



SR 524 Corridor PLANNING STUDY

FM# 437983-1

Public Meeting

Florida Solar Energy Center

June 12, 2017





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All inquiries or complaints will be handled according to FDOT procedure and in a prompt and courteous manner.





- Purpose of Meeting
- What Have We Learned?
- What are the Potential Solutions?
- How Do we Move Forward?
- Questions and Discussion



What is the Purpose of Tonight's Meeting?

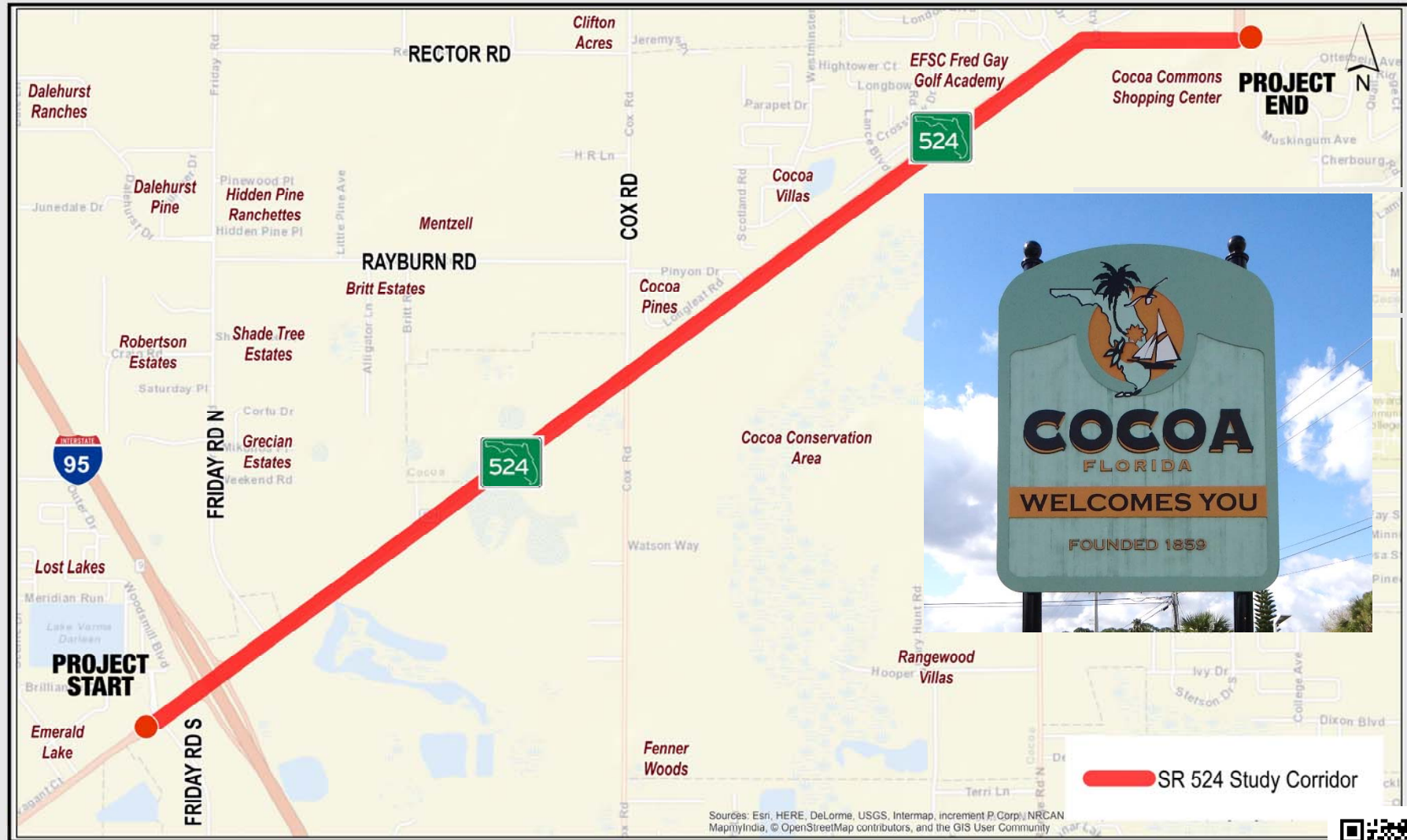
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- The Florida Department of Transportation (FDOT) is conducting a corridor planning study for **State Road (SR) 524** from S. **Friday Road**, west of I-95, to **Industry Road**.
- We will review:
 - **Purpose and need for the project** – what are the current and future issues?
 - **Potential solutions for the corridor** - that establish a context sensitive solution for all users of the corridor
 - **Next steps in the SR 524 improvement process** – how do we move forward with implementation



What are the Study Area Limits?



Characteristics of SR 524 Corridor Study Area

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- 3.1 miles
- 1 travel lane in each direction
- 7,300 – 14,400
Annual Average Daily Traffic
(AADT)
- Level of service “C”
- 6-8% truck traffic
- 4 traffic signals
 - Cox Road, London Boulevard, Shopping Center, and Industry Road





Speed Limit

- 45 mph posted speed limit from S. Friday Road to N. Friday Road; and from London Boulevard to Industry Road
- 55 mph posted speed limit from east of N. Friday Road to London Boulevard

Right-of-Way Width Varies

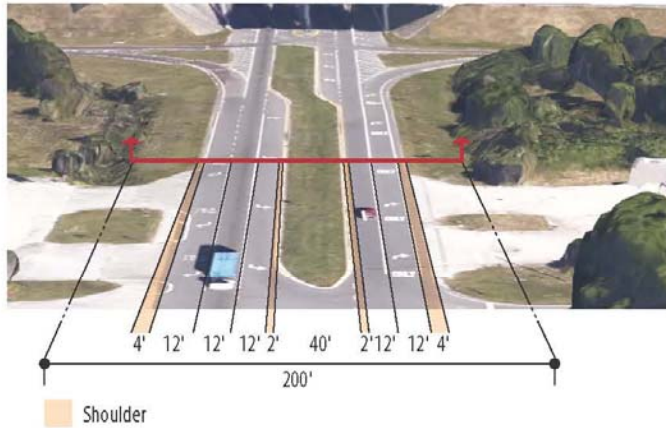
- 200' from S. Friday Road to I-95 Bridge
- 105' under I-95 Bridge
- 200' from I-95 Bridge to London Boulevard
- 218' from London Boulevard to Shopping Center
- 253' from Shopping Center to Industry Road



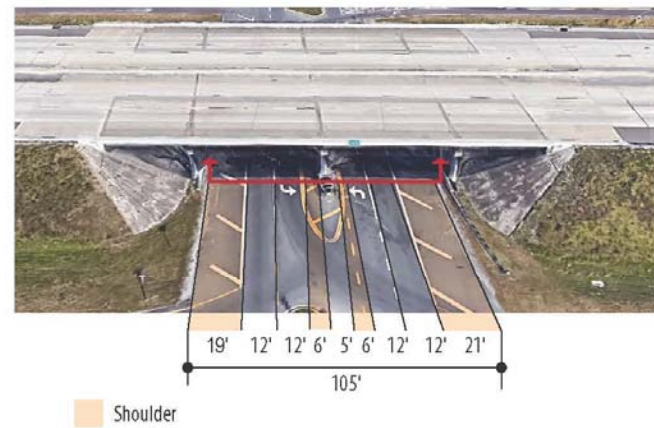
What SR 524 Looks Like Today



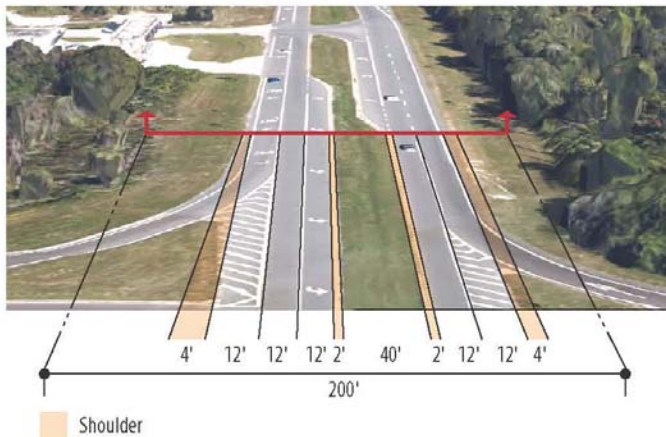
1 S. Friday Road to I-95



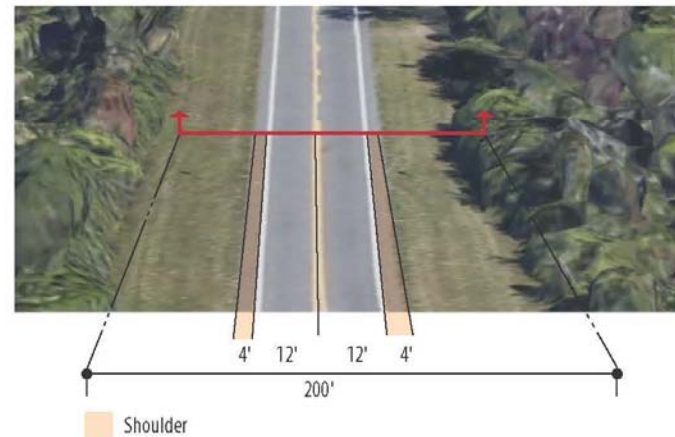
2 I-95 Interchange



3 I-95 to N. Friday Road



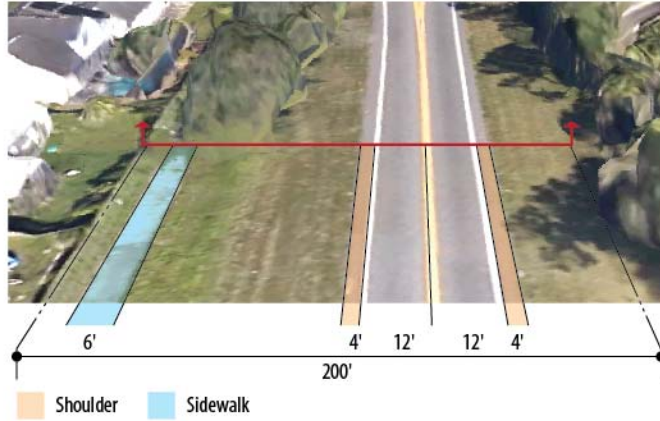
4 N. Friday Road to Cox Road



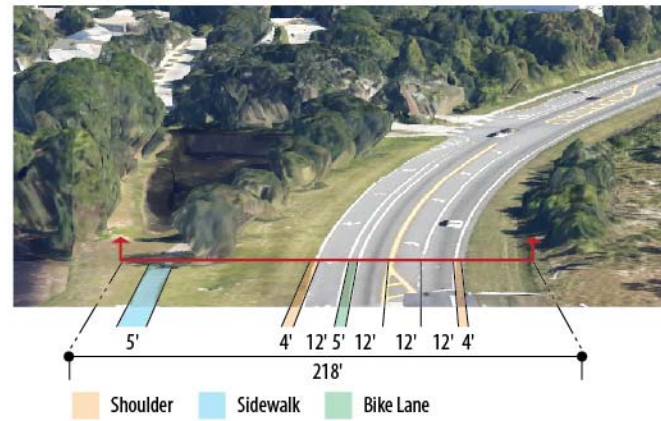
What SR 524 Looks Like Today



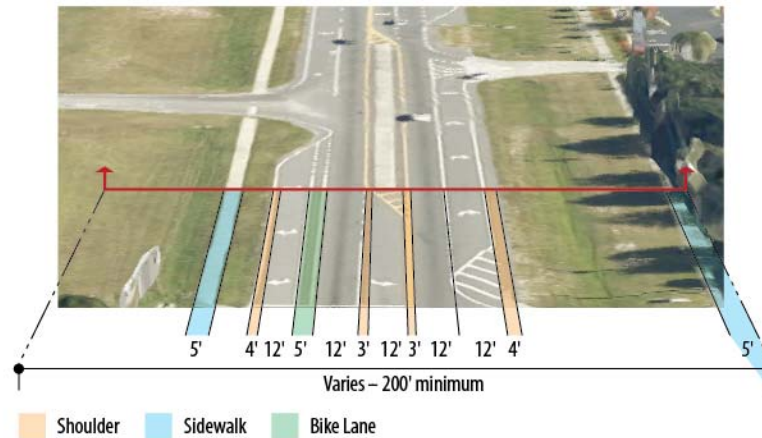
5 Cox Road to London Boulevard



6 London Boulevard to Shopping Center Intersection



7 Shopping Center Intersection to Industry Road





Purpose & Need: What Improvements are Needed and Why?





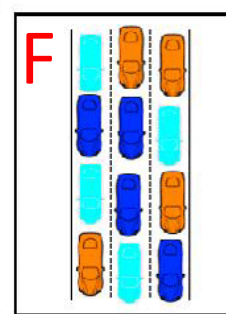
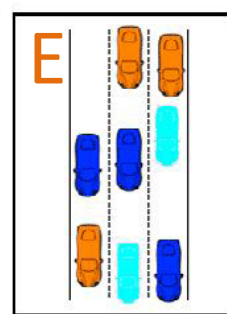
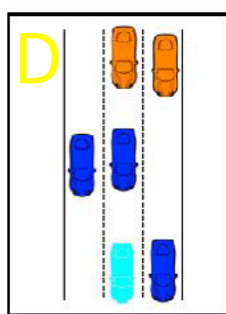
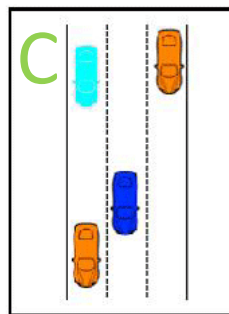
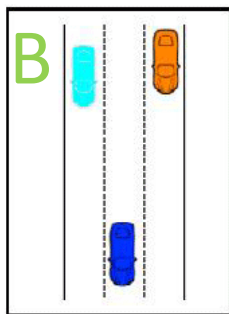
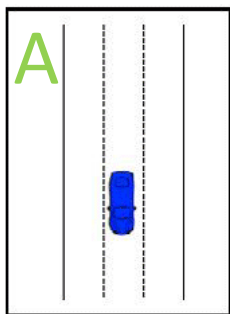
Purpose & Need: Data Analysis



Roadway Operating Conditions will Decline



Segment	2017		2040	
	AADT	LOS	AADT	LOS
S. Friday Road to I-95 W	8,600	LOS C	21,100	LOS E
I-95 West to I-95 E	9,100	LOS C	21,700	LOS E
I-95 East to N. Friday Road	9,900	LOS C	22,300	LOS E
N. Friday Road to Walmart Access Road	7,300	LOS C	18,600	LOS E
Walmart Access Road to Cox Road	7,300	LOS C	16,500	LOS C
Cox Road to Pinyon Drive	10,600	LOS C	18,700	LOS E
Pinyon Drive to Westminster Drive	10,600	LOS C	18,800	LOS E
Westminster Drive to London Blvd	9,300	LOS C	17,600	LOS D
London Blvd to Shopping Center	14,200	LOS C	21,300	LOS E
Shopping Center to Industry Road	14,400	LOS C	23,300	LOS E



Intersection Operating Conditions will Decline



Intersection	Control	Peak Hour	2017	2040
			LOS	LOS
S. Friday Road	Two-Way Stop Controlled	AM	LOS C	LOS F
		PM	LOS D	LOS F
I-95 SB Ramps	Two-Way Stop Controlled	AM	LOS E	LOS F
		PM	LOS F	LOS F
I-95 NB Ramps	Two-Way Stop Controlled	AM	LOS C	LOS F
		PM	LOS C	LOS F
N. Friday Road	Two-Way Stop Controlled	AM	LOS C	LOS F
		PM	LOS C	LOS F
Walmart Access Road	Signalized	AM	N/A	LOS A
		PM		LOS A
Cox Road	Signalized	AM	LOS B	LOS E
		PM	LOS B	LOS E
London Boulevard	Signalized	AM	LOS A	LOS A
		PM	LOS A	LOS A
Industry Road	Signalized	AM	LOS B	LOS F
		PM	LOS B	LOS F



Source: Analyzed using Synchro's HCM 2000 Unsignalized Intersection Capacity Analysis & Synchro's Lanes, Volumes, Timings Methodology. For unsignalized intersections, LOS reflects worst LOS on side road approach.



Higher than Average Crash Rate

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Motor Vehicle Crashes

- Higher than statewide average at 3.78 vs. 2.09
- Within I-95 interchange area – nearly 3x higher than statewide average
- 3 were fatal, 60 involved injuries, and 61 involved property damage

Pedestrian/Bicycle Crashes

- 4 bicycle/pedestrian accidents (2009 to 2013)

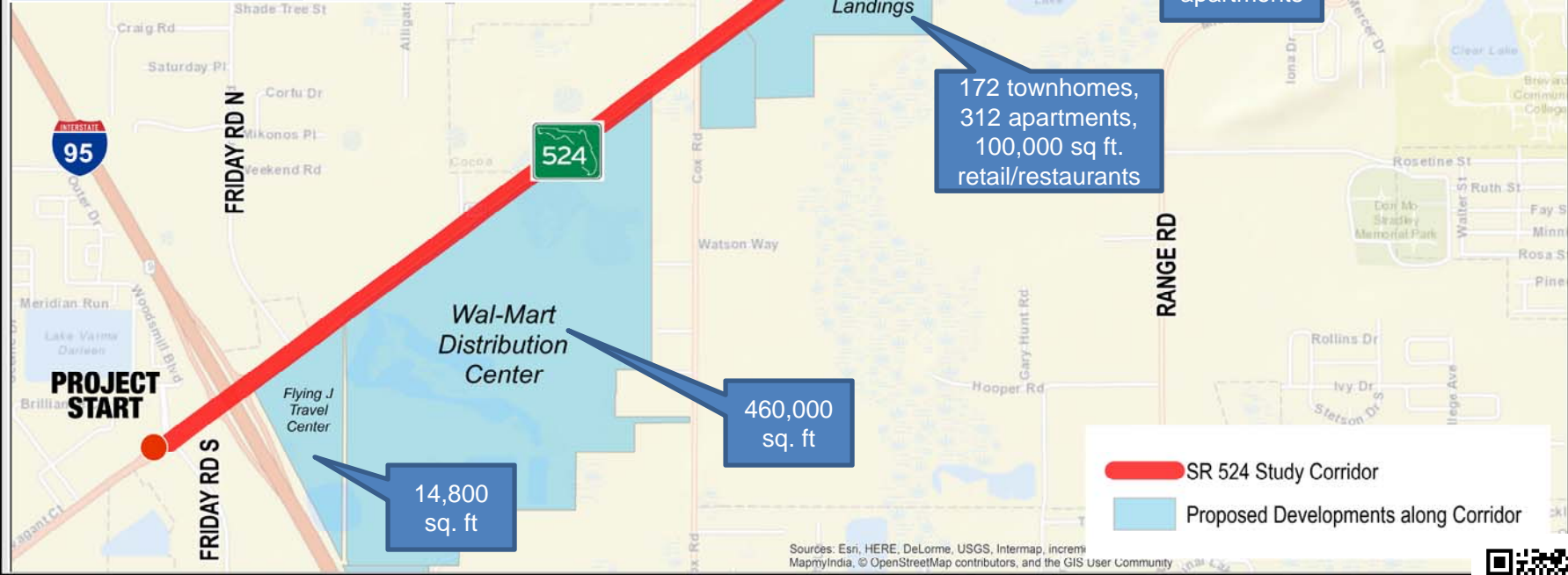
Crash Location	Total Number of Crashes	Pedestrian Involved	Bicycle Involved	Corridor Average Crash Rate	Statewide Crash Rate
S. Friday Road to I-95	1	0	0	6.15	2.63
I-95 Interchange	23	0	0	6.98	2.25
I-95 to N. Friday Road	12	1	0	4.30	2.63
N. Friday Road to Cox Road	14	0	0	0.28	0.93
Cox Road to London Blvd	21	1	1	0.32	1.72
London Blvd to Industry Road	53	1	0	4.65	2.38
Total (2010-2014)	124	3	1	3.78 (Average)	2.09 (Average)



Major Developments will Increase Traffic



Development Name	Size/Units
Walmart Distribution Center	460,000 SF warehouse
Flying J Travel Center	14,800 SF
London Cove	6 commercial lots (8.76 acres) 61 townhomes
The Preserve	248 apartments
Cocoa Landings	100,000 SF retail/restaurant 172 townhomes 312 apartments
Adamson Creek	509 single-family homes
Emerald Lakes	44,000 SF retail/restaurant 159 single-family homes



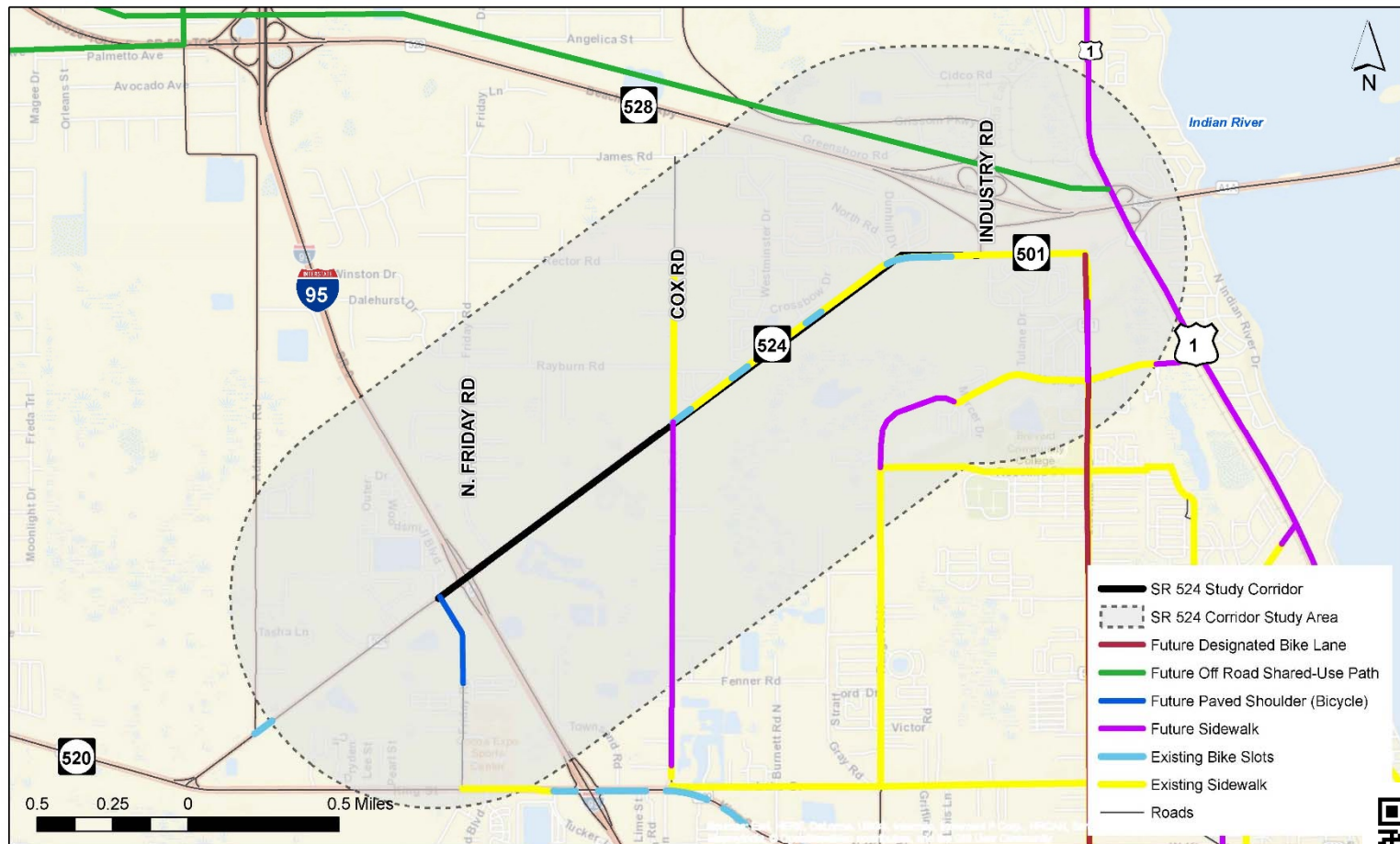
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment PmapyIndia, © OpenStreetMap contributors, and the GIS User Community



Pedestrian Paths and Bicycle Lanes are Limited

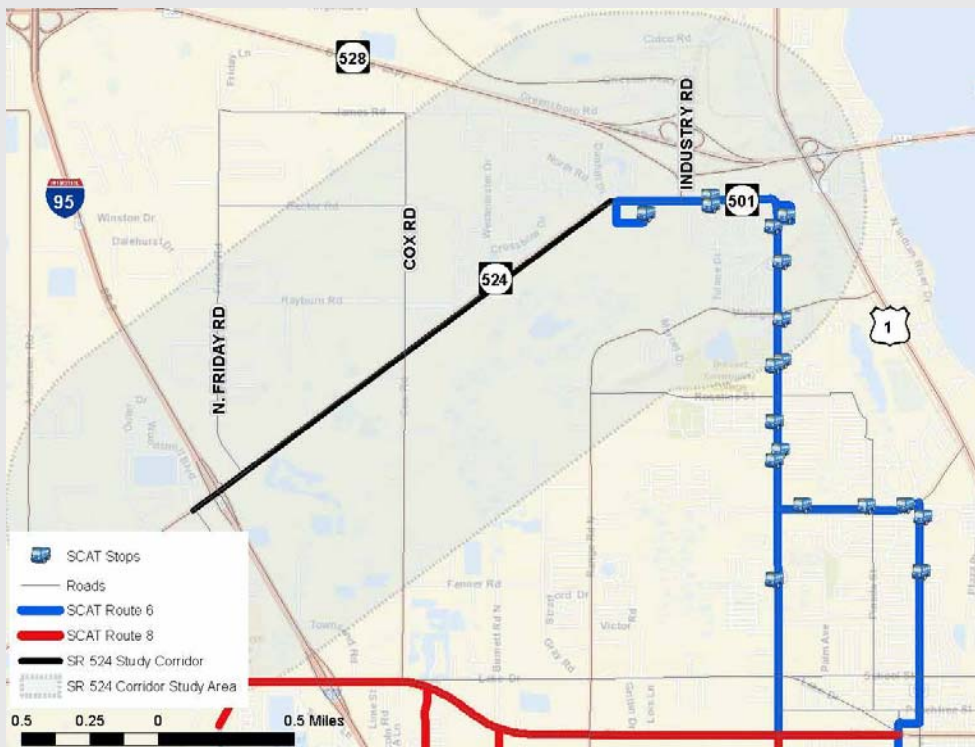


- Existing sidewalk on the north side between Cox and Industry
- Bicycle lane on the north side between London and Industry



Transit Routes are Limited

- Currently served by two Space Coast Area Transit (SCAT) bus routes at corridor ends – Route 6 and Route 8
- Future West Cocoa Circulator route planned



- **Land Use**

- The Corridor is projected to experience both **residential and employment growth** in the next 15 years. The combination of planned developments are estimated to generate over **12,000 additional trips** on the Corridor.

- **Traffic**

- By **2040**, the majority of the Corridor is **projected to operate in failing conditions** with no geometric improvements to existing infrastructure.
- By **2040**, the majority of the Corridor **intersections (five out of eight) will be operating at failing conditions** with no geometric improvements to existing infrastructure, with **particularly long delays at the I-95 Southbound ramp and N. Friday Road** intersections.

- **Safety**

- **Vehicular safety improvements are needed**, particularly at the I-95 intersection.
- **Pedestrian safety improvements are needed**, especially at London Road.

- **Multimodal Accommodations**

- **Enhanced bicycle and pedestrian accommodations** are needed to provide safe travel for non-vehicular users of the Corridor.





Purpose & Need: Public Input



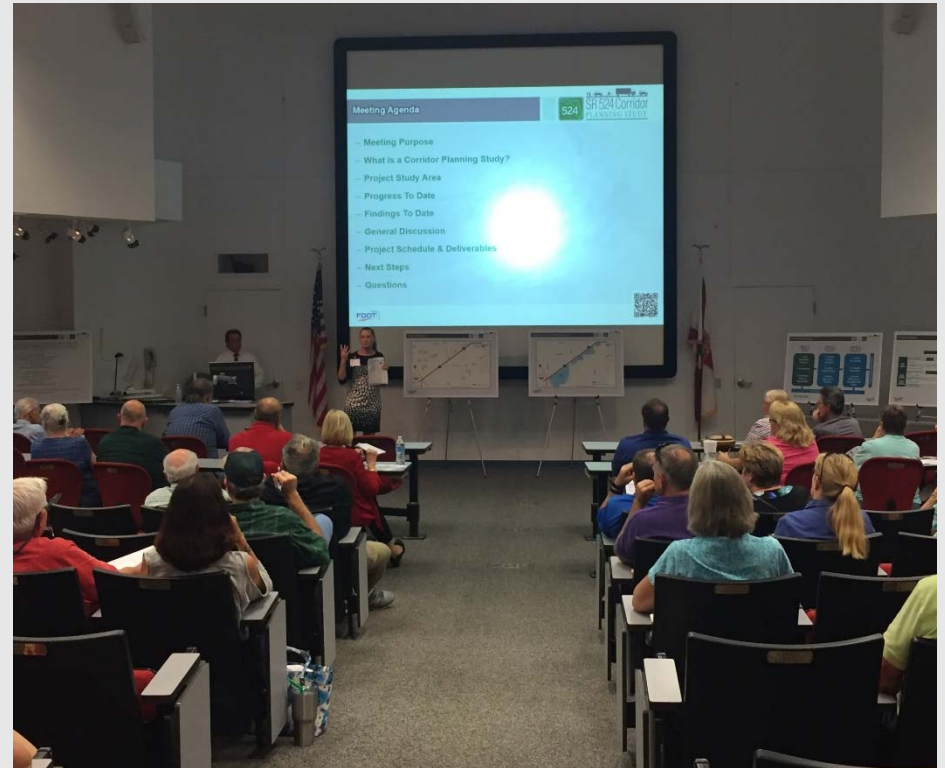
What We Heard You Say....

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Concerns Included:

- Impacts of new development
 - On traffic volumes
 - On corridor character
 - On property values
- Provide additional roadway capacity (widening)
- Improve safety for all users
- Minimize right-of-way impacts
- Develop and maintain corridor character
- Provide safe and reliable access to all users
- Prioritize multi-modal facilities
 - Pedestrian & bicyclists; multi-use paths
- Ensure driveways are accessible and safe
- Improve I-95 interchange ramp terminal intersections
- Mitigate traffic noise
 - Noise barriers



Guiding Principles for Developing Roadway Improvements

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In response to public/stakeholder input, five guiding principles were developed to frame the development of a conceptual alternative:

- **Safety and Security**
 - Provide a safe and secure Corridor
- **Mobility, Connectivity, and Accessibility**
 - Facilitate the easy movement of people and goods, improve interconnectivity between activity centers, I-95, SR 520, and SR 528, and provide access to different modes of transportation
- **Environmental Stewardship**
 - Protect the environment and the Cocoa Conservation Area
- **Economic Vitality**
 - Promote economic development, freight movement, and the development of a specialized economic hub along the Corridor
- **Land Use Coordination**
 - Promote livable communities and mixed use development along the Corridor





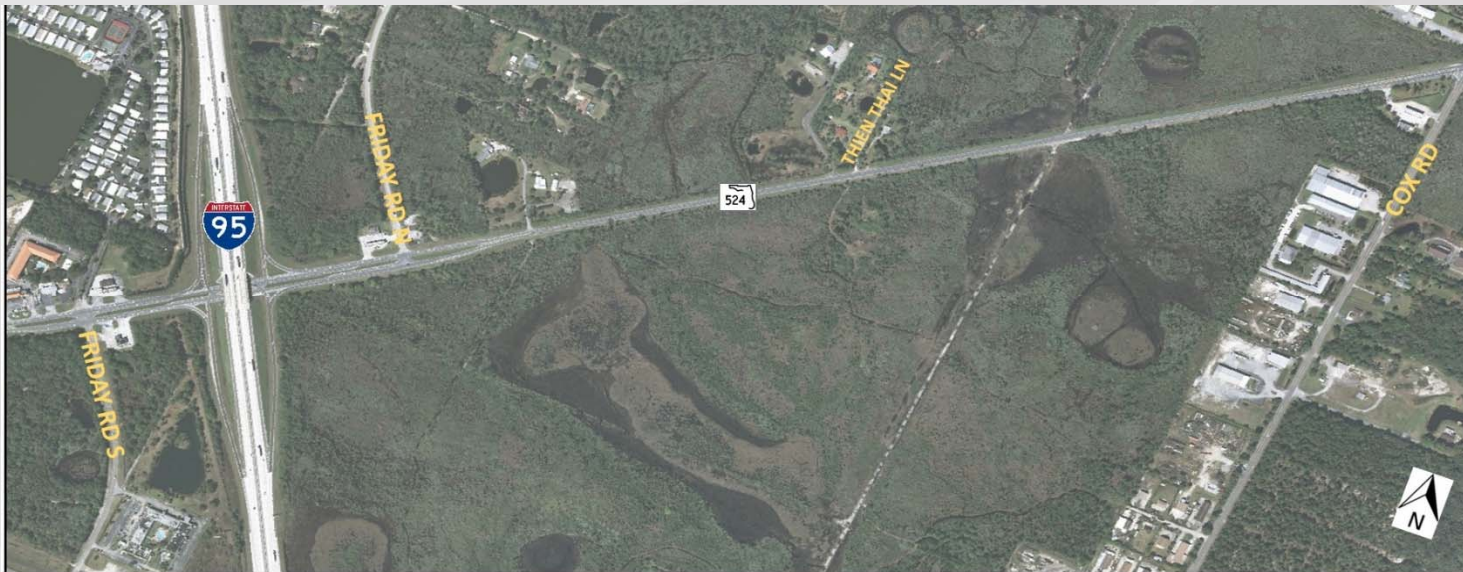
Recommendations to Improve SR 524 Corridor: Conceptual Alternatives





Industrial Character

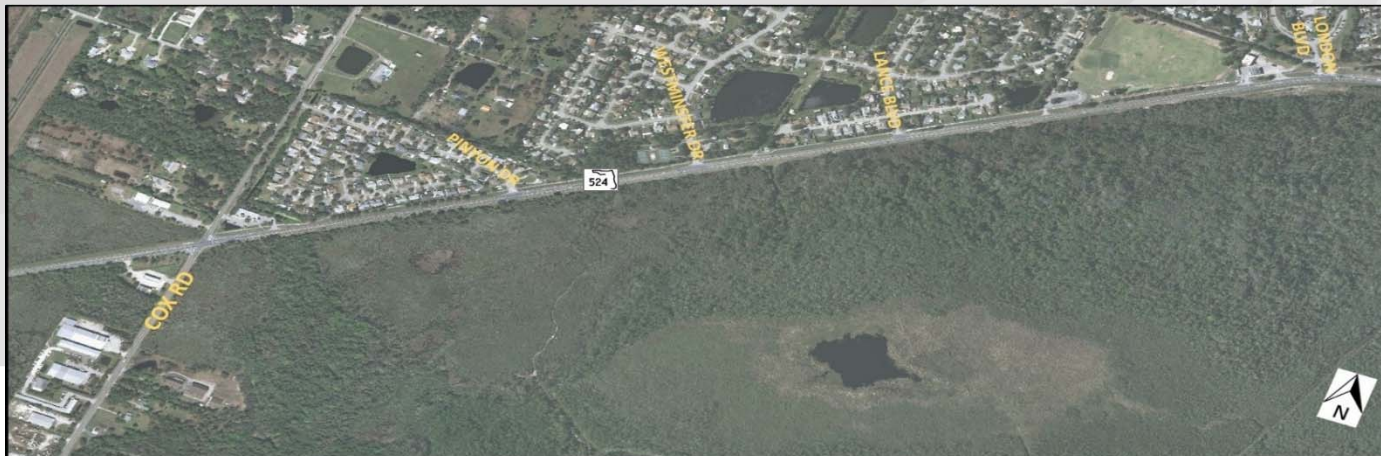
- **Four travel lanes** to accommodate additional traffic
- **Raised landscaped median** reduces impervious surface area
- **Wider through lanes** (12') to accommodate anticipated truck volumes
- **Major intersections signalized** to improve safety and mobility
- **Right turns lanes** into Walmart Distribution Center to facilitate movement of traffic
- **Accommodation for pedestrians and bicycles** on both sides SR 524 to improve safety and provide for all users





Residential/Mixed-Use Character

- **Four travel lanes** – accommodates additional traffic demand and mobility needs
- **Winding alignment** – slows traffic, supports livable communities, minimizes environmental impacts
- **Raised landscaped median** – improves safety; improves aesthetics, minimizes stormwater runoff
- **Speed limit reduction** – slows traffic, discourages truck traffic, recognizes bike/ped presence
- **Curb and gutter** – improves stormwater collection away from pavement; helps reduce speeds by providing definable barrier
- **Potential roundabouts** at Cox Road and London Blvd – improves aesthetics, slows traffic speeds, improves traffic flow and mobility
- **Enhanced pedestrian crossings** – accommodates all users; improves safety
- **Green bike lane** closer to Industry Road – accommodates all users; improves safety



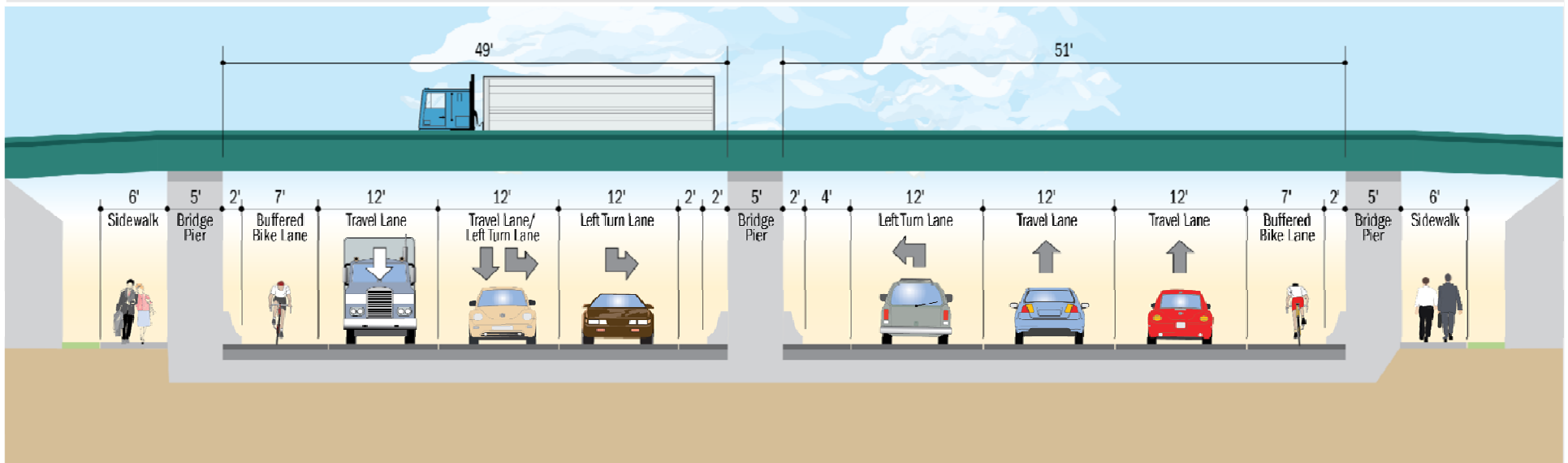
Conceptual Alternative: I-95 Interchange

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Key Improvements:

- Additional travel lanes for future traffic at the interchange
- Additional turn lanes for heavy left turns onto southbound I-95
- Traffic signals at ramps to I-95 to improve safety and traffic flow
- Buffered bicycle lanes and protected sidewalks for pedestrian safety



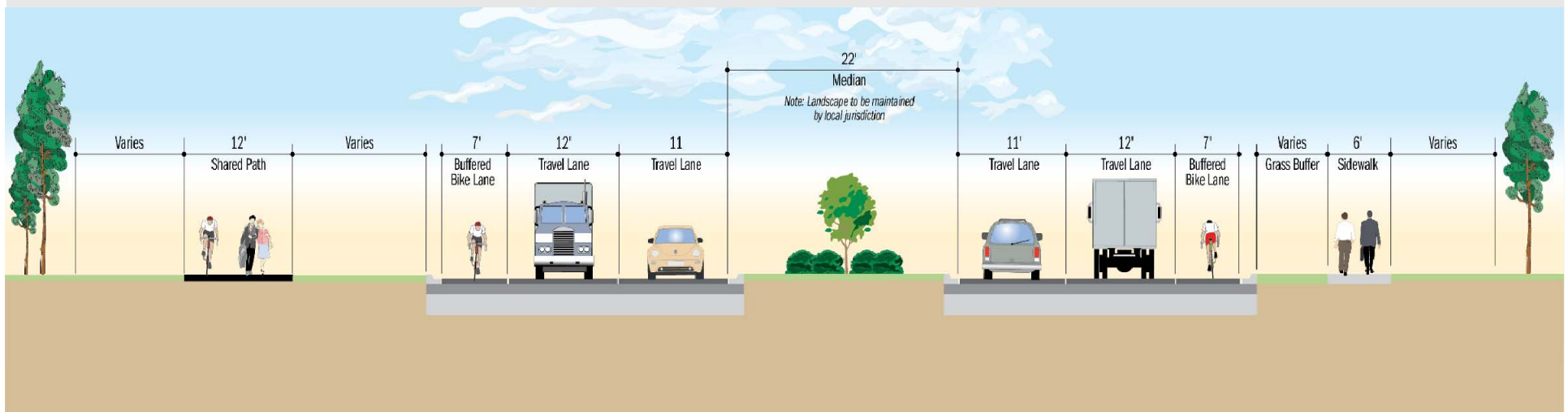
Conceptual Alternative: N. Friday Road to Cox Road

26



Key Improvements:

- Additional lanes to accommodate future traffic along the Corridor
- Buffered bicycle lanes and sidewalks, for pedestrian safety
- Raised median to improved safety
- Speed limit reduction, to promote increased safety for all users



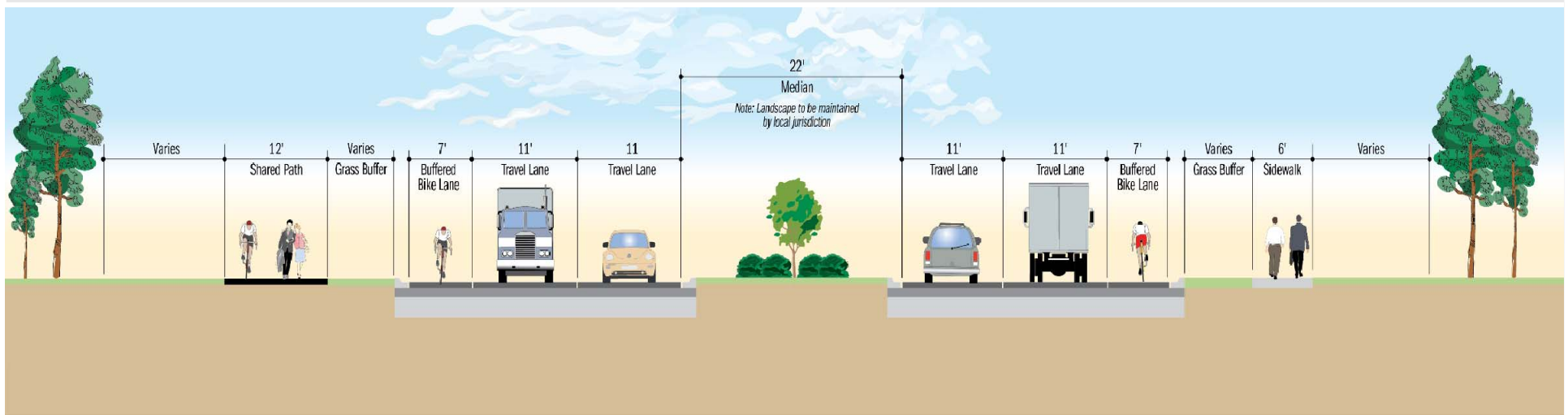
Conceptual Alternative: Cox Road to Coventry Court

27



Key Improvements:

- Additional lanes to accommodate future traffic along the Corridor
- Buffered bicycle lanes and sidewalks, for pedestrian safety
- Raised median to improve safety
- Reduced lane widths to discourage freight traffic
- Speed limit reduction to promote walkability, safety for all users, and discourage freight traffic



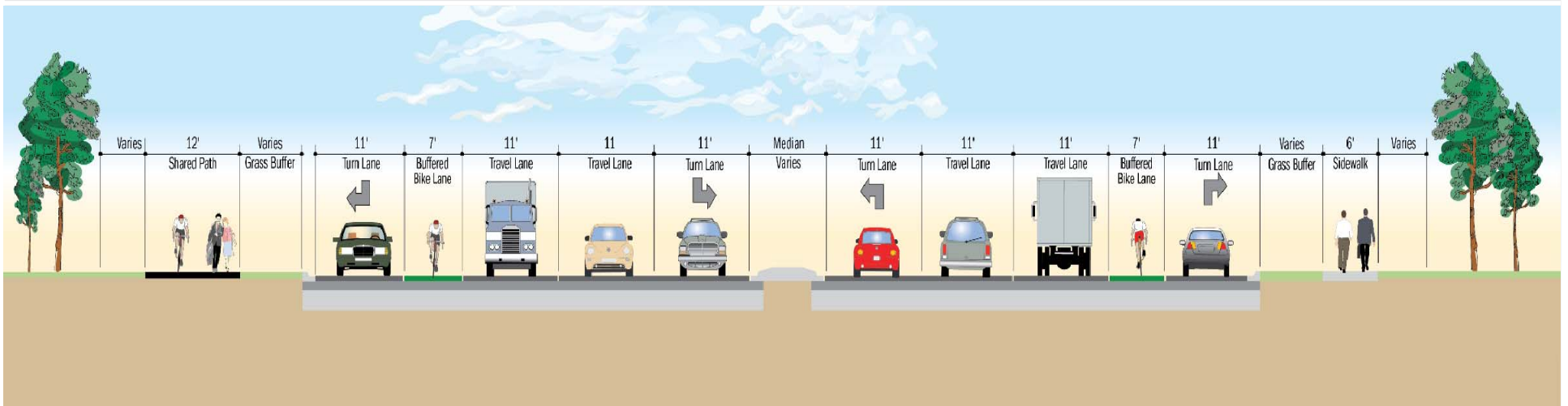
Conceptual Alternative: Coventry Court to west of Industry Road

28



Key Improvements:

- Additional lanes to accommodate future traffic along the Corridor
- Buffered bicycle lanes and sidewalks, for pedestrian safety
- Speed limit reduction to promote walkability, safety for all users, and discourage freight traffic
- Reduced lane widths to discourage freight traffic
- Turning lanes at shopping centers



Access Management



Pedestrian Crossings Will Be Improved

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Existing Sidewalks and Crossings



Example of Enhanced Pedestrian Crossing

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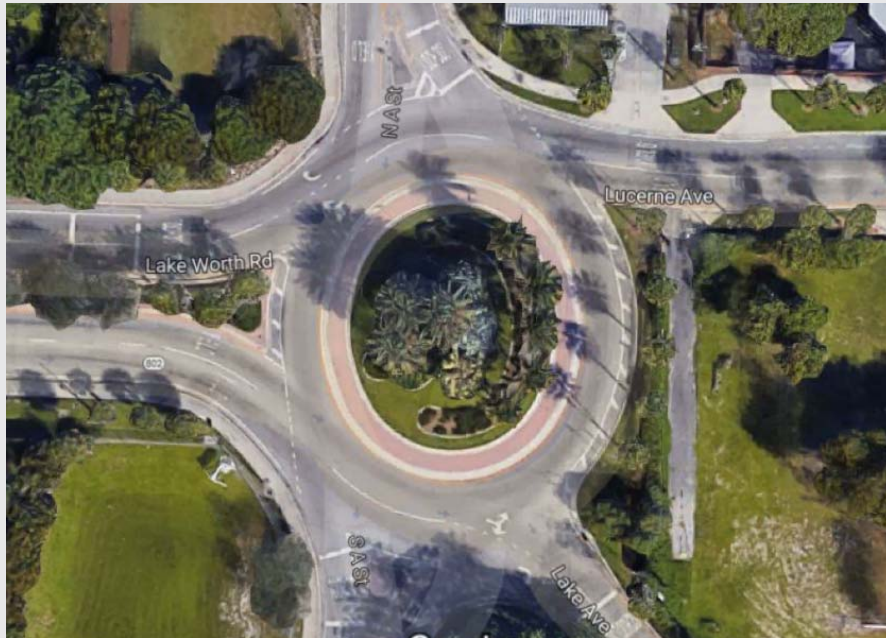
Would Roundabouts Improve SR 524?

32



FDOT Policy:

- Assess applicability of a roundabout when a road undergoes major reconstruction or before a new traffic signal is approved
- First step is a “Level 1 Screening” of intersections



SR 802/Lake Worth
Palm Beach



SR 44 at Grand Ave
Volusia County



What are the Benefits of Roundabouts?

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Improves Safety

- Fewer crashes; 90% fewer fatalities and 75% fewer injuries
- 10 – 40% fewer pedestrian/bicycle crashes
- Safer for beginning and elderly drivers
- Can be used in multiple road intersections



Saves Travel Time

- 30 to 50% increase in traffic capacity for intersection, less delay waiting at stops and signals



Is Environmentally Friendly

- Reduces pollution, fuel consumption and noise (from cars not idling at traffic signals)
- Roundabout islands can be landscaped with native plants and trees
- Generally require less land to construct than traditional intersections



Saves Money

- No cost for traffic signals and yearly maintenance
- Intersection still operates in power outages, no need for police to direct traffic

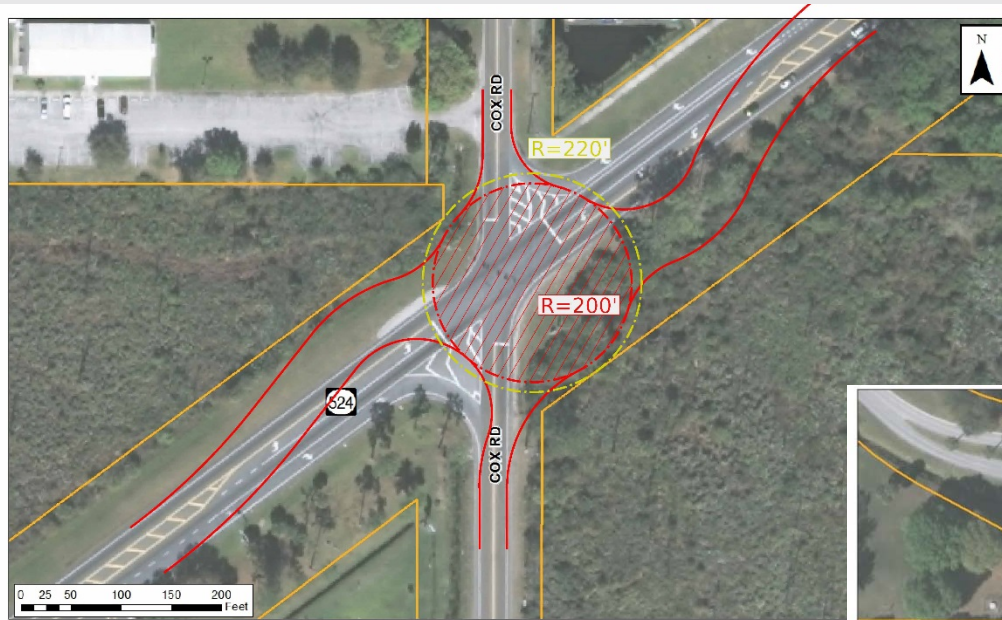


Improves Aesthetics

- Can serve as a gateway feature into the community



Roundabout Possibilities: Cox Road and London Boulevard



Cox Road



London Blvd





Building on the Corridor Study: What are the Next Steps?





Key Issues for Additional Analysis in PD&E Study

- What is the best alignment for the reconstructed road?
- Where are median openings full versus directional access?
- What speed limit should the road be designed for?
- How do we best address stormwater impacts?
- What lighting improvements are needed?
- Is there a way to minimize potential noise impacts?
- Coordination with I-95 interchange study

How Can I Remain Involved?

- Continuing public involvement opportunities throughout PD&E Study



Next Steps in SR 524 Study Process

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Action Item	Date
Corridor Alternatives and Strategy Report	July 2017
Space Coast TPO Briefing	July 13, 2017
City of Cocoa Council Briefing	July 25, 2017
Study Close-out	July 2017
Project Development & Environment Study (PD&E) Begins	2018



SR 524 Corridor PLANNING STUDY

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