

Project Background

2017

- Initial Area-Wide Traffic Study (Kimley-Horn)
- Assess future 2027 conditions and travel demands
- Increased traffic growth since 2020

2024 Update

- Area-Wide Traffic Study Update (Johnson Engineering)
- Assess future 2034 conditions and travel demands







Goals & Objectives



Peak Season Traffic Data Collection



Roadway & Intersection Analysis



Crash Data Review

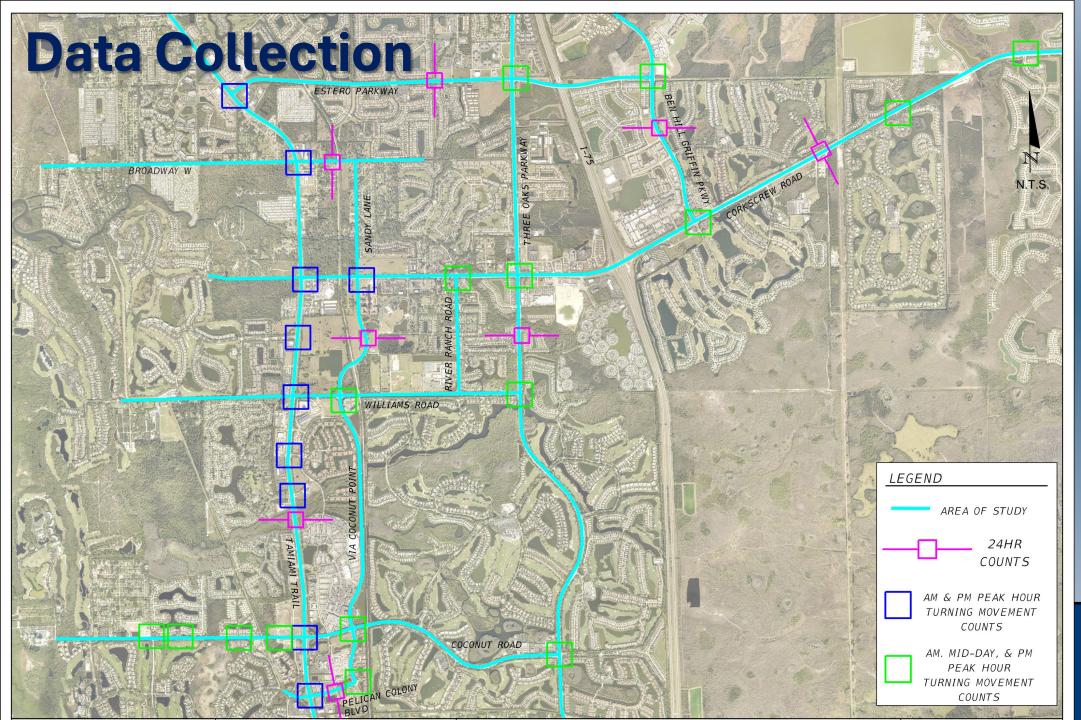


Develop Area-Wide Traffic Study Update

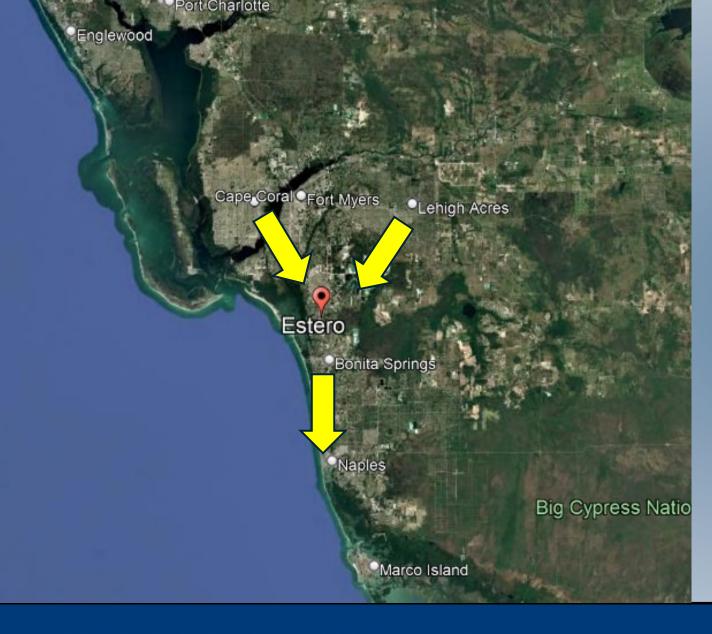








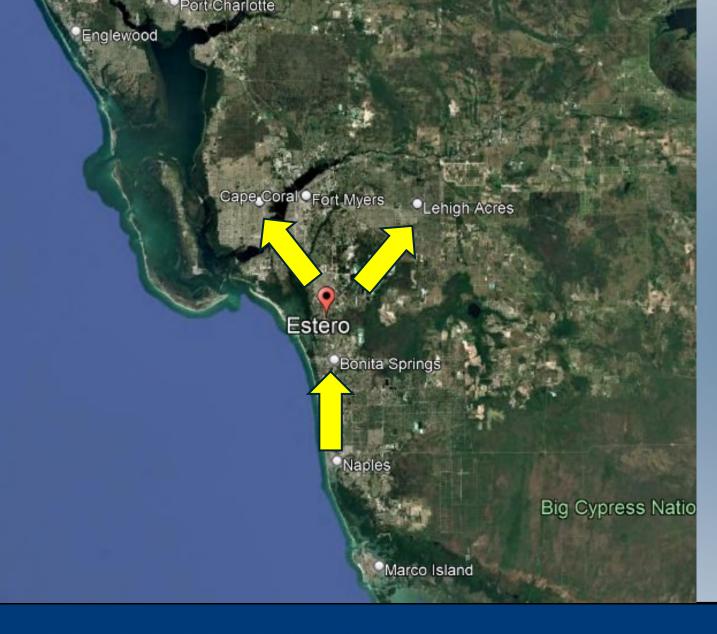




Village of Estero Traffic Flows

VILLAGE OF ESTERO



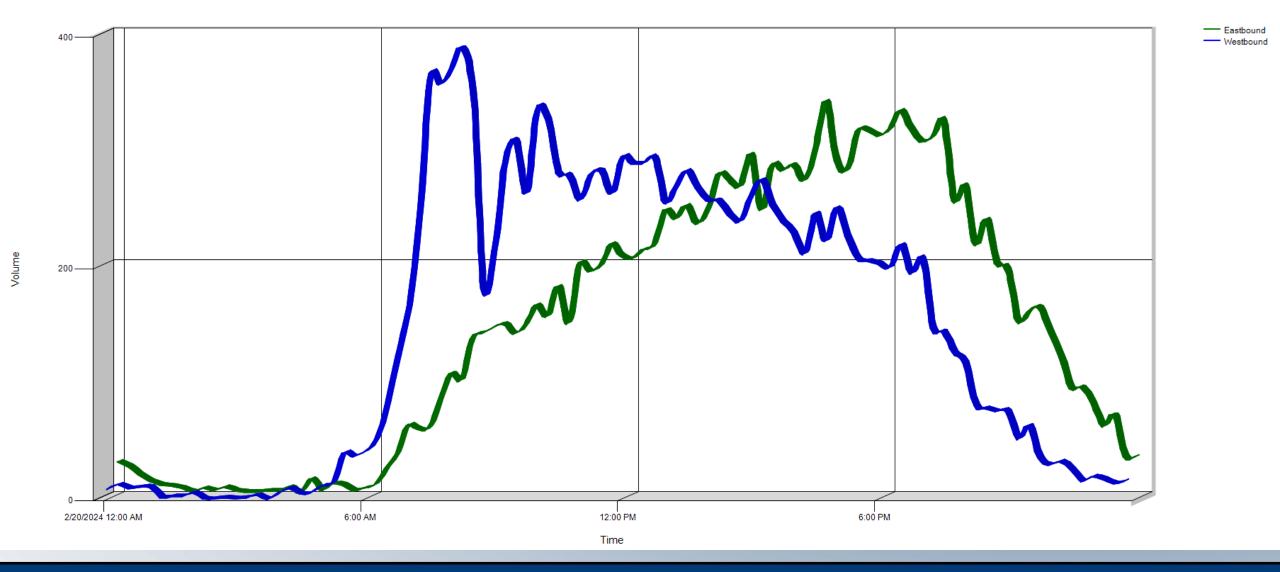


Village of Estero Traffic Flows

VILLAGE OF ESTERO



Corkscrew Road







Traffic Forecasting

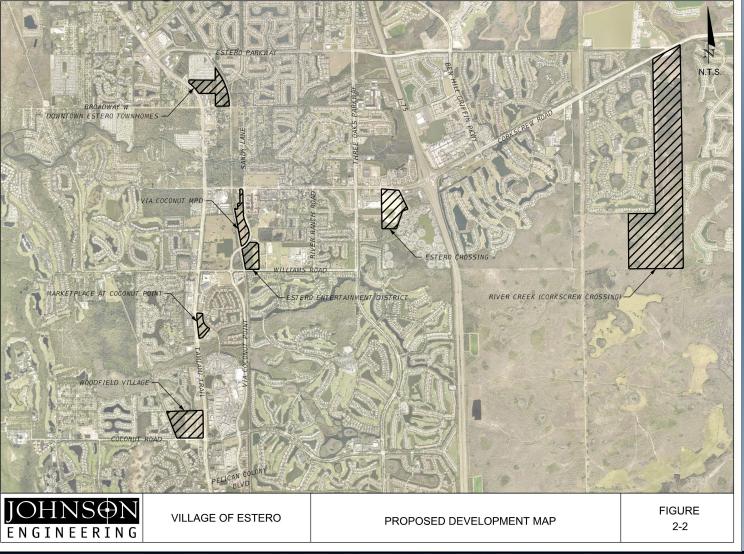
- 2024 Peak Season Baseline Data
- 2034 10-Year Peak Season Projections







Future Development Growth







Growth Rates

Growth Rate Determinations for Study Area							
Roadway	From	Annual Growth Rate					
Tamiami Trail	Within the Village	1%					
Ben Hill Griffin Parkway	Corkscrew Road	Estero Parkway	2.5%				
Broadway Avenue West	Yellow Trail	Tamiami Trail	1%				
Broadway Avenue East	Tamiami Trail	Sandy Lane	1%				
	West End	Spring Creek Road	1%				
Coconut Road	Spring Creek Road	Tamiami Trail	1%				
Coconut Road	Tamiami Trail	Via Coconut Point	1%				
	Via Coconut Point	Three Oaks Parkway	3%				
Corkscrew Road	Ben Hill Griffin Parkway	Wildcat Run Drive	3%				
Estero Parkway	Tamiami Trail	Three Oaks Parkway	1%				
Pelican Colony Boulevard	Tamiami Trail	Via Coconut Point	2%				
River Ranch Road	Williams Road	Corkscrew Road	1%				
Sandy Lane	Corkscrew Road	Broadway Avenue	1%				
Three Oaks Parkway	Williams Road	Corkscrew Road	2.5%				
	Pelican Colony	Coconut Road	3%				
Via Coconut Point	Coconut Road	Williams Road	3%				
Via Cocondi Foint	Williams Road	Corkscrew Road	3%				
	West Way	Tamiami Trail	1%				
Williams Road	Tamiami Trail	Via Coconut Point	1.5%				
	Via Coconut Point Three Oaks Parkway		3%				
Spring Creek Road	at Coco	1%					
El Dorado Boulevard	at Coco	nut Road	1%				
Via Veneto	at Coco	1%					







Roadway & Intersection Level of Service

- Collected peak season traffic data to serve at baseline 2024 conditions
- Projected travel demands and patterns to 2034 conditions using growth rates and large future developments



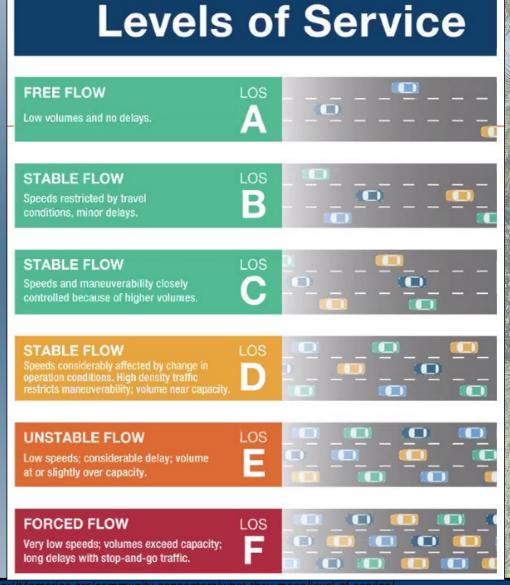








What is Roadway Level of Service (LOS)?





https://t4america.org/community-connectors/what-they-mean/level-of-servic



Roadway LOS Analysis

Peak-Hour Village of Estero Roadway Conditions								
Roadway	Segment	Lanes	Performance Standard Peak Hour Two-Way Service Volumes (Two Way)					dway Volumes vo Way)
			Performance	Capacity	LOS	Volume	LOS	Volume
Broadway Avenue	West of Tamiami Trail	2	D	1,180	С	668	С	738
Broadway Avenue	East of Tamiami Trail	2	D	1,180	С	518	С	572
Coconut Road	Weeks Street to Spring Creek Road	2	D	1,180	С	863	С	953
Coconut Road	Spring Creek Road to Tamiami Trail	2	D	1,180	С	993	С	1,097
Coconut Road	Tamiami Trail to Via Coconut	4	D	2,710	С	1,485	С	1,640
Coconut Road	Via Coconut to Three Oaks	4	D	2,710	С	1,494	С	2,008
River Ranch Road	Corkscrew Road to Williams	2	D	1,180	В	390	В	431
Sandy Lane	Broadway Avenue to Corkscrew	2	D	1,180	В	400	В	442
Via Coconut Point	Pelican Colony Boulevard to Coconut Road	4	D	2,710	В	536	В	720
Via Coconut Point	Coconut Road to Williams Road	4	D	2,710	С	1,393	С	1,872
Via Coconut Point	Williams Road to Corkscrew Road	4	D	2,710	В	400	В	538
Williams Road	West Way to Tamiami Trail	2	D	1,180	С	717	С	792
	T T	^		1,122	- î	2.1.1	- î	211
Williams Road	Via Coconut Point to Three Oaks Parkway	2	D	1,180	С	1,039	F	1,396
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Spring Creek Road	at Coconut Road	2	D	1,180	В	157	В	173
El Dorado Boulevard	at Coconut Road	2	D	1,180	В	130	В	144
Via Veneto	at Coconut Road	2	D	1,180	С	527	В	582





Koadv	Vay LOS Ana		OT Roadway Volumes	
Roadway	Segment	Lanes	Performance Standard Peak Hour Directional Service Volumes	2024 Roadway Volumes (One Way)

Roadway	Segment	Lanes	Performance Standard Peak Hour Directional Service Volumes		2024 Roadway Volumes (One Way)		2034 Roadway Volumes (One Way)	
			Performance	Capacity	LOS	Volume	LOS	Volume
Tamiami Trail	Within the Village of Estero	6	D	2,814	F	3,134	F	3,462
Ben Hill Griffin Parkway	Corkscrew Road to Estero Parkway	4	Е	2,000	D	1,736	F	2,222
Corkscrew Road	Ben Hill Griffin Parkway to Bella Terra	4	Е	1,960	D	1,490	F	2,002
Corkscrew Road	Tamiami Trail to I-75	4	Е	1,960	D	1,616	F	2,172
Estero Parkway	Tamiami Trail to Three Oaks Parkway	4	Е	2,000	С	1,273	D	1,406
Three Oaks Parkway	Williams Road to Corkscrew Road	4	E	1,940	F	1,945	F	2,490





What is Intersection Level of Service (LOS)?

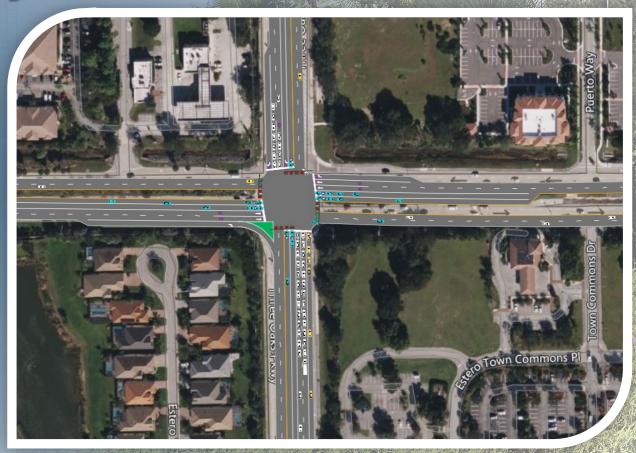
LOS	Control Delay per Vehicle (seconds per vehicle)
А	≤ 10
В	> 10-20
С	> 20-35
D	> 35-55
E	> 55-80
	> 80







- Intersection LOS
- Average Intersection Delay
- Worst Case Approach LOS
- Worst Case Approach Delay







Signalized Intersections within the study limits include the following:

- Tamiami Trail (U.S. 41) and Estero Parkway
- Tamiami Trail (U.S. 41) and Broadway Avenue F
- Tamiami Trail (U.S. 41) and Corkscrew Road F
- Tamiami Trail (U.S. 41) and Williams Road
- > Tamiami Trail (U.S. 41) and Coconut Road F
- Corkscrew Road and Via Coconut Point
- Corkscrew Road and River Ranch Road
 B
- Corkscrew Road and Three Oaks Parkway

- ➤ Ben Hill Griffin Parkway and Estero Parkway E
- Ben Hill Griffin Parkway and Corkscrew Road
- ➤ Ben Hill Griffin Parkway and Everblades Parkway B
- ➤ Three Oaks Parkway and Coconut Road
- ➤ Three Oaks Parkway and Williams Road
- Three Oaks Parkway and Estero Parkway
- Coconut Road and Via Coconut Point
 D





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- > Tamiami Trail (U.S. 41) and Coconut Road
- Corkscrew Road and Via Coconut Point
- Corkscrew Road and River Ranch Road
- Corkscrew Road and Three Oaks Parkway

- Ben Hill Griffin Parkway and Estero Parkway
- Ben Hill Griffin Parkway and Corkscrew Road
- Ben Hill Griffin Parkway and Everblades Parkway C
- ➤ Three Oaks Parkway and Coconut Road
- ➤ Three Oaks Parkway and Williams Road
- ➤ Three Oaks Parkway and Estero Parkway
- Coconut Road and Via Coconut Point





Unsignalized Intersections within the study limits include the following:

➤ Tamiami Trail (U.S. 41) and Pelican Sound Drive	F
➤ Tamiami Trail (U.S. 41) and Pelican Colony Boulevard	В
➤ Tamiami Trail (U.S. 41) and Via Rapallo Drive	E
➤ Tamiami Trail (U.S. 41) and Fountain Lakes Boulevard	A
➤ Tamiami Trail (U.S. 41) and Commons Way	D
➤ Ben Hill Griffin Parkway and Tidewater Key Boulevard	A
Coconut Road and Walden Center Drive	A
Coconut Road and Coconut Shores Drive	A
Coconut Road and North Commons Drive	A

➤ Coconut Road and Olde Meadowbrook Boulevard	A
➤ Coconut Road and Spring Creek Road	A
➤ Corkscrew Road and Cypress Shadows Boulevard	A
Corkscrew Road and Wildcat Run Road	A
➤ Via Coconut Point and Williams Road	C
➤ Via Coconut Point and Pelican Colony Boulevard	A







<u>Unsignalized Intersections within the study limits include the following:</u>

➤ Tamiami Trail (U.S. 41) and Pelican Sound Drive	F
➤ Tamiami Trail (U.S. 41) and Pelican Colony Boulevard	F
➤ Tamiami Trail (U.S. 41) and Via Rapallo Drive	E
➤ Tamiami Trail (U.S. 41) and Fountain Lakes Boulevard	A
➤ Tamiami Trail (U.S. 41) and Commons Way	D
➤ Ben Hill Griffin Parkway and Tidewater Key Boulevard	A
Coconut Road and Walden Center Drive	A
Coconut Road and Coconut Shores Drive	A
Coconut Road and North Commons Drive	A

Coconut Road and Olde Meadowbrook Boulevard	A
➤ Coconut Road and Spring Creek Road	A
➤ Corkscrew Road and Cypress Shadows Boulevard	B
Corkscrew Road and Wildcat Run Road	A
➤ Via Coconut Point and Williams Road	C
➤ Via Coconut Point and Pelican Colony Boulevard	A

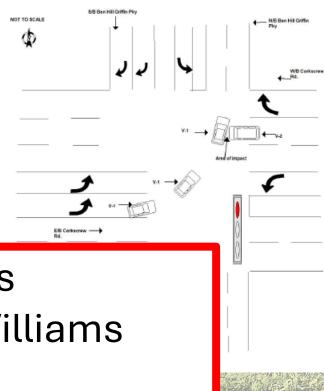






Crash Data – 5 Year History

- Corkscrew Road and Three Oaks Parkway 179
- Tamiami Trail and Estero Parkway 165
- Tamiami Trail and Corkscrew Road 158
- Tamiami Trail and Williams Road 118
- Tamiami Trail and Coconut Road 105
- Three Oaks Parkway
- Corkscrew Road an
- 3 Accidents with Fatalities
- 2 Due to left turns onto Williams Road from Tamiami Trail





Multimodal Impacts















> Tamiami Trail

- State maintained constrained roadway
- Monitor signal timings and phasing for improvements







Source: Google Earth









- > Williams Road (Via Coconut Point to Three Oaks Parkway)
 - Potential turn lane additions at Three Oaks Parkway
 - Potential 2 to 4 lane widening

Scheduled roundabout addition at River Ranch

Road intersection



Study Update









- Corkscrew Road (Tamiami Trail to I-75)
 - Lee County Cost Feasible 6-Laning
- Corkscrew Road (East of Ben Hill Griffin)
 - Ultimate design planned for the future 6-Laning
- >Three Oaks Parkway
 - Increase capacity thru Lee County involvement to meet current and future travel demands



Source: Google Earth





► Tamiami Trail & Estero Parkway

- Estero Parkway turn lanes insufficient length
- Close the left turn into Walmart and lengthen the dual left turn lanes onto Tamiami Trail (U.S. 41)





Source: Google Earth





➤ Tamiami Trail & Williams Road

Add exclusive westbound right turn lane

 Consider protected northbound and southbound left turns to alleviate

severe crash risk

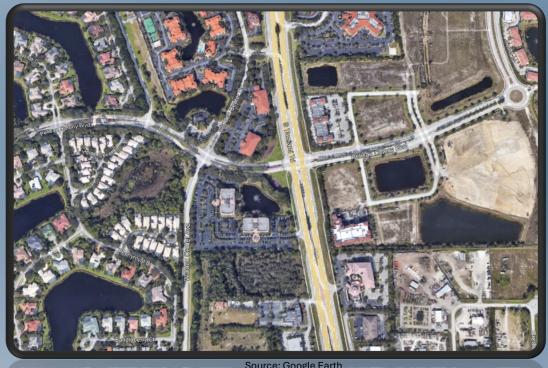






- > Tamiami Trail & Pelican Colony
 - Installation of a traffic signal







> Tamiami Trail & Coconut Road

- Extend westbound left turn lane
- Future Pelican Colony traffic signal may help alleviate traffic congestion at this intersection







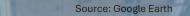
Corkscrew Road & Via Coconut Point

 Southbound turn lane improvements could improve capacity.













> Tamiami Trail & Pelican Sound Drive

- Modify intersection to right-in/right-out to address unprotected movements across Tamiami Trail.
- Potential future signal with development to the east





Source: Google Earth







- > Tamiami Trail & Via Rapallo Drive
 - Recommend completing a signal warrant analysis.











Village of Estero Priority Improvements





High Priority Improvements (Safety & Operational)

- > Tamiami Trail & Williams Road
 - Protected left turns along Tamiami Trail. Addition of exclusive westbound right turn lane.
- > Tamiami Trail & Coconut Road
 - Eastbound and Westbound left turn lane improvements, along with coordination with future Woodfield development. Addition of traffic signal (permitting stage) at Pelican Colony to help relieve congestion at Coconut Road.
- > Tamiami Trail & Via Rapollo Drive & Fountain Lake Boulevard
 - Traffic Signal warrant studies.



Area-Wide Traffic

Study Update

Medium Priority Improvements

(Operational)

- ▶ Tamiami Trail & Estero Parkway
 - Increase WB left turn lane storage (Remove Walmart left turn)
- > Tamiami Trail & Corkscrew Road
 - Modify the westbound approach to a dual left turn, single through lane, and exclusive right turn lane, as well as add a secondary right turn lane for the eastbound approach.
- Miscellaneous Signal Timing Improvements



Low Priority Improvements (Operational or Future Studies)

- ➤ Tamiami Trail & Broadway Avenue
 - Addition of exclusive eastbound and westbound left turn lanes
- Coconut Road & Coconut Shores Drive & Olde Meadowbrook
 - Roundabout Study
- Corkscrew Road & Via Coconut Point
 - Southbound left turn lane extension



Future Improvements (By Others)

- >Three Oaks Parkway Capacity Improvements
 - Lee County Department of Transportation
- Corkscrew Road Widening
 - Lee County Department of Transportation





VILLAGE OF ESTERO

