St. Lucie Transportation Planning Organization

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

BICYCLE-PEDESTRIAN ADVISORY COMMITTEE (BPAC)

Regular Meeting

Thursday, July 25, 2024
3:00 pm

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/6365980350327892826. 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; 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 2:30 pm on July 25, 2024.

AGENDA

1. Call to Order

2. Roll Call

3. Comments from the Public

4. Approval of Agenda

5. Approval of Meeting Summary
   - *May 23, 2024 Regular Meeting*

6. Action Items

   6a. Project Development and Environment Study (PD&E) for Widening Florida's Turnpike from State Route 70 (Okeechobee Road) to State Route 60 (Yeehaw Junction): An update by Florida's Turnpike on the PD&E for the widening of the Turnpike from State Route 70 to State Route 60.

   Action: Recommend endorsement of the PD&E alternatives, recommend endorsement with conditions, or do not recommend endorsement.

6b. Congestion Management Process (CMP) Major Update: Review of the draft CMP Major Update.

Action: Recommend adoption of the draft CMP Major Update, recommend adoption with conditions, or do not recommend adoption.

7. Discussion Items

7a. Transportation Asset/Service Vulnerability Assessment Update: A presentation on the development of the St. Lucie County Community Resilience Plan.

Action: Discuss and provide comments.

8. Recommendations/Comments by Members

9. Staff Comments

10. Next Meeting: The next St. Lucie TPO BPAC meeting is a regular meeting scheduled for 3:00 pm on Thursday, September 19, 2024.

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.

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 Aysiyen, tanpri rele nimewo 772-462-1593.

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

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BICYCLE-PEDESTRIAN ADVISORY COMMITTEE (BPAC)

REGULAR MEETING

DATE: Thursday, May 23, 2024

TIME: 3:00 pm

MEETING SUMMARY

1. Call to Order

The meeting was called to order at 3:00 p.m. by Vice Chairwoman Jennifer McGee in the absence of Chairman Vennis Gilmore.

2. Roll Call

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

Members Present	Representing
Jennifer McGee, Vice Chair	St. Lucie County Environmental Resources Department
Lisa Beert	Resident Bicycling
Carrie Wilbur	Port St. Lucie Parks and Recreation
Terry Davis	Resident Bicycling
Joyania Hawthorne	St. Lucie County Parks and Recreation

Others Present	Representing
Kyle Bowman	St. Lucie TPO
Peter Buchwald	St. Lucie TPO
Marceia Lathou	St. Lucie TPO
Yi Ding	St. Lucie TPO
Stephanie Torres	St. Lucie TPO
Teresa Lane	Recording Specialist

Kristina Morrow	Florida Department of Transportation (FDOT)
Jeff Weidner	MARLIN Engineering
Laura Postarini	MARLIN Engineering
Kayla Huetten	Benesch
Adolfo Covelli	St. Lucie County
Tom O'Donnell	Kimley-Horn and Associates

3. Comments from the Public – None.

4. Approval of Agenda

Mr. Buchwald requested that Item 6b be addressed after Item 6e.

* MOTION by Mr. Davis to approve the revised agenda.

** SECONDED by Ms. Beert Carried UNANIMOUSLY

5. Approval of Meeting Summary
   - March 21, 2024 Regular Meeting

* MOTION by Ms. Beert to approve the Meeting Summary.

** SECONDED by Mr. Davis Carried UNANIMOUSLY

6. Action Items

6a. Draft FY 2024/25 – FY 2028/29 Transportation Improvement Program (TIP): Review of the draft FY 2024/25 – FY 2028/29 TIP.

Mr. Buchwald explained that the TPO was required to develop a TIP annually to identify projects within the TPO area that had been prioritized and were to receive Federal or State funding within the next five years. He then invited Mr. Ding to continue. Mr. Ding outlined the year-long process necessary to develop the TIP, noted several agencies involved in its production, and highlighted a number of multimodal projects included in the draft under consideration. He presented the total amount of funding in the TIP and concluded with an overview of the performance measures to be used in the TIP's evaluation.

Ms. Beert commented that she would have liked to see resurfacing of the Green River Parkway Trail happen sooner.

* MOTION by Mr. Davis to recommend adoption of the draft TIP.

** SECONDED by Ms. Beert Carried UNANIMOUSLY

6b. 2024/25 List of Priority Projects (LOPP): Review of the draft LOPP for 2024/25 for the St. Lucie TPO.

Note: This agenda item was addressed after item 6e.

Mr. Buchwald described how the LOPP was produced each year as part of the annual TIP development cycle before detailing the differences between the previous year's LOPP and the draft under consideration. In doing so, he reported on revisions to the Master List, the Congestion Management Process (CMP) List, the Transportation Alternatives (TA) List, and the Transit List. He also reported on the deletion of the Local Projects for Carbon Reduction Program (CRP) and Transportation Alternatives Additional (TAA) Funding List, explaining that all the projects from that list had been programmed, and the CRP funding had been consumed until the next reauthorization of the Federal Surface Transportation Program.

Mr. Davis indicated his disappointment regarding the plan to add more travel lanes to St. Lucie West Boulevard rather than identifying another method of mitigating traffic congestion. Mr. Buchwald explained the challenge of alleviating congestion on the Boulevard due to the numerous driveways providing access to shopping plazas. He acknowledged that most public transportation funding was still allocated toward widening projects despite efforts to expand alternative options like rail and bus service but noted that the St. Lucie West Boulevard project would include a shared-use path.

Ms. Beert remarked that local infrastructure did not seem to be keeping pace with recent rates of development and expressed concern over potential safety ramifications.

Mr. Davis initiated a discussion regarding the need to focus more on the needs of pedestrians and bicyclists during the transportation planning process. He cited the dangers to pedestrians and cyclists when crossing large-capacity roadways and noted that cities in other, less wealthy countries often constructed overpasses for such users as so few people owned cars. Mr. Buchwald praised the members for their input and

encouraged them to continue expressing their concerns, explaining that other voices in the community objected to the implementation of shared-use paths, contending that they were underused. Ms. Morrow said FDOT is incorporating multi-modal guidelines into its standards and making steady progress on the issue. Last fall FDOT updated its Access Management Guidelines and renamed them Access Management Multimodal Guidelines to more fully consider bicycle and pedestrian uses.

Ms. Beert commented that the crosswalk at the intersection of Becker Road and Florida's Turnpike was dangerous for pedestrians crossing at the southbound entrance ramp because the pedestrian facility was offset from the road, rendering it difficult for drivers to see. Ms. Morrow indicated that she would inform the appropriate FDOT staff of the issue.

Ms. Beert urged the TPO not to delay resurfacing of the Green River Parkway sidewalk any further, reporting that she had recently suffered a flat tire on the trail due to rough terrain. Mr. Buchwald assured her that the resurfacing would remain on schedule.

* MOTION by Ms. Beert to recommend adoption of the draft 2024/25 LOPP.

** SECONDED by Mr. Davis Carried UNANIMOUSLY

6c. City of Fort Pierce Passenger Rail Station/Mobility Hub Concepts Plan: A presentation of the planning and concepts for the City of Fort Pierce Passenger Rail Station/Mobility Hub.

Mr. Buchwald invited Ms. Lathou to introduce the agenda item, and she explained the functions and features of a mobility hub before describing how downtown Fort Pierce had been identified as a suitable location for a passenger rail station/mobility hub. She introduced Mr. Weidner, who presented various statistics in support of a downtown Fort Pierce location and explained the evaluation process used to select the site for the station. Mr. Weidner then detailed the proposed design of the station/hub, concluding with an overview of the next steps in the development process.

Mr. Davis asked if it would be difficult to coordinate traffic on existing railroad tracks with a new passenger service and whether trains would have to be routed onto new tracks given that the majority of the U.S. rail system was owned by freight providers. Mr. Weidner explained that the rail station's site plan included a side track so that trains could pull off the main north-south track while loading and unloading passengers.

He also noted that the selected site was across the tracks from Florida East Coast (FEC) railway property, which featured a side track of its own that was underused. Mr. Davis expressed his enthusiasm for passenger rail along with his disappointment regarding Brightline's decision to locate its Treasure Coast stop in Stuart rather than in Fort Pierce, but indicated he would be reluctant to invest money in a station without a service agreement from an operator. Mr. Weidner identified Amtrak as a potential operator since the service currently ran from Jacksonville to West Palm Beach, bypassing the Treasure Coast. He recommended that planning for the ACES mobility hub proceed regardless of whether a rail operator were secured, as the design of the station could be deferred.

Vice Chairwoman McGee indicated her surprise regarding Brightline's selection of Stuart over Fort Pierce given St. Lucie County's population projections and asked if any County or City representatives had met with Brightline to explore the possibility of a second Treasure Coast station. Mr. Weidner stated his lack of information on the subject but suggested that the team remain persistent and continue to tout the benefits of a Fort Pierce station. Mr. Buchwald reported that Brightline had recently raised its commuter fares between individual stations and was emphasizing long-distance trips between South Florida and Orlando, noting that the service was still operating at a loss.

Mr. Davis asked if there had been discussions with Tri-Rail to locate a stop locally, and Mr. Buchwald explained that doing so would be challenging because Tri-Rail required local agencies to contribute operating money before offering passenger rail along the FEC tracks.

* MOTION by Mr. Davis to recommend acceptance of the Concepts Plan.

** SECONDED by Ms. Hawthorne Carried UNANIMOUSLY

6d. Transit Development Plan (TDP) Major Update: Review of the draft TDP Major Update for the St. Lucie TPO area.

Mr. Buchwald introduced Ms. Lathou, and she described the scope and purpose of the Transit Development Plan before highlighting the interagency coordination efforts involved in the completion of the Update. Ms. Huetten continued the presentation with an overview of the current bus service, ridership statistics, and population metrics for St. Lucie County. She detailed the public outreach activities conducted in connection with the Update and then reported on the findings, subsequently outlining the 10-year Transit Needs Plan. Ms. Huetten described how the Needs Plan had been analyzed before presenting the proposed projects and improvements included in the Reimagine Transit

Plan. She explained the proposed timeline for the improvements along with the projected operating costs and revenues and concluded with the next steps in the process.

In answer to Ms. Beert's question, Ms. Huetten described vanpooling as a ride-sharing program in which a government subsidy is used to acquire and operate a van for the purpose of traveling to and from work. Mr. Buchwald added that vanpools were an effective strategy for transporting Fort Pierce residents to work throughout St. Lucie County. In response to Vice Chairwoman McGee's question, Mr. Covelli clarified that South Florida Commuter Services already subsidized several vanpools for residents traveling outside St. Lucie County but indicated there was still a need to offer vanpools within the County.

Ms. Wilbur inquired about the possibility of implementing a dedicated bus lane to make bus travel faster. Ms. Huetten explained that the report recommended transit signal priority instead, which would allow buses to bypass traffic at certain intersections. She said the infrastructure improvement can function as a dedicated lane in certain areas, possibly where there are right-turn lanes that buses can use. Mr. Buchwald concurred that it is a cost-effective solution.

* MOTION by Ms. Beert to recommend endorsement of the draft TDP Major Update.

** SECONDED by Mr. Davis Carried UNANIMOUSLY

6e. Advanced Air Mobility (AAM) Study Phase 2: A presentation of Phase 2 of the AAM Study.

At Mr. Buchwald's invitation, Mr. Ding introduced the agenda item as well as Mr. O'Donnell. Mr. O'Donnell began the presentation by defining Advanced Air Mobility (AAM) and identifying the industry's key stakeholders. He explained the Study's methodology and then described how two preliminary vertiport locations had been identified based on a number of analytical parameters. Mr. O'Donnell provided an overview of vertiports and various issues related to their siting before presenting schematics of each site. He outlined several future considerations, displayed maps of existing airports, heliports and airport infrastructure, provided a demonstration of the preliminary AAM corridor model, and concluded with the final recommended vertiport locations.

When asked by Vice Chairwoman McGee why it was necessary to have a vertiport in the Southern Grove area as well as one at the Treasure Coast International (TCI) Airport, Mr. O'Donnell explained that the

electric vertical takeoff and landing aircraft (eVTOLs) would likely have a range of approximately 100 miles. He further explained that St. Lucie County was an ideal location for one or two nodes because vertiports had long been planned for cities like Orlando and West Palm Beach and the eVTOLs would have to stop somewhere along the route. He identified the TCI Airport as the most logical location, but noted that a second site would be needed as the network expanded.

Ms. Morrow asked if the cost of AAM flights would be comparable to that of airline tickets and whether the service could be used for commuting, and Mr. O'Donnell remarked that the industry was changing too rapidly to answer definitively. Mr. O'Donnell indicated that most eVTOLs would likely carry eight passengers and would have to compete against other modes of transportation. He further explained that vertiport developers might offer their own carriers, similar to how Delta and other airlines operate. Ms. Morrow asked if there could be vertiports in uncontrolled airspace that are autonomously operated without human intervention. Mr. O'Donnell said operators would prefer to operate autonomously but that will not happen for years.

Mr. Buchwald commented on the benefits of preserving land for a future vertiport in Southern Grove if officials deemed it worthwhile. Acknowledging that while the technology was still several years away from implementation, Mr. O'Donnell noted that vertiport nodes would likely be awarded to the areas that had been primed for the industry.

At Mr. Buchwald's request, Mr. O'Donnell explained how the State had supported the development of aviation, particularly AAM, noting that Florida and FDOT were considered leaders within the country.

Ms. Morrow asked how many people could travel through a vertiport in an hour, and O'Donnell said it depends on vehicle capacity and how many stations are located there. Vertiport mockups in Orlando and Palm Beach show three to four proposed stations and associated parking spaces.

Vice Chairwoman McGee inquired about the regulatory framework for AAM, and Mr. O'Donnell explained that the development timeline had been repeatedly delayed, adding that some of the most advanced aircraft developers were in Europe.

* MOTION by Ms. Beert to recommend acceptance of Phase 2 of the AAM Study.

* * SECONDED by Mr. Davis Carried UNANIMOUSLY

7. Recommendations/Comments by Members – None.

8. Staff Comments – Ms. Torres announced an upcoming bike ride on the Florida Shared-Use Nonmotorized (SUN) Trail through the Savannas Recreation Area to celebrate Family Health and Fitness Day and provided details regarding the location, timing, and contact information.

   Mr. Buchwald noted that the SUN Trail is under construction now from where Green River Parkway ends on Walton Road, through the Savannas Preserve State Park and up to Lennard Road. He said construction of the second phase will start in the summer, so that within two years cyclists will be able to ride through Savannas Preserve from Green River Parkway at the County line to the railroad tracks at the north end of Savannas Preserve. That will be at least a 10-mile, off-road trail through the state park, Mr. Buchwald said. Ms. Beert asked if the new trail will include shade trees and said cycling along Green River Parkway is very hot without shade. Ms. Torres said there's natural foliage along the proposed trail. Vice Chairwoman McGee said she loves the comment about shade and said if officials want to attract more cyclists and pedestrians to the trail, they should make it more appealing by planting shade trees. Ms. Torres said she will explore whether there are public beautification grants available to install landscaping.

   Mr. Buchwald announced two vacancies on the BPAC for run/hike representatives and indicated that interested individuals should access the application on the TPO's website.

   Mr. Buchwald requested that the next BPAC meeting be rescheduled from July 18th to July 25th, and the members agreed.

9. Next Meeting: The next St. Lucie TPO BPAC meeting is a regular meeting scheduled for 3:00 pm on Thursday, July 25, 2024.

10. Adjourn – The meeting was adjourned at 4:52 pm.

Respectfully submitted: Approved by:

_____ _____

Teresa Lane Jennifer McGee

Recording Specialist Vice Chairwoman

St. Lucie Transportation Planning Organization

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AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	July 25, 2024
Item Number:	6a
Item Title:	Project Development and Environment Study (PD&E) for Widening Florida's Turnpike from State Route 70 (Okeechobee Road) to State Route 60 (Yeehaw Junction)
Item Origination:	Florida's Turnpike Enterprise (FTE)
UPWP Reference:	Task 3.1 - Long Range Transportation Planning
Requested Action:	Recommend endorsement of the PD&E alternatives, recommend endorsement with conditions, or do not recommend endorsement.
Staff Recommendation:	It is recommended that comments are provided regarding the PD&E alternatives, and the alternatives are recommended to the TPO Board for endorsement based on the comments.

Attachments
- Staff Report
- FTE PD&E Presentation

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MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

FROM: Peter Buchwald
Executive Director

DATE: July 16, 2024

SUBJECT: Project Development and Environment Study (PD&E) for Widening Florida's Turnpike from State Route 70 (Okeechobee Road) to State Route 60 (Yeehaw Junction)

BACKGROUND

In July 2021, the TPO Advisory Committees reviewed the PD&E for the widening of the Turnpike from the Indiantown Road interchange in Jupiter to the State Route 70 (Okeechobee Road) interchange in Fort Pierce. Subsequently, the Florida's Turnpike Enterprise (FTE) started the PD&E for the widening of the Turnpike from the State Route 70 (Okeechobee Road) interchange to the State Route 60 (Yeehaw Junction) interchange.

FTE identified the need to widen this portion of the Turnpike to add capacity to accommodate future traffic volumes of freight and passenger vehicles linked to the projected growth in population and industry for the year 2045. The Turnpike is also a major evacuation route for Southeast Florida.

The completion of a PD&E is a significant phase in the transportation project development process. The PD&E serves as the bridge between the planning and design phases and guides decision-making by evaluating the potential impacts of the transportation project. During the PD&E phase, FTE collects data, develops and evaluates alternatives, conducts studies, prepares reports and gathers input from the general public, applicable agencies, and interested parties to develop the solution to meet the transportation needs that offers the greatest benefit with the least impact. FTE will present an update (attached) on the PD&E that includes the conceptual design and the project alternatives being considered for comments and endorsement.

ANALYSIS

To meet existing and future travel demands and address roadway deficiencies, the proposed project consists of the widening of the Turnpike from four to six lanes for 41 miles by adding one outside lane in each direction, the widening or reconstruction of numerous existing bridge structures, improvements to the existing State Route 60 (Yeehaw Junction) interchange, and a potential new interchange for the Northern Connector. The PD&E is developing the alternatives for the proposed capacity and interchange improvements and evaluating the potential impacts of the alternatives.

The St. Lucie TPO staff has participated in the PD&E since its start to ensure that the proposed improvements eventually recommended by the PD&E are consistent with the TPO's plans and programs which include the new Turnpike interchange for the Northern Connector. The Northern Connector would connect the new Turnpike interchange to a new I-95 interchange which would connect to the Airport Connector which would connect to St. Lucie Boulevard and the Treasure Coast International Airport as depicted below in the map from the TPO's SmartMoves 2045 Long Range Transportation Plan (LRTP):

Based on the potential addition of a new Turnpike interchange for the Northern Connector, the proposed PD&E alternatives appear to be consistent with the SmartMoves 2045 LRTP.

RECOMMENDATION

It is recommended that comments are provided regarding the PD&E alternatives, and the alternatives are recommended to the TPO Board for endorsement based on the comments.

St. Lucie TPO
Board and Committee Meetings
July and August 2024

PD&E Study

to Widen Turnpike from N. of SR 70 to N. of SR 60

(MP 152-193)

1

FPID: 423374-2

Agenda

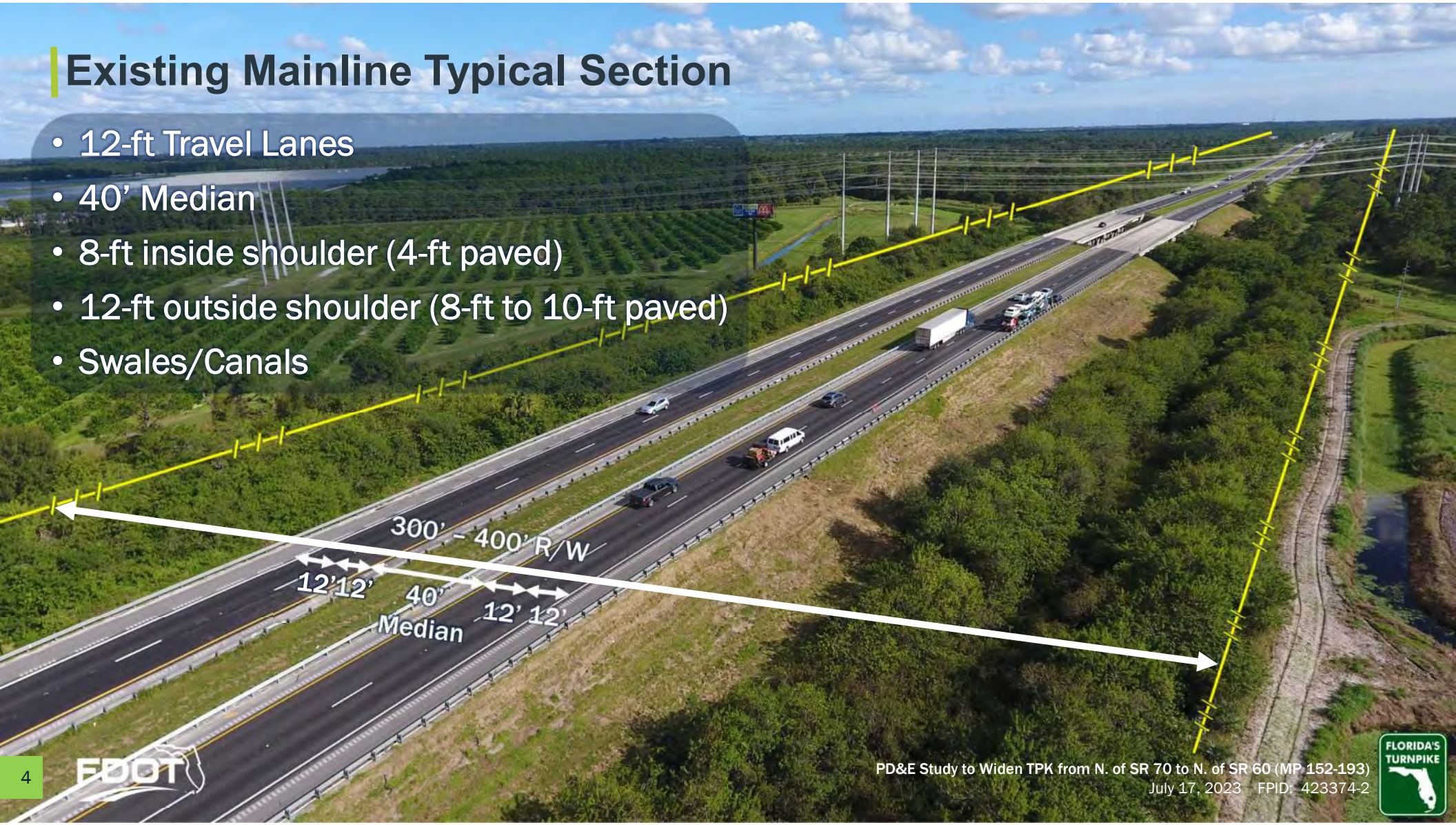
- Study Limits
- Existing Mainline Typical Section
- Purpose and Need
- Proposed Mainline Typical Section
- SR 60 / Yeehaw Junction Interchange Alternatives
- Northern Connector
  - Potential Location
  - Background
  - Conceptual Designs and Cost Estimates
  - Interchange Access Request
  - Conclusions and Recommendations
- Questions

Study Limits

- **St Lucie, Indian River, Okeechobee and Osceola Counties**
- **North of SR 70 to North of SR 60**
  - Mile post 152 to 193 (Approx. 41 miles)

Existing Mainline Typical Section

- 12-ft Travel Lanes
- 40’ Median
- 8-ft inside shoulder (4-ft paved)
- 12-ft outside shoulder (8-ft to 10-ft paved)
- Swales/Canals



Purpose and Need

- Accommodate future travel demand
  - Widen from 4 to 6 lanes – Needed by 2036
  - Future Traffic 2050
  - 8-lane section would be needed beyond 2075
- Improve traffic operations
- Improve safety
- Enhance emergency response times and evacuation

Proposed Mainline Typical Section

40-ft Median Widening with Guardrail

~$1.27B Construction Cost
($30.85M cost per mile)

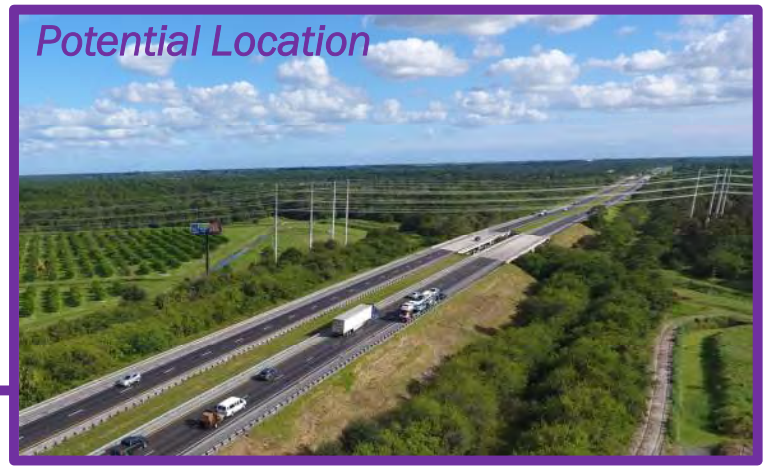
SR 60 / Yeehaw Junction Interchange Alternatives

Interchange Alternative A - Modified Trumpet

Interchange Alternative B – Partial Cloverleaf

Alternative Development

Interchange Feasibility – Northern Connector Interchange

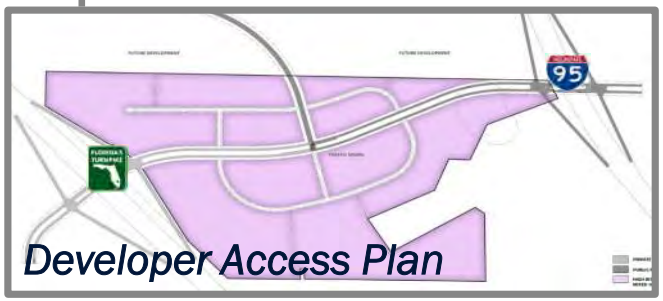


Alternative Development

Interchange Feasibility – Northern Connector Interchange

Background

- Northern Connector identified in St. Lucie TPO LRTP Needs Plan
- Ongoing coordination with St. Lucie County and Developer
- Coordination with the developer included the roadway alignment and traffic analysis
- Funding for the Northern Connector roadway components is uncertain
- Anticipated to be **developer funded**



Alternative Development

Interchange Feasibility – Northern Connector Interchange

Roadway Designs & Construction Cost

Diamond Concept

~$38.7M Construction Cost

Bowtie Concept

~$40.6M Construction Cost

Alternative Development

Interchange Feasibility – Northern Connector Interchange

Interchange Access Request

- Methodology Letter of Understanding approved on November 14, 2022.
- Re-evaluation of the Interchange Justification Report will likely be required
- Projected traffic volumes lower than typical

Location	Turnpike Profile	2050 AADT				
		No Build	Build	Impacts		
		65,600	65,600	0	0%	0%
193 - Yeehaw Junction (SR 60)		8,600	7,800	-800	-9%	-4%
		10,200	10,200	0	0%	
		67,200	68,000	800	1%	1%
158 Northern Connector			3,600	3,600		
			400	400		
		67,200	64,800	-2,400	-4%	-4%
152 - Fort Pierce (SR 70)		6,800	4,600	-2,200	-32%	-8%
		22,800	22,600	-200	-1%	
		83,200	82,800	-400	0%	0%

Legend
Toll Gantry

Alternative Development

Interchange Feasibility – Northern Connector Interchange

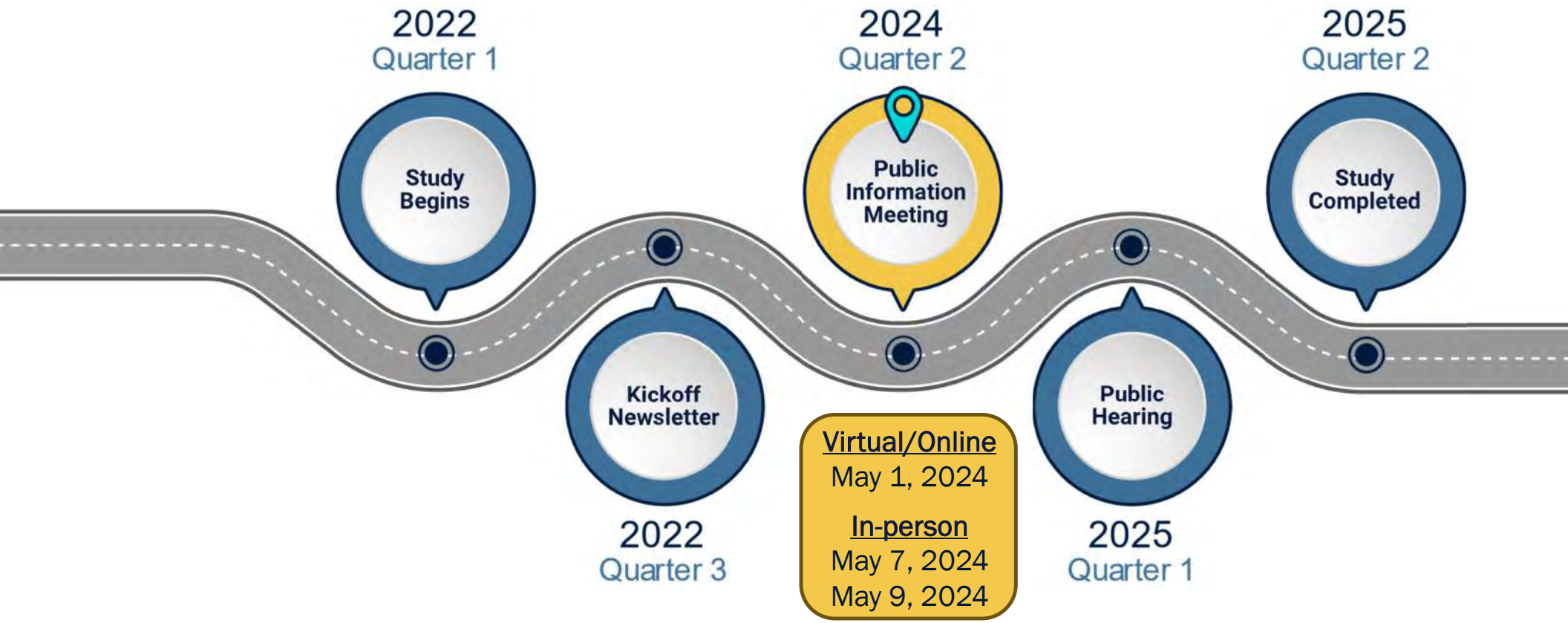
Conclusions

- Northern Connector roadway has no funding for next phase of project development
- Interchange is feasible from construction perspective and expected to be developer driven
- Mainline widening does not preclude interchange from being constructed in future

Recommendation

- Complete Turnpike IJR
- Begin interchange PD&E when the Northern Connector roadway advances in project development

Project Schedule



Project Manager Contact Information

Michael Leo, P.E.
Consultant to Florida's Turnpike Enterprise
P.O. Box 613069
Ocoee, FL 34761-3069
Michael.Leo@dot.state.fl.us
(407) 264-3414

Project Website:

www.TurnpikeSR70toSR60.com

Questions?

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AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	July 25, 2024
Item Number:	6b
Item Title:	Congestion Management Process (CMP) Major Update
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 3.4 – CMP
Requested Action:	Recommend adoption of the draft CMP Major Update, recommend adoption with conditions, or do not recommend adoption.
Staff Recommendation:	Based on the draft CMP Major Update addressing the congestion and safety issues identified in the TPO area, it is recommended that the draft CMP Major Update be recommended for adoption by the TPO Board.

Attachments

- Staff Report
- Draft CMP Major Update

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MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

THROUGH: Peter Buchwald
Executive Director

FROM: Yi Ding
Transportation Systems Manager

DATE: July 16, 2024

SUBJECT: Congestion Management Process (CMP) Major Update

BACKGROUND

The Congestion Management Process (CMP) is described by the Federal Highway Administration (FHWA) as a systematic and regionally-accepted approach for addressing congestion and safety issues. It provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion and safety issue management that meet State and local needs. Federal regulations require Metropolitan Planning Organizations (MPOs) with a population over 200,000 to establish a CMP.

The St. Lucie TPO's CMP has been utilized to allocate the TPO's CMP box funds of $300,000- $400,000 annually towards CMP projects in the TPO's List of Priority Projects (LOPP). The last major update of the CMP was completed in June 2018 and the need to prepare a major update of the CMP was established in the FY 2022/23 – FY 2023/24 Unified Planning Work Program (UPWP) in Task 3.4, *Congestion Management Process (CMP)*.

ANALYSIS

The attached CMP Major Update was prepared by Benesch, one of the TPO's General Planning Consultants.

In the CMP Major Update, CMP goals and objectives were identified, and performance measures were developed to meet the goals and objectives. Then,

the CMP network was evaluated in two phases. Phase 1 consisted of a systemwide evaluation of available traffic count and crash data to evaluate the CMP network on a larger scale. The performance measures were used to evaluate Phase 1 road segments to identify candidates for an in-depth analysis of roadway conditions in Phase 2. In addition, two stakeholder meetings were conducted among the TPO, the consultant, and local agencies to obtain input on the potential CMP projects.

In Phase 2, 11 CMP projects were evaluated and prioritized based on a deeper investigation and analysis. Based on the deeper investigation and analysis, seven of these projects were selected for implementation. Finally, a new CMP Implementation Plan containing these projects was developed to be utilized to inform the TPO's LOPP and allocate the TPO's CMP Box Funds for five years beginning with FY2025/26.

RECOMMENDATION

Based on the draft CMP Major Update addressing the congestion and safety issues identified in the TPO area, it is recommended that the draft CMP Major Update be recommended for adoption by the TPO Board.

CONGESTION MANAGEMENT PROCESS



St. Lucie Transportation Planning Organization

2024 Major Update

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1. INTRODUCTION

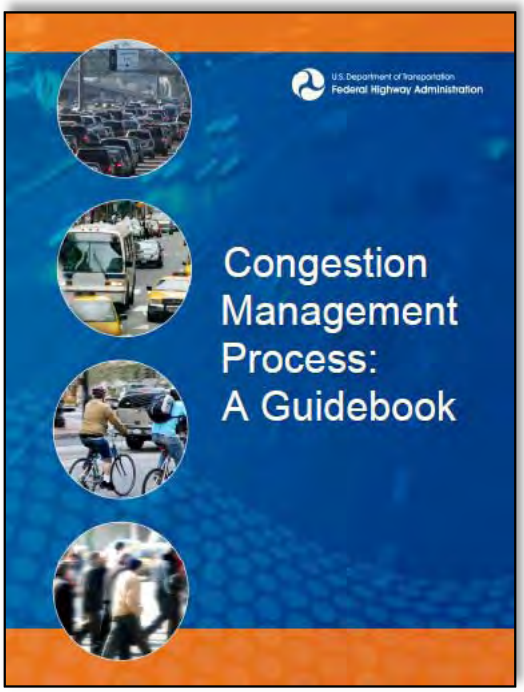
This document outlines the St. Lucie Transportation Planning Organization's (TPO) Congestion Management Process (CMP). The CMP relies on data analysis of current transportation conditions to make informed decisions about congestion management strategies for the St. Lucie TPO planning area. The CMP is designed to support the key goals of the SmartMoves 2045 Long Range Transportation Plan (LRTP), focused on improving the regional transportation system.

The 2024 major update will be used to identify and prioritize projects for potential inclusion in the Florida Department of Transportation (FDOT) Five-Year Work Program, the TPO's List of Priority Projects (LOPP) and the TPO's Transportation Improvement Program (TIP). It is estimated that $300,000 - $400,000 of federal funds will be allocated to CMP projects each year.

1.1 Federal Highway Administration CMP Guidebook

The FHWA's 'Congestion Management Process: A Guidebook" from April 2011, seen in **Figure 1.1**, was used as a reference guide for the development of the 2024 CMP Major Update. Other documents reviewed and used for the major update include the FHWA Highway Capacity Manual (HCM), the Traffic Monitoring Guide (TMG), the St. Lucie TPO's SmartMoves 2045 Long Range Transportation Plan (LRTP) and the current Transportation Improvement Program (TIP).

Figure 1.1 CMP Guidebook



1.2 What is a CMP?

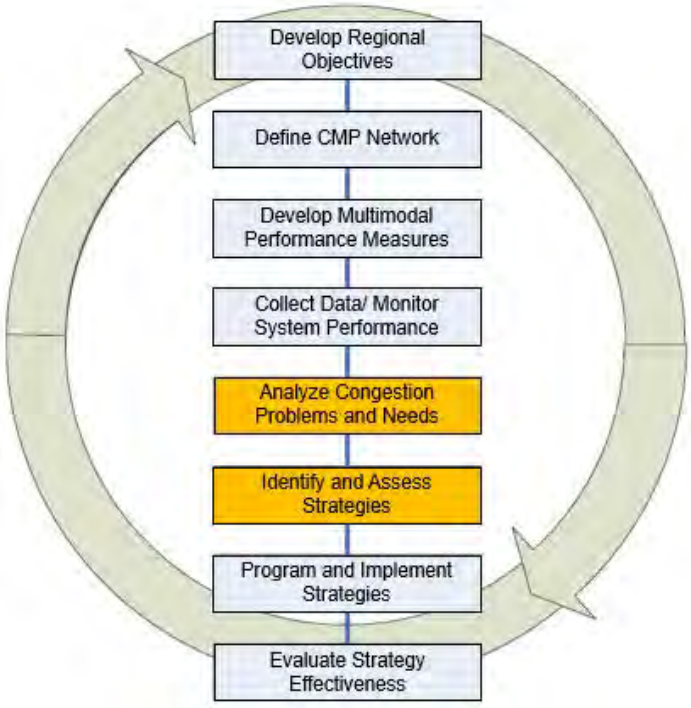
The CMP is a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assessed alternative strategies for congestion management that meet state and local needs. The CMP provides effective management and operation of the existing transportation system and is used to identify areas where improvements are most needed to best meet the vision of the TPO. The CMP analyzes data and provides tools to evaluate performance measures and make decisions regarding funding projects.

The CMP addresses the evolving needs, vision, and goals of the region. By using performance metrics, the CMP allows the TPO to assess current conditions of the area's transportation system and use performance measures to make decisions about congestion reducing projects. The CMP provides guidance that streamlines projects into funding and implementation stages. A flow chart of the CMP process is illustrated on the next page.

This 2024 CMP major update is structured in two phases. Phase 1 is a system-wide evaluation of traffic count data and crash data across the region's transportation system. The analysis is used to identify roadway segments and intersections with significant congestion and safety concerns.

These performance measures will be used to prioritize projects for additional evaluation in Phase 2. Phase 2 of the CMP requires an in-depth analysis of the prioritized projects and is used to develop congestion mitigation strategies and safety enhancements within the regional network.

Figure 1.2 CMP Flow Chart



1.3 CMP Benefits

The CMP benefits regional transportation systems by addressing congestion concerns linked to growth, land use changes, changes in travel patterns, mode shifts, and infrastructure changes. The CMP process provides a framework for the TPO to respond to congestion and operational issues in an ever-changing environment. The Federal Highway Administration (FHWA) identifies the following benefits of a successful CMP:

- A structure to analyze congestion issues.
- Increased collaboration and coordination
- Effective resource allocation
- Providing objective-driven and performance-based approach
- Links to project development and environmental review
- Improved safety

The TPO will identify projects that will provide the most benefit to the multi-modal transportation network. The funds will be allocated to projects that reduce congestion, enhance safety, decrease travel time delays, support environmental initiatives by combating emissions from idling vehicles and reduce fuel costs for motorists.

1.4 Goals and Objectives

The Federal Highway Administration (FHWA) states the CMP is an objective-driven, performance-based tool used for congestion management. The goals and objectives provide a framework to guide transportation improvements through a continuous CMP process. Performance measures are established to measure progress towards the defined objectives that address the region's congestion needs. Table 1.1 depicts the relationship between the goals, objectives and performance measures that are supportive of the St. Lucie TPO SmartMoves 2045 Long Range Transportation Plan (LRTP). The highlighted goals and objectives in Table 1.1 taken directly from the LRTP are consistent with the TPO's CMP illustrating the consistency of the TPO's major planning products.

This CMP Major Update directly incorporates the following goals from SmartMoves 2045 emphasizing support for the LRTP **Goal 1: Support Economic Activities, Goal 2: Provide Travel Choices,** and **Goal 5 Improve Safety and Security.** With clear guidance and performance measures, CMP projects will directly enable the efficient movement of people and goods and optimize the management and operations of the transportation system, promote safe travel choices, and ensure the safety and security of the entire transportation network.

The CMP major update will identify, evaluate, and prioritize CMP projects using performance measures developed and maintained through existing, regularly updated data sources. The highest prioritized projects will be candidates for potential inclusion in the FDOT Work Program, the TPO's List of Priority Projects (LOPP), and the Transportation Improvement Program (TIP). The TPO allocates approximately $300,000 to $400,000 annually in CMP Box Funds for these projects.

Objectives of the CMP major update include collecting data to calculate and evaluate congestion performance measures, improving modal choice through improvements to bike/ pedestrian and public transportation networks, improving efficiency of existing transportation services through intelligent traffic systems (ITS), ensuring community participation is representative and prioritizing congestion projects.

Table 1.1 SmartMoves 2045 Goals, Objectives, and Performance Measures

SmartMoves 2045 St. Lucie TPO LRTP	
Goal 1: Support Economic Activities	
Objectives	**Performance Measures**
Enable the efficient movement of people and goods on the roadway network	• Percent of person-miles traveled on the Interstate are reliable. • Percent of person-miles traveled on the non-Interstate NHS that are reliable. • The truck travel time reliability (TTTR) index that is the average of the maximum TTR calculated for each reporting segment on the Interstate

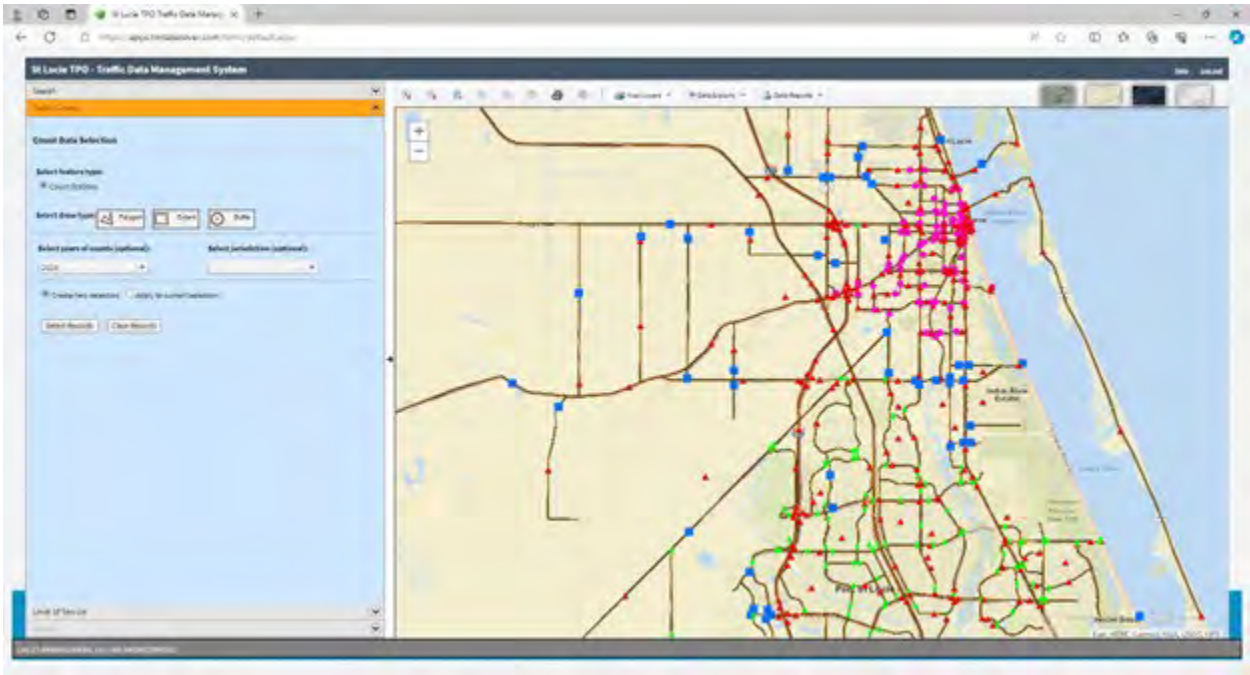
Optimize the management and operations of the transportation system	• TSM&O Strategic Network Development
Maximize the efficiency and effectiveness of the current transit system and improve access to destinations that support economic growth	• Percent of population within 1/4 mile of Major Activity Centers (MACs) • Transit routes providing access to MACs
Goal 2: Provide Travel Choices	
Objectives	**Performance Measures**
Encourage walking, cycling and other micromobility options	• Percent of roadways with sidewalks and bike lanes
Improve transit accessibility	• Percent of transit stops with sidewalk access. • Miles of fixed route transit service
Goal 3: Maintain the Transportation System	
Objectives	**Performance Measures**
Maintain the condition of the existing roadway transportation assets	• Percent of pavements of the Interstate System in Good/Poor condition • Percent of pavements of the non-interstate NHS is Good/Poor condition. • Percent of NHS bridges classified as Good/Poor condition
Maintain condition of existing transit assets	• Equipment- Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark. • Rolling Stock- Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark. • Percent of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale
Goal 4: Provide Equitable, Affordable, and Sustainable Urban Mobility	
Objectives	**Performance Measures**
Support healthy living strategies, programs, and improvements to create more livable communities	• Walking modal share • Bicycle modal share Transit modal share
Ensure community participation is representative	• Opportunities for engagement in traditionally underserved areas
Provide for transportation needs of transportation disadvantaged	• % of low-income, older adults, persons with disabilities within 1/4 mile of transit route
Make transportation investments that minimize impacts to natural environment and allocate resources toward mitigation	• Number of additional roadway lane miles of impacting environmentally sensitive areas
Improve transportation system's stability/ resiliency in event of climate change emergencies, or disasters	
Goal 5: Improve Safety and Security	
Objectives	**Performance Measures**
Improve safety and security in the Highway System	• Number of fatalities • Rate of fatalities per 100mil VMT • Number of serious injuries • Rate of serious injuries per 100 VMT
Improve safety and security in the Transit System	• Total number of reportable fatalities

	• Rate of reportable fatalities per total vehicle revenue miles by mode • Total number of reportable injuries • Rate of reportable injuries per total vehicle revenue miles by mode • Total number of reportable safety events • Rate of reportable safety events per total VMT by mode • Mean distance between major mechanical failures by mode
Improve safety and security in the Non-Motorized System	• Number of non-motorized fatalities and serious injuries combined

1.5 CMP Network

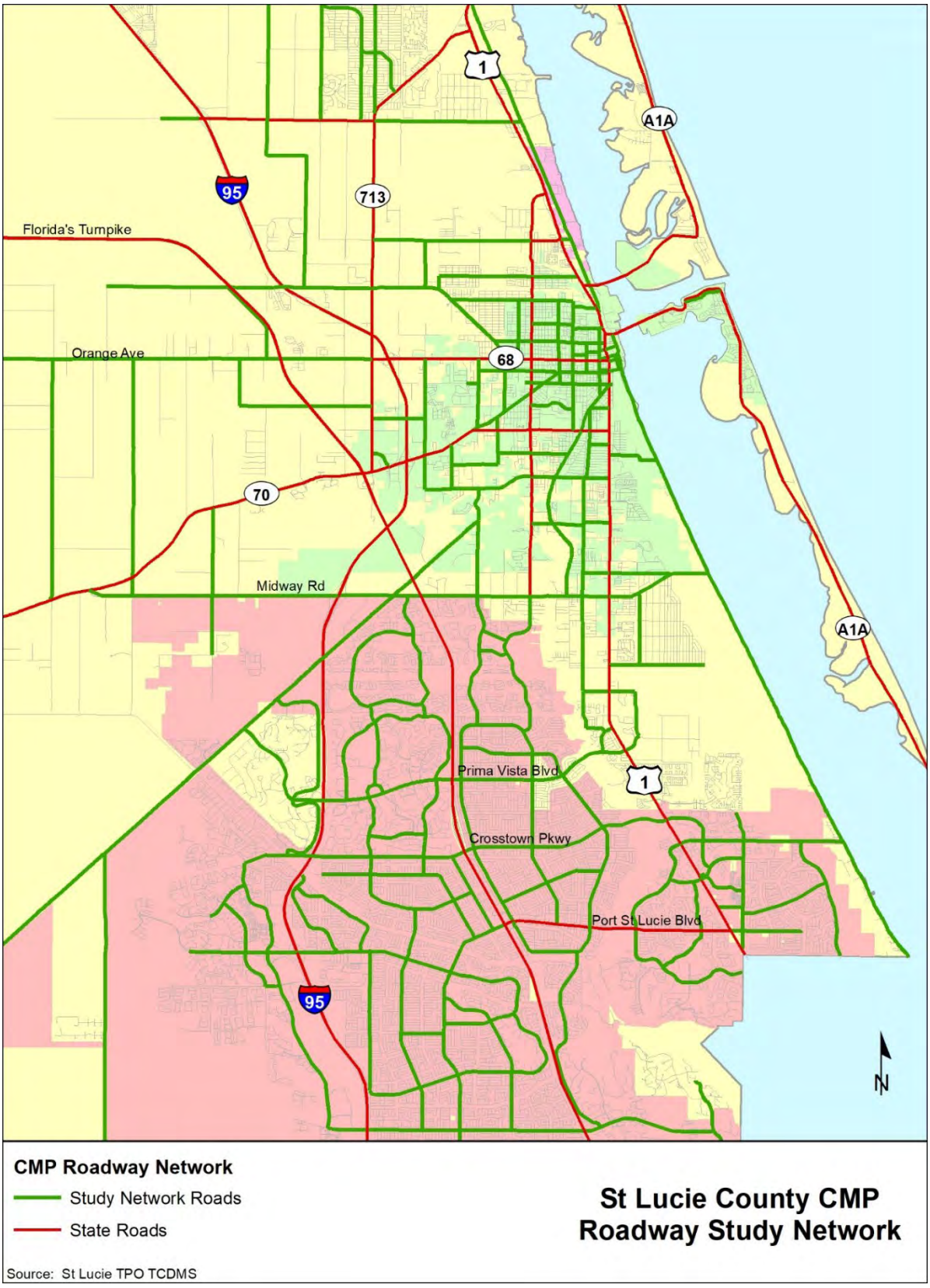
The CMP network is comprised of all major roadways in St. Lucie County that are included in the St. Lucie TPO's Traffic Data Management System (TDMS). The TDMS is available to the public, online via the St. Lucie TPO's website. This data management system collects annual daily counts from the State and TPO's annual collection programs and calculates peak hour traffic conditions data, which are used to develop performance measure values. This network is county-wide and includes the City of Fort Pierce, the City of Port St. Lucie, the Town of St. Lucie Village, and Unincorporated St. Lucie County. The web page of the St. Lucie TPO Traffic Data Management System website is shown in Figure 1.3.

Figure 1.3 St. Lucie Traffic Data Management System Website



For the purpose of this CMP update, the TDMS based study network was refined to include non-state road segments for which traffic data has been collected and installed in the TDMS. The study network is shown in Figure 1.4 on the next page.

Figure 1.4 CMP Roadway Study Network



2. PRIORITIZATION CRITERIA AND PERFORMANCE MEASURES

2.1 Performance Measures

The CMP focuses on providing specific, measurable, and agreed upon performance measures that can be tracked and analyzed by the TPO. Monitoring system performance can guarantee informed decisions are being made about the funding and implementation of congestion management strategies within the region. Per the Federal Highway Administration, a CMP must develop performance measures to support congestion management objectives and adequately assess system performance to clearly communicate problem areas. For the major update, performance measures are considered regional objectives, and utilize available data to identify needs and determine project prioritization.

The transportation network was evaluated in two phases. Phase 1 consisted of a system-wide evaluation of available traffic count and crash data to evaluate the CMP network on a larger scale. The performance measures were used to evaluate Phase 1 road segments to determine which roads move to Phase 2 for an in-depth analysis of roadway conditions. In Phase 2, the intersections and roadway segments were considered for congestion management project applications and strategies. The performance measures listed below outline the criteria for Phase 1 of the process.

The Phase 1 performance measures were:

- Volume to Capacity (V/C) Ratio screening
- Safety (fatality and serious injury crashes on the segment, including intersections)
- Key Stakeholder Input (local agency staff knowledge and concerns)

2.2 Phase 1 Prioritization Criteria

Three performance measures were used to evaluate and rank segments in the Phase 1 evaluation. These focused on evaluating the CMP network at a larger macroscopic level and included congestion, safety, and stakeholder input.

Congestion was measured using volume to capacity (V/C) ratios for the AM and PM peak periods. These ratios assisted in determining the level of service of a roadway or intersection. This measure allows for an understanding of the intensity and relative severity of the congestion that affects travel.

Crash data was analyzed for the years 2021 and 2022 using Signal 4 analytics to identify sever injury and fatal crashes. The goal was to identify the most dangerous network locations as the safety performance measure.

Lastly, key stakeholders identified roadway segments and intersections based upon their institutional knowledge. Points were awarded to these locations as the final performance measure for prioritization. The prioritization criteria and point system for each performance measure can be seen in Table 2.1 below. Crash segments and intersections identified by key stakeholder input were both given a maximum score of five points to highlight their specialized knowledge of the CMP roadway network.

Table 2.1 Prioritization Criteria and Point System

V/C Ratio	Rank Score	Crash	Score	Agency	Score
<= 0.80	1	Fatal or Severe Injury Crash	5	Stakeholder Concern Segment	5
0.80 – 0.94	2				
0.94 – 1.00	3				
1.00 – 1.10	4				
1.10 – 10	5				

3. PHASE 1 EVALUATION

3.1 Volume to Capacity (V/C) Screening

Step One of the V/C components of the Phase 1 evaluation included an initial screening of V/C ratios for study network segments for both the AM and PM Peak Periods. Step One identified 28 segments that had either an AM or PM V/C ratio of 1.00 or higher. Segments received the following scores, up to 5 points, for each peak-period, based on the V/C ratio ranges:

V/C Ratio	Rank Score
<0.80	1
0.80 - <0.95	2
0.95 - <1.00	3
1.00 - <1.10	4
>=1.10	5

Step Two was a review of the initial screening scoring for planned roadway improvements or changes to the TDMS segmentation that would impact scoring. Step Two identified six of the top ranked segments that could be re-scored due to planned roadway improvements or changes to TDMS segmentation. Four segments were identified as being scheduled for capacity improvements in the Transportation Improvement Plan (TIP), and two segments were identified as proposed candidates for segmentation changes in the TDMS that would lower the assigned V/C due to count station location. Table 3.1 on the next page, shows the top ranked segments after the initial V/C screening, with segments to be rescored identified. V/C ratio maps for the AM and PM peak periods and the full scoring tables are provided in the Appendix.

Step Three of the V/C component included a projection to 2028 using historical traffic count data in the TDMS with the planned TIP roadway capacity improvements accounted for in the V/C ratio calculation. The V/C ratio screening concluded with a rescoring of the study network segments using the revised scores for the six adjusted segments. The 2028 projected traffic conditions scoring table is provided in the Appendix.

Table 3.1 – 2023 AM and PM Congested Roadway Segment Scoring

SEGMENT ID	YEAR	ON STREET	FROM STREET	TO STREET	SEGMENT AM V/C	SEGMENT PM V/C	MAX PH V/C	AM Score	PM Score	Combined Score
2160	2023	CALIFORNIA BLVD	PEACOCK BLVD	TORINO PKWY	1.37	1.21	1.367	5	5	10
2120	2023	CALIFORNIA BLVD	DEL RIO BLVD	CROSSTOWN PKWY	1.45	1.21	1.448	5	5	10
2130.2	2023	CALIFORNIA BLVD	HEATHERWOOD BLVD	ST LUCIE WEST BLVD	1.15	1.15	1.149	5	5	10
2130.1	2023	CALIFORNIA BLVD	CROSSTOWN PKWY	HEATHERWOOD BLVD	1.15	1.15	1.149	5	5	10
2210	2023	CASHMERE BLVD	ST LUCIE WEST BLVD	PEACOCK BLVD	1.20	1.29	1.293	5	5	10
11300	2023	CASHMERE BLVD	PEACOCK BLVD	TORINO PKWY	1.22	1.13	1.217	5	5	10
22920	2023	EAST TORINO PKWY	TORINO PKWY	MIDWAY RD	1.16	1.12	1.155	5	5	10
3610	2023	GILSON RD	BECKER RD	LAKERIDGE DR	1.71	1.77	1.772	5	5	10
3600	2023	GILSON RD	MARTIN C.L.	BECKER RD	1.30	1.35	1.348	5	5	10
23580	2023	MIDWAY RD	MILNER DR	W OF SELVITZ RD	1.58	1.64	1.643	5	5	10
23575	2023	MIDWAY RD	EAST TORINO PKWY	MILNER DR	1.42	1.48	1.475	5	5	10
6802	2023	PORT ST LUCIE BLVD	PAAR DR	TULIP BLVD	1.11	1.11	1.106	5	5	10
23392	2023	SAVONA BLVD	PAAR DR	GATLIN BLVD	1.31	1.18	1.312	5	5	10
23391	2023	SAVONA BLVD	BECKER RD	PAAR DR	1.25	1.12	1.246	5	5	10
3090	2023	SOUTHBEND BLVD	BECKER RD	FLORESTA DR	1.34	1.18	1.343	5	5	10
1860	2023	BAYSHORE BLVD	SELVITZ RD	ST JAMES DR	1.12	1.05	1.119	5	4	9
1840	2023	BAYSHORE BLVD	PRIMA VISTA BLVD	FLORESTA DR	1.19	1.04	1.191	5	4	9
2400	2023	DARWIN BLVD	BECKER RD	PAAR DR	1.13	1.04	1.125	5	4	9
6530	2023	OLEANDER AVE	BELL AVE	FARMER'S MARKET RD	1.14	1.08	1.135	5	4	9
1850	2023	BAYSHORE BLVD	FLORESTA DR	SELVITZ RD	1.06	1.00	1.062	4	4	8
1940	2023	BECKER RD	SOUTHBEND BLVD	GILSON RD	1.02	1.09	1.091	4	4	8
1900.3	2023	BECKER RD	I-95	SAVONA BLVD	1.02	0.97	1.016	4	3	7
9140	2023	COMMERCE CENTER DR	ST LUCIE WEST BLVD	GLADES CUT-OFF RD	1.04	0.99	1.043	4	3	7
3110.1	2023	FLORESTA DR	THORNHILL DR	CROSSTOWN PKWY	1.09	0.97	1.091	4	3	7
3110.2	2023	FLORESTA DR	PORT ST LUCIE BLVD	THORNHILL DR	1.09	0.97	1.091	4	3	7
6550.11	2023	OLEANDER AVE	WISTERIA AVE	GARDENIA AVE	1.11	0.93	1.113	5	2	7
7890	2023	ST LUCIE WEST BLVD	COMMERCE CENTER D	W OF I-95	0.98	1.03	1.033	3	4	7
3100	2023	FLORESTA DR	OAKLYN ST	PORT ST LUCIE BLVD	1.06	0.89	1.060	4	2	6

Note: Segments with green highlight show higher V/C ratios than actual due to segmentation limits of the roadways.
Note: Segments with grey highlights have projects in the TIP that will improve V/C and remove them from priority ranking.

Figure 3.1 on the following page visualizes congestion levels on various roadway segments in St. Lucie County during the AM peak hours. The V/C ratio is used to evaluate congestion, with different colors representing levels of congestion. The Traffic Data Management System does not provide V/C values for intersections so only segments were evaluated in the analysis. Additionally, the Florida Turnpike was excluded from the V/C calculations.

Figure 3.1 AM Peak Hour V/C Ratios

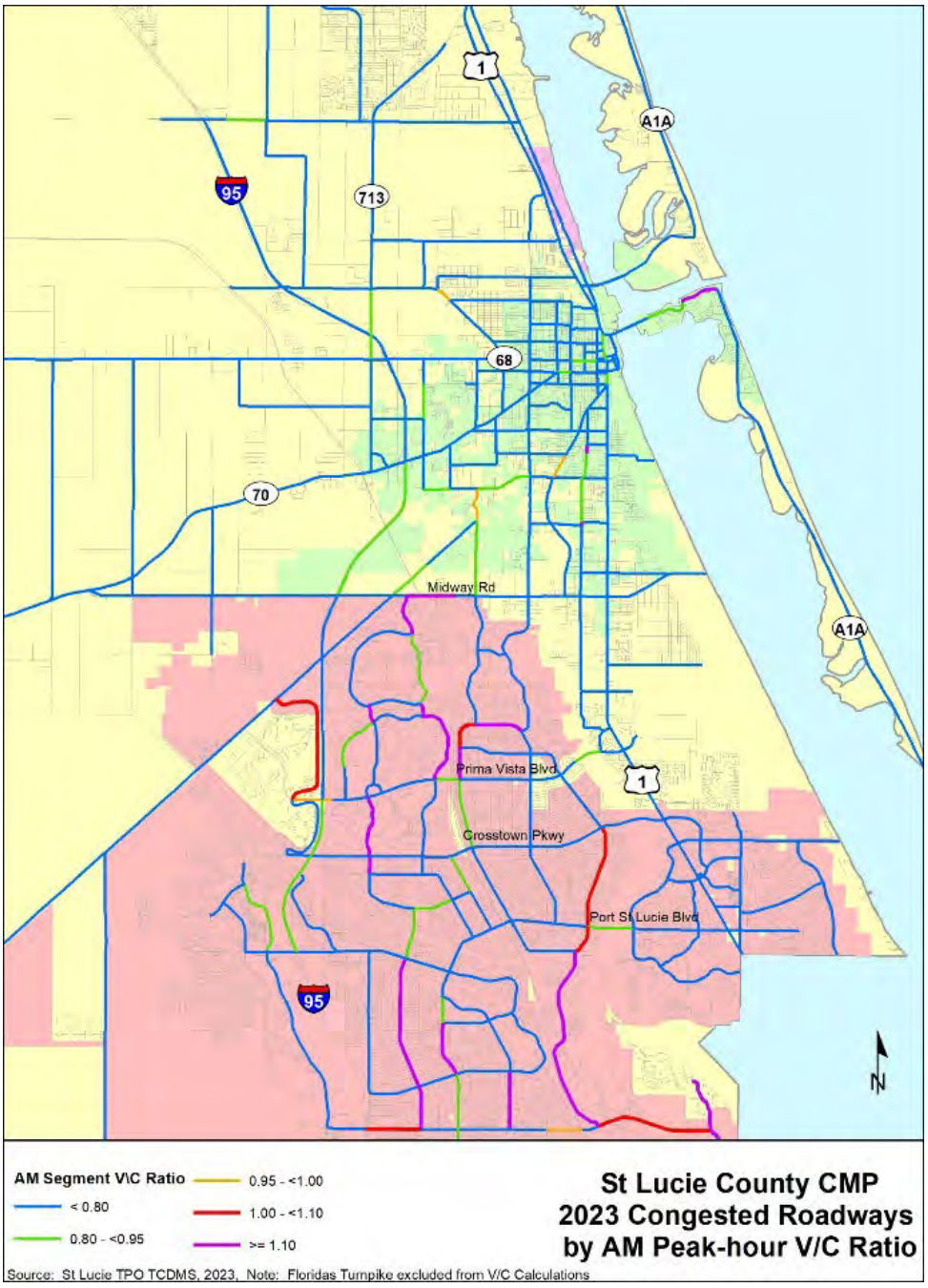
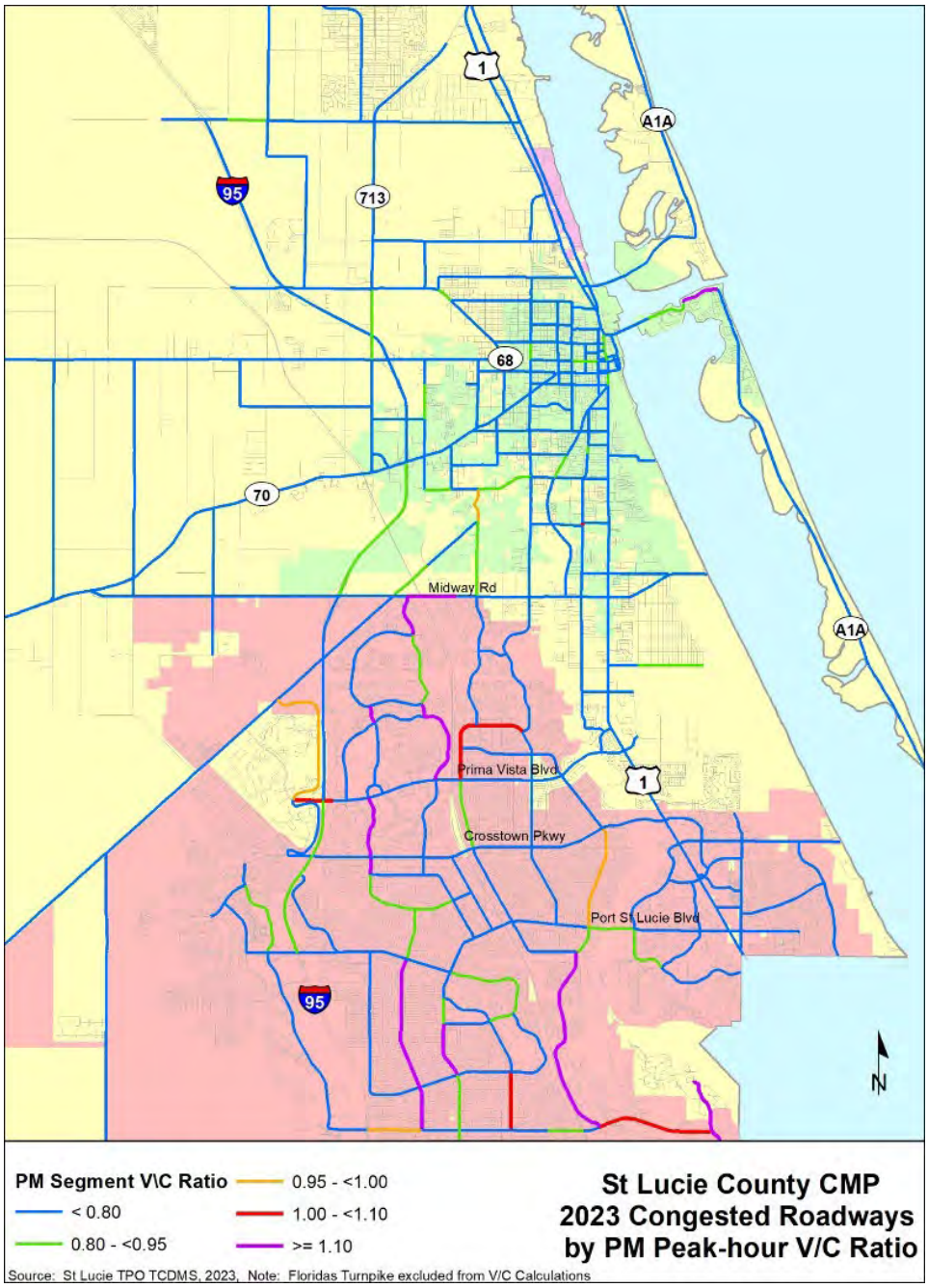


Figure 3.2 visualizes congestion levels on various roadway segments in St. Lucie County during the PM peak hours. The V/C ratio is used to evaluate congestion, with different colors representing levels of congestion. The Traffic Data Management System does not provide V/C values for intersections so only segments were evaluated in the analysis.

Figure 3.2 PM Peak Hour V/C Ratios



3.2 Safety Screening

Signal Four crash data was collected for the two most recent full years of data available (2021, 2022). Initial screening of the crash data identified fatality and serious injury crashes on roadways within St Lucie County. This data was reviewed in GIS and further refined to identify fatality and serious injury crashes on study network segments. Figure 3.3 shows the crashes by type on the study network roads.

Study network segments were scored five points based on crash severity. The scoring table was reranked based on the new scoring as shown in Table 3.2 on page 19. The full V/C and Crash scoring table is included in Appendix C.

Crash	Score
Fatal or Severe Injury Crash	5

Figure 3.3 on the next page visualizes the density and location of crash incidents throughout the County while **Figure 3.4** displays the location of high crash incidents overlayed with the CMP road network.

Figure 3.3 Severe Injury and Fatal Crash Locations

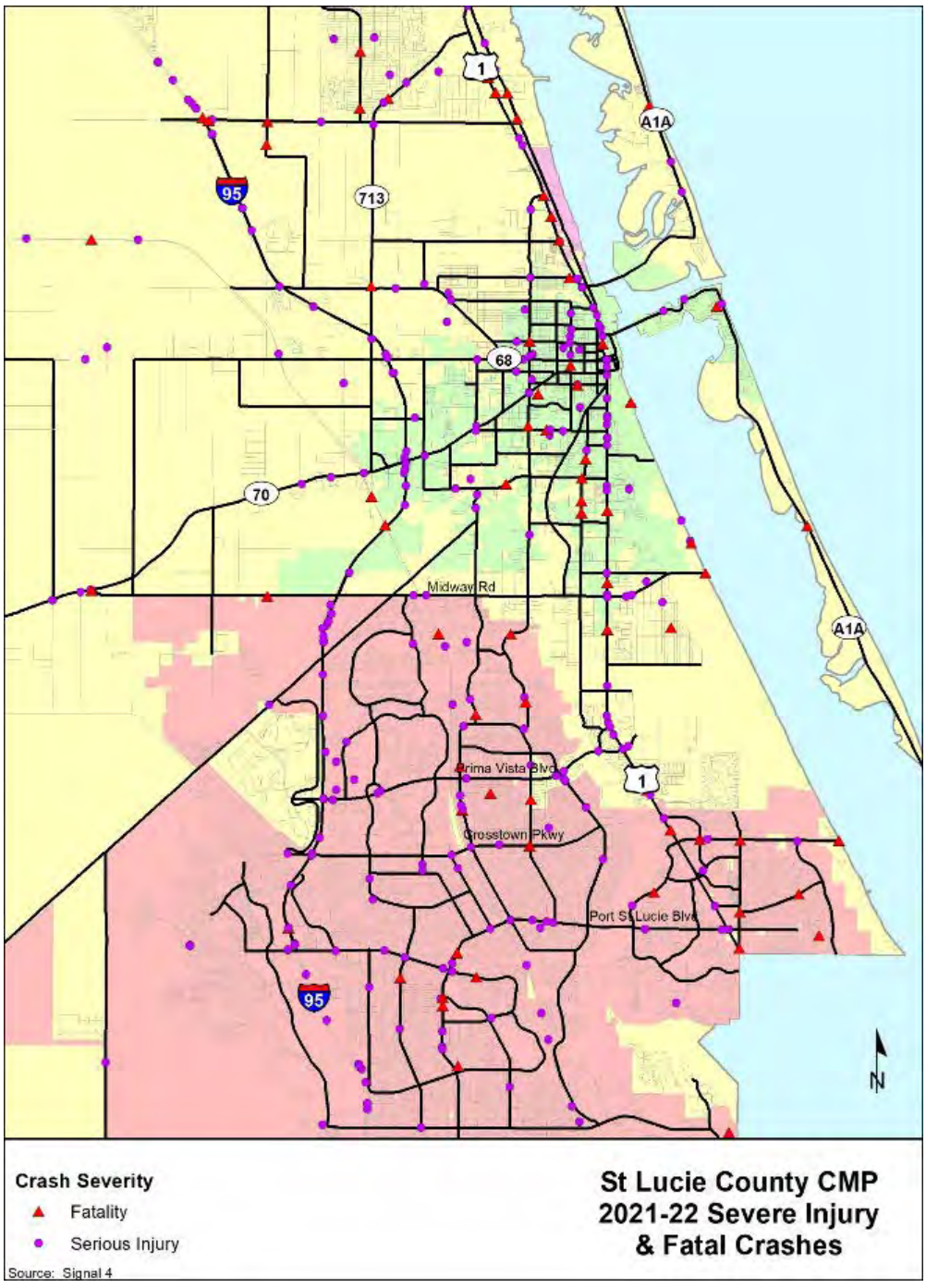


Figure 3.4 Severe Injury and Fatal Crash Locations on CMP Network

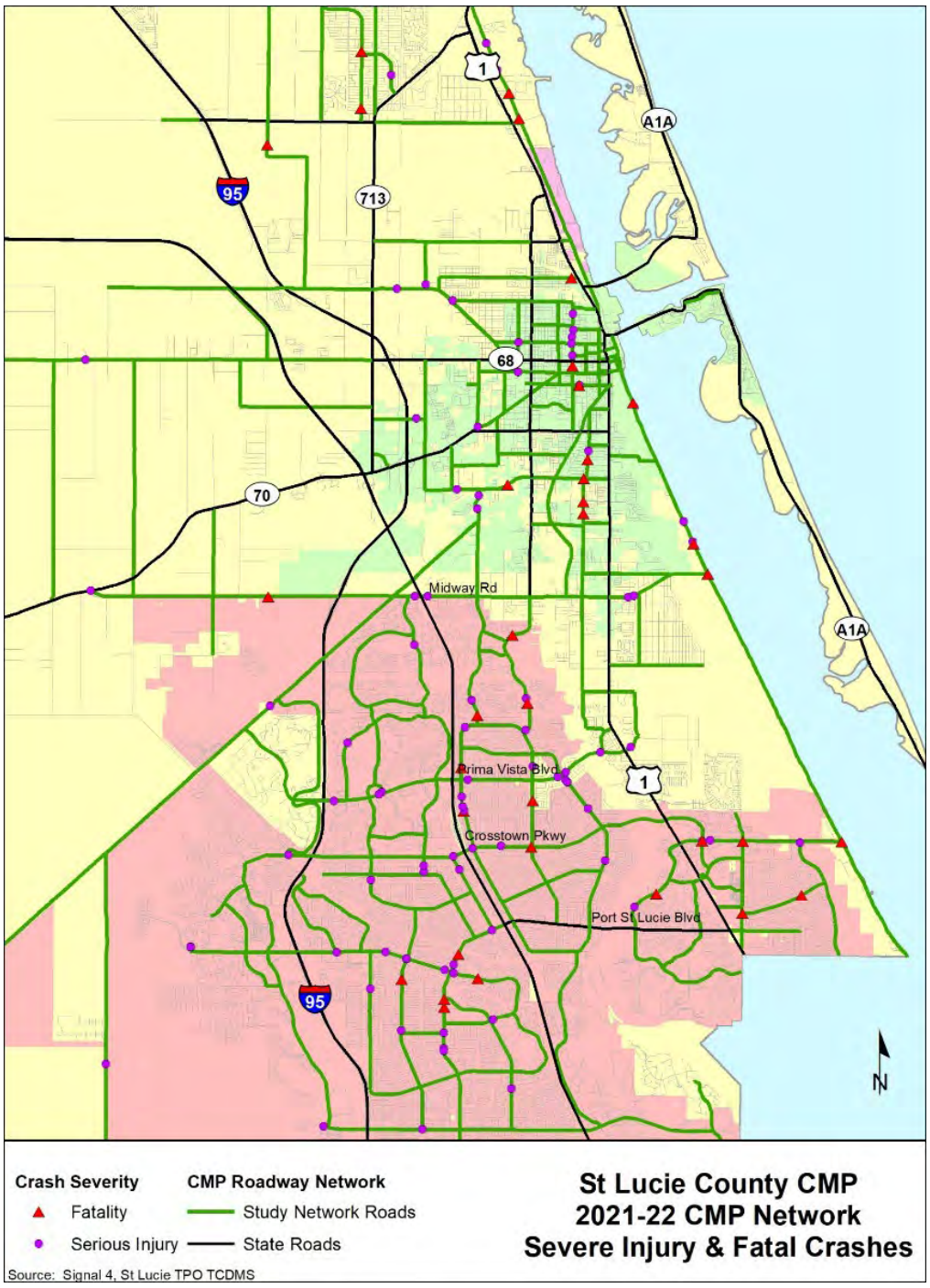


Table 3.2 – 2023 AM and PM Congested Roadway Segment and Severe Injury and Fatal Crash Scoring

SEGMENT ID	ON STREET	FROM STREET	TO STREET	SEGMENT AM V/C	SEGMENT PM V/C	MAX V/C	AM Score	PM Score	Combined V/C Score	Crash Score	Juris.	Total Score
23391	SAVONA BLVD	BECKER RD	PAAR DR	1.25	1.12	1.246	5	5	10	5	PSL	15
23392	SAVONA BLVD	PAAR DR	GATLIN BLVD	1.31	1.18	1.312	5	5	10	5	PSL	15
1840	BAYSHORE BLVD	PRIMA VISTA BLVD	FLORESTA DR	1.19	1.04	1.191	5	4	9	5	PSL	14
2400	DARWIN BLVD	BECKER RD	PAAR DR	1.13	1.04	1.125	5	4	9	5	PSL	14
1850	BAYSHORE BLVD	FLORESTA DR	SELVITZ RD	1.06	1.00	1.062	4	4	8	5	PSL	13
3110.1	FLORESTA DR	THORNHILL DR	CROSSTOWN PKWY	1.09	0.97	1.091	4	3	7	5	PSL	12
6550.11	OLEANDER AVE	WISTERIA AVE	GARDENIA AVE	1.11	0.93	1.113	5	2	7	5	County	12
7520	SELVITZ RD	GLADES CUT-OFF RD	EDWARDS RD	0.97	0.96	0.967	3	3	6	5	County	11
2120	CALIFORNIA BLVD	DEL RIO BLVD	CROSSTOWN PKWY	1.45	1.21	1.448	5	5	10	0	PSL	10
2130.1	CALIFORNIA BLVD	CROSSTOWN PKWY	HEATHERWOOD BLVD	1.15	1.15	1.149	5	5	10	0	PSL	10
2130.2	CALIFORNIA BLVD	HEATHERWOOD BLVD	ST LUCIE WEST BLVD	1.15	1.15	1.149	5	5	10	0	PSL	10
2160	CALIFORNIA BLVD	PEACOCK BLVD	TORINO PKWY	1.37	1.21	1.367	5	5	10	0	PSL	10
2210	CASHMERE BLVD	ST LUCIE WEST BLVD	PEACOCK BLVD	1.20	1.29	1.293	5	5	10	0	PSL	10
11300	CASHMERE BLVD	PEACOCK BLVD	TORINO PKWY	1.22	1.13	1.217	5	5	10	0	PSL	10
22920	EAST TORINO PKWY	TORINO PKWY	MIDWAY RD	1.16	1.12	1.155	5	5	10	0	PSL	10
3600	GILSON RD	MARTIN C.L.	BECKER RD	1.30	1.35	1.348	5	5	10	0	County	10
3090	SOUTHBEND BLVD	BECKER RD	FLORESTA DR	1.34	1.18	1.343	5	5	10	0	PSL	10
1830	BAYSHORE BLVD	CROSSTOWN PKWY	PRIMA VISTA BLVD	0.90	0.89	0.897	2	2	4	5	PSL	9
1860	BAYSHORE BLVD	SELVITZ RD	ST JAMES DR	1.12	1.05	1.119	5	4	9	0	PSL	9
22910.2	EAST TORINO PKWY	CASHMERE BLVD	TORINO PKWY	0.89	0.88	0.892	2	2	4	5	PSL	9
2810	EDWARDS RD	SELVITZ RD	25TH ST	0.87	0.89	0.889	2	2	4	5	County	9
6530	OLEANDER AVE	BELL AVE	FARMER'S MARKET RD	1.14	1.08	1.135	5	4	9	0	County	9
6803	PORT ST LUCIE BLVD	TULIP BLVD	DARWIN BLVD	0.84	0.84	0.841	2	2	4	5	PSL	9

3.3 Key Stakeholder Input

The key stakeholders for the CMP Major Update were identified as members of the St. Lucie TPO's standing Technical Advisory Committee who represented the local jurisdictions. Most are traffic engineers with a strong grasp of the causes of traffic congestion and safety issues within their jurisdictions and the broader TPO area. The participating key stakeholders included representatives from the City of Fort Pierce, the City of Port St. Lucie, and St. Lucie County.

The key stakeholders were convened formally on two occasions during the development of the CMP in the form of Working Group Sessions. The first session was held on February 12, 2024, at the TPO office. Topics discussed included an overview of the CMP, the scope and goals of the update, the role of the key stakeholders, the CMP network, a review of the congestion and safety measures, and the initial ranking of congested corridors.

The second meeting of the key stakeholders occurred on April 22, 2024, in the form of a virtual meeting. During this meeting, a final list of prioritized congested corridors was presented and potential congestion mitigation and safety enhancements strategics at each of the highest ranked ten (10) locations was discussed. Copies of the PowerPoint presentation and other meeting materials are in Appendix F.

As mentioned previously, key stakeholders identified roadway segments and intersections based upon their institutional knowledge. Points were awarded to these locations as the final performance measure for prioritization. Congested and dangerous locations identified by key stakeholder input were given a maximum score of five points to highlight their specialized knowledge of the CMP roadway network. Segments identified by stakeholders were assigned five additional points for reranking and participants agreed to provide input within a period of time.

Discussion of identified segments and planned improvements occurred during the working session. During the screening process identifying many of the areas of concern, three additional segments were identified by stakeholders as areas of specific concern. One of these segments identified is on a state road and "off

Study Network" but was identified as having impact on adjacent local roads and upon full scoring, ranked as a priority segment. Table 3.3 shows the high ranked study network segments. The full Phase One scoring Table is included in Appendix D.

Table 3.3 – 2023 Phase One CMP Scoring

Segment ID	On Street	From Street	To Street	AM Segment V/C	PM Segment V/C	Max. PH V/C	AM Score	PM Score	AM/PM Combined Score	Crash Score	V/C & Crash Score	Stake Holder Score	Ph. 1 Total Score
22920	EAST TORINO PKWY	TORINO PKWY	MIDWAY RD	1.16	1.12	1.155	5	5	10		10	5	15
23391	SAVONA BLVD	BECKER RD	PAAR DR	1.25	1.12	1.246	5	5	10	5	15		15
23392	SAVONA BLVD	PAAR DR	GATLIN BLVD	1.31	1.18	1.312	5	5	10	5	15		15
1840	BAYSHORE BLVD	PRIMA VISTA BLVD	FLORESTA DR	1.19	1.04	1.191	5	4	9	5	14		14
2400	DARWIN BLVD	BECKER RD	PAAR DR	1.13	1.04	1.125	5	4	9	5	14		14
6530	OLEANDER AVE	BELL AVE	FARMER'S MARKET RD	1.14	1.08	1.135	5	4	9		9	5	14
1850	BAYSHORE BLVD	FLORESTA DR	SELVITZ RD	1.06	1.00	1.062	4	4	8	5	13		13
3110.1	FLORESTA DR	THORNHILL DR	CROSSTOWN PKWY	1.09	0.97	1.091	4	3	7	5	12		12
6550.11	OLEANDER AVE	WISTERIA AVE	GARDENIA AVE	1.11	0.93	1.113	5	2	7	5	12		12
6840	PORT ST LUCIE BLVD	FLORIDA'S TURNPIKE	BAYSHORE BLVD	0.75	0.75	0.754	1	1	2	5*	7	5*	12
7520	SELVITZ RD	GLADES CUT-OFF RD	EDWARDS RD	0.97	0.96	0.967	3	3	6	5	11		11
2120	CALIFORNIA BLVD	DEL RIO BLVD	CROSSTOWN PKWY	1.45	1.21	1.448	5	5	10		10		10
2130.1	CALIFORNIA BLVD	CROSSTOWN PKWY	HEATHERWOOD BLVD	1.15	1.15	1.149	5	5	10		10		10
2130.2	CALIFORNIA BLVD	HEATHERWOOD BLVD	ST LUCIE WEST BLVD	1.15	1.15	1.149	5	5	10		10		10
2160	CALIFORNIA BLVD	PEACOCK BLVD	TORINO PKWY	1.37	1.21	1.367	5	5	10		10		10
2210	CASHMERE BLVD	ST LUCIE WEST BLVD	PEACOCK BLVD	1.20	1.29	1.293	5	5	10		10		10
11300	CASHMERE BLVD	PEACOCK BLVD	TORINO PKWY	1.22	1.13	1.217	5	5	10		10		10
3600	GILSON RD	MARTIN C.L.	BECKER RD	1.30	1.35	1.348	5	5	10		10		10
3090	SOUTHBEND BLVD	BECKER RD	FLORESTA DR	1.34	1.18	1.343	5	5	10		10		10
1830	BAYSHORE BLVD	CROSSTOWN PKWY	PRIMA VISTA BLVD	0.90	0.89	0.897	2	2	4	5	9		9
1860	BAYSHORE BLVD	SELVITZ RD	ST JAMES DR	1.12	1.05	1.119	5	4	9		9		9
22910.2	EAST TORINO PKWY	CASHMERE BLVD	TORINO PKWY	0.89	0.88	0.892	2	2	4	5	9		9
2810	EDWARDS RD	SELVITZ RD	25TH ST	0.87	0.89	0.889	2	2	4	5	9		9
6803	PORT ST LUCIE BLVD	TULIP BLVD	DARWIN BLVD	0.84	0.84	0.841	2	2	4	5	9		9

*Indicates a State Road added at Stakeholder request

During a final review to determine the higher priority segments for the Phase 1 CMP selection, some segments were combined where it made sense to do so, i.e., where more than one segment connected major crossroads and had similar characteristics and scoring. Table 3.4 on the following page indicates the high priority CMP roadway segments for the Phase 1 evaluation and selection.

Table 3.4 – 2023 Phase One Top 30 CMP Scoring – Some Segments Combined

On Street	From Street	To Street	No. Segments	AM/PM Combined Score	Crash Score	Ph. 1 Total Score
EAST TORINO PKWY	TORINO PKWY	MIDWAY RD	1	10		15
SAVONA BLVD	BECKER RD	GATLIN BLVD	2	10	5	15
DARWIN BLVD	BECKER RD	PAAR DR	1	9	5	14
OLEANDER AVE	BELL AVE	FARMER'S MARKET RD	1	9		14
BAYSHORE BLVD	PRIMA VISTA BLVD	SELVITZ RD	2	9	5	13/14
FLORESTA DR	THORNHILL DR	CROSSTOWN PKWY	1	7	5	12
OLEANDER AVE	WISTERIA AVE	GARDENIA AVE	1	7	5	12
PORT ST LUCIE BLVD	FLORIDA'S TURNPIKE	BAYSHORE BLVD	1	2	5*	12*
SELVITZ RD	GLADES CUT-OFF RD	EDWARDS RD	1	6	5	11
CALIFORNIA BLVD	DEL RIO BLVD	CROSSTOWN PKWY	1	10		10
CALIFORNIA BLVD	CROSSTOWN PKWY	ST LUCIE WEST BLVD	2	10		10
CALIFORNIA BLVD	PEACOCK BLVD	TORINO PKWY	1	10		10
CASHMERE BLVD	ST LUCIE WEST BLVD	TORINO PKWY	2	10		10
GILSON RD	MARTIN C.L.	BECKER RD	1	10		10
SOUTHBEND BLVD	BECKER RD	FLORESTA DR	1	10		10
BAYSHORE BLVD	CROSSTOWN PKWY	PRIMA VISTA BLVD	1	4	5	9
BAYSHORE BLVD	SELVITZ RD	ST JAMES DR	1	9		9
EAST TORINO PKWY	CASHMERE BLVD	TORINO PKWY	1	4	5	9
EDWARDS RD	SELVITZ RD	25TH ST	1	4	5	9
PORT ST LUCIE BLVD	TULIP BLVD	DARWIN BLVD	1	4	5	9
BECKER RD	SOUTHBEND BLVD	GILSON RD	1	8		8
CALIFORNIA BLVD	SAVONA BLVD	DEL RIO BLVD	1	3	5	8
CAMEO BLVD	CALIFORNIA BLVD	CROSSTOWN PKWY	1	3	5	8
OLEANDER AVE	FARMER'S MARKET RD	WISTERIA AVE	2	3	5	8
PEACOCK BLVD	UNIVERSITY BLVD	CALIFORNIA BLVD	1	3	5	8
PRIMA VISTA BLVD	FLORESTA DR	NARANJA AVE	1	3	5	8
PRIMA VISTA BLVD	NARANJA AVE	RIO MAR DR	1	3	5	8
TULIP BLVD	PORT ST LUCIE BLVD	DARWIN BLVD	2	3	5	8

3.4 Final Identification of Phase 2 Locations

Upon completing the identification of congested and dangerous network locations two assessments were made. The first was to determine if the location has a programmed improvement already in place that would remove it from consideration in this current analysis. The impact of the currently programmed improvement will be measured and evaluated in subsequent CMPs. The second step included a review of the list with TPO staff and the key stakeholders to determine if any of the remaining high-ranking locations should be removed from consideration for one reason or another. Examples of reasons for removing locations from consideration could be previous studies that determined major capacity improvement were warranted (a large project solution only) or physical constraints.

This final step in the process of identifying which locations were to move forward to Phase 2 for further evaluation and identification of congestion management mitigation strategies and projects is illustrated in Table 3.5 on the next page.

Table 3.5 Prioritization Criteria and Point System

Segment ID	On Street	From Street	To Street	No. Segments	AM/PM Combined Score	Crash Type	Crash Score	Ph. 1 Total Score	In 2018 CMP?
22920	EAST TORINO PKWY	TORINO PKWY	MIDWAY RD	1	10			15	
23391	SAVONA BLVD	BECKER RD	GATLIN BLVD	2	10	S	5	15	
2400	DARWIN BLVD	BECKER RD	PAAR DR	1	9	S	5	14	
6530	OLEANDER AVE	BELL AVE	FARMER'S MARKET RD	1	9			14	
1840	BAYSHORE BLVD	PRIMA VISTA BLVD	SELVITZ RD	2	9	F	5	13/14	
3110.1	FLORESTA DR	THORNHILL DR	CROSSTOWN PKWY	1	7	S	5	12	
6550.11	OLEANDER AVE	WISTERIA AVE	GARDENIA AVE	1	7	S	5	12	
6840	PORT ST LUCIE BLVD	FLORIDA'S TURNPIKE	BAYSHORE BLVD	1	2		5*	12*	
7520	SELVITZ RD	GLADES CUT-OFF RD	EDWARDS RD	1	6	S	5	11	
2120	CALIFORNIA BLVD	DEL RIO BLVD	CROSSTOWN PKWY	1	10			10	
2130.1	CALIFORNIA BLVD	CROSSTOWN PKWY	ST LUCIE WEST BLVD	2	10			10	Y
2160	CALIFORNIA BLVD	PEACOCK BLVD	TORINO PKWY	1	10			10	
2210	CASHMERE BLVD	ST LUCIE WEST BLVD	TORINO PKWY	2	10			10	Y
3600	GILSON RD	MARTIN C.L.	BECKER RD	1	10			10	
3090	SOUTHBEND BLVD	BECKER RD	FLORESTA DR	1	10			10	
1830	BAYSHORE BLVD	CROSSTOWN PKWY	PRIMA VISTA BLVD	1	4	S,F	5	9	Y
1860	BAYSHORE BLVD	SELVITZ RD	ST JAMES DR	1	9			9	
22910.2	EAST TORINO PKWY	CASHMERE BLVD	TORINO PKWY	1	4	S	5	9	
2810	EDWARDS RD	SELVITZ RD	25TH ST	1	4	F	5	9	
6803	PORT ST LUCIE BLVD	TULIP BLVD	DARWIN BLVD	1	4	F	5	9	Y
1940	BECKER RD	SOUTHBEND BLVD	GILSON RD	1	8			8	Y
Note:	Blue highlighted segments indicate programmed improvements scheduled by City of Port St Lucie								
Note:	Yellow hughlighted segments are selected for CMP								

The list of segments advanced for evaluation of projects and mitigation measures are shown below. It is understood that funds are limited with only $300,000 to $400,000 available every year for CMP projects. Therefore, only the top 10 locations were considered for recommended projects at this time. Each location was considered for applicable types of remediation projects identified in the CMP Toolbox.

	ON STREET	FROM STREET	TO STREET
1	Oleander Ave	Bell Ave	Farmer's Market Rd
2	Oleander Ave	Wisteria Ave	Gardenia Ave
3	Port St Lucie Blvd	Florida's Turnpike	Bayshore Blvd
4	Selvitz Rd	Glades Cut-Off Rd	Edwards Rd
5	California Blvd	Del Rio Blvd	Crosstown Pkwy
6	Gilson Rd	Martin C.L.	Becker Rd
7	Bayshore Blvd	Crosstown Pkwy	Prima Vista Blvd
8	Bayshore Blvd	Selvitz Rd	St James Dr
9	Edwards Rd	Selvitz Rd	25th St
10	Becker Rd	Southbend Blvd	Gilson Rd

4. CMP TOOLBOX

FHWA's Congestion Management Process: A Guidebook identifies applicable CMP Toolbox measures to address congested and dangerous locations. Each of the toolbox measures was considered for the top locations identified and advanced for Phase 2.

Applicable CMP Toolbox Measures	
Multimodal Improvements	
Sidewalks	
Bikes	
Transit	
TSM&O	
ITS	
ATMS	
Demand Management	
Flex Time	
Van Pools	
Park-n-Ride	
Roadway Capacity Improvements	
Add Lanes	
ROW Constrained	
Turn Lanes	

5. PHASE 2 EVALUATION

The highest priority locations without programmed improvements were advanced for further evaluation and screened for potential mitigation strategies from the CMP Toolbox. This section discusses each congested location in more detail and where applicable recommends congestion mitigation, operational, and safety projects.

Each of these locations was discussed with the Key Stakeholders during the second stakeholders' workshop to better understand causes of congestion and potential mitigation strategies. Some of the locations have been studied previously and some had projects completed in the recent past. In general, all the locations were well known to the Key Stakeholders and in keeping with CMP project funding levels, low-cost options were considered. In some instances, a readily identifiable mitigation project is not apparent and further study outside of the CMP is required.

5.1 Analysis and Recommended Improvements

5.1.1 Oleander Avenue, from Bell Avenue to Farmers Market Road

This segment of Oleander Avenue is currently congested in both the AM and PM peak hours of traffic. The segment is a 35 mph, two-lane undivided facility. There are currently no raised curbs, sidewalks, or designated bicycle facilities along the segment, although there are pre-construction phases of the St Lucie Walk-Bike Network identified in the CIP. Issues affecting congestion along this short segment include cut-through traffic making the jog on Oleander between Bell Avenue and Farmers Market Road, connecting 25th Street to the west with US 1 to the east. This cut-through traffic increases traffic volume on the segment, while impacting through traffic due to the turning vehicles onto and from Oleander Avenue from both Bell Avenue and Farmers Market Road. There is also notable trucking activity on the east side of Oleander Avenue at the Freshco Packaging Company which has a site driveway on Oleander, offset from the intersection with Bell Avenue.

It is recommended that intersection improvements be considered for the intersections of Oleander Avenue at Bell Avenue and Oleander Avenue at Farmers Market Road. The addition of left and right turn lanes on Oleander Avenue will accommodate traffic entering and exiting from the cross streets without impeding the flow of through traffic on the mainline. Oleander, Bell, and Farmers Market are all listed on the St Lucie Walk-Bike Network as either partially funded or unfunded needs, so this should be taken into consideration when planning the intersection improvements.

Figure 5.1 Oleander Avenue between Bell Avenue and Farmers Market Road

5.1.2 Oleander Boulevard, from Wisteria Avenue to Gardenia Avenue

This segment of Oleander Boulevard is currently congested in the AM peak-hour, and nearing congestion in the PM peak-hour of traffic. The segment is a 35 mph, two-lane undivided facility in a residential area. There are currently no raised curbs or designated bicycle facilities along this segment. A five-foot sidewalk exists along the west side of the street. Mid-segment, Maravilla Park exists providing several sports amenities

Figure 5.2 Pedestrian and Bicycle Improvements

to the neighborhood. However, there are no sidewalks or designated bike facilities adjacent to the park, providing direct access to the park. At the north end of this segment, Gardenia Avenue provides access to a signalized intersection at US 1.

Rosalyn Avenue runs along the south side of Maravilla Park, intersecting with Oleander Boulevard at an offset intersection with Barbados Avenue. In 2022, during the PM peak-hour of traffic, a severe injury crash occurred as a vehicle attempted a left-turn to enter the intersection. South of this intersection, at Azalea Avenue there was a fatal bicycle involved crash during the analysis period.

In order to better serve all modes of access to Maravilla Park and improve safety along the corridor, it is recommended that the following pedestrian and bicycle improvements be considered: Provide a multi-use path along the east side of the corridor, for providing direct access for pedestrians and cyclists to Maravilla Park and connecting to existing sidewalks along Wisteria, Rosalyn, Maple, and Gardenia Avenues. Provide well-marked crosswalks with flashing beacons on Oleander at Rosalyn Avenue, Antilles Avenue, and Azalea Avenue, with advance signage along Oleander to increase awareness and promote caution at these locations.

5.1.3 Port St Lucie Boulevard at Bayshore Boulevard

This intersection connects Port St Lucie Boulevard, which is a multi-lane divided state road, with Bayshore Boulevard, a City of Port St Lucie multi-lane divided roadway, and provides access to the Florida's Turnpike (Figure 6-3, below). The south leg of this intersection provides access to the Florida's Turnpike ramps and southern Bayshore Boulevard. While overall congestion along Port St Lucie Boulevard from the Turnpike to Bayshore Boulevard was not flagged during the Phase 1 congestion analysis, safety and stakeholder scoring has ranked this intersection in the priority list. Of primary concern is the eastbound to northbound left-turn lane, which tends to back up during peak periods, causing spill-back of left-turning traffic into the through-traffic lanes and failing to meet turning movement demand during each cycle of the traffic signal. Recent improvements to this intersection were made to address the westbound to southbound left-turn movement, and related issues with the following left-turn to access Bayshore Boulevard to the south. During the analysis period, several severe-injury crashes occurred at or near this intersection.

Increasing storage for the eastbound left turn, whether through extending the lane or adding a second left turn lane, may be problematic since the eastbound approach to this intersection is descending off the overpass bridge over the Turnpike, immediately to the west of the intersection. Additional right-of-way and structural requirements may be restrictive to adding an additional lane due to the overpass, and extending the left turn lane would require additional green time for the movement which could adversely impact the other intersection movements, including the recently improved westbound left-turn.

Operation of this intersection directly impacts roadways under the Florida Department of Transportation District operations, the Florida's Turnpike Enterprise, and the City or Port St Lucie. Complex considerations are at play to meet the demands of travelers and the needs of all stakeholders.

It is recommended that agency stakeholders meet to find a cooperative and collaborative solution to ongoing issues regarding the safe and efficient operation of this intersection, meeting the needs of all parties.

Figure 5.3 Port St Lucie Blvd at Bayshore Blvd

5.1.4 Selvitz Road, from Glades Cut-off Road to Edwards Road

This segment of Selvitz Road is currently very near congestion in both the AM and PM peak hours of traffic. The segment is a 35 mph, two-lane undivided facility. There are currently no raised curbs, sidewalks, or designated bicycle facilities along the segment, and there have been several severe-injury crashes along the segment during the analysis period. However, during coordination with stakeholders during the second

Figure 5.4 Glades Cut-off / Selvitz Road Realignment

Stakeholder Working Group session, plans were presented for planned improvements and realignment of Glades Cut-off Road and Selvitz Road in the vicinity of the study area. Therefore, no mitigation strategies are proposed for this segment at this time.

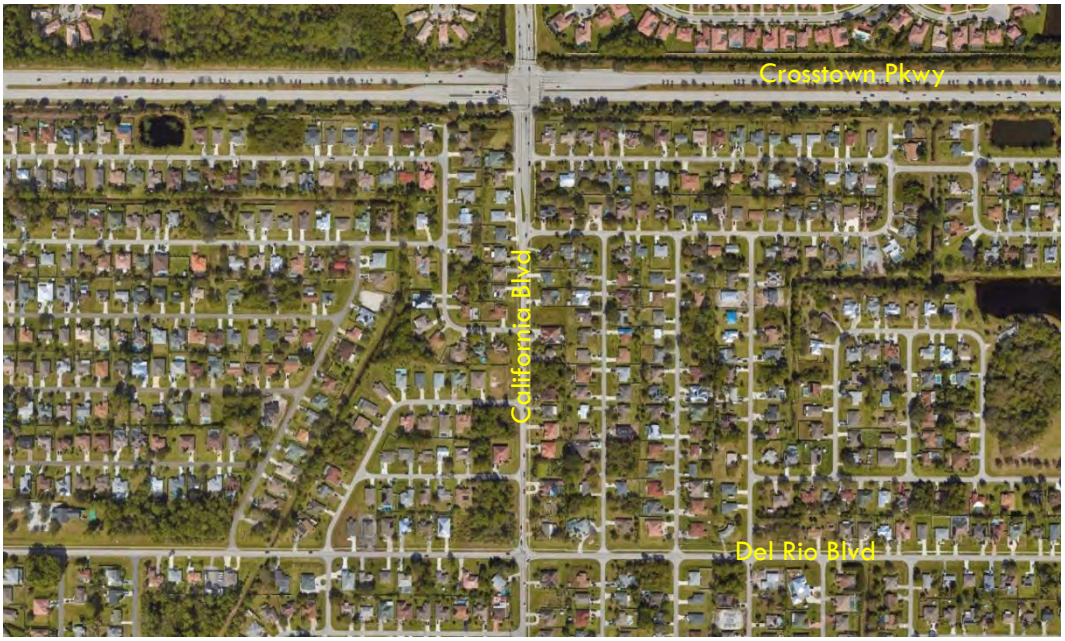
5.1.5 California Boulevard, from Del Rio Boulevard to Crosstown Parkway

This segment of California Boulevard is currently congested in both the AM and PM peak hours of traffic. The segment is a 40 mph, two-lane undivided residential collector. There is a sidewalk along the east side, with a partial sidewalk along the northern part of the west side. Approximately 65% of the daily traffic on this roadway segment continues along California Boulevard to the south, with approximately 35% of the traffic travelling from/to Del Rio Boulevard at the south end of the segment.

This section of California Boulevard is listed in the current LRTP for widening to four lanes in the 2026 to 2030 period, however the City of Port St Lucie is securing additional funding to move this project up on the schedule.

Due to the residential nature of the study area, it is recommended that additional consideration be given to bicycle and pedestrian safety with the planned capacity improvements to this roadway segment. As shown in Figure 5-5, below, California Boulevard and Del Rio Boulevard are both residential in character, as is the surrounding area.

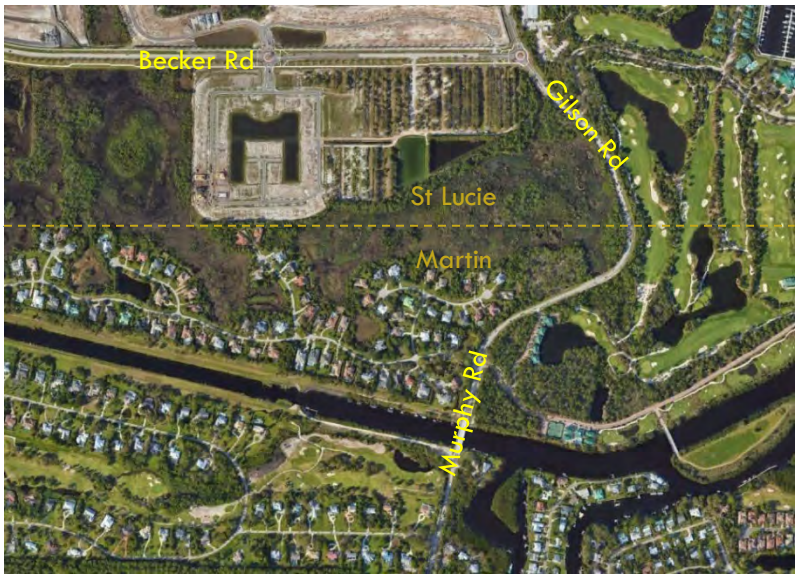
Figure 5.5 California Blvd, from Del Rio Blvd to Crosstown Pkwy



5.1.6 Gilson Road, from Martin County Line to Becker Road

This segment of Gilson Road is a two-lane County Road that is currently congested in both the AM and PM peak hours of traffic. There are very few driveways or intersections along the roadway segment, and no pedestrian or designated bicycle facilities. Traffic analysis indicates that morning peak traffic is traveling southbound to Martin County, returning northbound in the PM peak-hour. The intersection of Gilson Road with Becker Road was recently improved with a roundabout, including crosswalks connecting to the sidewalks along Becker Road and a section of sidewalk along the Gilson Road between the crosswalks on the east

Figure 5.6 Gilson Road, from Martin County Line to Becker Road



side of the roundabout. South of the county line, the roadway continues as Murphy Road, a two-lane facility, in Martin County.

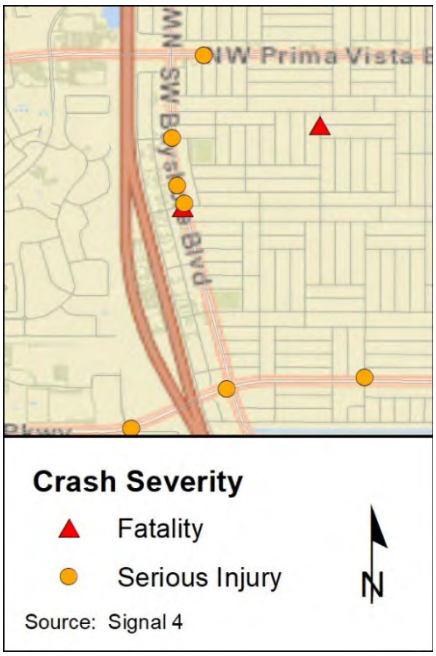
Recently, the Murphy Road bridge, south of the Martin County line was replaced as a two-lane facility. Murphy Road is in the 2045 Martin County MPO Long Range Transportation Plan as being widened from two to four lanes during the 2036 to 2045 period.

Gilson Road, from Martin County Line to Becker Road, is recommended for further study to address congestion issues. Additionally, coordination with Martin County is recommended in order that improvements, when scheduled, are planned to benefit the entire roadway and its users on both sides of the county line.

5.1.7 Bayshore Boulevard, from Crosstown Parkway to Prima Vista Boulevard

This segment of Bayshore Boulevard is a 40 mph, four-lane divided roadway that is currently approaching congestion in both the AM and PM peak-periods of traffic. There is a sidewalk along the west side of the segment and a multi-use path along the east side, providing access for pedestrians and cyclists. Bayshore Boulevard in this area serves as a collector road to a largely residential area and there are a large number of driveways along this segment.

Figure 5.7 Severe Injury & Fatal Crashes



During the analysis period, three severe-injury crashes and one fatal crash occurred along this segment. None of these crashes appear to have been influenced by peak-hour traffic conditions, and only one occurred at an intersection.

A traffic signal with full pedestrian phasing was recently installed at the intersection of Bayshore Boulevard and Lakehurst drive.

It is unknown if the new signal at Lakehurst Drive will have an impact on traffic metering as the only signal between the termini of this segment, and if such metering will mitigate severe vehicular crashes. Continued monitoring of traffic congestion and crashes is recommended. TSM&O / ATMS solutions include possible future real-time monitoring and adaptive traffic control to provide mid-segment traffic metering.

5.1.8 Bayshore Boulevard, from Selvitz Road to St James Drive

This segment of Bayshore Boulevard is currently congested in both the AM and PM peak hours of traffic. The segment is a 40 mph, two-lane undivided facility. There are currently no raised curbs, or designated bicycle facilities along the segment. A sidewalk runs along the south side of the street and there are crosswalks at the roundabout at Selvitz Road and at the signalized intersection with St James Drive. The area is residential and there are many residential driveways along the segment. Bayshore Boulevard becomes Airoso Boulevard west of the intersection at St James Drive. Continued monitoring of traffic congestion and crashes is recommended.

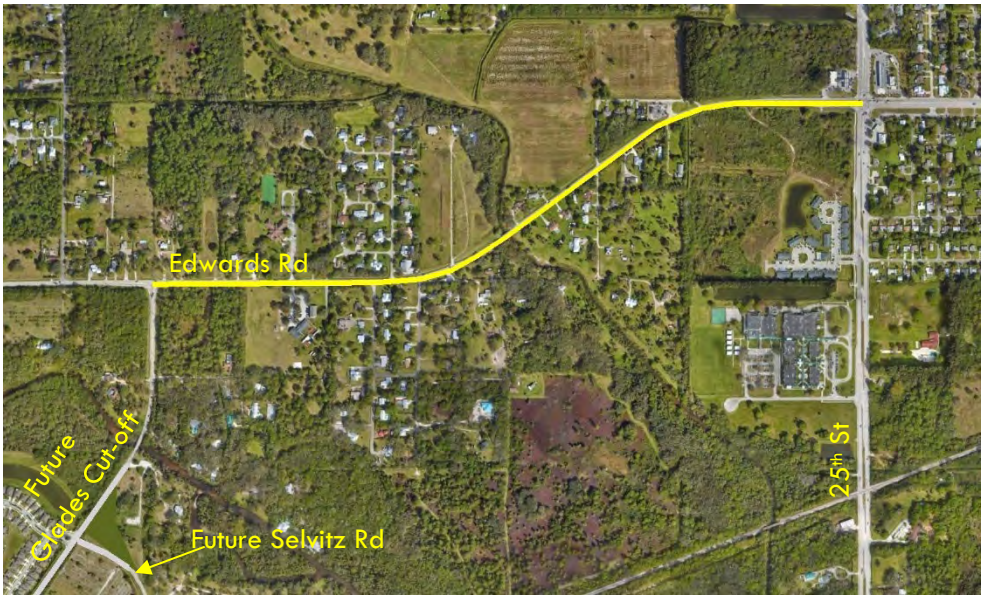
Figure 5.8 Bayshore Blvd / Airoso Blvd, from Selvitz Rd to St James Dr

5.1.9 Edwards Road, from Selvitz Road to 25th Street

This segment of Edwards Road is currently approaching congestion in both the AM and PM peak periods of traffic. The segment is a 45 mph, two-lane undivided facility with five-foot paved shoulders. There are currently no raised curbs, or pedestrian facilities along the segment. During the analysis period, there was one fatal pedestrian crash along the segment during the AM peak hour of traffic.

At this time, it is not known what the impact of the major realignment of Glades Cut-off Road and Selvitz Road at the west end of this segment will have on traffic conditions of Edwards Road. Continued monitoring of traffic congestion and crashes along this segment is recommended.

Figure 5.9 Edwards Rd, from Selvitz Rd (Future Glades) to 25th St

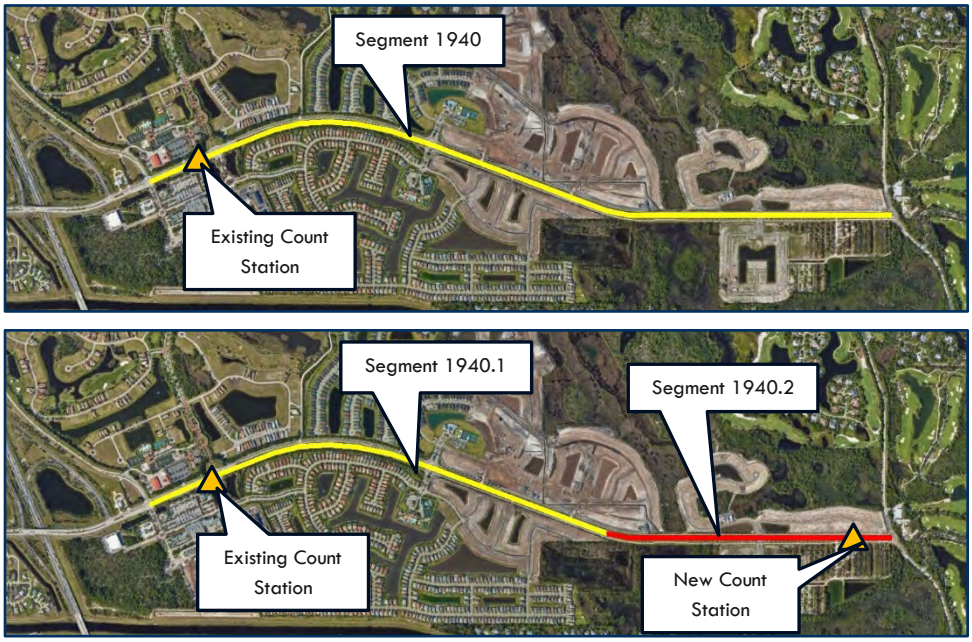


5.1.10 Becker Road, from Southbend Boulevard to Gilson Road

This segment of Becker Road includes sections of both four-lane and two-lane roads in an area of recent and ongoing development. The segment is currently congested in both AM and PM peak periods but is being analyzed as a two-lane facility and needs several updates for more accurate assessment and evaluation.

It is recommended that the analysis segment of Becker Road, from Southbend Boulevard to Gilson Road be split at the new point where the four-lane section becomes two-lane, east of Veranda Reserve Boulevard. Additionally, the eastern segment comprising the two-lane portion of Becker Road should be assigned a new traffic count station to be added to the St Lucie TPO annual traffic count program. Both new segments of Becker Road are recommended for further study to address remaining congestion issues under the proposed analysis recommendations.

Figure 5.10 Becker Road Analysis Segmentation

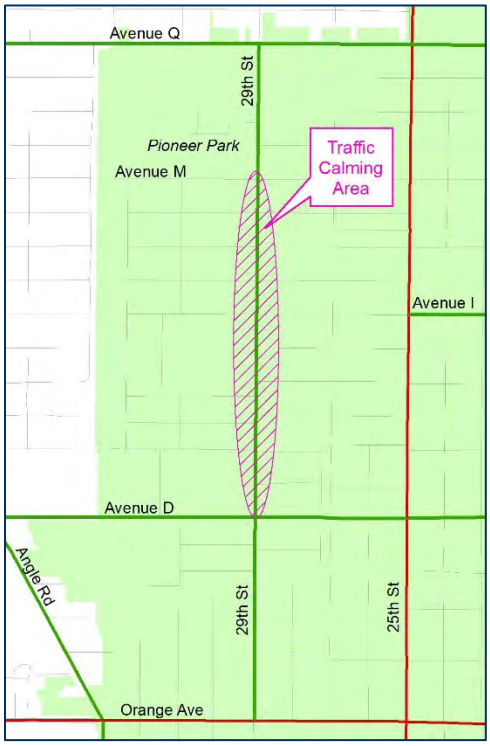


5.1.11 29th Street, from Orange Avenue to Avenue M

During the final stakeholder meeting, it was requested that 29th Street from Orange Avenue to Avenue M in Fort Pierce be added to the St Lucie TPO roadway analysis network for annual traffic monitoring, inclusion in the TPO Traffic Data Management System (TDMS), and consideration in the Congestion Management Process. Discussion was held regarding several traffic-related issues, including the absence of traffic counts, and speeding along this roadway.

A recommendation was made to include the segment in the TDMS and TPO roadway analysis network for traffic count monitoring. An additional recommendation was made for consideration of traffic calming strategies along the segment to reduce speeding, particularly in the vicinity of Pioneer Park on Avenue M.

Figure 5.11 29th Street Traffic Calming



6. CONCLUSIONS & IMPLEMENTATION

The previously referenced *Congestion Management Process: A Guidebook* published by FHWA in 2011 defines congestion management as follows:

> "Congestion management is the application of strategies to improve transportation system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods. A congestion management process (CMP) is a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation systems performance and assesses alternative strategies for congestion management that meet state and local needs. The CMP is intended to move these congestion management strategies into the funding and implementation stages."

This 2024 CMP Major Update by the St. Lucie TPO accomplishes all these objectives. Primarily, the TPO is dedicated to updating and maintaining on a regular basis data that is used to assess congestion consistently and on a regular basis. This allows for an accurate system and corridor-level evaluation of congestion within the TPO area. This CMP quantifies and ranks congestion on roadway segments which allows for the limited funding resources to be applied to locations where they will have the greatest impact. In application of the funds, this CMP considers all proven congestion mitigation approaches and safety enhancement that will be effective in serving the community.

This CMP goes to a deeper analytical level than most CMPs by analyzing and recommending specific project improvements. The process also engages local implementing agencies from the onset to ensure that everyone fully understands the value of the CMP and what can be accomplished through cooperation. The result is congestion management strategies that are ready to move into the funding and implementation stages.

Implementation of CMP strategies is a critical process and includes the following steps:

- Step 1 – Determine funding sources.
- Step 2 – Prioritizing strategies
- Step 3 – Programming projects in the Transportation Improvement Program (TIP)

The funding source that amounts annually to approximately $300,000 per year will be available for the St. Lucie TPO for the implementation of CMP strategies (CMP box funds). Several ranked roadway segments and intersections are, or will be, subject to or influenced by ongoing or planned improvements. These segments have been recommended for continued monitoring to assess the impact of said improvements. The prioritization of identified CMP strategic projects is detailed in Section 5 of this report. Prior to programming projects in the TIP, estimated construction costs based on current generalized construction costs will need to be updated. The CMP Implementation Plan is provided below in the List of Priority Projects in Table 6-1.

Table 6.1 2024 St Lucie TPO CMP List of Priority Projects

Project #	Project Segment	Improvement Description	Estimated Cost	1	2	3	4	5
1	Oleander Ave from Bell Ave to Farmers Market Rd	Southbound left-turn lane and northbound right-turn lane at Farmers Market Rd.	$300,000	$300,000				
2	Oleander Blvd from Wisteria Ave to Gardenia Ave	Multi-use path along east side of ROW from Azalea Ave to Antilles/Windsor Ave.	$260,000		$260,000			
3	Oleander Blvd from Wisteria Ave to Gardenia Ave	Flashing beacon crosswalk, sidewalk-path connections at Roselyn Ave, Antilles Ave, and Azalea Ave.	$90,000		$90,000			
4	Oleander Ave from Bell Ave to Farmers Market Rd	Southbound right-turn lane and northbound left-turn lane at Bell Ave.	$330,000			$330,000		
5	California Blvd from Del Rio Blvd to Crosstown Pkwy	Bicycle and pedestrian safety improvements to enhance planned road widening.	$300,000				$300,000	
6	29th Street from Orange Avenue to Avenue Q	Install two to three speed humps/tables between Avenue D and Avenue Q for traffic calming.	$60,000				$60,000	
7	Bayshore Blvd from Crosstown Pkwy to Prima Vista Blvd	TSM&O / ATMS real time monitoring and adaptive traffic control for mid-segment traffic metering.	$300,000					$300,000
		Estimated available revenue (from CMP box funds)		$300,000 - $400,000				
		Revenue used for improvements		$300,000	$350,000	$330,000	$360,000	$300,000

The St. Lucie TPO's CMP has been utilized to allocate the TPO's CMP box funds of $300,000- $400,000 annually towards CMP projects in the TPO's List of Priority Projects (LOPP). LOPP project costs above have been estimated at the lower end of the funding range to allow for contingencies and inflationary effect.

St. Lucie Transportation Planning Organization

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

AGENDA ITEM SUMMARY

Board/Committee:	Bicycle-Pedestrian Advisory Committee (BPAC)
Meeting Date:	July 25, 2024
Item Number:	7a
Item Title:	Transportation Asset/Service Vulnerability Assessment Update
Item Origination:	Unified Planning Work Program (UPWP)
UPWP Reference:	Task 3.9 – Environmental Planning
Requested Action:	Discuss and provide comments
Staff Recommendation:	It is recommended that comments such as climate-related concerns and priorities be provided to be included in the Vulnerability Assessments and Regional Resilience Plan.

Attachments
- Staff Report
- Presentation

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MEMORANDUM

TO: Bicycle-Pedestrian Advisory Committee (BPAC)

THROUGH: Peter Buchwald
Executive Director

FROM: Stephanie M. Torres
Bicycle Pedestrian Program Manager

DATE: July 16, 2024

SUBJECT: Transportation Asset/Service Vulnerability Assessment Update

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BACKGROUND

As climate change continues to threaten both natural and built environments, the risk of impact to transportation infrastructure rises. Scientific studies predict that sea level rise will accelerate and, therefore, transportation infrastructure along the seacoast continues to be vulnerable to inundation in addition to other impacts from climate change such as seasonal flooding and storm surge.

The St. Lucie TPO completed the Sea Level Rise Mapping in 2019 to identify transportation infrastructure exposed to potential future flooding within the TPO area. To continue the integration of the consideration of impacts from climate change into the TPO's metropolitan planning program, the TPO's Unified Planning Work Program (UPWP) includes Transportation Asset/Service Vulnerability Assessment updates.

In 2020, St. Lucie County was awarded a Community Resilience Planning Grant through the Florida Department of Environmental Protection to perform Vulnerability Assessments within the County, which includes water resources, critical buildings and infrastructure, historic resources and vulnerable populations. Subsequently, the County secured a Community Development Block Grant for Mitigation through the Rebuild Florida General Planning Support Program. This grant supports a scope of work to develop a Regional Resilience Plan that includes unified hazard mitigation efforts to bolster social,

economic, and environmental resilience from acute and chronic stressors related to the impacts of natural disasters and regional climate changes.

The Vulnerability Assessments and Regional Resilience Plan are further supported by the Resilience Planning Steering Committee. The TPO is a key member of the Committee and have been working collaboratively with the St. Lucie County Environmental Resources Department (ERD) during the development of the Vulnerability Assessments and Regional Resilience Plan. The St. Lucie County ERD will present an update on the Vulnerability Assessments and Regional Resilience Plan.

ANALYSIS

The Vulnerability Assessments and Regional Resilience Plan together are a comprehensive initiative aimed at identifying and addressing St. Lucie County's most pressing climate-related risks. The initiative aims to provide a clear picture of the County's current vulnerabilities and develop strategies to mitigate potential impacts from climate change, such as sea level rise, flooding, and intensified storms. The initiative will also evaluate the resilience of critical County and local agency buildings and infrastructure to ensure they can withstand and recover from natural disasters. The initiative objectives revolve around the following key goals:

1) Develop a cohesive strategy for resilience;
2) Address climate hazards, complying with state legislation;
3) Guide resilience actions and community partnerships; and,
4) Increase eligibility for State and Federal grant funding.

The Resilience Planning Steering Committee is also comprised of representatives from local city governments, emergency management, community health, regional planning, and other key sectors. This collaborative effort aims to create a comprehensive plan that enhances the County's ability to withstand and recover from natural disasters and climate related stressors. The role of the Committee includes not only reviewing the deliverables from the consultants but also coordinating with respective agencies on technical review, policy development, and communication support.

Because local agencies will play a crucial role in the success of this initiative, the Committee members are encouraged to provide valuable data on past incidents and current preparedness levels helping to identify gaps and areas for improvement. Local agencies can provide insights into the needs of vulnerable populations ensuring the strategies developed are inclusive and equitable. The evaluation of the resilience of the transportation network will be included in the initiative, and enhancements to support evacuation and

recovery efforts will be proposed based on the results of the data provided by local partners. This collaborative approach not only strengthens the findings of the initiative but also fosters a sense of shared responsibility and commitment to building a more resilient St. Lucie County.

RECOMMENDATION

It is recommended that comments such as climate-related concerns and priorities be provided to be included in the Vulnerability Assessments and Regional Resilience Plan.

St. Lucie County
Vulnerability Assessments and Regional Resilience Plan

ST. LUCIE COUNTY FLORIDA

TETRA TECH

Project Team

TETRA TECH

ERIN L. DEADY, P.A.

the balmoral group

CLEARVIEW GEOGRAPHIC

LORI LEHR INC.
YOUR LINK TO CRS SUCCESS

SEARCH

Firefly public relations & marketing
20 brilliant years of illuminating ideas and glowing results

HDR

Project Objectives

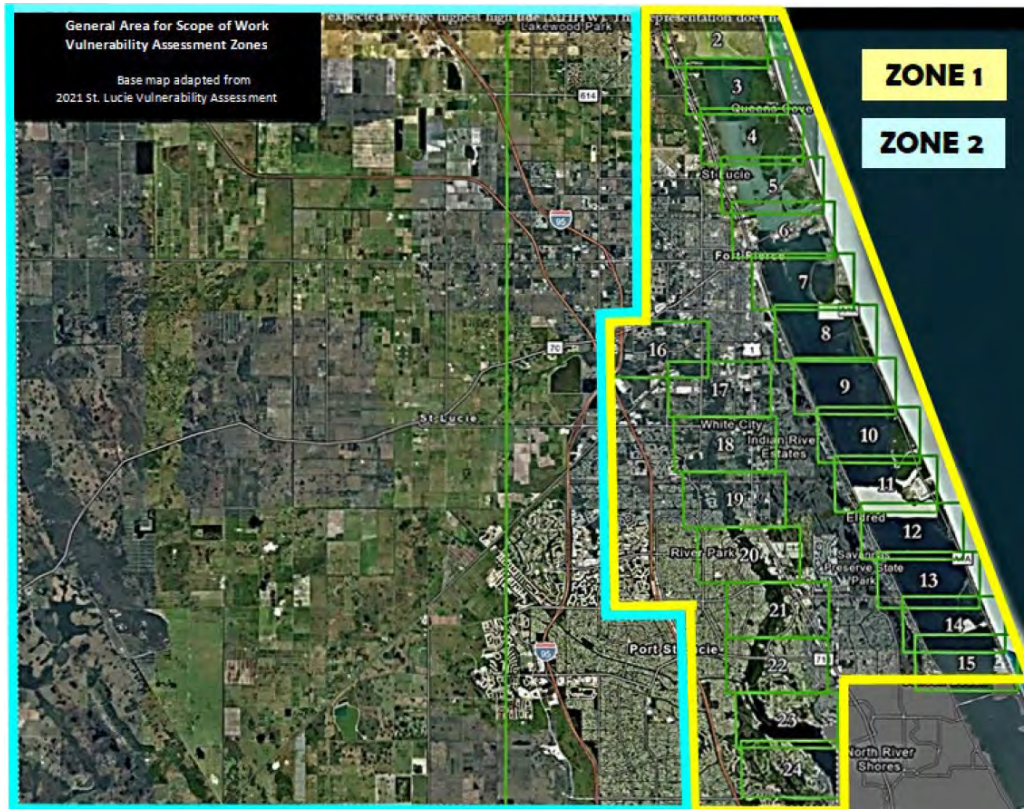
1. **Develop a cohesive strategy for resilience**
2. **Address climate hazards, complying with state legislation**
3. **Guide resilience actions and community partnerships**
4. **Increase eligibility for State and Federal grant funding**

Funding sources: FDEP Resilient Florida Planning Grant & CDBG MIT Dept of Commerce

Scope of Work – Resilient Florida

- VA and Shoreline & Habitat Study – Zone 1
  - Update to 2021 community-wide SLR VA pursuant to FS section 380.093(3)(c)
  - Evaluate exposure and sensitivity of County assets to climate threats
  - 2040, 2070, and 2100 flooding projections modeled
  - SLAMM Modeling to ID habitat transitions
    - Existing shoreline & habitat infrastructure data
    - Modeling processes for inundation, erosion, accretion, salinity, over wash, saturation

- Natural Resources, Cultural, and Historical VA – Zones 1 & 2
  - Evaluate natural resources and determine vulnerabilities to climate hazards through modeling for current and future development projections
  - ID and analyze threats to sensitive ecosystems
  - Tree canopy assessment using existing LiDAR
  - Cost-benefit analysis
  - Inventory sensitive lands for future protection and conservation



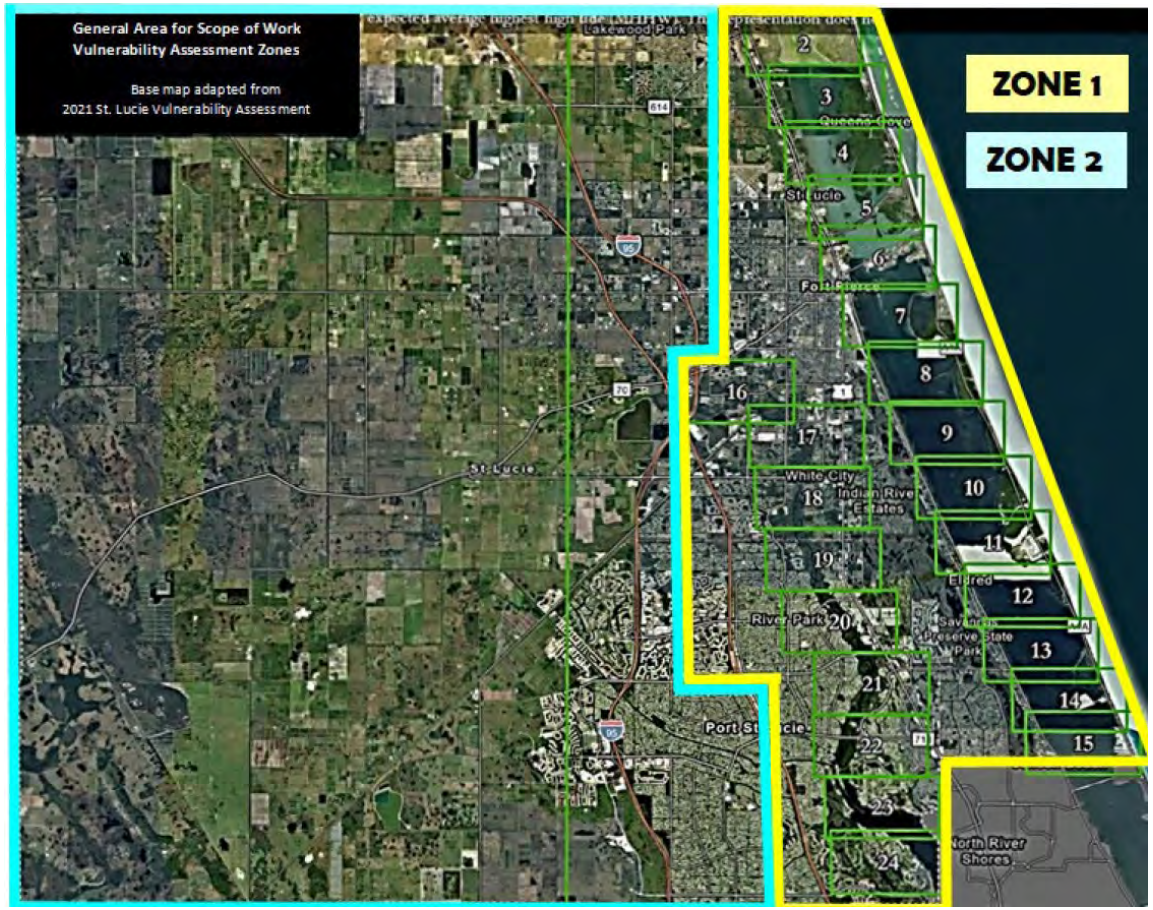
ST. LUCIE COUNTY FLORIDA

TETRA TECH

Scope of Work – CDBG-MIT

- VA – Zones 1 & 2
  - Evaluate vulnerability and risk to FEMA Community Lifelines and identify hazard mitigations
  - Identify critical assets impacted and prioritize by need
  - Focus on reducing disruptions to local government operations, economic security, and human health and safety
    - Consider LMI communities

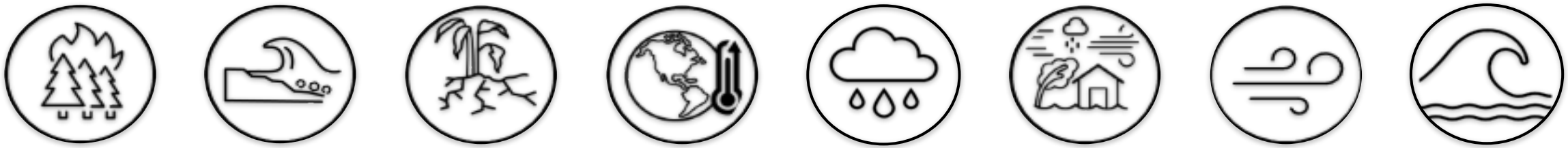
- Zones 1 & 2 watershed and heat mapping analysis
    - Compliant with FEMA criteria
    - Understand the potential magnitude, severity, and extent of these hazards on community and human health



Climate Hazards

- RF: VA: Shoreline & Habitat Study, and Natural, Cultural, and Historic Resources VA
  - Sea level rise, tidal, storm surge, rainfall induced, and compound flooding

- CDBG-MIT:
  - RF flood scenarios, extreme temperatures, drought, severe storms, coastal erosion, and wildfire



Critical Assets -Section 380.093 F.S

Owned or maintained by county, cities, and other entities

- **Transportation**
  - Roads, Bridges, Rail, Marinas
- **Critical Infrastructure**
  - Non-buildings, all utilities
- **Critical Community & Emergency Facilities**
  - Schools, Health Care Services, Emergency operational facilities
- **Natural, Cultural, & Historic Resources**
  - Shorelines, Conservation Lands, Parks

Regionally Significant Assets

- Critical assets that support the needs of communities spanning multiple geopolitical jurisdictions, including, but not limited to:
  - ✓ Water resource facilities
  - ✓ Regional medical centers
  - ✓ Emergency operations centers
  - ✓ Regional utilities
  - ✓ Regional natural systems
  - ✓ Major transportation hubs and corridors
  - ✓ Airports
  - ✓ Seaports

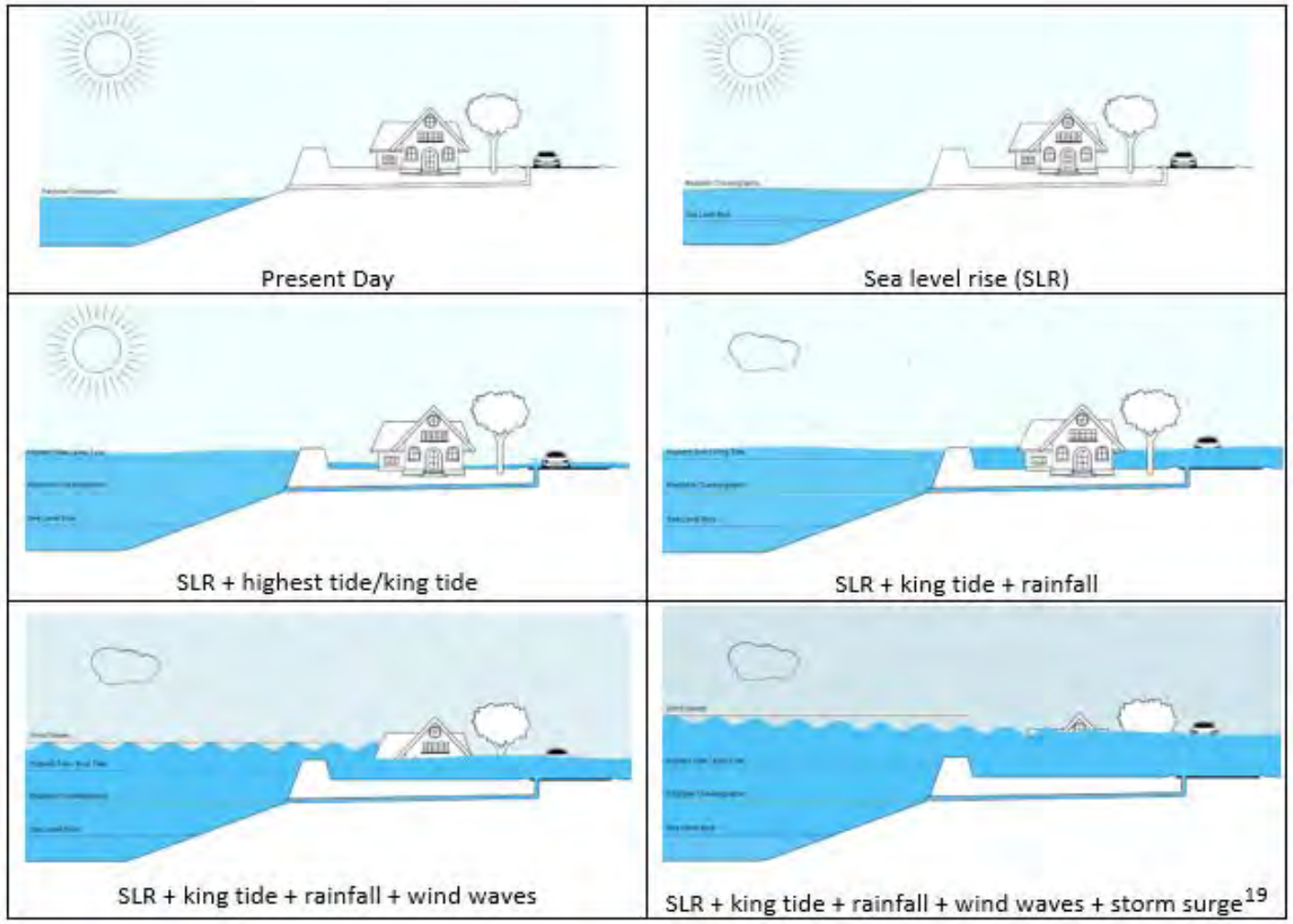
Resilient Florida Flood Scenarios

Future Projections:

2040

2070

2100



Images taken from NOAA Understanding Stormwater Inundation:
https://coast.noaa.gov/stormwater-floods/understand/

Resilient Florida Flood Scenarios

- Section 380.093(3)(d)3.a-c, F.S. requires:
  - All analyses in the North American Vertical Datum of 1988.
  - At least two local sea level rise scenarios, which must include the 2017 National Oceanic and Atmospheric Administration intermediate-low and intermediate-high sea level rise projections.
  - At least two planning horizons that include planning horizons for the years 2040 and 2070.

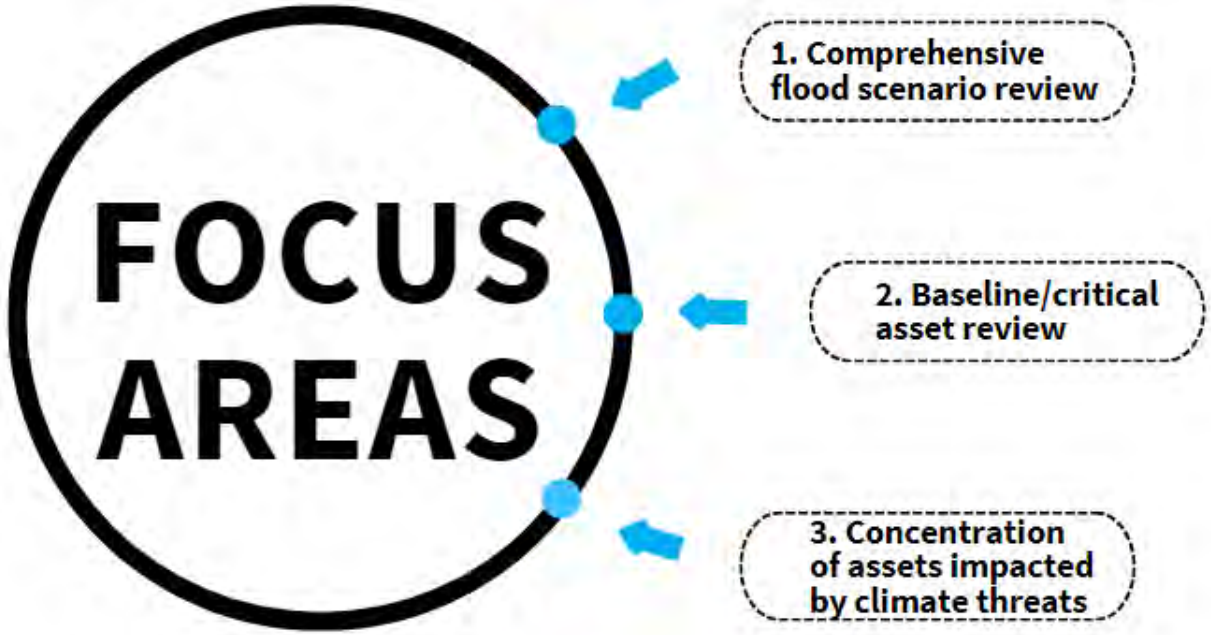
- *Proposed methodology provides analyses in NAVD88, use of NOAA Intermediate Low and High (2022) and 2040, 2070 & 2100 meeting and exceeding all Scenario and Standards requirements*

Focus Areas

Criteria for focus areas:

1. There is an aggregation of critical assets at risk
2. The area is subject to either sea level rise, surge, rainfall or combined flooding risk today or by 2040 or 2070
3. Areas identified as at-risk based on socio-economic data or population vulnerabilities

Purpose: Helps prioritize where adaptation response should occur based on geographic area and timeline to impact



Sea Level Affecting Marsh Model (SLAMM)

- Open-sourced tool that simulates the dominant processes involved in wetland conversions and shoreline modifications during long-term sea level rise.
- Addresses various wetland scenarios, including inundation, erosion, over wash, saturation, and salinity
- Can evaluate conservation lands, shorelines, surface waters and wetlands
- SLAMM provides a robust land cover change (conversion) and marsh migration dynamics
- Outputs are compatible with GIS software for viewing and analysis

SLAMM Output

Example Sum of All Habitat Countywide

SLAMM Output - County wide acres of land area; "present" is cross walk from FWC CLC Nov - 2019 to SLAMM NWI categories.

Habitat Type	Present	2040	Change from Present	2070	Change from Present	Change from 2040	2100	Change from Present	Change from 2070
Developed Dry Land	18117.0	15650.2	-14%	9457.7	-48%	-40%	4660.3	-74%	-70%
Undeveloped Dry Land	13885.0	8441.5	-39%	4607.6	-67%	-45%	2243.0	-84%	-73%
Swamp	35076.6	160.0	-100%	61.8	-100%	-61%	36.5	-100%	-77%
Cypress Swamp	31795.3	15.1	-100%	0.1	-100%	-99%	0.0	-100%	-100%
Inland-Fresh Marsh	147827.4	788.3	-99%	68.3	-100%	-91%	25.0	-100%	-97%
Trans. Salt Marsh	0.0	452.1		67.8		-85%	1190.9		163%
Mangrove	342369.1	240306.2	-30%	24375.0	-93%	-90%	15148.5	-96%	-94%
Tidal Flat	3591.7	570.9	-84%	194.3	-95%	-66%	1025.7	-71%	80%
Ocean Beach	122.3	111.4	-9%	57.0	-53%	-49%	25.2	-79%	-77%
Rocky Intertidal	7978.6	3555.5	-55%	790.0	-90%	-78%	203.7	-97%	-94%
Inland Open Water	573.6	195.7	-66%	86.7	-85%	-56%	56.4	-90%	-71%
Estuarine Open Water	17664.2	314304.0	1679%	538375.5	2948%	71%	548125.6	3003%	74%
Open Ocean	1596.4	1809.3	13%	2013.5	26%	11%	2097.3	31%	16%
Irreg.-Flooded Marsh	0.0	0.4		0.0		-100%	0.4		-8%
Tidal Swamp	15.1	4.5	-70%	2.4	-84%	-47%	1.0	-93%	-77%
Flooded Developed Dry Land	0.0	2466.8		8659.2		251%	13456.7		446%
Flooded Forest	0.0	31780.2		31795.2		0%	31795.3		0%
Aggregated Non Tidal	32002.0	26558.5	-17%	22724.5	-29%	-14%	20359.9	-36%	-23%
Freshwater Non-Tidal	214699.3	963.5	-100%	130.2	-100%	-86%	61.5	-100%	-94%
Open Water	19834.1	316309.0	1495%	540475.7	2625%	71%	550279.4	2674%	74%
Low Tidal	11692.6	4237.8	-64%	1041.3	-91%	-75%	1254.6	-89%	-70%
Saltmarsh	0.0	0.0		0.0			520.6		
Transitional	342369.1	272539.0	-20%	56238.0	-84%	-79%	48135.2	-86%	-82%
Freshwater Tidal	15.1	4.5	-70%	2.4	-84%	-47%	1.0	-93%	-77%
GHG (10^3 Kg/Metric Tons)		573559.9		562072.1		-2%	574672.1		0%

- Shows percent change in each habitat type : Increase in estuary, decrease in dry land
- Calculates carbon sequestration changes based on habitat change
- Results inform policies and programs related to land acquisition, management and restoration
- This output will be used to develop the cost-benefit analysis

Community Stakeholder Engagement

- Collaborative approach:
  - Diverse stakeholders involved which may include elected officials/boards, other jurisdictional boards, Resilience Steering Committee, citizen stakeholders, sector stakeholders
  - In-person and virtual education and engagement sessions, public charettes, governmental board/council meetings

- Communication vehicles:
  - Social media
  - Project webpage
  - Printed materials and media
  - TV and radio
  - StoryMap

- Community Input
  - Community Survey
  - RF: 4 government and 6 community engagement meetings
  - CDBG-MIT: 12 government and 12 community engagement meetings

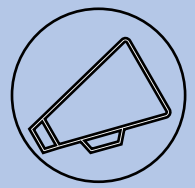
Regional Resilience Plan

- Enhance County-wide resilience by offering climate adaptation and mitigation strategies based on identified risks
- Funding analysis, capacity assessment, and implementation plan
- Considerations will include hazard mitigation, emergency preparedness, land use planning, code & policy development, infrastructure investment, and public health policies & programs
- Informed by:
  - VA's, existing plans & studies, Resilience Steering Committee
- Lay the foundation for the St. Lucie Regional Resilience Plan

Adaptation Strategies

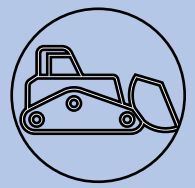
Grey Infrastructure (fortify, elevate, relocate)

Green Infrastructure (protect, restore, augment)



Community Education, Programs, and Readiness

Emergency Management Planning



Land Use and Code Guidelines

Role of Steering Committee

- Review deliverables and outputs, provide feedback
- Coordinate with your respective organizations/jurisdictions
- Sub-committees
  - **Technical Sub-Committee** (Engineering, Environmental): will be involved in vulnerability assessment kick-off meeting & review meetings; including data identification, review of modeling tools, review of draft VA, formatting utilized in maps, etc. [sub-committee has been established, includes Paul Thomas-FP Building Director, Peter May-PSL Stormwater, Josh Revord-SLC Coastal Engineer, Jenn McGee-SLC ERD]
  - **Policy & Planning Sub-Committee** will be involved in Comprehensive Plan and Policy considerations [to be established and include TCRPC, SLC, FP, PSL planners].
  - **Stakeholder Engagement & Communications Sub-Committee** will be involved in kick-off meeting and in developing messaging, marketing and stakeholder engagement opportunities, including identifying groups and opportunities to engage [to be established and include PIO's from SLC, PSL, FP].

Project Next Steps

PROJECT KICK OFF MEETING

DATA COLLECTION AND ANALYSIS

IDENTIFY DATA GAPS

GIS MODELING FOR FLOODING AND OTHER CLIMATE RISKS

IDENTIFY FOCUS AREAS

PUBLIC ENGAGEMENT

Project Schedule

Due Date Sept 30, 2024

Target Completion Date Sept 2025