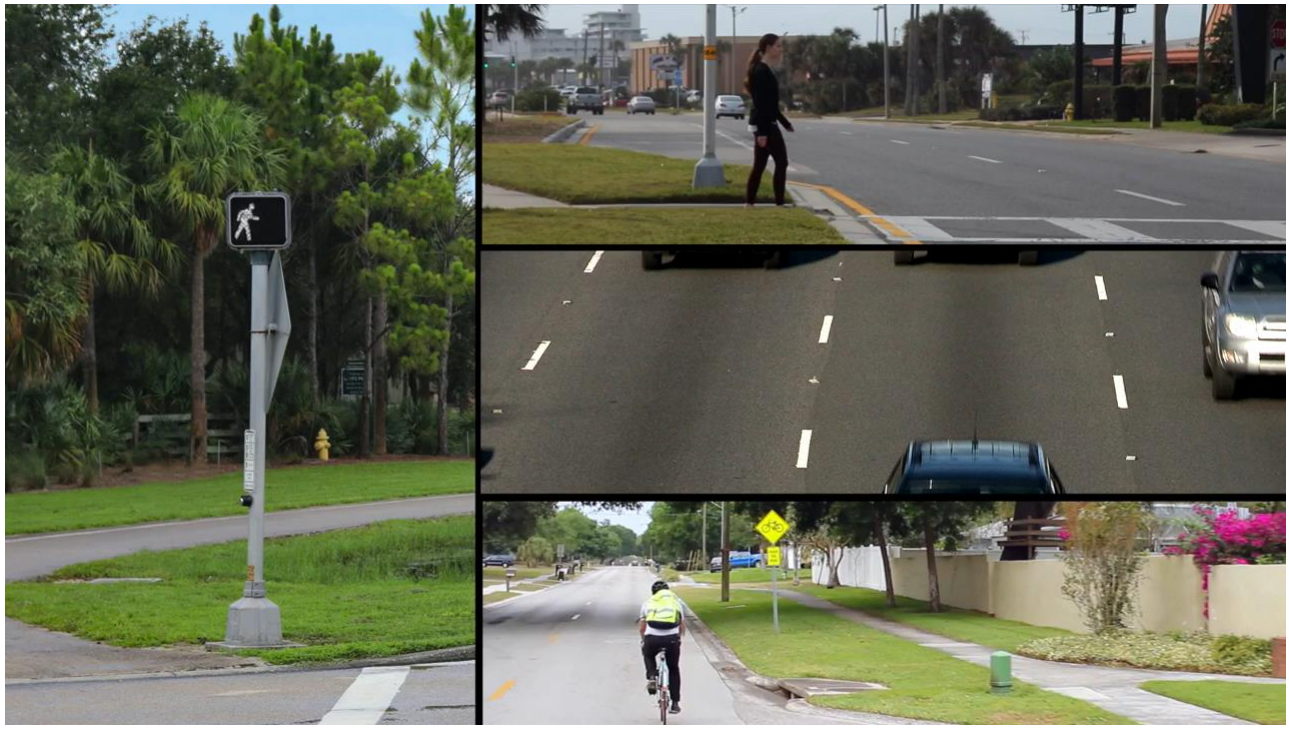




TRANSPORTATION SYMPOSIUM

9

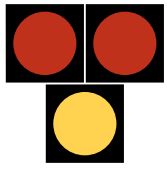
9

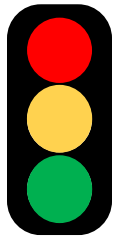


10

Midblock Pedestrian Signals Vs. Pedestrian Hybrid Beacon

- Both Midblock Pedestrian Signals (MPS) and Pedestrian Hybrid Beacons (PHB) enhance pedestrian safety at midblock crossings by stopping traffic when activated, but each use different signal head configurations on the mast arm.





TRANSPORTATION SYMPOSIUM

11

11

Crash Reduction Factor Comparison

Crash Type (Fatal & Serious Injury)	Pedestrian Hybrid Beacon Crash Reduction Factor	Midblock Pedestrian Signal Crash Reduction Factor*
All Crashes	25%	34%
Pedestrian Crashes	**45%**	**45%**
Rear End Crashes	29%	31%

*NCHRP Report 1030 “Safety at Midblock Pedestrian Signals”

TRANSPORTATION SYMPOSIUM

12

12

U.S. Department of Transportation
Federal Highway Administration

Manual on Uniform Traffic Control Devices (MUTCD)

MUTCD Home
Site Map
Knowledge
Overview
Evolution of the MUTCD
Who Uses the MUTCD
MUTCD Current Edition
Color Specifications
Amendment Process
Experimentations
Standard Highway Signs (SHS) Publication
FAQs
Resources
MUTCD Team
23 CFR 655
Official Rulings
Interim Approvals
Interpretations Issued by FHWA
State MUTCDs & TCD Info
Related Links
Federal Register
Policy Statements
Previous Editions of the MUTCD
Publications

Resources

Resources > Official Rulings

Return to List | Perform Another Search

Details for Request 4(09)-79

Request Type:	Experiment
Requesting Agency:	Florida DOT
State:	FL
Date of Request:	10/14/2020
Topic:	Midblock Pedestrian Signals
Affected Portions of 2009 MUTCD:	Part 4
FHWA Ruling:	Experiment Approved 11/23/2020, Progress Report 9/8/2021, 8/26/2022
Approval Status:	Approved
Keywords:	Pedestrian Signals| Pedestrians| Traffic Control Signals

Contact Information:
Name: Alan El-Urfali
Address: Florida Department of Transporation State Traffic Engineering and Operations 605 Suwannee St, M.S. 36 Tallahassee, FL 32399-0450
Phone: 850-410-5416
E-mail: Alan.El-Urfali@dot.state.fl.us

FHWA

US DOT Home | FHWA Home | MUTCD Home | Operations Home | Privacy Policy

United States Department of Transportation - Federal Highway Administration

13

Pre Construction Crash Summary

Travel Mode	Fatal	Incapacitating Injury	Non-Incapacitating Injury	Possible Injury	No Injury	Total
Pedestrian	0	5	3	3	0	11
Bicycle	0	1	9	5	1	16
Total	**0**	**6**	**12**	**8**	**1**	27

Travel Mode	Daytime	Night with Street Lights	Total
Pedestrian	5	6	**11**
Bicycle	14	2	**16**
Total	**19**	**8**	**27**

TRANSPORTATION SYMPOSIUM

14

14


Median Opening 12
41st Avenue N
MP 3.083
Existing Access
Full Median Opening
Proposed Modification(s)
Convert to a Bi-Directional
Median Opening
40th Avenue N
42nd Avenue N
French
Quarter
North
Condos
Wells Fargo
Chop
Stick
Express
Mini
Mart
Telephone
Systems
Pizza Hut
Hooters

15

15

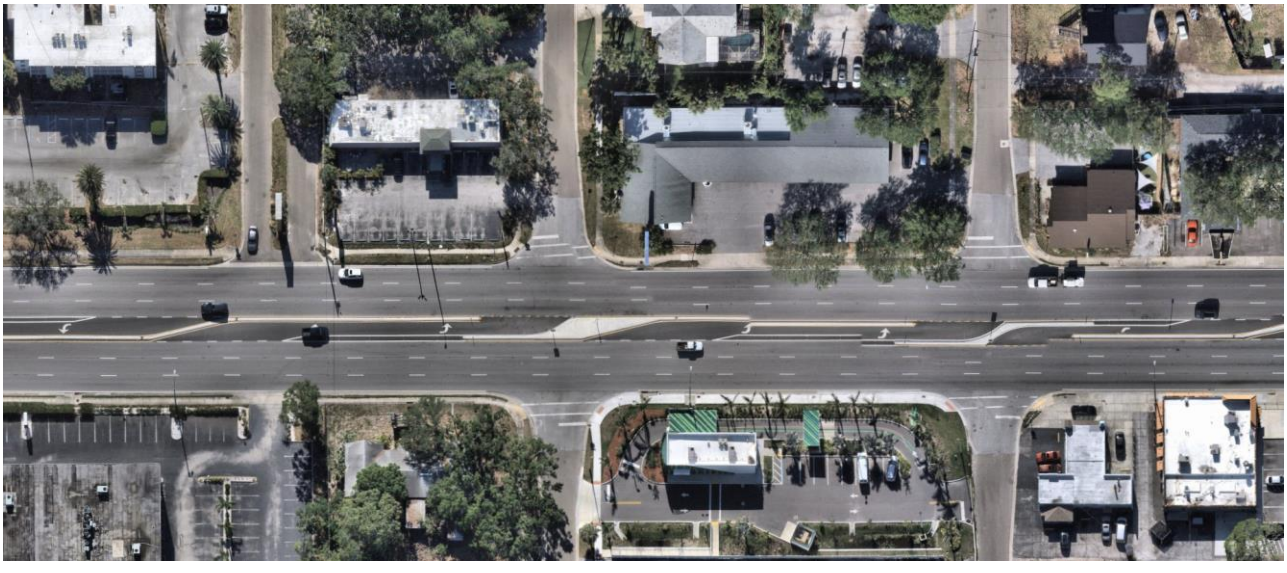
16

16


Median Opening 50
80th Avenue N
MP 5.557
Existing Access
Full Median Opening
Proposed Modification(s)
Convert to a N/B Directional
Median Opening
81st Avenue N
Hook's Restaurant
Animal Hospital
215'
Auto Dealer
80th Ave
Laundry
Seafood Bar & Grill

17

17



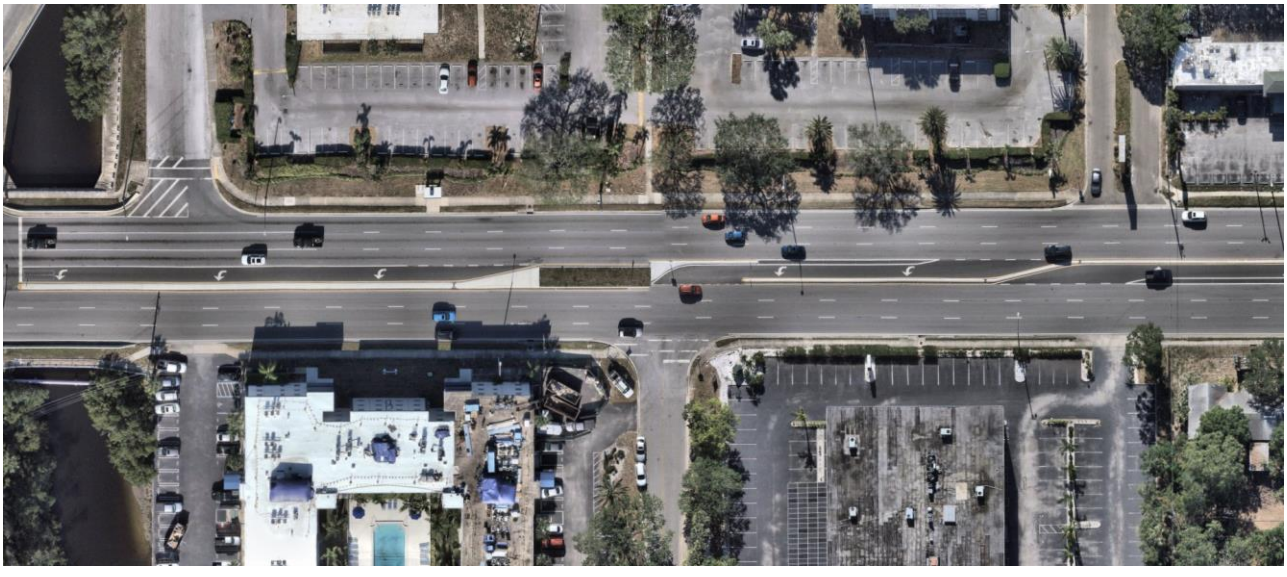
18

18


Full Median Opening
Proposed Modification(s)
Convert to a S/B Directional Median Opening
Palmway Village Apartments
335'
9th Avenue
Baywest Center

19

19



20

20


Median Opening 43
(East) 74th Avenue N
MP 5.163
Existing Access
Full Median Opening
Proposed Modification(s)
Close Median Opening
74th Avenue N
Dental Center
Motel
Cleaners
BP
375'
257'
74th
Winn-Dixie

21

21

22

22

23

24

25

June 19 - 20, 2025
Hollywood, FL

TRANSPORTATION SYMPOSIUM

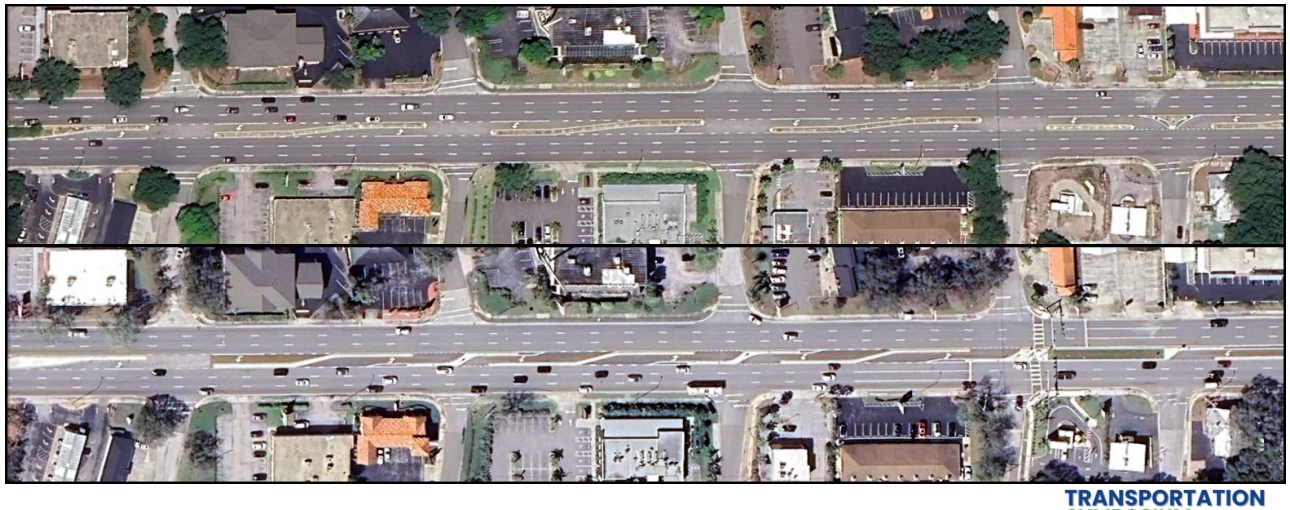
FHWA Proven Safety Countermeasures

Transportation Symposium Website

SCAN ME

26

Corridor Access Management



TRANSPORTATION SYMPOSIUM

27

27

June 19 - 20, 2025
Hollywood, FL

TRANSPORTATION SYMPOSIUM

Crosswalk Visibility Enhancements

Transportation Symposium Website

SCAN ME

28


IMPROVED LIGHTING (LED)
REDUCE PEDESTRIAN CRASHES UP TO 42%

29


HIGH-VISIBILITY CROSSWALK
REDUCE PEDESTRIAN INJURY CRASHES UP TO 40%

30


ADVANCED
WARNING SIGNAGE
AHEAD

31


WARNING SIGNAGE
Lincoln Cir N

32

Leading Pedestrian Interval

- Gives pedestrians the opportunity to **establish their presence** in the crosswalk at an intersection **3-7 seconds** before vehicles are given a green indication.
  - Enhanced safety for pedestrians who may be slower to start into the intersection
  - Increased visibility
  - Reduced conflicts
- **Can reduce pedestrian-vehicle crashes by 13% at intersections**
- Low implementation cost

TRANSPORTATION SYMPOSIUM

33

33

34


Median and pedestrian refuge islands can reduce overall crossing length and exposure to vehicle traffic, and can reduce pedestrian crashes up to 56%
PROVEN SAFETY COUNTERMEASURES
MEDIANS & REFUGE ISLANDS
U.S. Department of Transportation
Federal Highway Administration
Learn more at:
https://highways.dot.gov/safety/proven-safety-countermeasures

35

35


June 19 - 20, 2025
Hollywood, FL
TRANSPORTATION SYMPOSIUM
Education & Outreach
Transportation Symposium Website
SCAN ME

36

FDOT

FLORIDA DEPARTMENT OF TRANSPORTATION · DISTRICT 7

US 92 (4th STREET NORTH) MIDBLOCK PEDESTRIAN SIGNALS

37

38

38

39

39

June 19 - 20, 2025
Hollywood, FL

TRANSPORTATION SYMPOSIUM

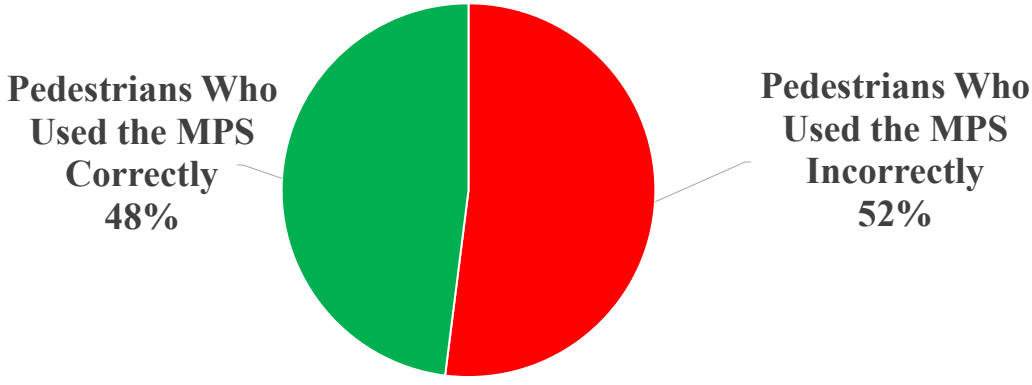
Behavioral Analysis 34th Ave 11/2024

Transportation Symposium Website

SCAN ME

40

MPS Usage

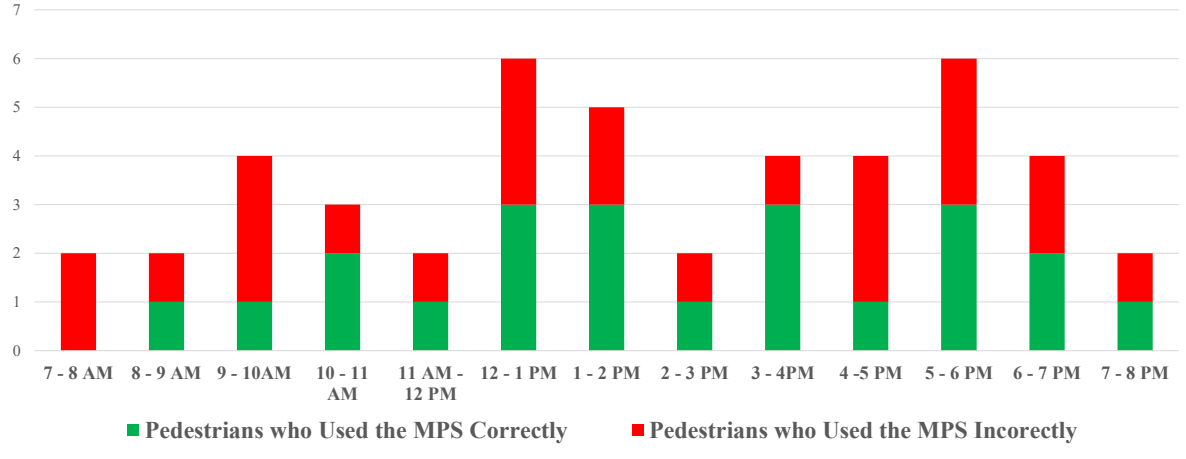


TRANSPORTATION SYMPOSIUM

41

41

Pedestrian Behavior

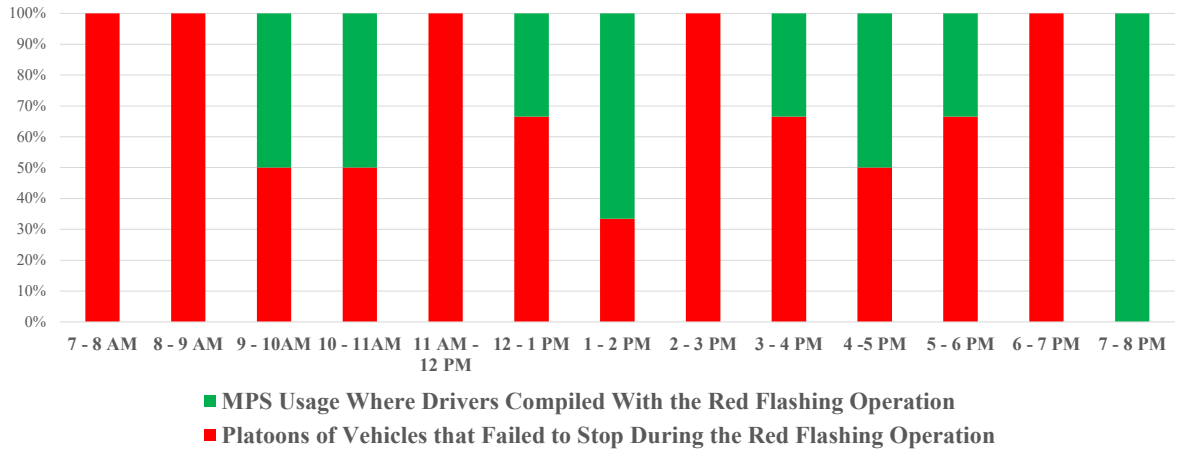


TRANSPORTATION SYMPOSIUM

42

42

MPS Usage Vs. Driver Behavior



TRANSPORTATION SYMPOSIUM

43

43

June 19 - 20, 2025
Hollywood, FL

TRANSPORTATION SYMPOSIUM

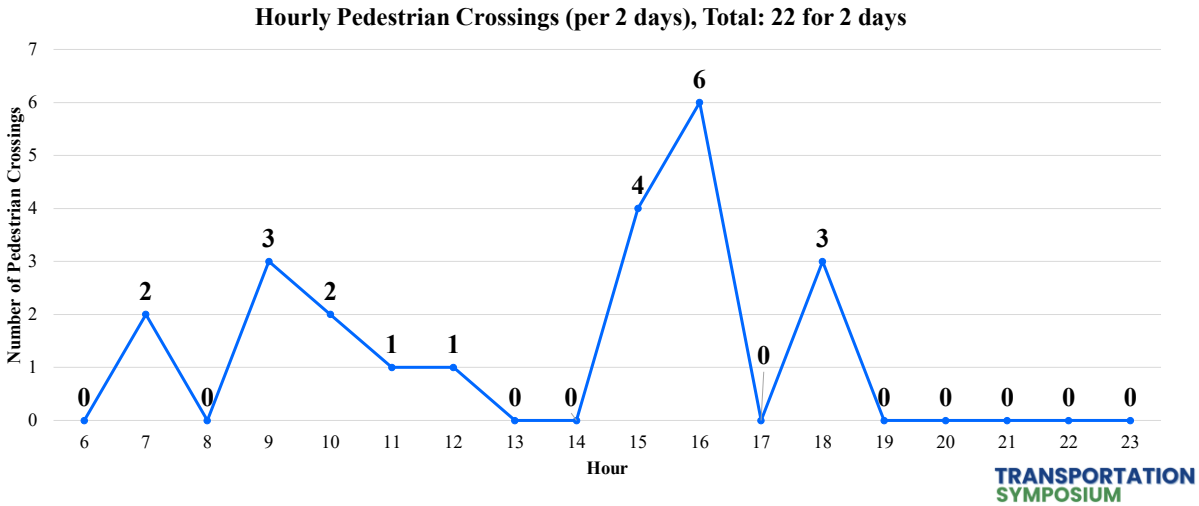
Behavioral Analysis 70th Ave Before and After 4/2023 vs 3/2025

Transportation Symposium Website

SCAN ME

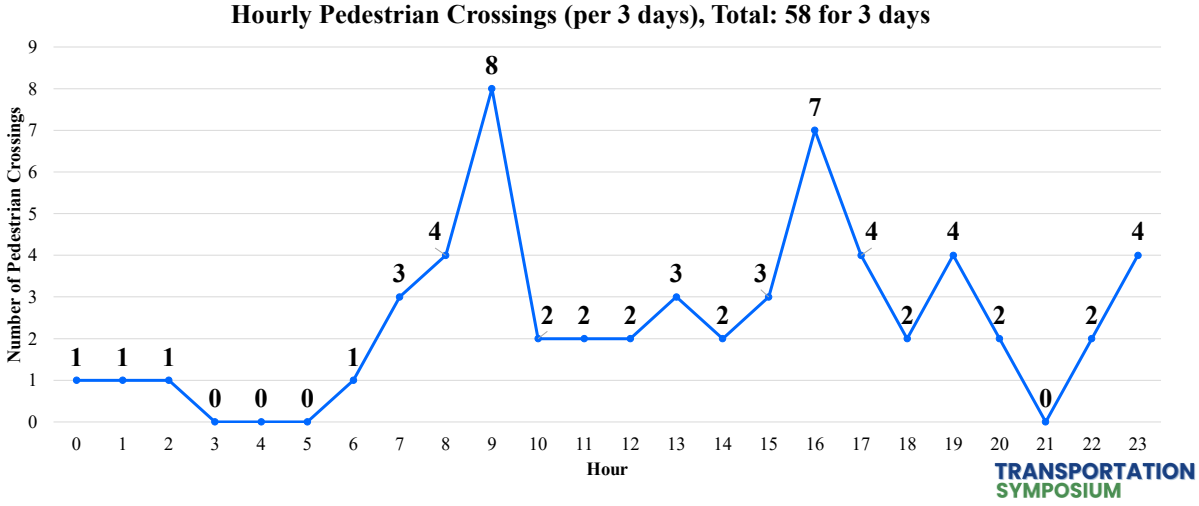
44

Before – Unprotected Pedestrian Crossings by Hour



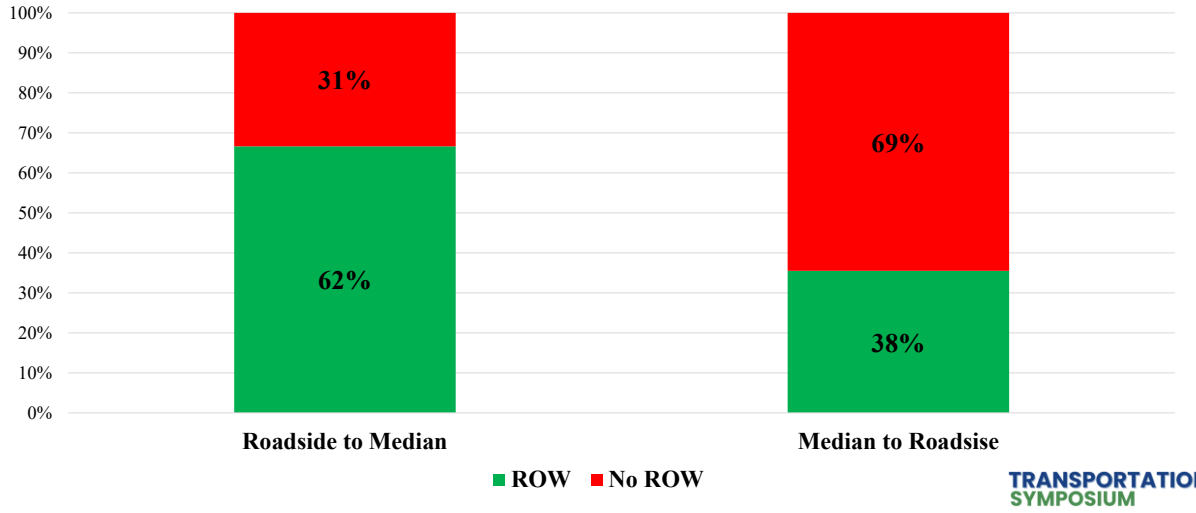
45

After – Pedestrian Crossings by Hour



46

Crossing Right of Way by Stages



TRANSPORTATION SYMPOSIUM

47

47

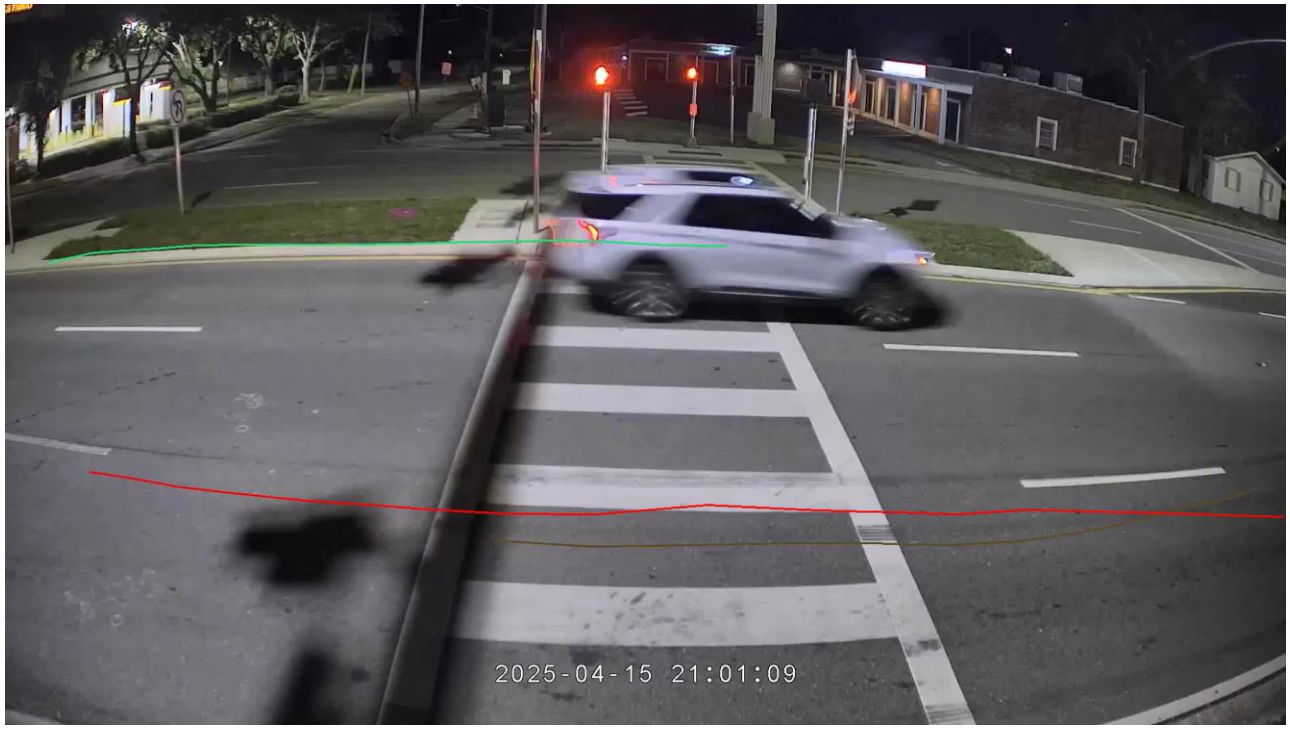
Surrogate Safety Data: Near Miss Events

- A pedestrian is nearly struck by a vehicle, but no collision occurs
- Identified by Post-Encroachment Time
  - The time difference between a pedestrian and a vehicle passing the potential conflict point
- **High Risk < 1.5s**
- **Medium Risk = 1.5s – 3s**
- **Low Risk = 3s – 5s**

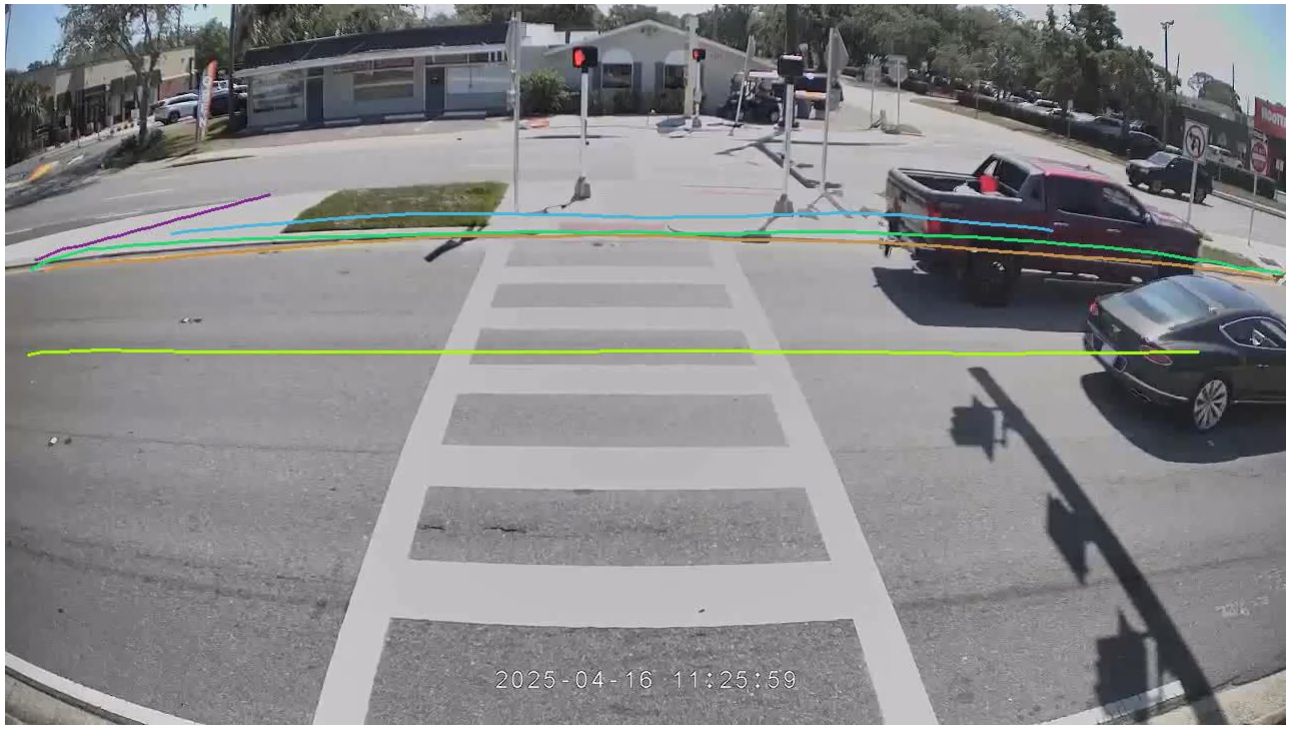
TRANSPORTATION SYMPOSIUM

48

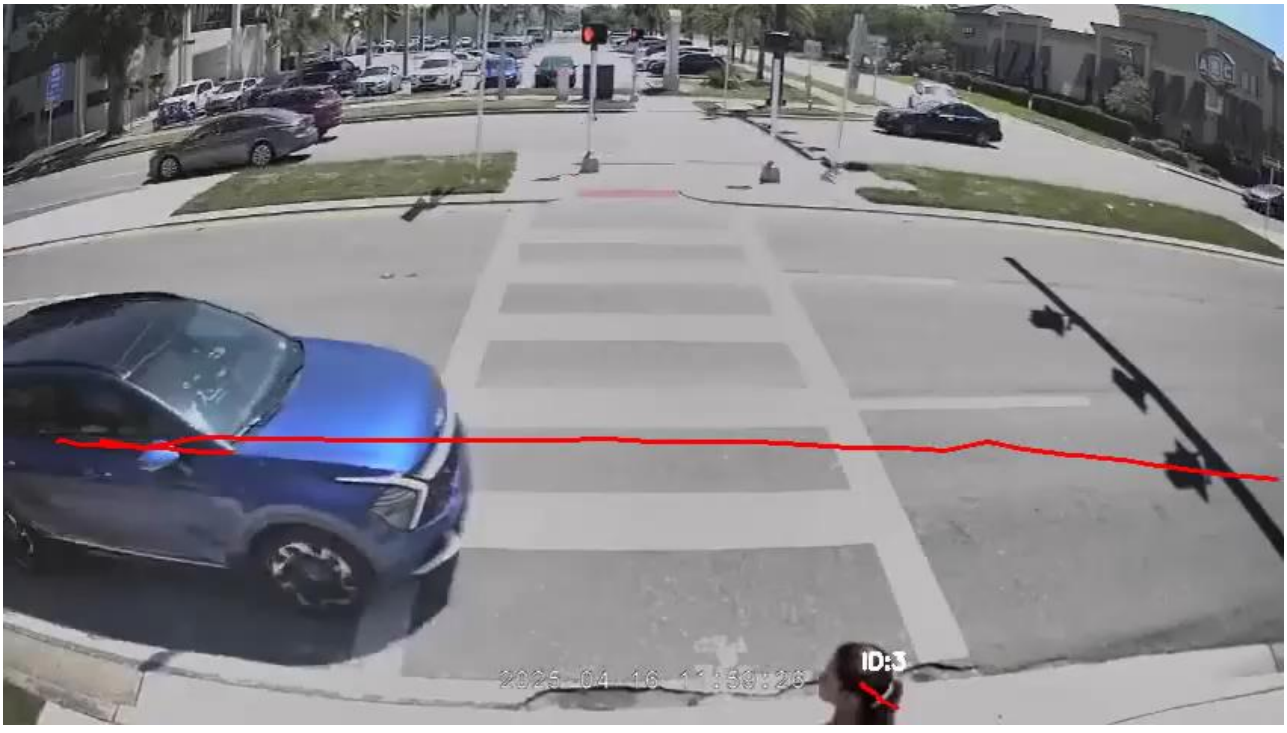
48



49



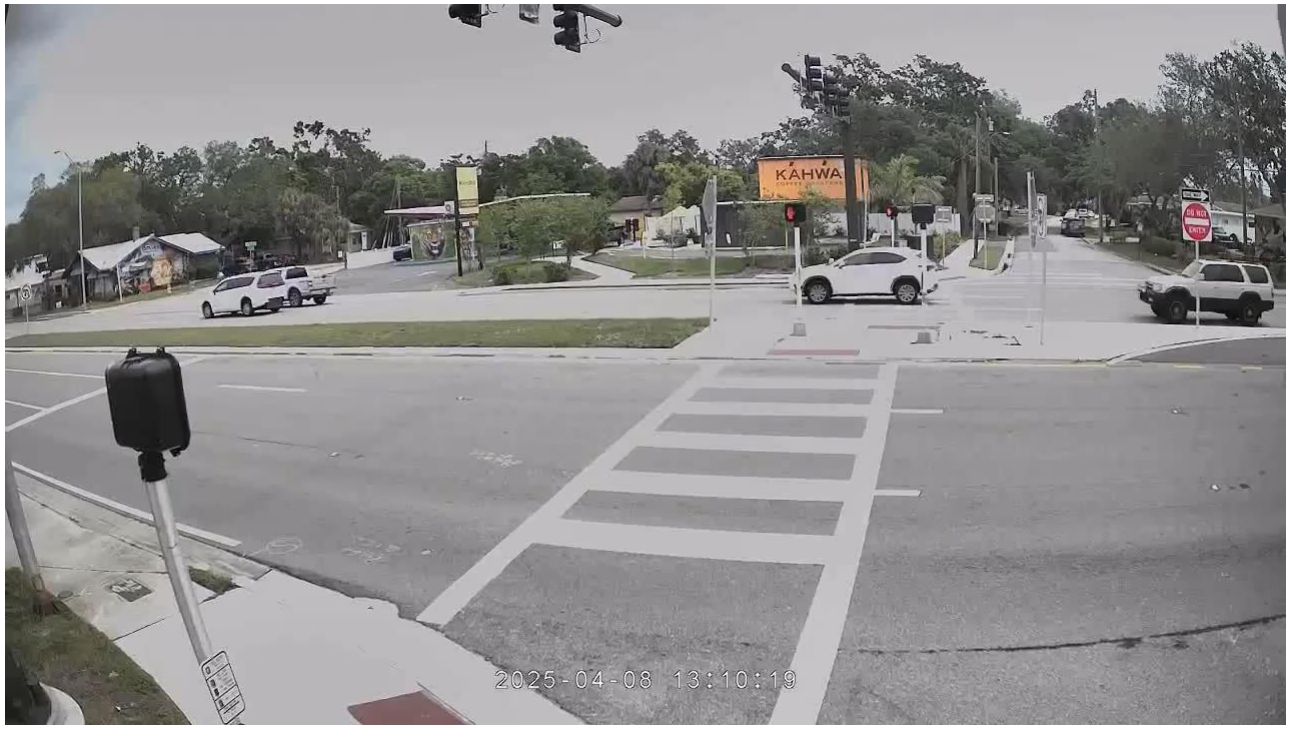
50



51

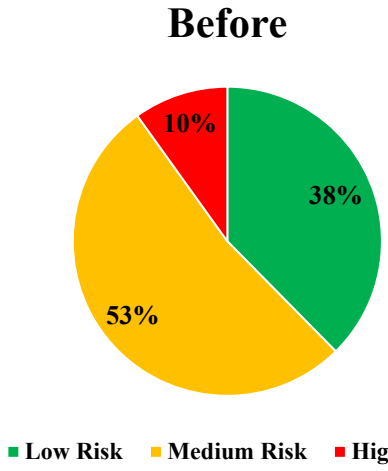
52

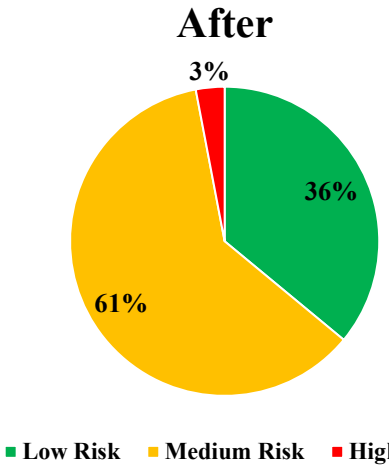
53



54

Near Miss Events



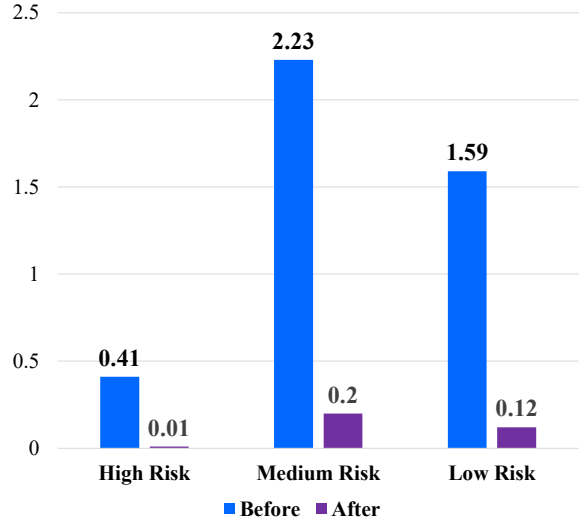


TRANSPORTATION SYMPOSIUM

55

55

Comparison of Near Miss Event Rates



$$Rate = \frac{N.of\ near\ miss\ events}{Ped\ Volume}$$

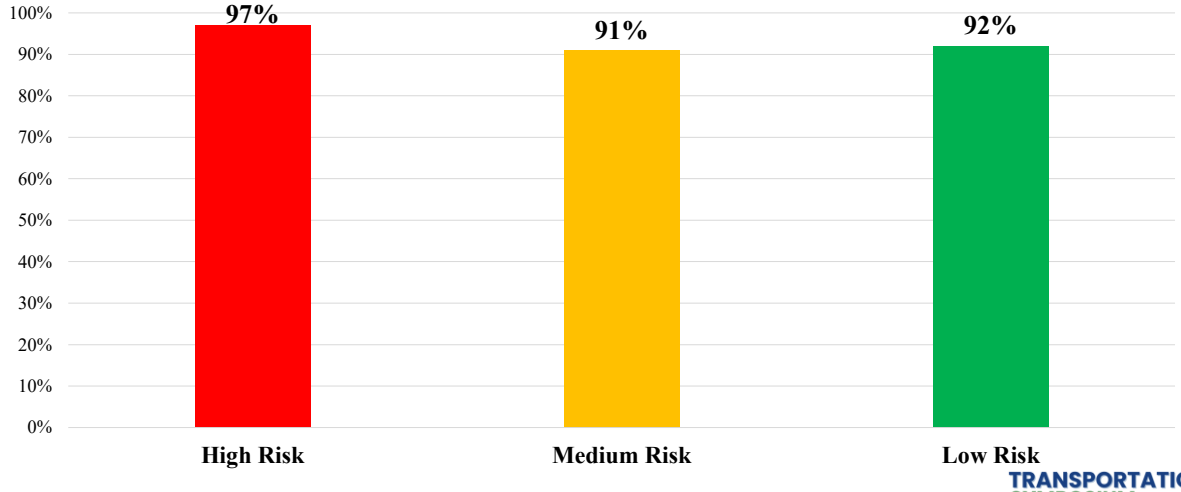
- Before = 4/15 & 4/19/2023
- After = 3/25-3/27/2025
- **The "after" near miss rates are much lower than the "before" rates**

TRANSPORTATION SYMPOSIUM

56

56

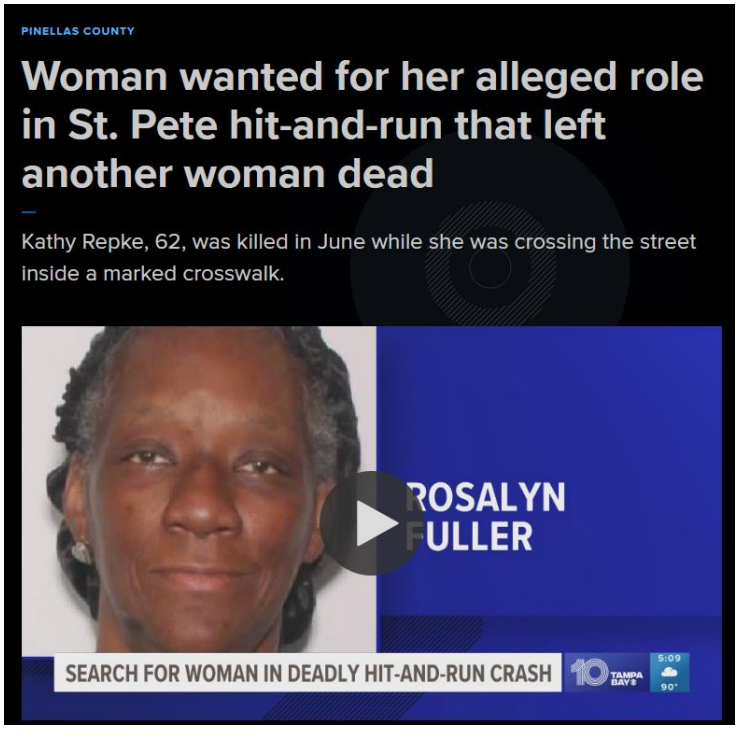
Near Miss Rate Reduction with Midblock Pedestrian Signal



TRANSPORTATION SYMPOSIUM

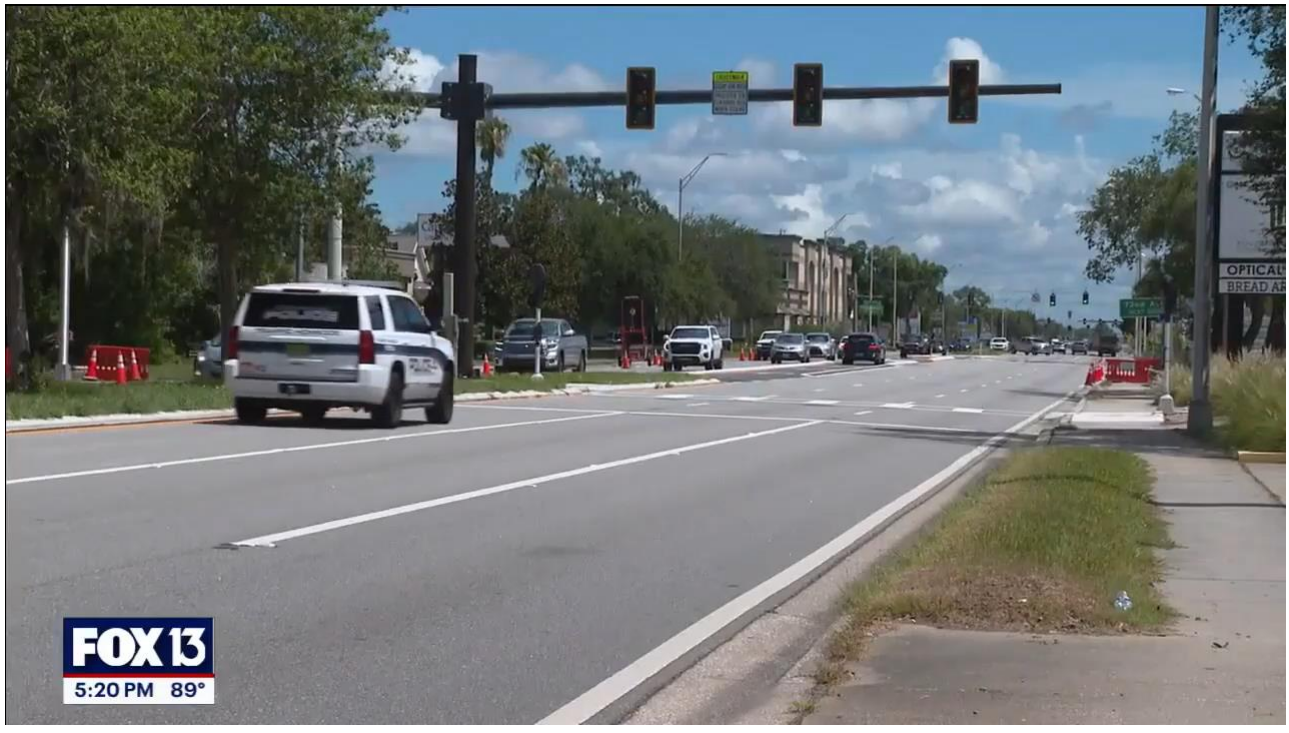
57

57



58

58



59

Florida Department of Transportation

11201 North McKinley Drive
Tampa, FL 33612

MEMORANDUM

DATE: January 29, 2025

TO: Resident Construction Engineers, Design Project Managers, Consultant Engineers, Construction Engineering and Inspection (CEI), In-House Designers and Project Administrators

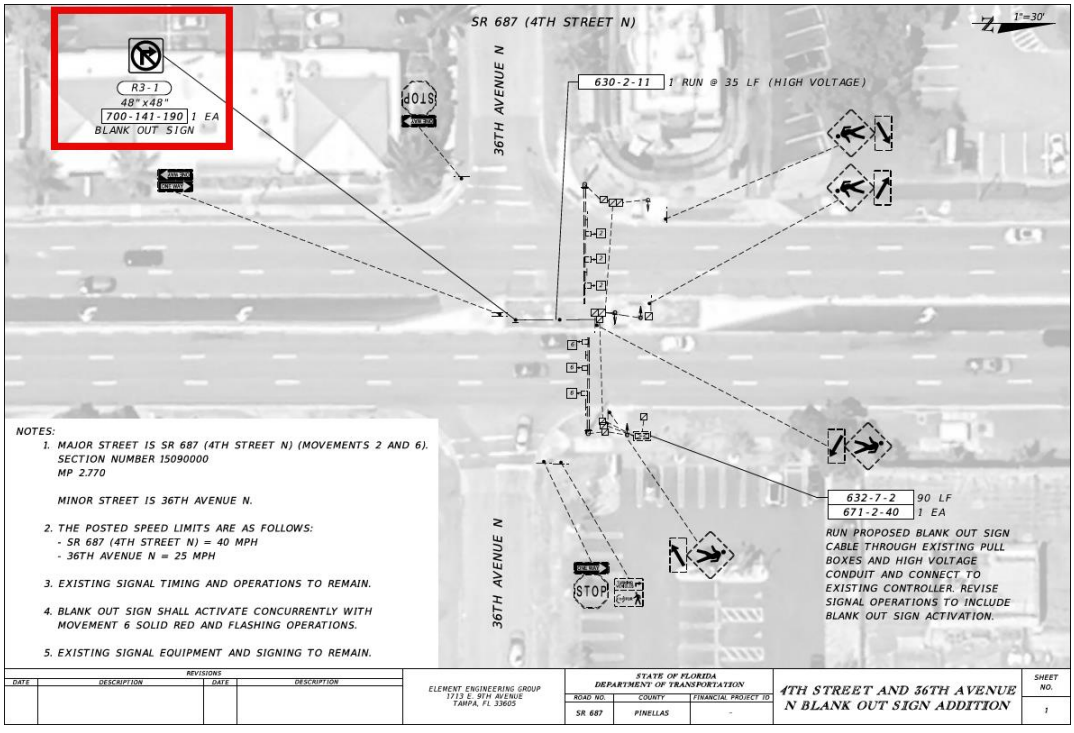
FROM: Ping (Peter) Hsu, P.E., District Safety Administrator
Allan Urbonas, P.E., District Design Engineer
Ronald Chin, P.E., District Traffic Operations Engineer
Conrad Campbell, P.E., District Construction Engineer

COPIES: David W. Gwynn, P.E., District Secretary
Francis Lewis, P.E., Director of Transportation Operations
Justin Hall, P.E., Director of Transportation Development

SUBJECT: **Supplemental Temporary Traffic Control (TTC) Guidelines for Major Traffic Control Device Installation or Modifications.**

60

60



61

Adjusting MPS Timing Operation

- The time required to cross on leg is 30 seconds and only one leg can be activated at a time
  - This resulted in pedestrians waiting in the median while the phase for the first leg ended before the next leg would start
- Because of the delay, pedestrians we're not complying with signal and crossing the second leg when a gap appeared
- After the pedestrian had crossed the second leg, the signal would cycle, forcing vehicles to stop for a pedestrian that had already crossed the street
- After coordination with the city, the northbound and southbound movements will operate separately, removing the pedestrian delay

TRANSPORTATION SYMPOSIUM

62

62

Crash Reduction

- **23% reduction** in corridor pedestrian/bicycle crashes
  - 8-month period before vs. after construction
- Post-Construction
  - One crash involving bicycles or pedestrians attempting to cross midblock
  - **No fatal or serious injury** bicycle or pedestrian crashes

TRANSPORTATION SYMPOSIUM

63

63

Key Takeaways

- Project success in enhancing safety and mobility
- Importance of…
  - **Innovation** -> Midblock Pedestrian Signals
  - **Evaluation** -> Pedestrian and driver behavior
  - **Adaptability** -> Blocking curb ramps, no right turn blank out signs
  - **Public Education and Outreach** -> PSA, mailings, geofencing, on street engagement
- Model for future urban corridor safety projects

TRANSPORTATION SYMPOSIUM

64

64

Safety Message

65

65

Contact Us

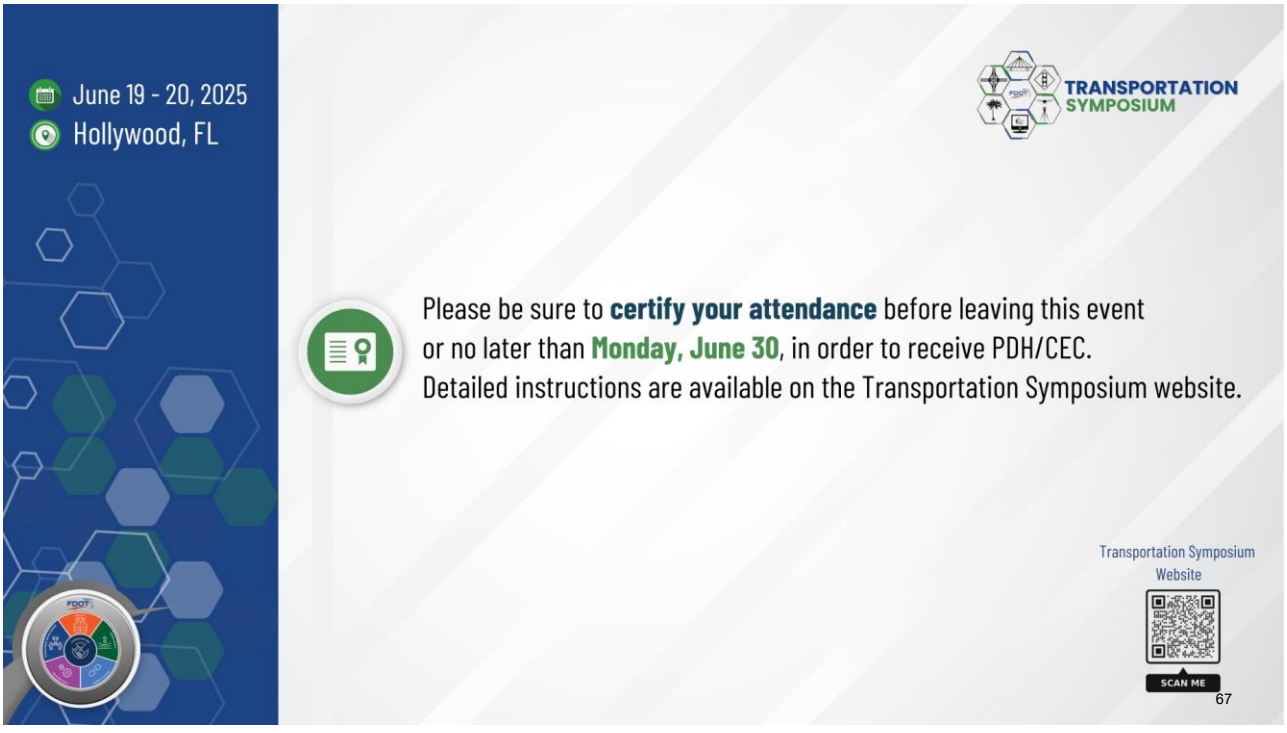
Tina Russo
Tina.Russo@dot.state.fl.us
(813)975-3689

Andrew Gray
Andrew.Gray@dot.state.fl.us
(813)975-3688

TRANSPORTATION SYMPOSIUM

66

66


June 19 - 20, 2025
Hollywood, FL
TRANSPORTATION SYMPOSIUM
Please be sure to certify your attendance before leaving this event
or no later than Monday, June 30, in order to receive PDH/CEC.
Detailed instructions are available on the Transportation Symposium website.
Transportation Symposium Website
SCAN ME
67

67