

## TECHNICAL ADVISORY COMMITTEE (TAC)

### Regular Meeting

Tuesday, November 16, 2021  
1:30 pm

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#### Public Participation/Accessibility

Participation in Person: Public comments may be provided in person at the meeting. Persons who require special accommodations under the Americans with Disabilities Act (ADA) or persons who require translation services (free of charge) should contact the St. Lucie TPO at 772-462-1593 at least five days prior to the meeting. Persons who are hearing or speech impaired may use the Florida Relay System by dialing 711.

Participation by Webconference (not intended for Committee Members): Using a computer or smartphone, register at <https://attendee.gotowebinar.com/register/57709385371190027>. After the registration is completed, a confirmation will be emailed containing instructions for joining the webconference. Public comments may be provided through the webconference chatbox during the meeting.

Written and Telephone Comments: Comment by email to [TPOAdmin@stlucieco.org](mailto:TPOAdmin@stlucieco.org); by regular mail to the St. Lucie TPO, 466 SW Port St. Lucie Boulevard, Suite 111, Port St. Lucie, Florida 34953; or call 772-462-1593 until 1:00 pm on November 16, 2021.

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### AGENDA

1. Call to Order
2. Roll Call
3. Comments from the Public
4. Approval of Agenda
5. Approval of Meeting Summary
  - *July 20, 2021 Regular Meeting*
6. Action Items
  - 6a. 2022 Meeting Dates: Approval of the proposed 2022 meeting dates for the St. Lucie TPO TAC.  
  
*Action: Approve the proposed 2022 meeting dates, approve with conditions, or do not approve.*

- 6b. Micro-Mobility Study Scope of Services: Review of the Scope of Services for the Micro-Mobility Study.

*Action: Review and recommend approval of the Scope of Services, recommend approval with conditions, or do not recommend approval.*

7. Discussion Items

- 7a. Speed Kills Analysis: An update of the Speed Kills Analysis of the St. Lucie TPO area.

*Action: Discuss and provide comments to Staff.*

- 7b. FY 2022/23 – 2023/24 Unified Planning Work Program (UPWP) Call for Planning Projects: Initial discussion of the development of the FY 2022/23 – 2023/24 UPWP for the St. Lucie TPO.

*Action: Discuss and propose planning projects for potential inclusion in the FY 2022/23 – 2023/24 UPWP.*

8. Recommendations/Comments by Members

9. Staff Comments

10. Next Meeting: Subject to the approval of Agenda Item 6a, the next St. Lucie TPO TAC meeting is a regular meeting scheduled for 1:30 pm on Tuesday, January 18, 2022.

11. Adjourn

## NOTICES

The St. Lucie TPO satisfies the requirements of various nondiscrimination laws and regulations including Title VI of the Civil Rights Act of 1964. Public participation is welcome without regard to race, color, national origin, age, sex, religion, disability, income, or family status. Persons wishing to express their concerns about nondiscrimination should contact Marceia Lathou, the Title VI/ADA Coordinator of the St. Lucie TPO, at 772-462-1593 or via email at [lathoum@stlucieco.org](mailto:lathoum@stlucieco.org).

Items not included on the agenda may also be heard in consideration of the best interests of **the public's health, safety, welfare, and as necessary to protect every person's right of access.** If any person decides to appeal any decision made by the St. Lucie TPO Advisory Committees with respect to any matter considered at a meeting, that person shall need a record of the proceedings, and for such a purpose, that person may need to ensure that a verbatim record of the proceedings is made which includes the testimony and evidence upon which the appeal is to be based.

Kreyol Ayisyen: Si ou ta renmen resevwa enfòmasyon sa a nan lang Kreyòl Aisyen, tanpri rele nimewo 772-462-1593.

Español: Si usted desea recibir esta información en español, por favor llame al 772-462-1593.



Coco Vista Centre  
466 SW Port St. Lucie Blvd. Suite 111  
Port St. Lucie, Florida 34953  
772-462-1593 www.stlucietpo.org

## TECHNICAL ADVISORY COMMITTEE (TAC)

### REGULAR MEETING

DATE: Tuesday, July 20, 2021  
TIME: 1:30 pm  
LOCATION: St. Lucie TPO  
Coco Vista Centre  
466 SW Port St. Lucie Boulevard, Suite 111  
Port St. Lucie, Florida

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#### MEETING SUMMARY

1. Call to Order

Chairman Sanders called the meeting to order at 1:35 pm.

2. Roll Call

The roll was conducted via sign-in sheet, and a quorum was confirmed with the following members present:

Members Present

Marty Sanders, Chairman  
Benjamin Balcer, Vice Chairman  
Jack Andrews  
Edmund Bas  
Brandon Creagan  
Joe DeFronzo  
Murriah Dekle  
  
Roje Gonzalez  
Kevin Lindgren  
  
Salomon Rincon

Representing

St. Lucie County School District  
St. Lucie County Planning  
Fort Pierce Engineering  
St. Lucie County Public Works  
Fort Pierce Planning  
Port St. Lucie Public Works  
St. Lucie County Transit  
Management  
Community Transit  
Treasure Coast International  
Airport  
St. Lucie County Fire District

Others Present

Kyle Bowman  
 Peter Buchwald  
 Yi Ding  
 Marceia Lathou (via web)  
 Rachel Harrison  
 Adolfo Covelli  
 Laura Dodd (via web)  
 Bob Driscoll  
 Caryn Gardner-Young (via web)

Selena Griffett  
 Rax Jung (via web)  
 John Podczerwinsky (via web)  
 Gregor Senger (via web)  
 Mira Skoroden  
 Emily Thomason (via web)  
 Ricardo Vasquez (via web)

Victoria Williams

Representing

St. Lucie TPO  
 St. Lucie TPO  
 St. Lucie TPO  
 St. Lucie TPO  
 Recording Specialist  
 St. Lucie County Transit  
 Port St. Lucie Planning  
 Community Transit  
 Florida Department of  
 Transportation (FDOT)  
 St. Lucie County  
 Florida's Turnpike Authority  
 FDOT  
 FDOT  
 FDOT  
 Jarrett Walker + Associates  
 Martin Metropolitan Planning  
 Organization  
 Florida's Turnpike Authority

3. Comments from the Public – None.

4. Approval of Agenda

\* MOTION by Vice Chairman Balcer to approve the agenda.

\*\* SECONDED by Ms. Dekle Carried UNANIMOUSLY

5. Approval of Meeting Summary  
 • May 18, 2021 Regular Meeting

\* MOTION by Ms. Dekle to approve the Meeting Summary.

\*\* SECONDED by Vice Chairman Balcer Carried UNANIMOUSLY

Chairman Sanders commented on the excellence of Ms. Harrison in the preparation of the meeting summaries.

## 6. Action Items

- 6a. Florida's Turnpike Project Development and Environment (PD&E) Study: Presentation by the Florida's Turnpike Enterprise of the PD&E Study being conducted from Jupiter to Fort Pierce.

Mr. Buchwald introduced the agenda item and invited Ms. Williams to continue. Ms. Williams described the project location and study limits before explaining the 'No-Build Alternative.' She then turned to the 'Preferred Alternative,' detailing the improvements being proposed for the mainline as well as the existing and new interchanges within the Turnpike segment that is being studied. She identified several widening and interchange projects within the segment that are funded for design, noted the date and time of the project's public hearing, and concluded by explaining several methods for providing comments.

Ms. Dekle thanked Ms. Williams for the presentation and inquired about the plans for incorporating sound walls into the project. Ms. Williams indicated that every part of the segment had been evaluated for sound walls and that a number of areas had met the criteria. She elaborated on the process by which a community would qualify for a sound wall and then explained how certain bond funding considerations unique to the Turnpike might impact the project.

In response to Vice Chairman Balcer's question, Ms. Williams confirmed that the Midway Road bridge would be replaced along with the 14 other bridge structures crossing over the Turnpike within that segment if the Preferred Alternative were implemented. She further confirmed that the project plans had accounted for the widening of Midway Road and the new Turnpike alignment should the mainline widening be approved. In answer to Mr. Bas' inquiry, Ms. Williams affirmed that the 15 bridges slated for replacement would be identified by the PD&E.

In reference to the proposed design of the Midway Road interchange, Vice Chairman Balcer voiced his concern that the alignment of the northbound on-ramp would negatively impact the parking area of the Contender Boats facility located in the northeast quadrant of the interchange. Mr. Bas later remarked that Inwood Consulting Engineers had designed an alignment for the northeast quadrant of the interchange when designing the Midway Road widening. He noted the Inwood alignment's reduced the impact on Contender Boats and requested that it be considered as an alternative. Ms. Williams

indicated that she would bring the matter to the attention of the project manager.

Vice Chairman Balcer questioned the strategy of starting from the southern end of the segment when designing and implementing Turnpike improvements given the greater degree of development occurring in St. Lucie County than in Martin County. Ms. Williams explained that the present order for design had been based on traffic data, land-use plans, and long-range transportation plans, noting that some interchange improvements would likely need to be made before mainline widening could progress in portions of the segment.

Vice Chairman Balcer requested that the future widening of Glades Cut-Off Road be taken into consideration during the PD&E process.

Chairman Sanders expressed his confidence in the project manager, Brian Ribaric, citing his responsiveness to stakeholder comments and his creativity in approaching challenges.

- \* MOTION by Vice Chairman Balcer to recommend endorsement of the PD&E Study with the conditions that 1) the future widening of Glades Cut-Off Road be accommodated in the replacement of the Turnpike bridge over Glades Cut-Off Road, 2) the proposed alignment of the northbound on-ramp of the new Midway Road interchange be redesigned to minimize right-of-way impacts to the Contender Boats facility and potentially incorporate the alignment proposed by the County's design consultant, 3) the cost of the Midway Road bridge replacement be included in the estimated costs for improvements in the Study, and 4) the design of the future mainline widening from Becker Road north be programmed before the programming of the design of the future mainline widening between Martin Highway and Becker Road to accommodate the higher rate of development anticipated for St. Lucie County.

- \* \* **SECONDED** by Ms. Dekle **Carried UNANIMOUSLY**

6b. Transit Route Optimization Study Draft Choices & Concept Report: Presentation of the Transit Route Optimization Study Draft Choices & Concept Report.

Mr. Buchwald explained the purpose of the Transit Route Optimization Study and introduced Ms. Lathou, who noted the Study's origins in the present Transit Development Plan before describing its two phases. Ms. Lathou invited Ms. Thomason to continue, and Ms. Thomason began by explaining the rationale for the Study along with the tasks

completed during its first phase. She detailed the two concepts being proposed, one aimed more toward ridership and the other toward coverage, and then outlined the performance measures of proximity and access. Ms. Thomason presented several diagrams illustrating the differences in travel time and coverage among the existing network and the individual concepts and concluded with the next steps in the process.

Chairman Sanders commented that the ridership concept appeared to create greater opportunity for local residents and inquired about the costs associated with each concept. Ms. Thomason indicated that both concepts would cost more than the present budget because of the expanded Saturday service.

In response to Mr. DeFronzo's question, Ms. Thomason explained that the concepts under discussion had been developed based on existing patterns of land use and density.

Discussion ensued regarding how to determine the appropriate balance between ridership and coverage with Chairman Sanders commenting on the twin difficulties of infrequent service and unequal coverage against the backdrop of social equity concerns. Ms. Thomason remarked that, in her experience, communities typically discuss both concepts and then choose an approach somewhere in between. In response to Chairman Sanders' question, Ms. Thomason indicated that the concepts had been developed using the typical demand around the middle of the day on weekdays. Mr. Buchwald noted that neither Lakewood Park nor the region southwest of Gatlin Boulevard and I-95 would have service if the ridership concept were implemented, and Chairman Sanders asked if boarding data were available for bus stops in those areas. Ms. Dekle explained that some routes were important for inter-County connectivity despite low boarding numbers with Ms. Thomason adding that the largest boarding numbers were associated with Route 1. Ms. Dekle commented on the possibility of isolating the routes with the lowest boardings and replacing them with other types of service, while Chairman Sanders voiced the option of only offering service a few times per day on the lesser-used routes.

Mr. Buchwald then initiated a discussion regarding transit funding with Ms. Dekle observing that the Study had been predicated on the assumption of the funding remaining at current levels. She explained some of the funding challenges presented by the low Municipal Service Taxing Unit (MSTU) rate and the ongoing consideration by the two City jurisdictions of the viability of mobility fees, noting that Port St. Lucie was especially concerned with enhancing mobility. Mr. Buchwald

commented that the local attitudes toward transit might change if the buses were fuller or were seen in more neighborhoods.

\* MOTION by Ms. Dekle to recommend acceptance of the Report.

\*\* SECONDED by Mr. Creagan Carried UNANIMOUSLY

6c. Draft Electric Vehicle Charging Station Plan: Review of the draft Electric Vehicle Charging Station Plan.

Mr. Buchwald introduced the agenda item and invited Ms. Lathou to continue. Ms. Lathou presented a map of existing electric vehicle (EV) charging stations in St. Lucie County and explained the need for more publicly-available stations, using the battery capacity of the Nissan Leaf as an example. She described a number of factors to consider when selecting appropriate locations for charging stations before highlighting the three screening criteria developed in the Plan for siting such stations in St. Lucie County: highway intersections, Retail Major Activity Centers (MACs), and Title VI/Environmental Justice (EJ) areas. Ms. Lathou presented the proposed list of locations and concluded with projections for EV usage in 2030.

Ms. Dekle thanked Ms. Lathou for the presentation and remarked on its timeliness. In response to her concerns regarding the cooperation of property owners and managers at the proposed charging station sites, Ms. Lathou described the existing partnership enabling the installation of a station at the St. Lucie West Walmart and indicated that retailers seemed willing to host such stations because they encouraged more shopping.

Ms. Skoroden noted that FDOT had produced a number of resources on EVs and EV charging and directed members on how to find them online.

Chairman Sanders suggested that the charging station proposed to service the interchange of I-95 and Orange Avenue be sited closer to the interchange. He commented that several potentially suitable developments were planned for that area including a Wawa gas station.

Discussion ensued regarding existing EV stations in St. Lucie County, including the ones at City Hall in downtown Fort Pierce and at the Wawa at the intersection of Okeechobee and Jenkins roads. Ms. Lathou described the local charging stations as having a mix of public and private ownership, noting that the EV industry was considering ways to



promote charging station interoperability to increase EV usage. In answer to Mr. Andrews' comment, Ms. Lathou elaborated upon the features that must be incorporated into an effective charging station. Chairman Sanders remarked on the possibility of private entities installing EV charging capabilities at more fuel stations and suggested staff coordinate with planning departments to incorporate charging plans into site plans. In response to Vice Chairman Balcer's question regarding the installation of the Wawa EV station, Mr. Creagan explained that only minor adjustments had to be made to the site plan for the installation.

- \* MOTION by Vice Chairman Balcer to recommend acceptance of the Plan with the condition that TPO staff coordinate with local planning staffs during the site plan review process for major projects to facilitate the establishment of electric vehicle charging stations at appropriate locations.
- \*\* SECONDED by Mr. Creagan Carried UNANIMOUSLY

## 7. Discussion Items

7a. Transportation Asset/Service Vulnerability Assessment Update: An update of the Transportation Asset/Service Vulnerability Assessment for the St. Lucie TPO.

Mr. Buchwald indicated that TPO staff had completed Sea Level Rising Mapping in November 2019 to identify the transportation infrastructure in the TPO area that could potentially be exposed to future flooding, explaining the present agenda item as a continuation of the effort to integrate environmental considerations into the TPO's metropolitan planning program. Mr. Ding continued the presentation by noting the TPO's involvement with St. Lucie County's Resilience Planning Steering Committee, an entity funded by a Florida Department of Environmental Protection grant to produce a Vulnerability Assessment Report on potentially-impacted assets and services within the County. He indicated that the Report showed the possibility of minor impacts to the County's transportation features in 2070, a finding consistent with those of the 2019 Sea Level Rise Study. Mr. Ding concluded by reporting of the County's receipt of another grant that would fund a three-year scope of work to develop a Regional Resilience Plan aimed at mitigating the effects of future natural disasters and climate change.

In response to Chairman Sanders' comment, Mr. Buchwald clarified that the present item was just the beginning of a three-year effort toward climate resilience, noting that St. Lucie County appeared to be in a better position on that issue than the counties to the south.

8. Recommendations/Comments by Members – None.
9. Staff Comments – Mr. Buchwald thanked the members for their participation and for their comments.
10. Next Meeting: The next St. Lucie TPO TAC meeting is a joint meeting with the Bicycle-Pedestrian Advisory Committee and the Citizens Advisory Committee scheduled for 1:30 pm on Tuesday, October 19, 2021.
11. Adjourn – The meeting was adjourned at 3:05 pm.

Respectfully submitted:

Approved by:

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Rachel Harrison  
Recording Specialist

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Marty Sanders  
Chairman



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## AGENDA ITEM SUMMARY

Board/Committee: Technical Advisory Committee (TAC)

Meeting Date: November 16, 2021

Item Number: 6a

Item Title: 2022 Meeting Dates

Item Origination: Annual administrative business

UPWP Reference: Task 1.1 - Program Management

Requested Action: Approve the proposed 2022 meeting dates, approve with conditions, or do not approve.

Staff Recommendation: It is recommended that the proposed 2022 meeting dates be approved.

### Attachments

- TAC Proposed 2022 Meeting Dates

## Technical Advisory Committee (TAC) **PROPOSED** 2022 Meeting Dates (Approved: \_\_\_\_\_)

Tuesday, January 18, 2022, 1:30 pm

Tuesday, March 22, 2022, 1:30 pm

Tuesday, May 17, 2022, 1:30 pm

Tuesday, July 19, 2022, 1:30 pm

Tuesday, September 20, 2022, 1:30 pm

Tuesday, November 29, 2022, 1:30 pm  
(Joint Meeting with the Citizens Advisory Committee  
and the Bicycle-Pedestrian Advisory Committee)

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## AGENDA ITEM SUMMARY

Board/Committee:	Technical Advisory Committee (TAC)
Meeting Date:	November 16, 2021
Item Number:	6b
Item Title:	Micro-Mobility Study Scope of Services
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 3.2 – Transit Planning
Requested Action:	Review and recommend approval of the Scope of Services, recommend approval with conditions, or do not recommend approval.
Staff Recommendation:	Because the Micro-Mobility Study would address connectivity to the fixed-route bus system and the Study is consistent with Task 3.2 of the UPWP, it is recommended that the Micro-Mobility Study Scope of Services be recommended for approval by the TPO Board.

### Attachments

- Staff Report
- Micro-Mobility Scope of Services



Coco Vista Centre  
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772-462-1593 www.stlucietpo.org

## MEMORANDUM

TO: Technical Advisory Committee (TAC)

THROUGH: Peter Buchwald  
Executive Director

FROM: Marceia Lathou  
Transit Program Manager

DATE: November 2, 2021

SUBJECT: Micro-Mobility Study Scope of Services

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### BACKGROUND

Trips on fixed route buses begin and end with travel to and from bus stops. Such access is known as "first-last mile" micro-mobility: walking, bicycling or shared-ride travel.

The St. Lucie TPO uses a continuing, cooperative, and comprehensive approach to micro-mobility planning. To unify prior, current, and future efforts into a single plan, the Unified Planning Work Program (UPWP) includes a Micro-Mobility Study which will analyze the deployment of micro-transit, e-scooters, car sharing, and bike sharing in selected areas of St. Lucie County. The goal of the Micro-Mobility Study is to enhance mobility for persons who don't have access to single-occupancy automobiles or who do not wish to use such vehicles.

### ANALYSIS

The Micro-Mobility Study will assess past and existing micro-mobility programs as well as the potential for new technologies. The Study will analyze context-sensitive solutions for the Gatlin Boulevard/Tradition Parkway area, the Torino Parkway area, and downtown Fort Pierce, focusing on the following methods of travel:

- Ø Pedestrian:
  - Walking
  - Special needs for persons with disabilities
- Ø Bicycle, Board & Skate:
  - Personal bicycles and e-bikes
  - Bike sharing
  - Skateboards and e-skateboards
  - Shared e-scooters
- Ø Vehicular:
  - Park-and-Ride, both conventional and electric vehicles
  - Kiss-and-Ride, drop-off transfer points
  - Neighborhood electric vehicles (NEV)
  - Car sharing
  - Ride sharing and traditional taxis
- Ø Transit:
  - Conventional public bus service
  - Micro-transit partnerships
  - Micro-transit with autonomous vehicles

The Micro-Mobility Study will be conducted by The Corradino Group, one of the TPO's General Planning Consultants. The Study will be completed in June 2022 with a lump sum budget of \$30,000.

### RECOMMENDATION

Because the Micro-Mobility Study would address connectivity to the fixed-route bus system and the Study is consistent with Task 3.2 of the UPWP, it is recommended that the Micro-Mobility Study Scope of Services be recommended for approval by the TPO Board.

## St. Lucie TPO Micro-Mobility Study

### Scope of Services

Prepared by The Corradino Group, Inc.

October 21, 2021

#### INTRODUCTION

For persons that rely on public transportation, the first and last part of their trip is often perceived as the longest, the most time consuming, the most uncomfortable, and the least reliable. Their journey does not start when they board a bus or train and does not end where they alight. Their trip begins when they walk to or from the transit stop, or ride a bike, take a taxi, share a car ride or use some other transportation for the connecting parts of their journey.

The connecting journeys, before and after the transit ride, are influential enough to encourage or discourage a person to ride transit again. A transit traveler evaluates the desirability of a transit trip based on multiple criteria for the entirety of the door-to-door journey. The satisfaction of each part of the journey is not evenly weighted based on actual distance or time, but perceptually weighted based on a person's own needs and comfort levels for each part of the trip. In this way, the 5-minute walk in undesirable or high level-of-transportation-stress conditions can discourage a 15-minute transit journey. The resulting dilemma is ubiquitous: near empty transit services on roads congested with single-occupant vehicles.

Not only are the first and last legs of the trip disproportionate in their effect on transit demand, but their impact on transit providers is also disproportionate. For mass transit providers, and especially for major fixed right-of-way investments like rail, productivity and efficiency depend on large numbers of people moving along linear transit sheds with comfortable connections to destinations. The more complete the network, the higher the utilization that can be expected. To complete the network with conventional transit, services become inefficient and difficult to sustain without higher-than-average subsidies.

Successful fixed-route transit services rely on direct alignments through high-density corridors. Traditionally, it was left to individual riders to get themselves to and from transit stops by walking, bicycling, driving, or getting dropped off or picked up. Starting in the 1970's, public agencies, employers, and transportation management associations have been providing shuttle connections, dial-a-ride and car-pooling services to facilitate "first-and-last-mile" (FLM) mobility, and, more recently, private companies have begun to provide FLM services that connect to transit lines.

The need for new FLM strategies to support competing needs for greater utilization and expansion of urban mass transit has never been greater. From traditional to the cutting-edge, the range of FLM connective modes, technologies and delivery models include many options that can be organized into 4 modal groups:



- **Pedestrian Modal Group:**
  - Walking
  - Special needs for disabled persons
  
- **Bicycle, Board & Skate Modal Group:**
  - Personal Bicycles and E-Bikes
  - Bike Sharing: dock-based or dockless
  - Skateboards and E-Skateboards
  - Shared E-Scooters
  
- **Vehicular Modal Group:**
  - Park-and-Ride (conventional)
  - Park-and-Ride with Plug-In Electric Vehicles (PEV)
  - Kiss-and-Ride
  - Neighborhood Electric Vehicles (NEV)
  - Car Sharing, including pod-based, free floating, station cars and peer-to-peer networks
  - Ride Sharing & Traditional Taxi
  
- **Transit Modal Group:**
  - Conventional Transit Services – Public Provider
  - Micro Transit: Private Providers and Public-Private Partnerships (P3's)
  - Micro Transit with Autonomous Vehicles (AV)



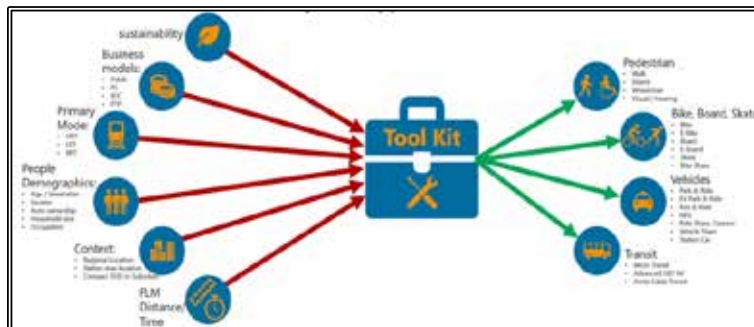
Each mode has its own characteristics of suitability that are context sensitive. Whether owned or operated by governmental entities or not, each mode has specific needs for infrastructure, regulatory support, funding, and integration with primary fixed-route transit. Each is affected by level of acceptance from end-users and continued innovation in technology and business models.

The St. Lucie TPO has been at the forefront of planning for effective mobility services. The TPO and its partner agencies wish to leverage and unify prior, current, and planned micro-mobility and micro-transit efforts into a single plan to enhance mobility for persons that don't have access to single-occupancy automobiles or do not wish to use such vehicles.

At Corradino, with 50 years of experience in multimodal transportation, we understand transit and mobility planning, and we understand the changes that are happening in response to our changing lifestyles, economy and technologies. We performed the First-and-Last Mile Study for the Miami-Dade TPO to develop the range of technologies and business models for the network of mobility options that is essential to developing its fixed-guideway rail and BRT SMART Plan. We developed a toolbox of context-sensitive solutions and performed two case studies.



The Director for this study will be Mark Alvarez, with 30 years of transit, mobility and land use planning experience. He was the Project Manager for the *First-and-Last Mile Study*. He has in-depth understanding of micro-mobility, how it differs from and integrates with traditional public transit, and its advantages and challenges.



In 2013, Mark Alvarez co-authored the *Drive Electric Florida, US-1 Corridor Pilot Project* for the South Florida Regional Planning Council and Florida Power & Light, to develop the infrastructure plan for shared, plug-in-electric vehicles at Metro-Rail stations for first-last-mile trips.

Srinivas ("Srin") Varanasi will work with Mark on this project. Srin is Vice President in Corradino's nationwide transportation systems planning practice. He has 16 years of experience in corridor/ subarea modeling, area wide transportation planning, travel demand forecasts, model applications, and GIS database development projects.

We are pleased to provide this scope of services to assist the TPO develop its unified short-term *Micro-Mobility Plan*, using a planning horizon of 3 years. Four tasks will be undertaken to deliver this plan. These tasks, their schedule and costs are described on the following pages.

- § Task 1. Review Existing Plans and Affirm Study Area
- § Task 2. Opportunities for Success and Micro-Mobility Provider Needs
- § Task 3. Existing Conditions & Analysis
- § Task 4. Recommendations

## TASKS

### Task 1. Review Existing Plans and Affirm Study Area

We will meet with St. Lucie TPO staff and relevant City/County staff to fully identify and review past micro-mobility plans and related efforts, transit plans, and existing performance levels. With TPO staff, we will determine other information sources to review. The information will be documented in a Technical Memorandum to include a summary of key findings.

The three areas of study currently identified for micro-mobility programs are: 1) the Tradition Area, 2) Torino Parkway, and 3) Downtown Fort Pierce. We understand that the County's Transit Division is actively implementing micro-mobility solutions, and so as part of Task 1 we will work with City/County staff to confirm the areas of study for the *Micro-Mobility Study*.

Staff Meetings:	2 TPO staff virtual meetings after kick-off meeting
Product:	Technical Memorandum summarizing key findings and the history of micro-mobility efforts in St. Lucie County
Start:	After Project Kick-Off Meeting – assumed in January 2022
Complete:	February 2022
Task Cost	\$ 4,800

### Task 2. Opportunities for Success and Micro-Mobility Provider Needs

We will contact three micro-mobility program managers that have operated in St Lucie County to determine the key market factors and other metrics by modal type for sustainable micro-mobility systems. Key benchmarks will be sought for: entering and exiting a market area; sustaining operations; infrastructure needs; regulatory needs or barriers; experience with market area geography; and, integration with fixed-route transit systems.

Staff Meetings:	3 virtual meetings or phone interviews with micro-transit program managers with experience in St. Lucie County and County staff; 2 meetings with TPO staff to discuss lessons learned
Product:	Technical Memorandum summarizing key findings
Start:	After Project Kick-Off Meeting - assumed in January 2022
Complete:	February 2022
Task Cost	\$ 5,600

### Task 3. Existing Conditions & Analysis

Concurrent with Task 1, we will collect and analyze data to measure transportation system performance. We understand that the Transit Division is working with contractors to provide dynamic information systems for their transit and mobility operations, including: TransLoc information systems, and Optym's RouteMax; we will coordinate with those systems and the Via dashboard to gain available data for *this study*.

Based on data collection efforts and using available data from the St Lucie County transportation planning model as needed, we will identify pertinent information for micro-mobility utilization for the identified areas as confirmed in Task 1. We will analyze these areas for predominant trip patterns to determine where micro-mobility will serve: 1) local trips, not requiring first-last-mile connections; 2) non-local trips that do not require transit connections, such as recreational trips; and, 3) non-local trips that do require first-last-mile transit connections, such as work, shopping, medical trips, and other necessary travel. We will analyze each area for indicators with which to recommend different micro-mobility mode combinations that are pertinent to the projected mobility needs of each area.



Pedestrian and bicycle infrastructure for the identified micro-mobility areas will be assessed using County GIS information, then verified by aeriels and site visits. We will review transit operations for schedules, service spans and stop locations to assess the viability of transit connections, and local mobility hubs for effective first-last-mile connections.

Staff Meetings:	2 meetings: 1 methodology meeting and 1 meeting to review findings
Product:	Technical Memorandum summarizing key findings, GIS files, and presentation
Start:	After Project Kick-Off Meeting - assumed in January 2022
Complete:	April 2022
Task Cost	\$ 14,000

#### Task 4. Recommendations

Recommendations will be developed based on the findings of Tasks 1, 2 and 3 to answer four questions:

- 1) What micro-mobility mode, or combination of modes can best address the needs of each of the study areas?
- 2) Should the micro-mobility choices be managed and operated by private providers, or should they be publicly-owned/operated, or are Public-Private Partnership models better suited?
- 3) What infrastructure investments; policy and regulatory changes; and transit operations/ equipment modifications could be programmed to match the needs for each area and assure long-term viability and growth of the micro-mobility services?
- 4) For first-and-last-mile connections, where are the locations for potential transit hubs, and what are the specifications for the hubs?

The draft report, along with a presentation will be provided to St. Lucie TPO staff for review by April 22, 2021, ready for inclusion on the agendas of the three St. Lucie TPO advisory committees. After receiving input from the advisory committees, we will include summaries of comments and requests from each committee, and provide to the TPO staff for their input regarding any changes that should be made to the final report. The final report will be provided to the TPO staff by May 20 for inclusion on the June 2022 agenda of the St. Lucie TPO board.

Staff Meetings:	2 meetings: 1) review draft report; 2) review final advisory committee comments
Public Presentations:	1) St. Lucie TPO Citizens' Advisory Committee (CAC), May 2022 2) St. Lucie TPO Technical Advisory Committee (TAC), May 2022 3) St. Lucie TPO Bicycle-Pedestrian Advisory Committee (BPAC), May 2022 4) St. Lucie TPO Board, June 2022
Products:	Draft Report, presentations and Final Report
Start:	April 2022
Complete:	June 2022
Task Cost	\$ 5,600

## PROJECT SCHEDULE

St. Lucie TPO Micro-Mobility Study	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	Cost
<b>Task 1 Plans and Documents Review</b>	[Bar]						\$ 4,800
<b>Task 2. Opportunities for Success and Micro-Mobility Provider Needs</b>	[Bar]						\$ 5,600
<b>Task 3. Existing Conditions &amp; Analysis</b>	[Bar]						\$ 14,000
<b>Task 4. Recommendations</b>				[Bar]	[Bar]	[Bar]	\$ 5,600
<b>TOTAL</b>	[Bar]						\$ 30,000

★ St. Lucie TPO Advisory Committee Public Meetings: CAC, TAC, BPAC

★ St. Lucie TPO Board Meeting

## PROJECT COST SUMMARY

Task 1. Plans and Documents Review	\$ 4,800
Task 2. Opportunities for Success and Micro-Mobility Provider Needs	\$ 5,600
Task 3. Existing Conditions & Analysis	\$14,000
Task 4. Recommendations	\$ 5,600
<b>Total</b>	<b>\$30,000</b>



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## AGENDA ITEM SUMMARY

Board/Committee: Technical Advisory Committee (TAC)

Meeting Date: November 16, 2021

Item Number: 7a

Item Title: Speed Kills Analysis

Item Origination: Unified Planning Work Program (UPWP)

UPWP Reference: Task 3.7 – Safety and Security Planning

Requested Action: Discuss and provide comments to Staff.

Staff Recommendation: It is recommended that the Speed Kills Analysis is discussed and comments are provided to Staff.

### Attachments

- Staff Report
- St. Lucie TPO Fatal Crash Fact Sheet and Map



## MEMORANDUM

TO: Technical Advisory Committee (TAC)

FROM: Yi Ding, Transportation Systems Manager  
and  
Peter Buchwald, Executive Director

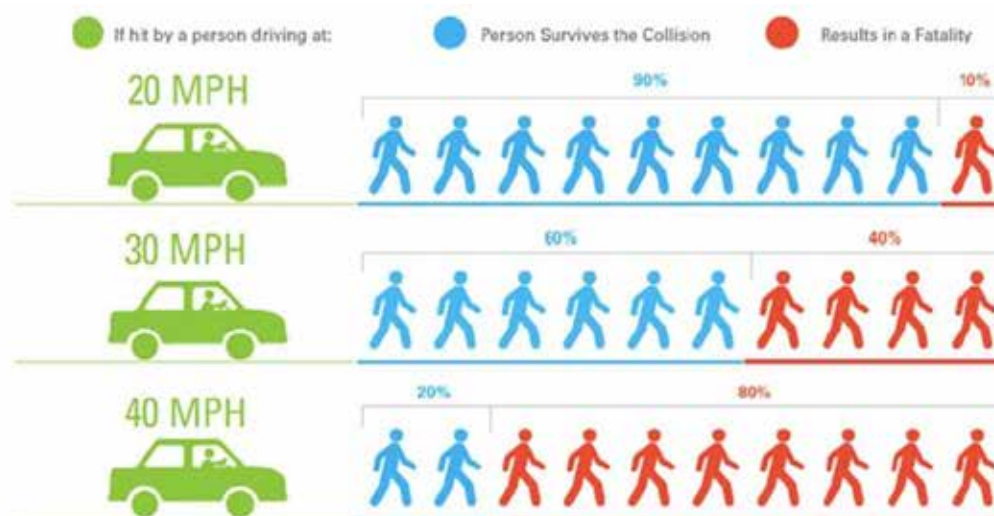
DATE: November 9, 2021

SUBJECT: Speed Kills Analysis

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### BACKGROUND

According to the National Highway Traffic Safety Administration (NHTSA), one of the top reasons for traffic accidents and fatalities is driving too fast for the road conditions. High speeds make crashes more likely and increase the risk of fatal injuries at an alarming rate according to NHTSA. According to the U.S. Department of Transportation and as depicted in the following graphic, a pedestrian who is hit by a car moving at 20 miles per hour has an 90 percent chance of survival, while that person only has a 20 percent chance of survival if hit by a car moving at 40 miles per hour:



The St. Lucie TPO supports the national and Statewide "Vision Zero" efforts to eliminate all traffic fatalities and serious injuries on the transportation

network. Managing travel speeds is an effective strategy and a critical tenet of Vision Zero.

Therefore, Task 3.7, *Safety and Security Planning*, of the St. Lucie TPO FY 2020/21 – 2021/22 Unified Planning Work Program (UPWP) includes a Speed Kills Analysis to examine the link between vehicle speed and crash risk and severity on the roadway network in the TPO area.

## ANALYSIS

For this analysis, the fatal crashes and the speed limits on the roadway network in the TPO area were reviewed to identify any consistencies. Crash data was obtained from the Signal Four Analytics database for the years 2011 through 2021.

The attached St. Lucie TPO Fatal Crash Fact Sheet and Map summarizes the findings and illustrate the distribution of the fatal crashes for vehicles, pedestrians, and bicyclists in the St. Lucie TPO area. In addition, vehicle and bicycle-pedestrian high crash locations are summarized as follows:

Vehicle High Crash Locations						
Street Name	From	To	Segment Length (miles)	Crash Number	Speed Limit (MPH)	State Highway System
U.S. Highway 1	Edward Rd	Dixieland Dr	0.74	7	40	Yes
U.S. Highway 1	Brazilian Cir	Prima Vista Blvd	0.8	6	45	Yes
Airoso Blvd	Lakehurst Dr	Prima Vista Blvd	0.66	5	40	No
Port St. Lucie Blvd	Cameo Blvd	Dalton Ave	0.89	5	45	No
St. Lucie West Blvd	Peacock Blvd	California Blvd	0.45	5	45	No

Bicycle-Pedestrian High Crash Locations						
Street Name	From	To	Segment Length (miles)	Crash Number	Speed Limit (MPH)	State Highway System
25th St	Ave G	Nebraska Ave	1.6	8	40	Yes
U.S. Highway 1	Tennessee Ave	Southland Dr	1.8	7	40	Yes

After examining the fatal crashes at the high crash locations, TPO staff did not find any consistencies between the crashes and the specific, identified causes of the crashes. The only consistency identified is that these high crash locations are on roadways with posted speeds of 40 miles per hour or higher.



In fact, 75 percent of all fatal crashes in the TPO area occur on roadways with posted speeds of 40 miles per hour or higher.

Serious injuries and fatal crashes in the TPO area may be reduced most significantly by reducing the travel speeds on these roadways with high crash locations by reducing the speed limits, also known as setting "target speeds", on these roadways. The Florida Department of Transportation (FDOT) is responsible for setting the target speeds on the roadways of the State Highway System, and the local jurisdictions are responsible for setting the target speeds on the local roadways.

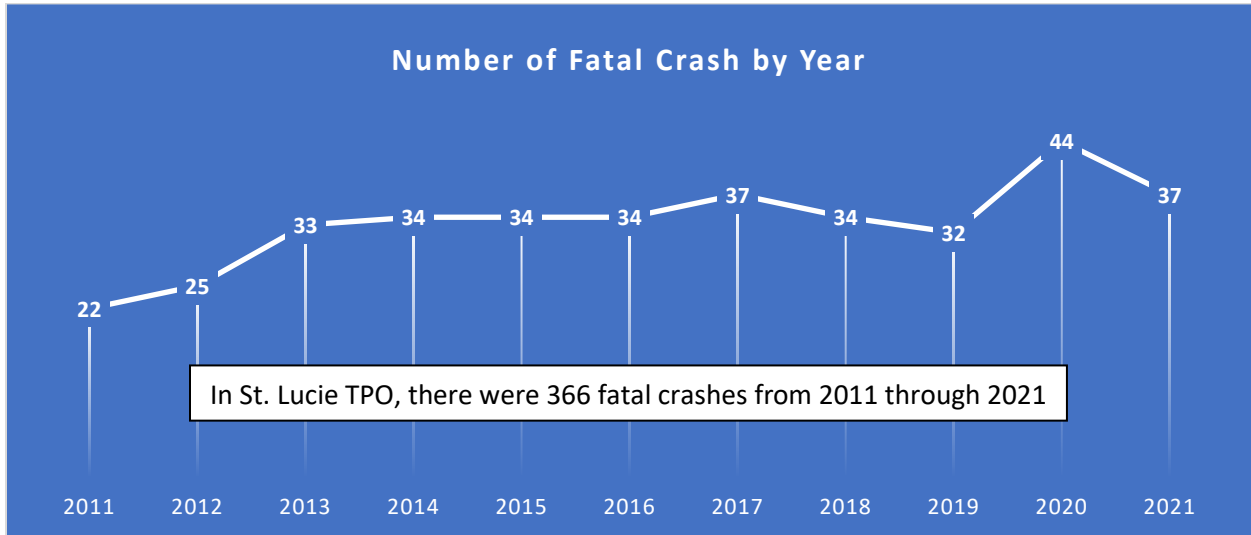
To better support their Vision Zero efforts, FDOT now is implementing a "Safe Systems" approach to setting target speeds. Rather than expecting perfect behavior from drivers, pedestrians, and bicyclists, this approach recognizes that people will make mistakes, and systems will fail with the goal that target speeds should be established so that when someone does err, the penalty is not death. Meanwhile, to improve traffic safety and address speeding issues, the City of Port St. Lucie is proposing to reduce the speed limit on all residential/neighborhood roads to 25 miles per hour.

While the effect of reducing travel speeds on traffic congestion is the subject of much debate in the latest literature, physical improvements to the roadways, known as deflection, engagement, and enclosure, may be needed to most effectively implement the target speeds. In addition, coordination with local law enforcement agencies and education of the general public will be necessary to ensure commitment to the target speeds.

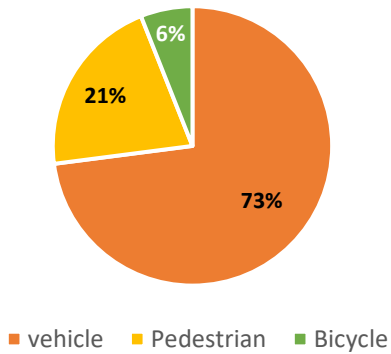
### RECOMMENDATION

It is recommended that the Speed Kills Analysis is discussed and comments are provided to Staff.

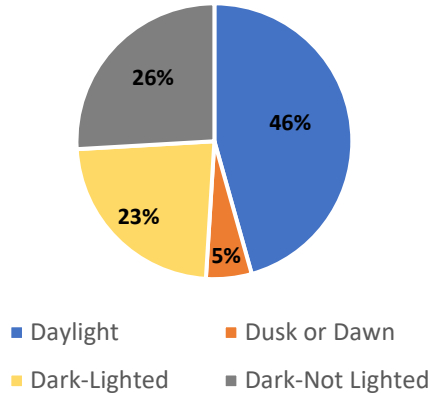
# St. Lucie TPO Fatal Crash Fact Sheet



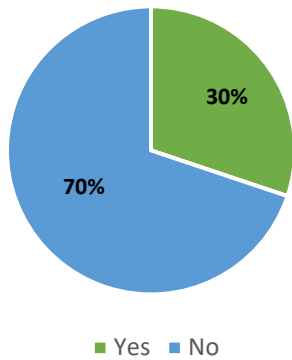
**Crash Mode**



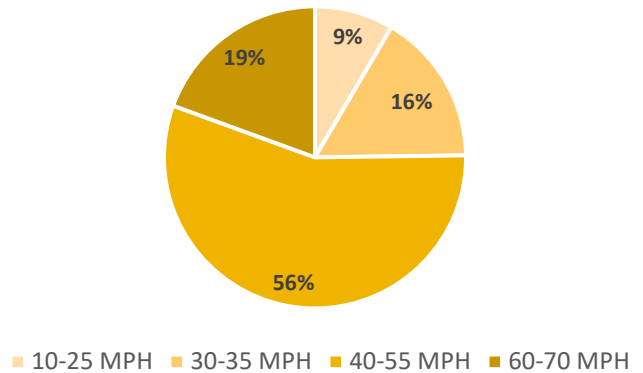
**Lighting Conditions**



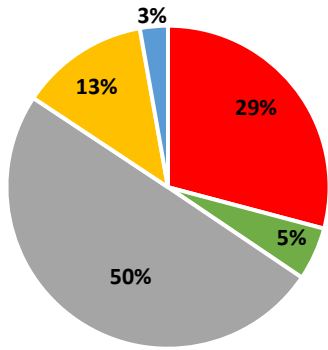
**At Intersection?**



**Speed Limit**

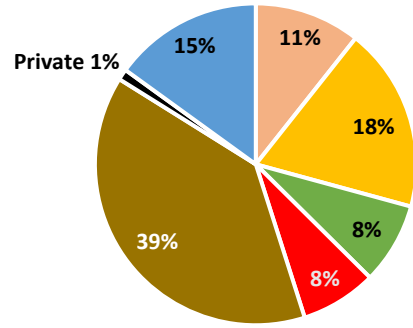


**Vehicle Type**



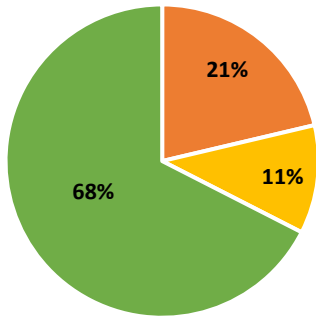
- SUV or Pickup
- Commercial Vehicle
- Passenger Car
- Motorcycle
- Others

**Roadway Type**



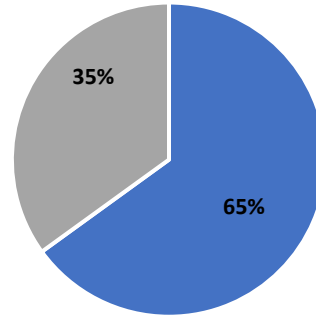
- Interstate
- State
- Turnpike
- U.S.
- Local
- Private
- County

**Driver's Age**



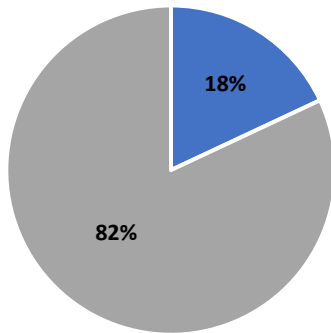
- Senior
- Teenager
- Others

**Distracted/Speeding/Aggressive/Impaired Driving?**



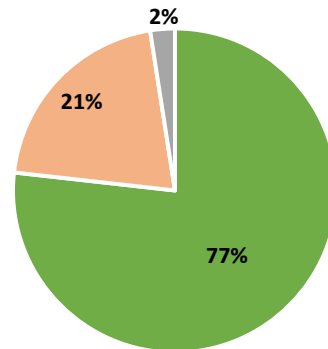
- Yes
- No

**Violation Issued**



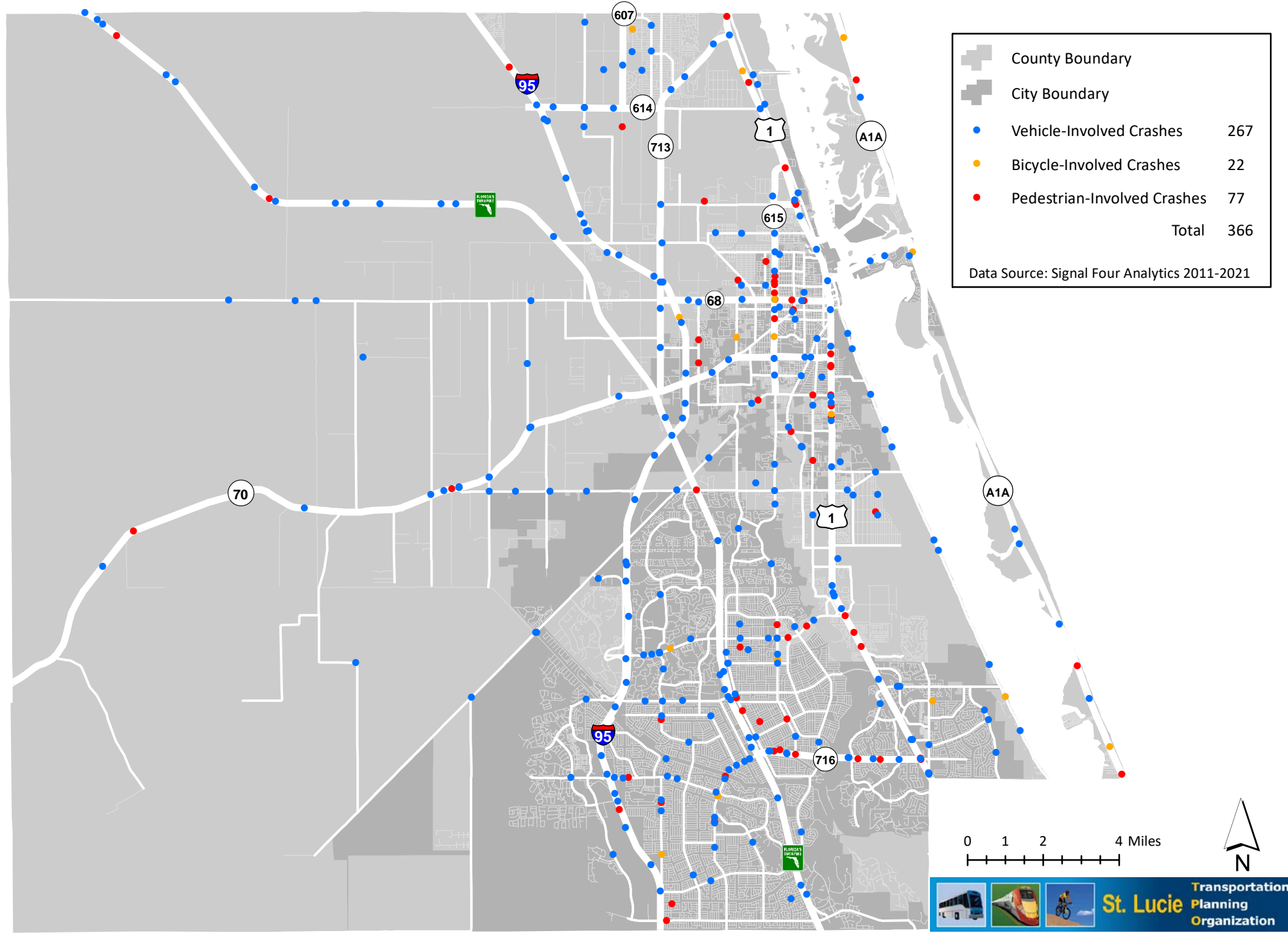
- Yes
- No

**Seat Belt in Use?**

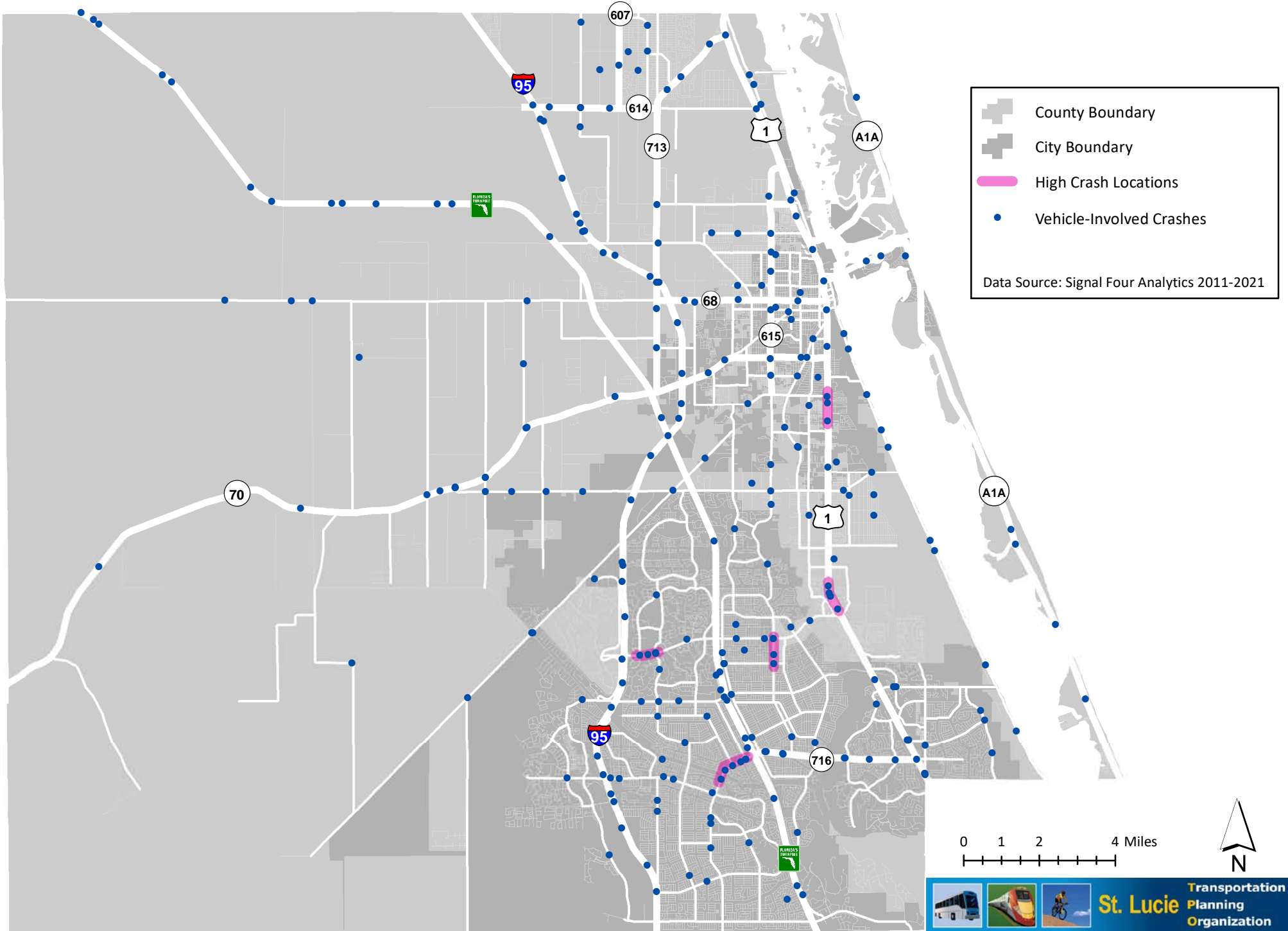


- Yes
- No
- Data N/A

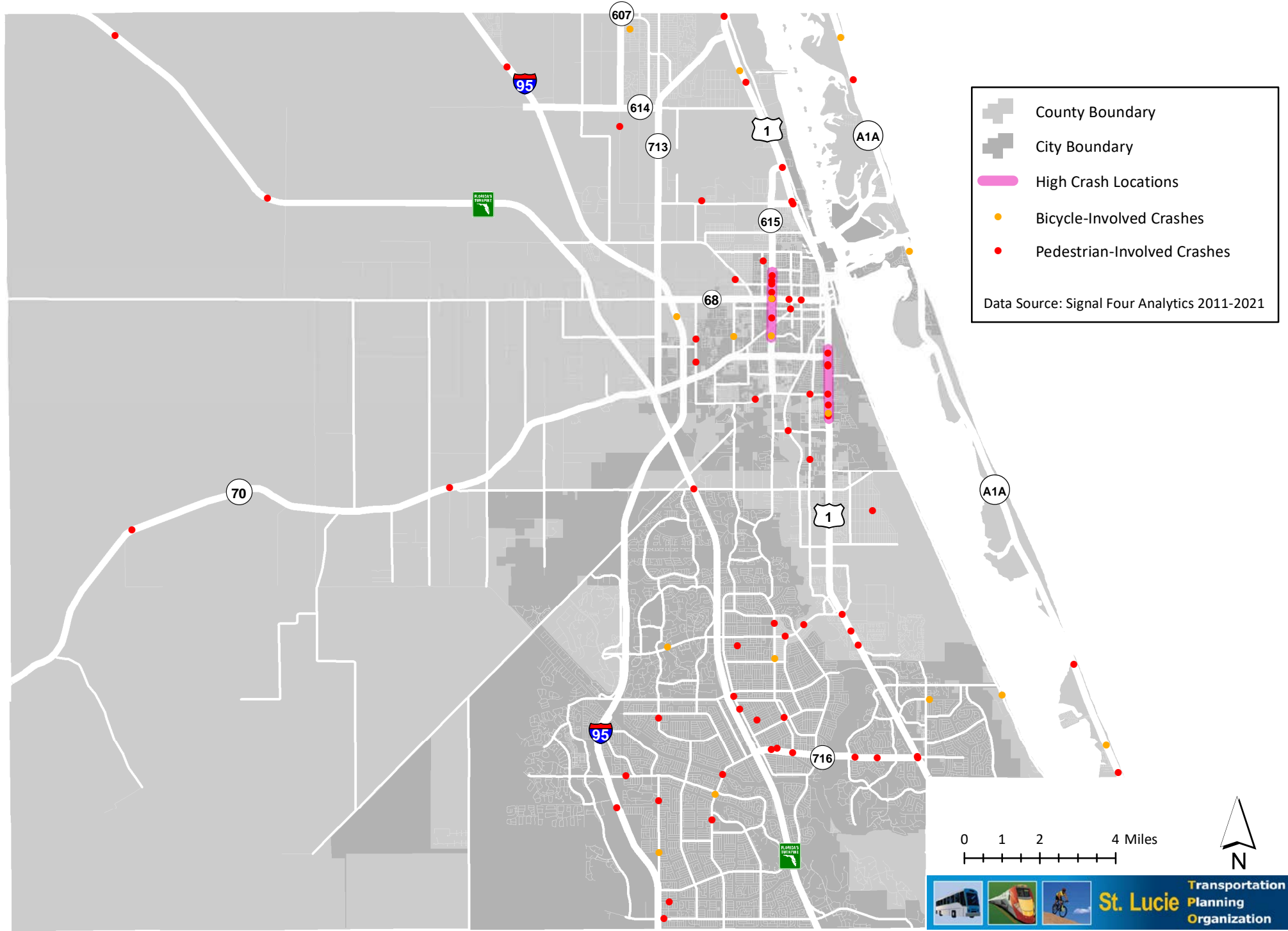
# St. Lucie TPO Fatal Crashes by Mode



# Vehicle-Only Fatal Crashes



# Bicycle and Pedestrian Involved Fatal Crashes





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## AGENDA ITEM SUMMARY

Board/Committee: Technical Advisory Committee (TAC)

Meeting Date: November 16, 2021

Item Number: 7b

Item Title: FY 2022/23 – 2023/24 Unified Planning Work Program (UPWP) Call for Planning Projects

Item Origination: Unified Planning Work Program (UPWP)

UPWP Reference: Task 1.2 – UPWP Development

Requested Action: Discuss and propose planning projects for potential inclusion in the FY 2022/23 – 2023/24 UPWP.

Staff Recommendation: Because the draft UPWP is developed based on comments received from the TPO Advisory Committees and other sources, it is recommended that the draft UPWP is discussed, and planning projects are proposed to Staff.

### Attachment

- Staff Report



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772-462-1593 [www.stlucietpo.org](http://www.stlucietpo.org)

## MEMORANDUM

TO: Technical Advisory Committee (TAC)

THROUGH: Peter Buchwald  
Executive Director

FROM: Marceia Lathou  
Transit Program Manager

DATE: November 2, 2021

SUBJECT: FY 2022/23 – 2023/24 Unified Planning Work Program (UPWP) Call for Planning Projects

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### BACKGROUND

The Unified Planning Work Program (UPWP) is the two-year program supported by State and Federal funds of transportation planning activities undertaken by the TPO. The UPWP includes a description of the planning work and resulting products, who will perform the work, timeframes for completion, costs, and funding sources. The UPWP serves as the foundational document for carrying out the continuing, cooperative, and comprehensive transportation planning process within the TPO area.

The UPWP is required for the TPO to receive funding from the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Florida Commission for the Transportation Disadvantaged (FCTD), and the Florida Department of Transportation (FDOT).

Planning projects are included in the UPWP based on TPO priorities, the need to satisfy State/Federal requirements, and funding constraints. Projects may involve any aspect of surface transportation including roads, transit, bicycle/pedestrian, and the needs of the transportation disadvantaged.

The current UPWP for FY 2020/21 – FY 2021/22 ends on June 30, 2022. Therefore, it is necessary to initiate the development of the UPWP for FY 2022/23 – FY 2023/24.



## ANALYSIS

An initial discussion of the proposed FY 2022/23 – FY 2023/24 UPWP is requested at this time. The discussion should consist of the identification and discussion of the planning priorities, tasks, projects, and activities that should comprise the proposed UPWP. The Call for Planning Projects is being announced to the public through the TPO website/social media and discussions at meetings.

The Call for UPWP Projects has already resulted in several project ideas which are proposed to be included in the draft FY 2022/23 – FY 2023/24 UPWP. These projects include:

- Sustainable Transportation Plan - planning for and encouraging less gasoline-dependent and single-occupancy methods of transportation.
- Transit Development Plan Major Update – assisting the St. Lucie County Transit Division in developing its strategic plan for the future bus network.
- Community Profile Updates – an update of the existing Community Profiles based on the most current U.S. Census data.
- Transit Center Visioning Workshop – an exploration of concepts to improve the public transportation system and to build consensus for funding strategies.
- Transportation Performance Measures 2.0 – enhancement of the UPWP task devoted to transportation and public transportation performance measures.

The draft UPWP will be submitted to various Federal agencies for their review and comment, and a formal public comment period will be initiated. The TPO Board will review the draft UPWP for adoption at its April 2022 meeting.

## RECOMMENDATION

Because the draft UPWP is developed based on comments received from the TPO Advisory Committees and other sources, it is recommended that the draft UPWP is discussed, and planning projects are proposed to Staff.