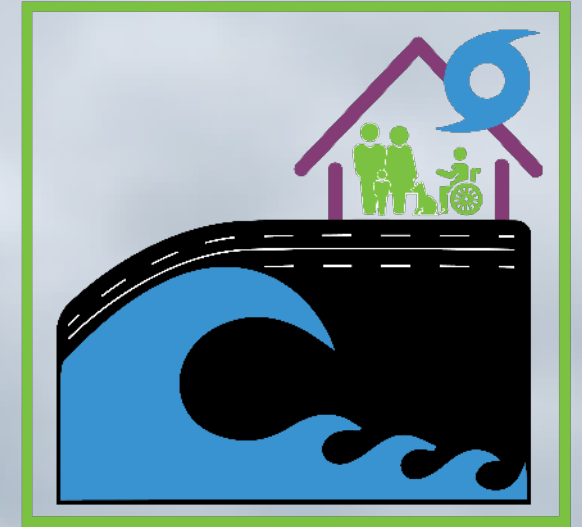


# TPO Policy Committee August 2022

## Storm Evacuation Forecast & Shelter-in-place Scenarios Study



**Hillsborough TPO**  
Transportation  
Planning Organization

# Today

Study Purpose

Study Topics

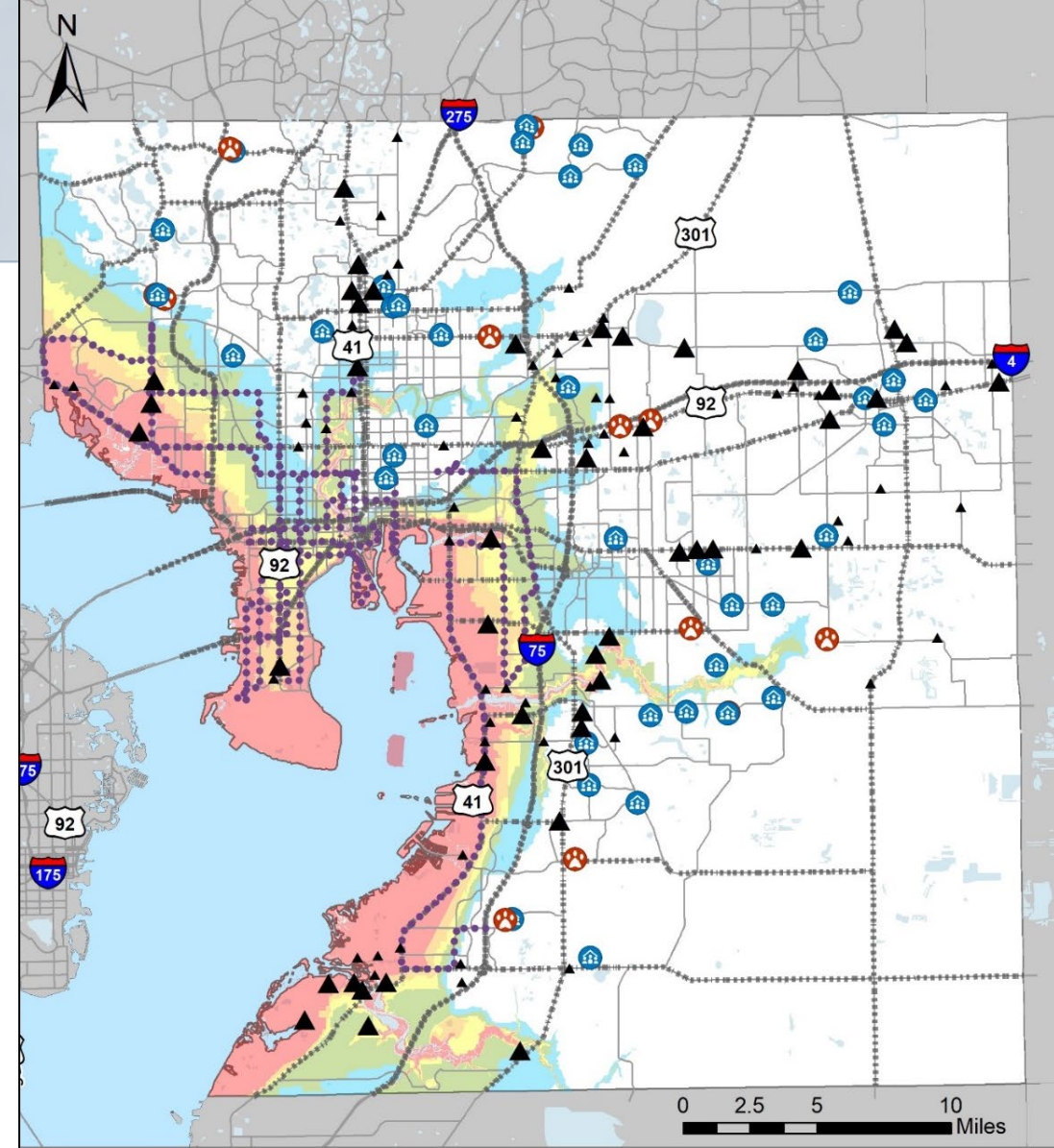
Outreach

Recommendations



# Background

- Evacuation due to storm surge
  - Flee from flood, hide from wind
- Evacuation Zones by Saffir-Simpson Hurricane scale
  - Zone A: 74-95 mph - Category 1
  - Zone B: 96-110 mph - Category 2
  - Zone C: 111-129 mph - Category 3
  - Zone D: 130-156 mph - Category 4
  - Zone E: 157+mph - Category 5
- Mobile homes – all zones



## Evacuation System and Mobile Home Parks

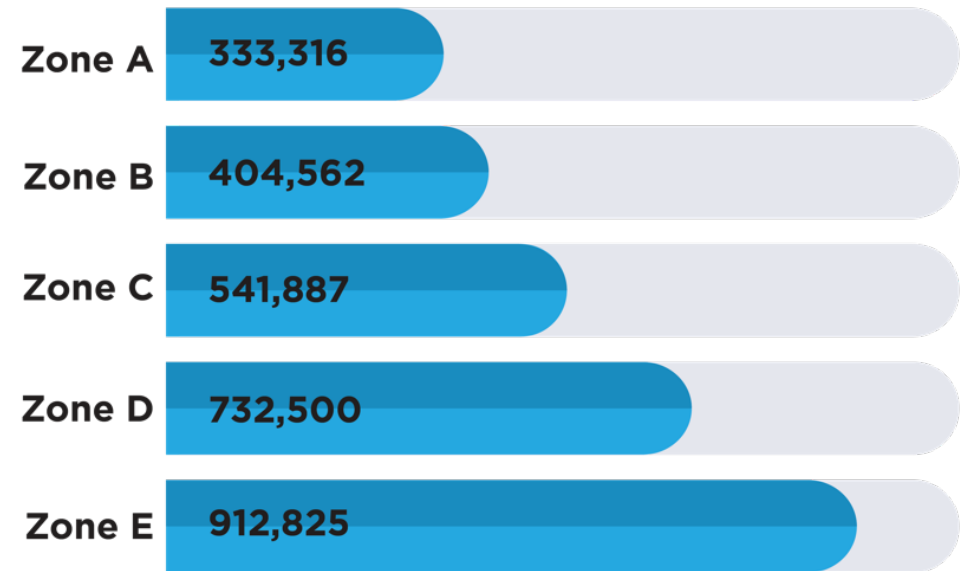
▲ M.H. Park (100+ lots)	..... Evacuation Routes	Evacuation Zone A
▲ M.H. Park (<100 lots)	— Transportation Network	Evacuation Zone B
🏠 General Public Shelter	🌊 Water Bodies	Evacuation Zone C
🐾 Pet Friendly Shelter	🏠 Outside Study Area	Evacuation Zone D
..... HART Evac. Routes	🗺 Hillsborough County	Evacuation Zone E

# Study Purpose

Enhance evacuation and sheltering:

- High-level analyses of techniques
- Emphasis on options other than road widening
- TPO implementable actions

Total Population by Evacuation Zone

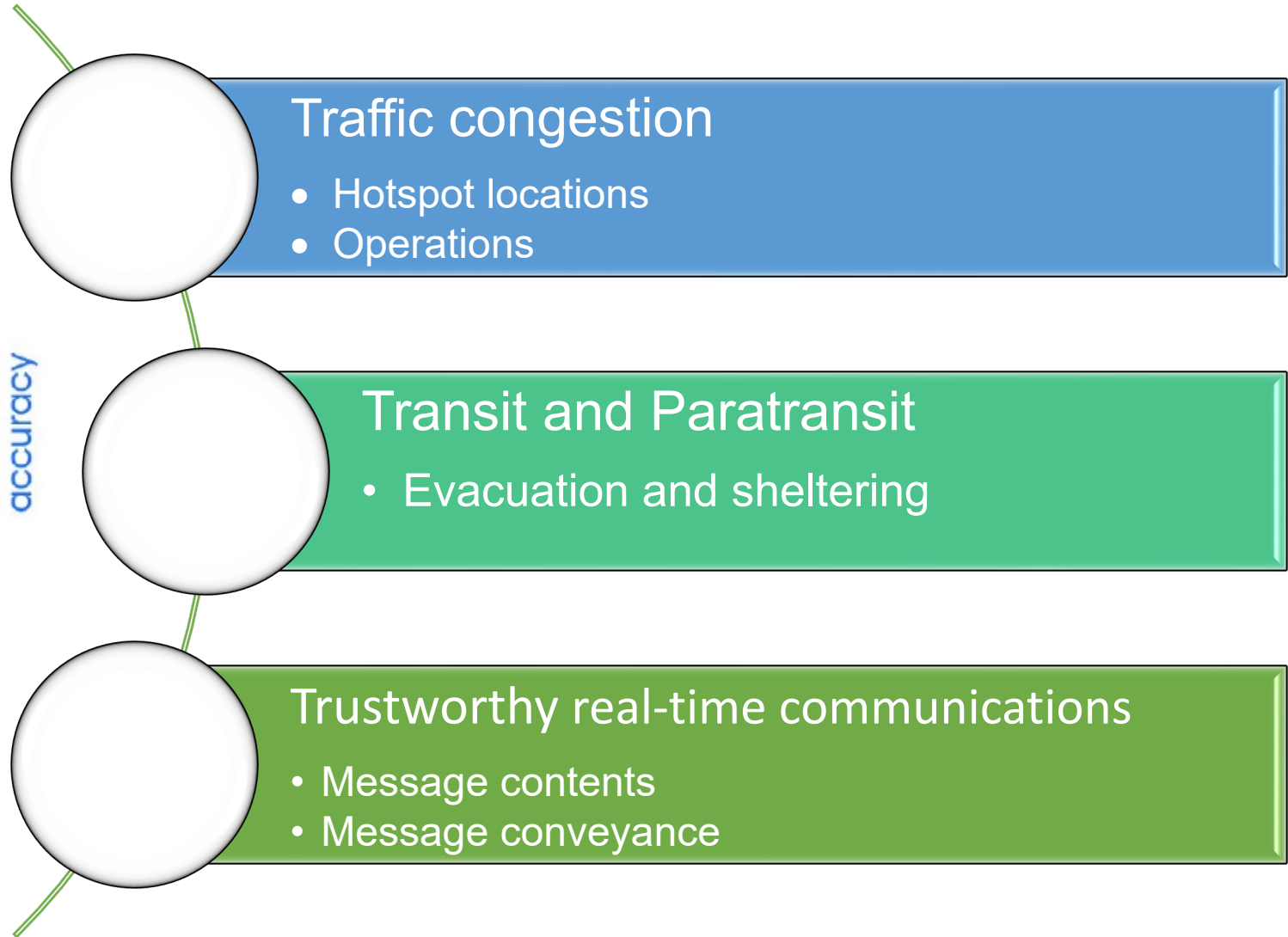


Hillsborough County 2021 population estimate is 1,512,070

**Category 3 (Zone C) evacuation = 24-hour clearance time**



# Study Topics





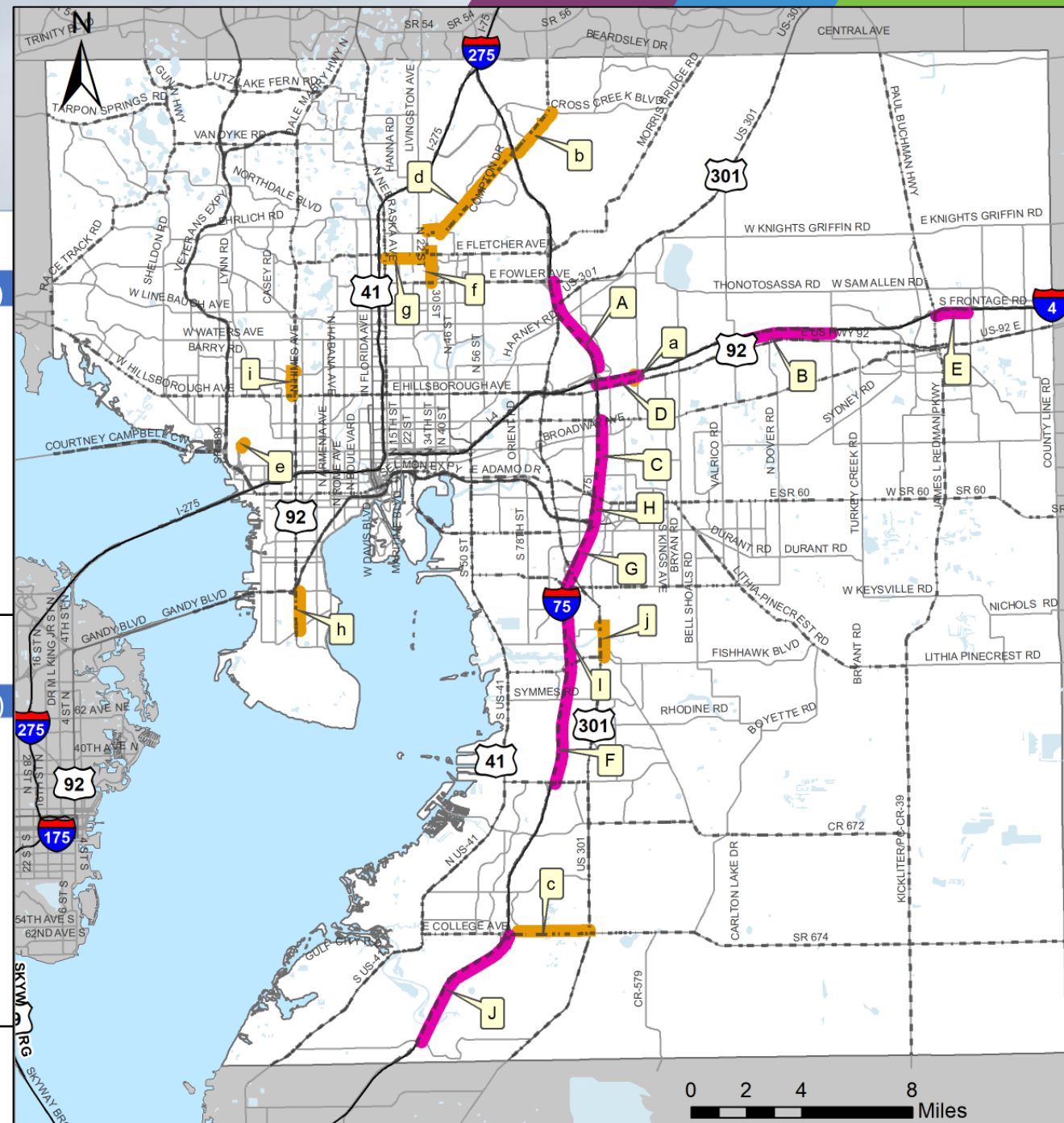
# Congestion Hotspot Locations

## Arterials

ID	Road	Between	And	Direction	Distance (miles)
a	Mango Rd	I-4 Ramps	Hillsborough Ave	SB	0.2
b	Bruce B. Downs Blvd	I-75 Ramps	New Tampa Rd	NB	1.9
c	Sun City Center Blvd	I-75 Ramps	US 301	WB	2.7
d	Bruce B Downs	Bearss Ave	I-75 Ramps	SB	4.3
e	George J Bean Pkwy	Airport Service Rd	Airport Recirculation Dr	NB	0.3
f	Bruce B. Downs Blvd	Fletcher Ave	Fowler Ave	NB	1.0
g	Fletcher Ave	Nebraska Ave	Bruce B. Downs Blvd	EB	1.5
h	Dale Mabry Hwy	Gandy Blvd	Interbay Blvd	NB	1.5
i	Dale Mabry Hwy	Sligh Ave	Hillsborough Ave	SB	0.8
j	US 301	Riverview Dr	Boyette Rd	NB	1.0

## Freeways

ID	Road	Between	And	Direction	Distance (miles)
A	I-75	Fowler Ave	I-4	NB	3.6
B	I-4	McIntosh Rd	Branch Forbes Rd	EB	3.6
C	I-75	Dr MLK Jr Blvd	Brandon Blvd	NB	2.8
D	I-4	I-75	Mango Rd	EB	1.5
E	I-4	Paul Buchman Hwy	Park Rd	EB	1.2
F	I-75	Gibsonton Dr	Big Bend Rd	NB	4.2
G	I-75	Selmon Expy	US 301	NB	1.9
H	I-75	Brandon Blvd	Selmon Expy	NB	1.0
I	I-75	US 301	Gibsonton Dr	NB	3.6
J	I-75	Sun City Center Blvd	Valroy Blvd	NB	5.1



Based on Hurricane Irma conditions and projected congestion.

# Traffic Operations

Traffic signal coordination

Circuitous routes

Phased evacuations

Emergency shoulder use

Reversible lanes

- Promote travel flow in evacuation direction
- Support cross street and neighborhood access
  
- Location specific solutions
- Wayfinding through communities
  
- Ask specific populations to leave earlier
- Emergency managers cautious
  
- Planned ahead of time to add temporary capacity
- Contraflow resource intensive, recovery implications
  
- Familiar to public
- Supports through-county evacuation



# Transit and Paratransit

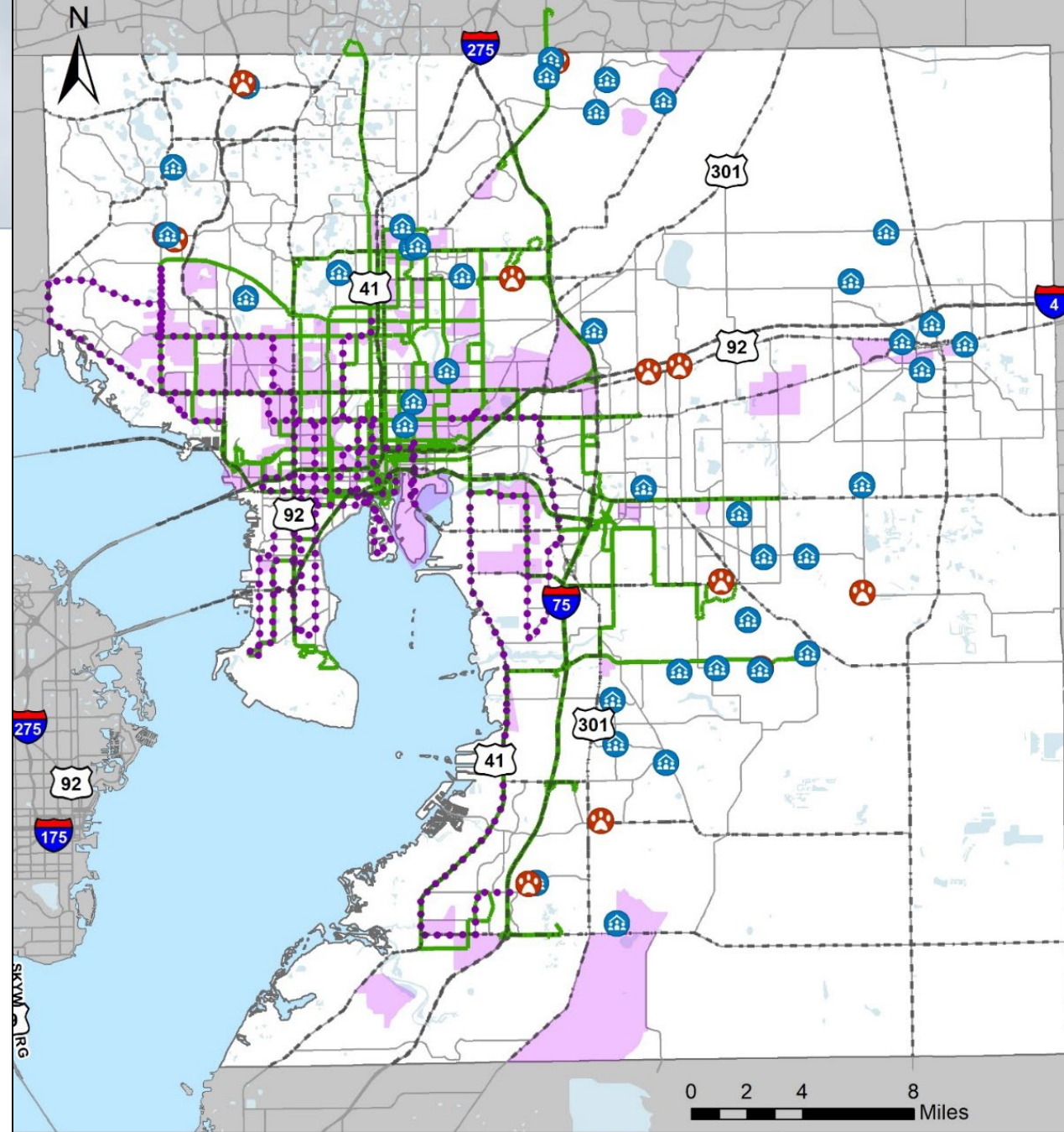
## Coverage – Households with Below Poverty Incomes

	# of Households	Typical HART Service (%)	Emergency Service (%)
Category 1 (Zone A)	7,219	59	55
Category 3 (Zones A/B/C)	14,684	71	76
Category 5 (Zones A-E)	31,851	72	62
All of Hillsborough	73,474	63	31

Within half mile of stops for typical service.  
 Within half mile of route for emergency service.



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Typical vs. Evacuation HART Transit Routes & EJ Communities



# Communications

## Clearance times reduced if people respond quickly to evacuation notices

Dynamic message signs

Targeted messaging

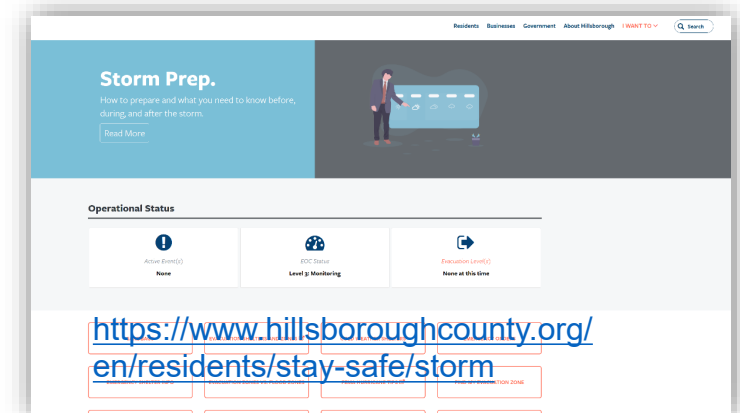
Collaboration & coordination

- Provide real time information
- Supports preparation, evacuation & recovery
- Persons with transportation or health needs
- Promotes evacuation compliance and sheltering at home or inland nearby
- Emergency managers control messages
- TPO can support and augment, education

You only need to evacuate short distances to be safe.

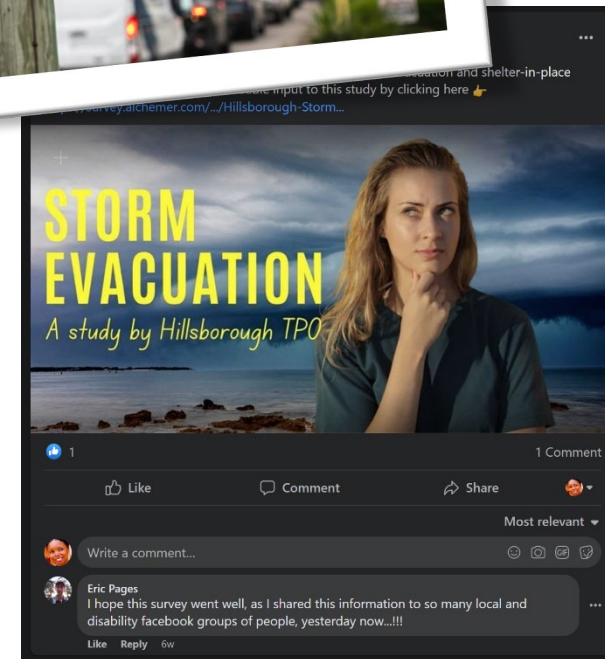
Sample targeted messages

Run from flood, hide from wide. Know your zone.



# Partner and Public Outreach

- Partner agencies
- On-line surveys
- Supplemented with university surveys
- Study overview video
- Video requesting feedback
- TPO social media and newsletters
- Partner social media
- Study website
- Virtual open house
- Community meetings



# Recommendations

## Transportation

**Address**

Address traffic congestion at evacuation hot spot locations

**Improve**

Improve travel flow - traffic signal coordination or addressing circuitous routes

**Provide**

Provide message signs for emergency notifications and operations

**Review**

Review transit/paratransit operations for evacuation zones, mobile home areas and community needs



# Recommendations

## Communication and Collaboration

Inform	Emergency preparedness and response Shelter in place, evacuate short distances where appropriate
Target	Target messages for communities and contexts Transportation specific messages, e.g., registration, HART changes
Assist	Those without access to smartphones/internet Those with medical or transportation needs
Support	Supplement emergency management as requested Encourage local agencies to consider housing policies/programs





# Next Steps

Action	How
Address hotspot locations	<b>LRTP:</b> Incorporate strategic projects/investments <b>CMP:</b> Consider evacuation congestion in needs & solutions
Dynamic message signs	<b>LRTP/TIP:</b> Incorporate projects or box funding for signs, encouraging local agencies too
Transit for emergencies	<b>UPWP/Partners:</b> Perform study about transit service and coverage needs as part of emergencies
Targeted messaging	<b>New:</b> Collaborative initiative regarding hurricane sheltering and evacuation



# Questions and Answers



## Accept Report



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# More Information

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