AGENDA CMC

Congestion Management Committee
Collier County Transportation
Management Services Department
South Conference Room
2885 South Horseshoe Drive
Naples, Florida 34104

NOTE: THIS IS AN IN-PERSON MEETING

March 18, 2026
2:00 – 3:00 p.m.

1. **Call to Order**
2. **Roll Call**
3. **Approval of Agenda**
4. **Approval of January 21, 2026 Meeting Minutes**
5. **Open to Public for Comment on Items Not on the Agenda**
6. **Agency Updates**
   A. FDOT
   B. MPO
   C. Other
7. **Committee Action**
8. **Reports and Presentations (May Require Committee Action)**
   A. Congestion Management Process Status Update - Goal/Objectives/Performance Measures, CMP Network and Baseline Conditions for Collier County, Public Survey, and Next Steps
9. **Member Comments**
10. **Distribution Items (No presentation)**
    A. Updated 2026 Collier MPO Meeting Calendar
    B. FDOT District 1 Draft Transportation Systems Management & Operations Master Plan
11. **Next Meeting Date:**
    May 20, 2026, 2 p.m.
12. **Adjournment**

PLEASE NOTE:

The meetings of the advisory committees of the Collier Metropolitan Planning Organization (MPO) are open to the public and citizen input is encouraged. Any person wishing to speak on any scheduled item may do so upon recognition of the Chairperson. Any person desiring to have an item placed on the agenda should contact the MPO Director at least 14 days prior to the meeting date. Any person who decides to appeal a decision of the advisory committee will need a record of the proceedings pertaining thereto, and therefore may need to ensure that a verbatim record of the proceeding is made, which record includes the testimony and evidence upon which the appeal is to be based. In accordance with the Americans with Disabilities Act, any person requiring special accommodations to participate in this meeting should contact the Collier Metropolitan Planning Organization 72 hours prior to the meeting by calling (239) 252-5814. The MPO's planning process is conducted in accordance with Title VI of the Civil Rights Act of 1964 and Related Statutes. Any person or beneficiary who believes that within the MPO's planning process they have been discriminated against because of race, color, religion, sex, age, national origin, disability, or familial status may file a complaint with the Collier MPO Title VI Coordinator, Ms. Suzanne Miceli, (239) 252-5814 or by email at: Suzanne.Miceli@collier.gov, or in writing to the Collier MPO, attention: Ms. Miceli, at 2885 South Horseshoe Dr., Naples, FL 34104.

CONGESTION MANAGEMENT COMMITTEE of the
COLLIER METROPOLITAN PLANNING ORGANIZATION
MEETING MINUTES
January 21, 2026, 2:00 p.m.

1. Call to Order

Chair Hall called the meeting to order at approximately 2:01 p.m.

2. Roll Call

Ms. Miceli called the roll and confirmed a quorum was present in the room.

CMC Members Present In-Person
Dan Hall, *Chair*
Chris Ordonez
Dave Rivera
Dayna Fendrick
Don Scott
Jacob Stauffer
Karen Homiak

CMC Members Absent
Alison Bickett, *Vice-Chair*
John Lambcke
Justin Martin

MPO Staff
Anne McLaughlin, Executive Director
Dusty Hansen, Planner II
Suzanne Miceli, Operations Support Specialist II

Others Present
Kathy Eastley, Collier County Transportation Planning Planner III
Ravyn Sylvia, Kimley-Horn

3. Approval of the Agenda

Ms. Homiak *moved to approve the amended agenda.* ***Mr. Rivera*** *seconded. Passed unanimously.*

4. Approval of the November 19, 2025 Meeting Minutes

Ms. Homiak *moved to approve the November 19, 2025 minutes.* ***Mr. Scott*** *seconded. Passed unanimously.*

5. Public Comments for Items not on the Agenda

None.

6. Agency Updates

A. FDOT

None.

B. MPO

Ms. McLaughlin said incoming Collier MPO Executive Director, Carmen Monroy, had signed her employment contract, which was scheduled for approval at the February 13, 2026 MPO Board meeting.

C. Other

(i) City of Naples

None.

(ii) Collier County Public Transportation & Neighborhood Enhancement (PTNE)

None.

(iii) Collier County Transportation Planning

None.

(iv) Collier County Traffic Management Center (TMC) Operations

None.

(v) Lee County MPO

None.

7. Committee Action

A. Elect Chair and Vice-Chair

Mr. Rivera *moved to re-elect Dan Hall as Chair and Alison Bickett as Vice-Chair.* ***Mr. Scott*** *seconded. Passed unanimously.*

B. Reschedule the Committee's September 16, 2026, Meeting to October 21, 2026

Ms. Hansen said staff was requesting to reschedule the Committee's September 16, 2026 meeting to October 21, 2026, to accommodate the schedule for completion of the Congestion Management Process (CMP).

Ms. Homiak *moved to reschedule the Committee's September 16, 2026, Meeting to October 21, 2026.* ***Mr. Scott*** *seconded. Passed unanimously.*

8. Reports and Presentations (May Require Committee Action)

A. Overview of Updated MPO Call for Projects Submittal Requirements, Schedule and Funding

Ms. McLaughlin said the 2050 Long Range Transportation Plan (LRTP) Cost Feasible Plan reflects limitations imposed by steep reductions in the State's revenue projections. A portion of the MPO's Surface Transportation Block Grant - Urban (SU) annual funding is allocated to roadway improvements as well as congestion mitigation and safety projects. Transportation Alternative – Urban (TALU) funding is allocated to bike-ped projects. The MPO is prioritizing the completion of projects already in the pipeline over funding new projects. Other scheduling considerations include FDOT's annual March 31st deadline and, a decision to postpone issuing a Call for Projects for SUN Trail funding this year, and that some projects may need to be resubmitted in FDOT's GAP portal system.

Ms. McLaughlin provided a presentation (which can be viewed in the January 21, 2026 CMC Agenda).

A group discussion followed, and it was noted that inflation and increasing costs are significantly affecting the call-for-projects process. It was suggested that Committee members wait for the updated Congestion Management Process (CMP) scoring criteria before submitting new applications. Bridges have dropped off as an eligible category of SU funding with the 2050 LRTP. The LRTP identifies approximately $7.5 million in SU funds for congestion management/safety projects per five-year period (approximately $1.5 million per year). There is a current backlog of prioritized but unfunded projects. MPO staff anticipates issuing a call for congestion management/safety projects for FY2034 or FY2035 after completion of the major update to the CMP, now underway.

FDOT's new policy directive of January 7, 2026, requires a feasibility study demonstrating full project funding before a Project Development & Environmental (PD&E) or Preliminary Engineering phase can be funded, that a PD&E must be completed within 18 months, and funding for construction must be identified within 8 years of the start of the PD&E phase. Committee members expressed concern regarding the feasibility of submitting projects under this requirement. FDOT is expected to re-evaluate the policy and provide further guidance in the future.

This item was presented for presentation and discussion only.

B. Update on Collier and Lee MPO Consolidation Feasibility Study

Ms. McLaughlin said FDOT contracted with the Center for Urban Transportation Research, University of South Florida (CUTR), to conduct the first phase of a Feasibility Study to evaluate the potential consolidation of Collier and Lee County MPOs. CUTR provided a presentation to the Collier MPO Board and the Lee County MPO Board's Executive Committee in November. The anticipated timeline for completion of the phase one study is:

- March 2026: Survey results presented to the MPO Boards
- Spring 2026: Preparation of draft proposed MPO Apportionment Plan
- Summer 2026: Collier/Lee MPO Board Joint Workshop to review the Apportionment Plan
- Fall 2026: Final presentation to the MPO Boards
- December 2026: Study completion

A group discussion followed, and it was mentioned that more would be known when CUTR's apportionment plan was released. It is important to note that merging would not create new money for either region or ensure funding availability for regional projects. It was also noted that consolidation could increase local competition over the limited amount of money available and smaller areas could suffer. Tampa was struggling with apportionment fairness in its proposed consolidation with Hillsborough, Pinellas and Pasco Counties. However, a merged, larger MPO may have a competitive advantage when applying for discretionary grant funding.

This item was presented for presentation and discussion only.

9. Member Comments

Mr. Rivera said that construction of two additional lanes and flashers was almost completed for Broad Avenue South and 2nd Street.

Ms. Fendrick said she noticed that the mid-block crossings on U.S. 41 East are frequently utilized.

10. Distribution Items

A. Excerpts from INRIX 2025 Traffic Scorecard Report

This item was distributed.

B. FDOT Project Development Policy effective January 7, 2026

This item was distributed.

11. Next Meeting Date

March 18, 2026, 2:00 p.m. –Transportation Management Services Bldg., South Conference Room, 2885 S. Horseshoe Dr., Naples, FL, 34104 – in person.

12. Adjournment

There being no further comments or business to discuss, **Chair Hall** adjourned the meeting at 2:43 p.m.

EXECUTIVE SUMMARY
REPORTS & PRESENTATIONS
ITEM 8A

Congestion Management Process Status Update - Goal/Objectives/Performance Measures, CMP Network and Baseline Conditions for Collier County, Public Survey, and Next Steps

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OBJECTIVE: For the Committee to receive an update on the development of Collier MPO's Congestion Management Process (CMP) and to be able to provide input.

CONSIDERATIONS: Collier MPO's CMP update, including a comprehensive regional element with Lee County MPO, got underway late last year. Benesch, the CMP consultant for both MPOs, has completed the following drafts for Collier MPO:

(i) CMP Goal, Objectives and Performance Measures (**Attachment 1**)
(ii) Collier CMP Roadway Network Map (**Attachment 3**)
(iii) Collier Baseline Traffic Conditions Map (existing/committed projects through 2030) (**Attachment 3**)
(iii) Public congestion survey questions (**Attachment 2**)/public outreach timeline

Benesch will provide a presentation on the drafts and the status of plan development (**Attachment 3**). Collier MPO, Lee County MPO and Benesch will be coordinating development of the Regional CMP Element in late spring/early summer.

The proposed CMP Objectives and Performance Measures have been refined from the previous major update to the CMP. For reference, the 2022 CMP Objectives and Performance Measures are included as **Attachment 4**.

STAFF RECOMMENDATION: Provided for informational purposes and Committee discussion and input.

Prepared By: Dusty Hansen, Senior Planner

ATTACHMENTS:

1. Draft CMP Goal, Objectives and Performance Measures
2. Draft online public survey questionnaire on congestion
3. Benesch Presentation (March 2026)
4. 2022 CMP Major Update-Objectives and Performance Measures

Goal of the Congestion Management Process

Improve Collier County's transportation system performance and reliability by mitigating congestion, improving safety, and enhancing mobility.

Objectives of the Congestion Management Process

OBJECTIVE #1	Reduce recurring congestion on the Collier MPO CMP Network and the Collier-Lee Regional Roadway CMP Network.
OBJECTIVE #2	Optimize the movement of freight and goods.
OBJECTIVE #3	Improve the safety of transportation facilities.
OBJECTIVE #4	Leverage technology and innovation to reduce congestion and improve safety, when feasible.
OBJECTIVE #5	Encourage alternative modes of transportation (other than single-occupancy vehicles) to reduce vehicle miles traveled (VMT) and travel demand.
OBJECTIVE #6	Support the integration of transportation and land use, and the development and maintenance of an integrated multimodal network (including a pedestrian/bicycle/electric mobility device network and connections to transit stops).
OBJECTIVE #7	Integrate the Congestion Management Process, including the Joint Regional Element with Lee MPO, and its proposed improvements into the Long Range Transportation Plan.

Performance Measures for the Congestion Management Process

CMP OBJECTIVE	PERFORMANCE MEASURE	DATA SOURCE
1. Reduce Recurring Congestion	Percent of Roadway Miles by Volume-to-Capacity (V/C) Ratio	State/County/City LOS
	Percent of Vehicle Miles Traveled (VMT) by Volume-to-Capacity (V/C) Ratio	State/County/City LOS
	Level of Travel Time Reliability on Interstate and Non-Interstate NHS Network	FDOT Source Book
	Percent of Roadways with an Average Daily Travel Time Index Greater Than 1.0	RITIS
	Total Annual Vehicle Hours of Delay	FDOT Source Book & RITIS
2. Optimize Freight Movement	VMT on Designated Truck Routes with a V/C Ratio Greater Than 1.0	State/County/City LOS
	Level of Truck Travel Time Reliability	FDOT Source Book
	Number of Crashes Involving Heavy Vehicles/Trucks	Signal Four Crash Dashboard
3. Improve Safety	Number of Crash-Related Fatalities & Serious Injuries	FDOT Source Book & Signal Four
	Number of Crash-Related Fatalities & Serious Injuries per 100M VMT	FDOT Source Book & Signal Four
	Number of Non-Motorized Fatalities & Serious Injuries	FDOT Source Book & Signal Four
4. Leverage Technology	Number of Intersections Connected to the County Advanced Traffic Management System (ATMS)	Collier County
	Number of Programmed Projects to Install Signal Technology or Update Signal Timing Over the Next 5 Years	MPO TIP
	Number of Intersections with New Signal Technology or Signal Timing Adjustments Made Over the Past 5 Years	MPO TIP & County AUIR
5. Encourage Alternative Modes of Transportation	Number of People Registered in the FDOT Commute Connector Database That Have an Origin or Destination in Collier County	FDOT
	Average Bus Route Service Frequency and Number of Routes	Collier County
	Transit Passenger Trips per Revenue Hour	Collier County & NTD
	Transit On-Time Performance	Collier County & NTD
6. Support Integration of Transportation & Land Use	Centerline Miles of Existing & Programmed Non-Motorized Facilities	MPO BPMP & TIP
	Percentage of Funding Allocated to Multimodal Project	MPO TIP
	Share of Regional Jobs Within a 1/4-Mile of Transit Stops	Census LEHD
	Share of Regional Households Within a 1/4-Mile of Transit Stops	Census ACS
7. Incorporate CMP Into the LRTP & TIP	Number of Planned Projects with a Congestion-Reduction Component or Purpose	MPO LRTP
	Number of Programmed Projects with a Congestion-Reduction Component or Purpose	MPO TIP

CONGESTION IN COLLIER COUNTY

We Want to Hear from You!

The Collier MPO is interested in learning about how traffic congestion impacts you.

Please take our short survey. If you have any questions or comments, please email Dusty.Hansen@collier.gov

Experiences with Congestion

1. Which of the following best fits your definition of traffic congestion?
   a. Long travel times
   b. Unreliable travel times
   c. Slow traffic speeds
   d. High traffic volumes
   e. Long delays at intersections
   f. Other (please specify) _____

2. How would you rate traffic congestion in Collier County?
   a. Highly congested
   b. Moderately congested
   c. Slightly congested
   d. Not at all congested

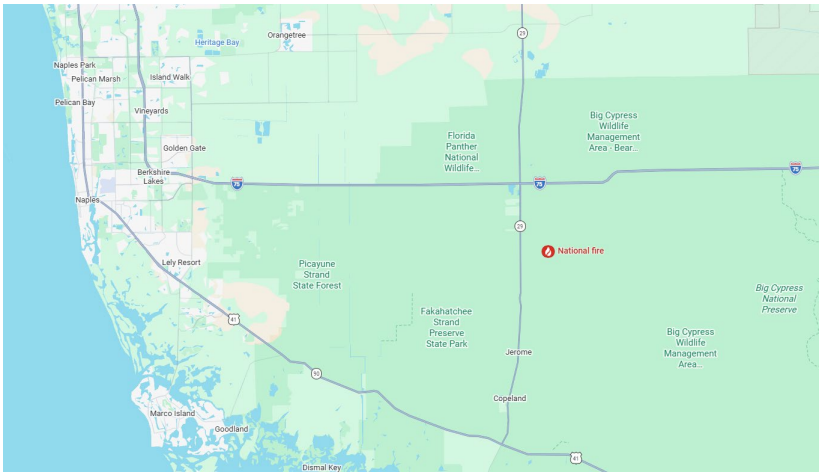
3. Which of the following do you feel are the most significant causes of traffic congestion in Collier County? (**Please Select 3 Answers**)
   a. Poor intersection/interchange design
   b. Lack of dedicated turn lanes
   c. Construction zones and special events
   d. Lack of alternative transportation options
   e. Crashes/traffic incidents
   f. Seasonal traffic from visitors
   g. High volume of freight vehicles
   h. Ineffective traffic signals/poor signal coordination
   i. Inadequate roadway capacity
   j. Traffic congestion is not an issue in the region
   k. Other (please specify) _____

4. To reduce traffic congestion, Collier County should prioritize implementing which of the following strategies? (**Please Select 3 Answers**)
   a. Building dedicated turn lanes
   b. Improving safety
   c. Improving incident clearance times
   d. Improving work zone and special event management
   e. Improving traffic signal coordination
   f. Increasing commuter programs (ex. carpool/vanpool) and rideshare options
   g. Improving public transportation/transit service (ex. bus, shuttle)
   h. Connecting neighboring communities
   i. Improving bicycle and pedestrian facilities
   j. Providing timely traveler information
   k. Improving intersections (ex. adding turn lanes, adding interchanges)
   l. Other (please specify) _____

5. How does traffic congestion in Collier County affect you? (**Please Select All That Apply**)
   a. Increased stress
   b. Increased fuel costs
   c. Reduced productivity
   d. Reduced time with friends or family
   e. Environmental concerns
   f. It does not significantly affect me
   g. Other (please specify) _____

6. How often does traffic congestion in Collier County make your travel time unpredictable?
   a. Always
   b. Often
   c. Sometimes
   d. Rarely
   e. Never

7. Please use the map below to indicate areas where you regularly encounter traffic congestion:



Travel Options

8. Do you feel that you currently have options for commuting to work other than driving alone?
   a. Yes
   b. No

9. Would you be willing to use an alternative mode of transportation (something other than driving alone in your car) for commuting to/from work if the options were available?
   a. Yes
   b. No

   If yes, please select all that you would consider:
   a. Public transportation/transit (ex. bus, shuttle)
   b. Bicycle
   c. Electric bicycle or scooter/Mobility devices
   d. Walking
   e. Carpool/vanpool
   f. Telecommute/work from home
   g. Flexible work schedules outside of typical hours
   h. Other (please specify) _____

10. Would you be willing to use an alternative mode of transportation (something other than driving alone in your car) for commuting to/from work if your employer made them available or provided incentives to use them?
    a. Yes
    b. No

    If yes, please select all that you would consider:
    a. Public transportation/transit (ex. bus, shuttle) pass or discount
    b. Bicycle parking and/or shower facilities
    c. Free or reduced cost carpool/vanpool programs
    d. Covered or priority parking for carpool/vanpool participants
    e. Telecommute/work from home
    f. Flexible work schedules outside of typical hours
    g. Employer-assisted housing near your work area
    h. Other (please specify) _____

11. Do you have the flexibility to adjust the times that you travel to/from work?
    a. Yes
    b. No

    If yes, do you use this option to avoid traffic congestion?
    a. Yes
    b. No

Travel Patterns

12. What is your current home ZIP code? _____

13. What is your current work ZIP code? _____

14. How many days per week do you normally work from home?
    a. 1-2
    b. 3-4
    c. 5
    d. I don't work from home
    e. I'm unemployed or retired

15. What is your usual commute time to work?
    a. Less than 10 minutes
    b. 10 to 14 minutes
    c. 15 to 19 minutes
    d. 20 to 24 minutes
    e. 25 to 29 minutes
    f. 30 to 34 minutes
    g. 35 or more minutes
    h. I'm unemployed, retired, or work from home

16. How much time do you spend driving on an average weekday?
    a. Less than 20 minutes
    b. 20 to 29 minutes
    c. 30 to 39 minutes
    d. 40 to 49 minutes
    e. 50 to 59 minutes
    f. 60 to 69 minutes
    g. 70 or more minutes

17. How much time do you spend driving in traffic congestion on an average weekday?
    a. Less than 20 minutes
    b. 20 to 29 minutes
    c. 30 to 39 minutes
    d. 40 to 49 minutes
    e. 50 to 59 minutes
    f. 60 to 69 minutes
    g. 70 or more minutes

18. Please share any other thoughts or comments related to traffic congestion in Collier County:

_____

_____

19. If you would like to receive email updates from the MPO, please provide your email address below:

_____

Thank you for taking our survey!

8A Attachment 3
CMC 3/18/26

COLLIER Metropolitan Planning Organization

Congestion Management Process Update

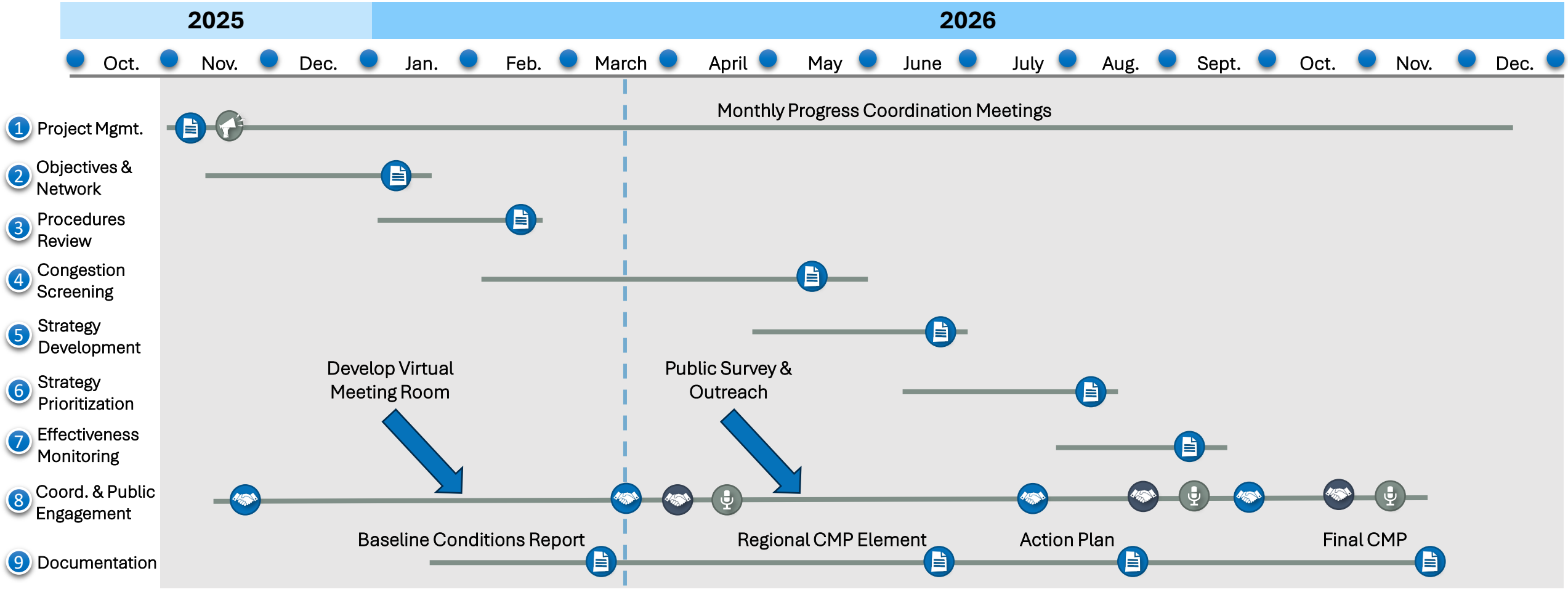
Congestion Management Committee

March 18, 2026

Agenda

- Schedule Overview
- CMP Goal, Objectives, & Performance Measures
- CMP Roadway Network & Baseline Traffic Conditions
- Public Engagement Timeline & Survey Questionnaire
- Next Steps

Schedule



Project Tasks

Technical & Citizen Advisory Committee

Kickoff Meeting

Congestion Management Committee

MPO Board Meetings

Task Deliverable/Report

Goal & Objectives

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Performance Measures

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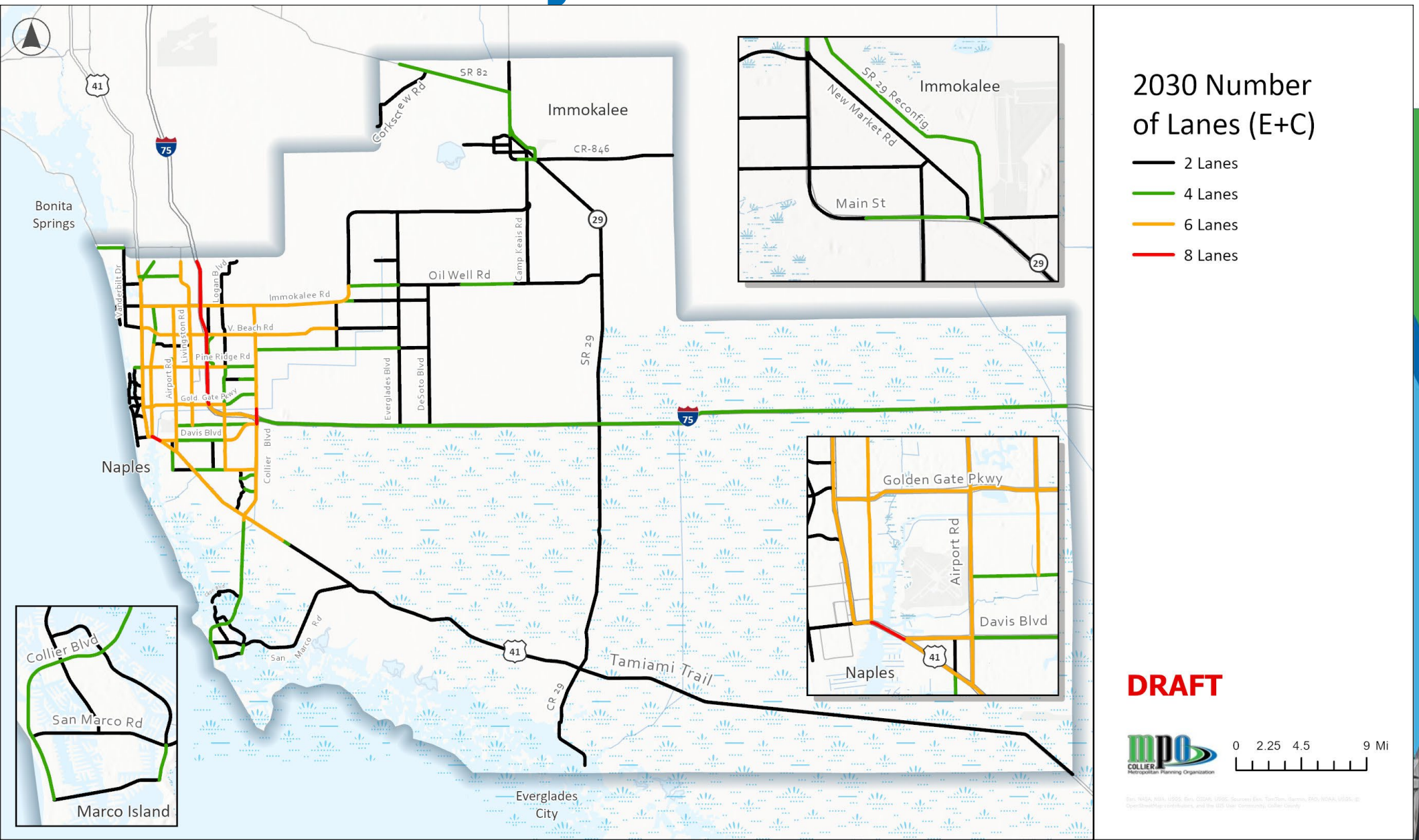
Incorporate CMP Into the LRTP & TIP	Number of Planned Projects with a Congestion-Reduction Component or Purpose	MPO LRTP
	Number of Programmed Projects with a Congestion-Reduction Component or Purpose	MPO TIP

CMP Roadway Network



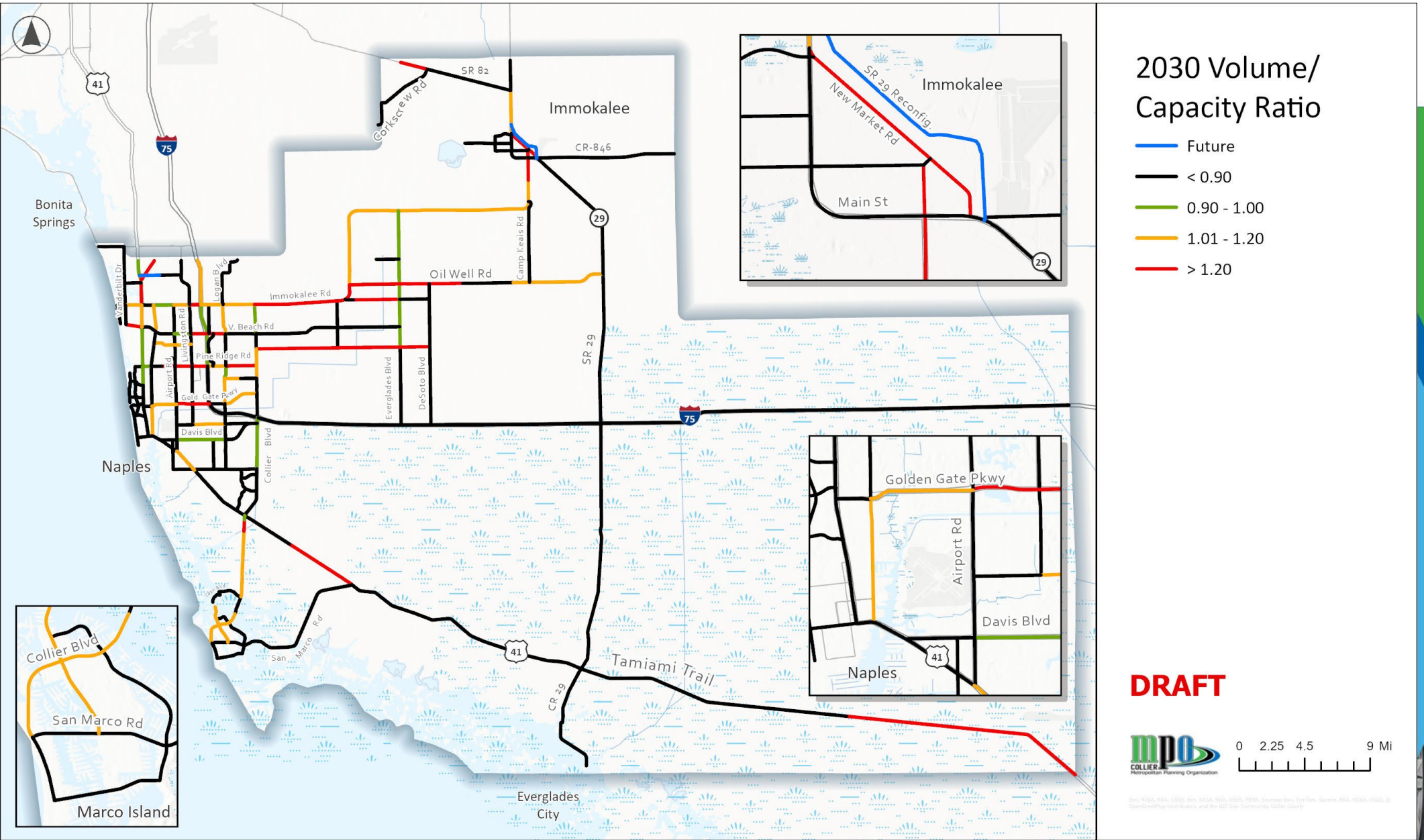
2030 Number of Lanes (E+C)

- 2 Lanes
- 4 Lanes
- 6 Lanes
- 8 Lanes

DRAFT

0 2.25 4.5 9 Mi

Baseline Traffic Conditions



2030 Volume/ Capacity Ratio

- Future
- < 0.90
- 0.90 - 1.00
- 1.01 - 1.20
- > 1.20

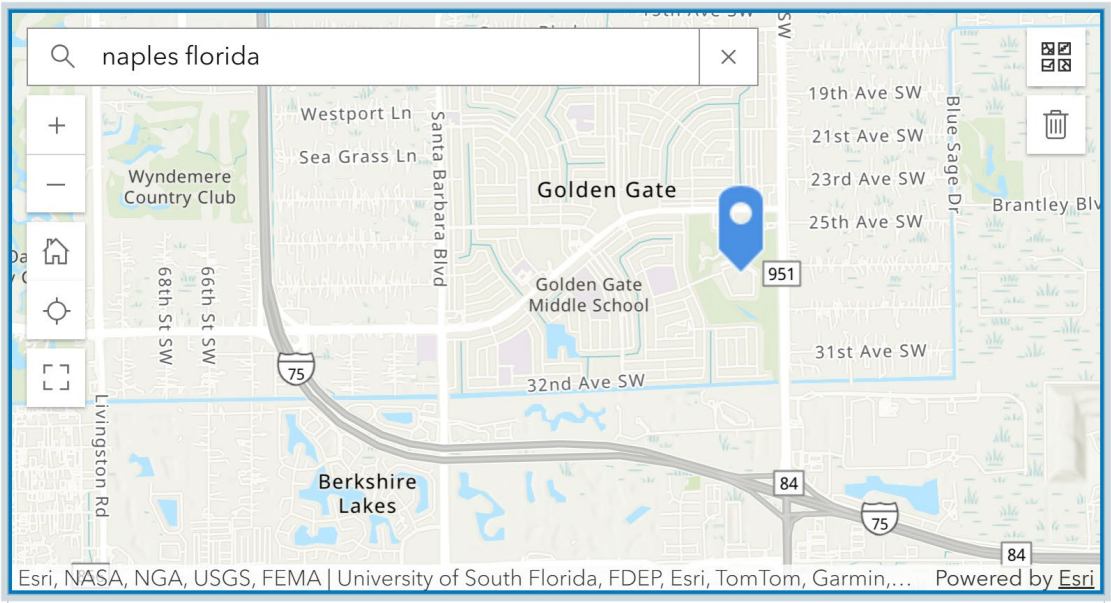
DRAFT

0 2.25 4.5 9 Mi

Online Congestion Survey

- Purpose is to obtain public feedback on congestion and travel-related issues in Collier County
- 15-20 questions grouped into **three** categories:
  - ✓ *Experience with Congestion*
  - ✓ *Travel Options*
  - ✓ *Travel Patterns*
- Location-based questions for identifying congested areas and home/work ZIP Codes

Please use the map below to indicate areas where you regularly encounter traffic congestion:



Congestion Survey Timeline

OUTREACH TASK	COMPLETION DATE
Incorporate CMC Feedback & Finalize Survey Content	**March 27**
Develop Virtual Meeting Room & Online Survey Application for Review/Testing	**April 17**
Provide Link to Partner Agencies & Begin Promoting Survey	**April 27**
Close Survey & Download Raw Results Data	**May 26** or **June 10***
Provide Survey Results Summary to MPO for Review	**Jue 24**
Present Draft Survey Results to CMC	**July 15**

**Survey period may be 30 or 45 days, depending on activity. Will assess results on 5/26 and determine if more time would be beneficial.*

Next Steps

- Updates to TAC, CAC, & MPO Board – **March & April**
- Conduct Congestion "Hot Spot" Analysis & Origin/Destination Evaluation – **April & May**
- Conduct Online Survey & Summarize Results – **May & June**
- Next CMC Update – **July 15**

QUESTIONS?

Contact

Dusty Hansen

MPO Project Manager

239-252-5850

dusty.hansen@collier.gov

Wally Blain, AICP

Consultant Project Manager

813-344-7322

wblain@benesch.com

OR

Ian Debnam, AICP

954-361-1588

idebnam@benesch.com

COLLIER
Metropolitan Planning Organization

Congestion Management Process

2022 Update

Adopted by the Collier MPO on April 8, 2022

Tindale Oliver is now benesch

3.0 Congestion Management Objectives

1 Develop Regional Objectives

The first action of the CMP is to identify the Regional Objectives. The CMP Goal and Objectives are used to guide the process of monitoring congestion and improving the mobility of persons and goods in Collier County. They also inform the selection of CMP performance measures used to quantify congestion levels, as well as help to identify and prioritize congestion management strategies.

3.1 CMP Goal

The MPO's overarching CMP Goal is to:

Improve Collier County's transportation system performance and reliability through mitigating congestion and improving the safety and mobility of people and goods.

3.2 CMP Objectives

As a part of the TSP Action Plan's recommended enhancements to the CMP process, a review was conducted of CMP goals and objectives used by other MPOs in Florida and nationwide that would complement the Collier MPO's 2017 CMP Objectives.

The following Objectives were reviewed by the CMC and approved by the MPO Board for providing more specific guidance and direction in evaluating the performance measures and strategies of the CMP.

Objective 1: Improve the safety of transportation facilities.

Objective 2: Integrate the Congestion Management Process and its proposed improvements into the LRTP, TDP, and Bicycle/Pedestrian Master Plan, and support the integration of transportation and land use.

Objective 3: Develop, maintain, expand, and close gaps in pedestrian, bicycle, and shared-use path facility networks for efficient and safe movement of people. Connect these pedestrian and bicycle facilities to existing and future transit stops.

Objective 4: Reduce vehicle miles traveled (VMT) by encouraging alternative modes of transportation, supporting sustainable land use development, and creating an integrated multimodal transportation system.

Objective 5: Optimize the movement of goods.

Objective 6: Promote transportation investments that support the LRTP's priorities, goals, and objectives.

3.3 LRTP Goals and Objectives Related to Congestion

In addition to the CMP Goal and Objectives, the MPO's 2045 LRTP includes multiple goals and objectives that are either specifically intended to reduce roadway congestion or supplement the CMP effort. Because the eight actions followed by the CMP are integrated into the metropolitan planning process, the LRTP and other MPO planning efforts work in tandem with the CMP in terms

5.0 Congestion Management Performance Measures

Developing performance measures related to and in support of the CMP objectives for evaluating congestion is the third action of the CMP. These performance measures are data-based methods used to measure and monitor the effectiveness of the transportation system in the CMP.

5.1 Multimodal Performance Measures

3 Develop Multimodal Performance Measures

The MPO's CMC has previously researched, evaluated, and established performance measures during prior updates of the CMP. As part of the 2020 TSP process, the list was modified and expanded to include the following measures, which have been selected to track system performance over time, measure progress towards meeting the CMP Objectives, and evaluate the effectiveness of congestion management strategies. These performance measures are organized into a series of categories based on the multimodal system and transportation users:

TRAVEL DEMAND:

- Percent of roadway miles by volume-to-capacity (V/C) ratio
- Percent of vehicle miles traveled (VMT) by V/C ratio
- Number of signalized intersections connected to Advanced Traffic Management System (ATMS)

SAFETY:

- Total crashes
- Motor vehicle severe injury crashes
- Motor vehicle fatal crashes
- Pedestrian and bicycle severe injury and fatal crashes

TRANSIT TRAVEL:

- Average bus route service frequency and number of routes
- Passenger trips (annual ridership)
- Passenger trips per revenue hour
- Transit on-time performance

GOODS MOVEMENT:

- VMT on designated truck routes with a V/C ratio greater than 1.0
- Number of crashes Involving heavy vehicles/trucks

PEDESTRIAN/BICYCLE FACILITIES:

- Centerline miles of bicycle lanes
- Linear miles of connector sidewalks on arterial roadways
- Linear miles of shared-use paths adjacent to roadways

TRANSPORTATION DEMAND MANAGEMENT (TDM):

- Number of people registered in the FDOT Commute Connector database that have an origin in Collier County

ACCESSIBILITY:

- Share of regional jobs within a ¼-mile of transit
- Share of regional households within a ¼-mile of transit

INCIDENT DURATION

- Mean time for responders to arrive on-scene after notification
- Mean incident clearance time
- Road Ranger stops

CUSTOMER SERVICE

- Nature of comments/responses and customer satisfaction

SYSTEM RELIABILITY

- Average Travel Speed
- Travel Time Index
- Congestion %

6.0 Performance Monitoring and Congestion Analysis

Once the framework of the CMP has been established through the first three actions, the monitoring of system performance and analysis of congestion should lead to more effective investment decisions that result in a safer and more efficient transportation network.

6.1 Monitoring System Performance

4 Collect Data/Monitor System Performance

As the fourth action of the CMP, collecting data and monitoring conditions provides insight into the performance of the transportation system. Cooperatively with the MPO's planning partners, the process of data collection should be an ongoing activity. The ongoing nature of data collection provides a benefit to the MPO in preparing updates to the TSP reports through access to current and updated information. Consistent with the measures presented previously in Table 5-1, monitoring system performance includes review of data from all modes of travel considered in the CMP. Shown in Table 6-1, the system performance monitoring plan outlines the measures and data sources to be used in future updates of the TSP process.

Table 6-1 Performance Monitoring Plan

Performance Measures	Monitoring Activity	Data Source & Responsible Agency
• % of roadway miles by volume-to-capacity (V/C) ratio • & of vehicle miles traveled (VMT) by V/C ratio • VMT on designated truck routes with a V/C ratio > 1.0	MPO CMP Database; LOS analysis	Collier County AUIR; FDOT LOS spreadsheet; Naples traffic counts
• Number of signalized intersections connected to Advanced Traffic Management System (ATMS)	Collier County CIP	Collier County Traffic Operations
• Total crashes • Motor vehicle severe injury crashes • Motor vehicle fatal crashes • Pedestrian and bicycle severe injury and fatal crashes • Number of Crashes Involving Heavy Vehicles/Trucks	Safety Performance Measures Report; Crash Data Analysis	Collier MPO / FDOT Collier County CDMS
• Average bus route service frequency and number of routes • Passenger trips (annual ridership) • Passenger trips per revenue hour • Transit on-time performance	National Transit Database Reporting	Collier Area Transit
• Centerline miles of bicycle lanes • Linear miles of connector sidewalks on arterial roadways • Linear miles of shared-use paths adjacent to roadways	Bicycle/Pedestrian Master Plan	Collier MPO
• Number of people registered in the FDOT Commute Connector database that have an origin in Collier County	District 1 Commute Connector	FDOT
• Share of regional jobs within a ¼-mile of transit • Share of regional households within a ¼-mile of transit	GIS analysis during TSP Update	Collier MPO / RITIS Database
• Mean time for responders to arrive on-scene after notification • Mean incident clearance time • Road Ranger stops	Road Rangers Performance Measures Report	FDOT

Performance Measures	Monitoring Activity	Data Source & Responsible Agency
• Report on nature of comments/responses and customer satisfaction.	Traffic Operations Citizen Survey	Collier County Traffic Operations
• Average Travel Speed • Travel Time Index • Congestion %	Data Analysis during TSP Update	Collier MPO / RITIS Database

6.2 Measuring Congestion in Collier County

5 Analyze Congestion Problems and Needs

The fifth action of the CMP is to analyze congestion problems and needs using data and analysis to identify the location and causes of congestion that exist. To accomplish this, the Collier MPO CMP utilizes a variety of data sources to evaluate recurring and non-recurring sources of congestion.

6.2.1 Identifying Congestion Hot Spots

Congestion is traditionally understood to be the level at which the transportation system performance is no longer acceptable due to traffic delays. Consistent with the multimodal nature of congestion and the causes of congestion, the CMP includes a multi-data approach for identifying areas of congestion. The data sources chosen to evaluate and provide context to congestion within the CMP network include:

- **Volume-to-Capacity Ratios:** Existing plus committed (E+C) roadway segments with a V/C ratio greater than, or equal to 1
- **Travel Time/Speed Based Results:** Roadways with recorded speeds of less than, or equal to 23 mph.
- **School Related Congestion:** Road segments adjacent to schools with congestion issues.
- **Hot Spot Safety Locations:** Intersections and road segments with the highest frequency and rate of crashes
- **Congestion Survey:** Public Outreach Results

The results and analysis of these data sources serves as an essential bridge between the evaluation of system performance data and the identification of potential strategies to address congestion. Congested areas based on these data sources are measured, for the purpose of identifying hot spots and needed network improvements.

Problem congestion areas identified by conducting a geospatial analysis of the recurring and non-recurring data sources is used to identify congestion hot spot locations within Collier County. The hot spot locations are sorted into three tiers to further identify which of the hot spot locations had the most causes of congestion.

- **Tier 1:** represents road segments influenced by 3 or more congestion causes.
- **Tier 2:** represents road segments influenced by 2 congestion causes.
- **Tier 3:** represents road segments influenced by 1 congestion cause.

EXECUTIVE SUMMARY
DISTRIBUTION ITEMS
ITEM 10A

Updated 2026 Collier MPO Meeting Calendar

OBJECTIVE: For the Committee to receive a copy of the updated 2026 Meeting Calendar.

CONSIDERATIONS: An updated 2026 MPO meeting calendar reflecting recent meeting changes has been prepared (**Attachment 1**).

The Committee voted to reschedule its September 16, 2026, meeting to October 21, 2026, to align with the timeline for endorsing the Congestion Management Process. The remaining CMC meetings scheduled for this year are as follows: May 20, July 15, October 21, and November 18.

The updated meeting calendar also reflects a joint Bicycle & Pedestrian Advisory Committee workshop with Lee County MPO on March 24 in Fort Myers.

STAFF RECOMMENDATION: Provided for informational purposes.

Prepared By: Dusty Hansen, Senior Planner

ATTACHMENTS:

1. Revised 2026 Collier MPO Meeting Calendar (1/27/26)

2026 Meeting Schedule

Collier Metropolitan Planning Organization (MPO)
2885 S. Horseshoe Drive, Naples, FL 34104
(239) 252-5814 | www.CollierMPO.org

*Approved September 12, 2025
Revised 01/27/26

~~RED STRIKETHROUGH~~ = CANCELLED MEETING
DATES IN GREEN = ADDED MEETING

Metropolitan Planning Organization (MPO) – Monthly at 9:30 a.m.

MPO Board Meetings are held on the second Friday of the month at the Board of County Commissioners Chambers, Admin. Bldg. F, 3299 Tamiami Trail East, Naples, FL, 34112, unless otherwise noted.

February 13, 2026	March 13, 2026	April 10, 2026	May 8, 2026
June 12, 2026	September 11, 2026	October 9, 2026	November 13, 2026
December 11, 2026			

Technical Advisory Committee (TAC) – Monthly at 9:30 a.m.

TAC Meetings are held on the fourth Monday of the month at the County Transportation Management Services Bldg., South Conference Room, 2885 South Horseshoe Drive, Naples, FL, 34104, unless otherwise noted.

January 26, 2026	February 23, 2026	March 23, 2026	April 27, 2026
*May 18, 2026 *due to holiday*	August 24, 2026	September 28, 2026	October 26, 2026
November 23, 2026			

Citizens Advisory Committee (CAC) – Monthly at 2:00 p.m.

CAC Meetings are held on the fourth Monday of the month at the County Transportation Management Services Bldg., South Conference Room, 2885 South Horseshoe Drive, Naples, FL, 34104, unless otherwise noted.

January 26, 2026	February 23, 2026	March 23, 2026	April 27, 2026
*May 18, 2026 *due to holiday*	August 24, 2026	September 28, 2026	October 26, 2026
November 23, 2026			

Bicycle/Pedestrian Advisory Committee (BPAC) – Monthly at 9:00 a.m.

BPAC Meetings are held on the third Tuesday of the month at the Collier County Government Center, Admin. Bldg. F, IT Training Room, 5th Floor, 3299 Tamiami Trail East, Naples, 34112, unless otherwise noted.

January 20, 2026	~~February 17, 2026~~	~~March 17~~ **March 24, 2026**	April 21, 2026
May 19, 2025	August 18, 2026	September 15, 2026	October 20, 2026
November 17, 2026			

Joint Collier-Lee Bicycle & Pedestrian Advisory/Coordinating Committees (BPAC/BPCC) Meeting:
March 24, 2026 at 10:00 a.m. at Collaboratory, 2031 Jackson St Fort Myers, FL 33901

Congestion Management Committee (CMC) – Bi-Monthly at 2:00 p.m.

CMC Meetings are held on the third Wednesday of every other month at the Collier County Transportation Management Services Bldg., South Conference Room, 2885 South Horseshoe Drive, Naples, FL, 34104, unless otherwise noted.

January 21, 2026	March 18, 2026	May 20, 2026	July 15, 2026
~~September 16, 2026~~ **October 21, 2026** **Off cycle to accommodate CMP endorsement*	November 18, 2026		

Local Coordinating Board (LCB) for the Transportation Disadvantaged – Quarterly at 1:30 p.m.

LCB Meetings are held quarterly on the first Wednesday of the corresponding month at the Collier County Government Center, Admin. Bldg. F, IT Training Room, 5th Floor, 3299 Tamiami Trail East, Naples, 34112, unless otherwise noted.

March 4, 2026	May 6, 2026	September 2, 2026	December 2, 2026

EXECUTIVE SUMMARY
DISTRIBUTION ITEMS
ITEM 10B

FDOT District 1 Draft Transportation Systems Management & Operations Master Plan

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OBJECTIVE: For the Committee to be apprised of FDOT's analysis and recommendations for technology-focused investments on key corridors in Collier County.

CONSIDERATIONS: FDOT is updating its District 1 Draft Transportation Systems Management & Operations (TSM&O) Master Plan and has been conducting stakeholder outreach with MPOs and technical staff for County and municipal staff within District 1.

The TSM&O effort seeks to guide technology-focused investments that enhance safety, mobility, resilience, communications and workforce capability across some of District 1's critical corridors for connectivity, where technology-based solutions could have the most impact. The top 5 corridors identified by FDOT for Collier County are as follows:

1. U.S. 41 (Tamiami Trail/S.R. 45) from the Lee County Line to Immokalee Road (C.R. 846)
2. U.S. 41 (Tamiami Trail/S.R. 90) from Airport-Pulling Road to 9th Street S
3. Pine Ridge Road from U.S. 41 (Tamiami Trail) to Airport-Pulling Road
4. Immokalee Road (C.R. 846) from U.S. 41 (Tamiami Trial) to Collier Boulevard
5. Airport-Pulling Road from Davis Boulevard to Golden Gate Parkway

FDOT conducted its final stakeholder meeting with Collier, Lee, And Charlotte Counties (the meeting presentation is included as **Attachment 1**) on March 9, 2026, and has provided its District 1 draft TSM&O Master Plan (**Attachment 2**) to stakeholders.

FDOT has requested that any comments on the draft be provided by March 16th. Comments on the draft can be emailed to FDOT's consultant, Kathleen Keen, PE, at kkeen@vhb.com (telephone: 617-607-2970).

STAFF RECOMMENDATION: Provided for informational purposes and for the Committee to have the opportunity to provide comments on the draft report.

Prepared By: Dusty Hansen, Senior Planner

ATTACHMENTS:

1. FDOT Final Stakeholder Presentation for Collier, Lee and Charlotte Counties
2. FDOT D1 Draft TSM&O Master Plan (3/6/26)

FINAL STAKEHOLDER MEETING

COLLIER, LEE, & CHARLOTEE COUNTIES

District 1 Transportation Systems Management & Operations (TSM&O) Master Plan

March 9, 2026

Agenda

- Greeting & Introductions
- Recap
  - Mission, Vision, & Goals
  - Top 5 Priority Roadways
- Gap Analysis
- Recommendations
- Discussion
- Next Steps

Master Plan Mission & Vision

Mission Statement

- To enhance the safety, mobility, and resiliency of our transportation network through innovative technology solutions that meet the needs of all users.

Vision Statement

- To establish a transportation system that is connected and resilient for all users and operators.

Goals

Goal 1: Safety Enhancement: Improve detection of and response time to traffic incidents by traffic operators and first responders through additional and/or improved monitoring and alerting capabilities.

Goal 2: Safety Enhancement: Provide proactive measures to protect Vulnerable Road Users.

Goal 3: Mobility Improvement: Improve travel time reliability by reducing congestion using advanced technologies and data systems.

Goal 4: Mobility Improvement: Improve information dissemination to the traveling public.

Goals

Goal 5: Mobility Improvement: Enhance multimodal transportation options with technology investments to improve safety and travel time reliability.

Goal 6: Resilience: Identify resilient solutions for transportation infrastructure during and after severe weather events.

Goal 7: Improved Communications: Eliminate gaps in communications and add greater redundancy to enable advanced communications, innovative technology deployments, traffic operations, and automated data collection.

Goal 8: Workforce Development: Identify staffing needs and training opportunities to operate and maintain the advanced transportation system.

Top 5 Priority Corridors – Collier County

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
03010000	U.S. 41 (Tamiami Trail/S.R. 45)	0	3.06	1	59.3
03010000	U.S. 41 (Tamiami Trail/S.R. 90)	12.8	14.1	2A	57.7
03010000	U.S. 41 (Tamiami Trail/S.R. 90)	12.064	12.8	2B	55.4
03003000	Pine Ridge Road	5.844	7.819	3	55.9
03590000	Immokalee Road (C.R. 846)	0	3.67	4A	53.8
03590000	Immokalee Road (C.R. 846)	3.67	6.97	4B	53.7
03003000	Airport-Pulling Road	0.79	3.24	5	54.1

Priority Ranking

- 1
- 2
- 3
- 4
- 5

Map Legend

- City Limits
- Outside County Limits

0 0.75 1.5 3 Miles

Top 5 Priority Corridors - Lee County

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
12100000	Daniels Parkway (C.R. 876)	4.21	7.991	1	68
12070000	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	0.7	4.41	2	69.5
12005000	Colonial Boulevard (S.R. 884)	1.171	2.5	3A	68.8
12005000	Colonial Boulevard (S.R. 884)	0.414	1.171	3B	63.4
12010000	U.S. 41 (Cleveland Avenue/S.R. 45)	15.77	17.04	4A	65.5
12010000	U.S. 41 (Cleveland Avenue/S.R. 45)	17.04	17.75	4B	64.2
12005000	Colonial Boulevard (S.R. 884)	4.06	6.46	5A	63.1
12005000	Colonial Boulevard (S.R. 884)	2.5	4.06	5B	62.4

Priority Ranking

- 1
- 2
- 3
- 4
- 5

Map Legend

- City Limits
- Outside County Limits

❷ Dr. Martin Luther King Jr. Boulevard

❸ Colonial Boulevard

❺ Colonial Boulevard

❶ Daniels Parkway

❹ U.S. 41

0 0.5 1 2 Miles

Top 5 Priority Corridors - Charlotte County

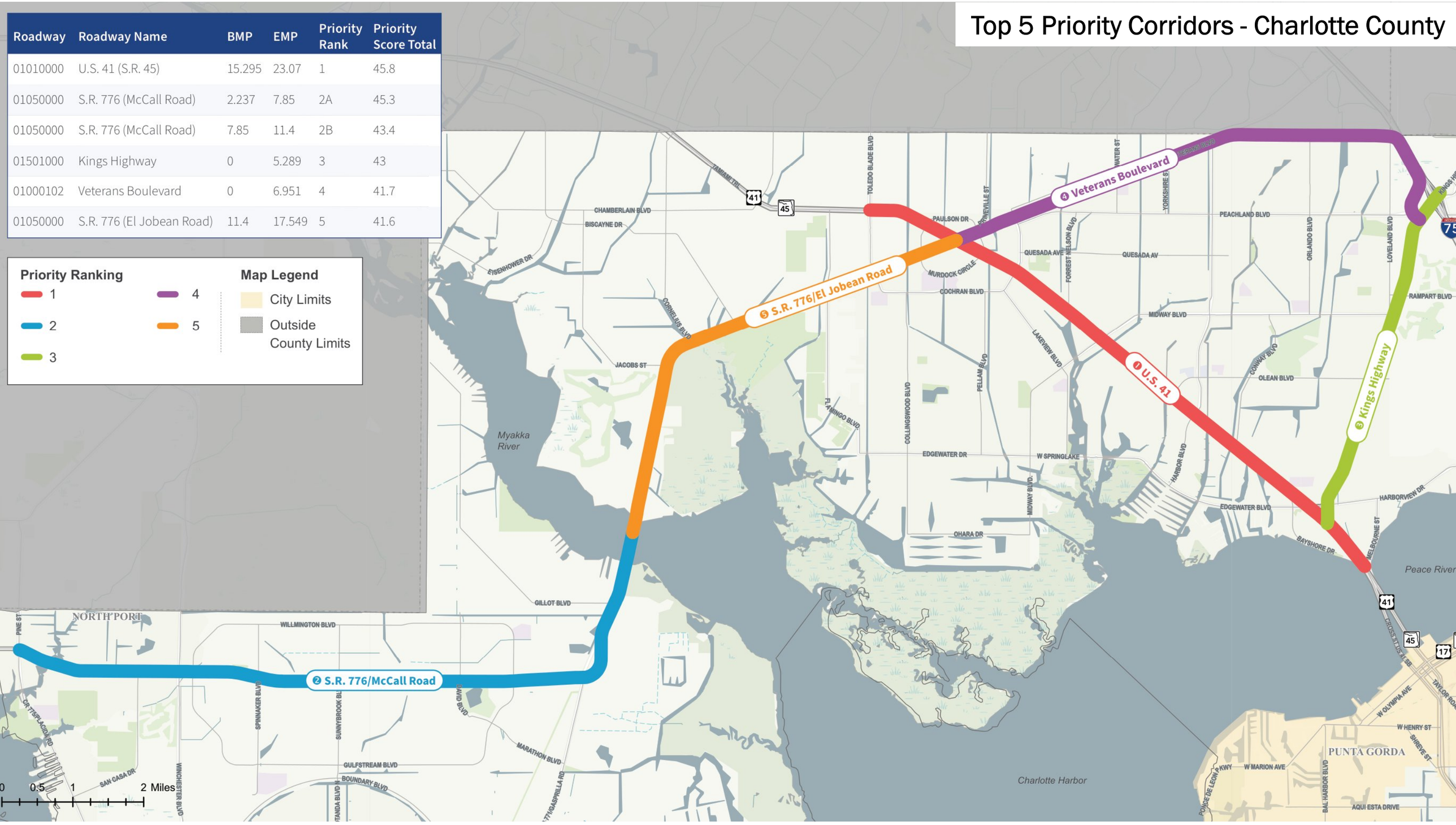
Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
01010000	U.S. 41 (S.R. 45)	15.295	23.07	1	45.8
01050000	S.R. 776 (McCall Road)	2.237	7.85	2A	45.3
01050000	S.R. 776 (McCall Road)	7.85	11.4	2B	43.4
01501000	Kings Highway	0	5.289	3	43
01000102	Veterans Boulevard	0	6.951	4	41.7
01050000	S.R. 776 (El Jobean Road)	11.4	17.549	5	41.6

Priority Ranking

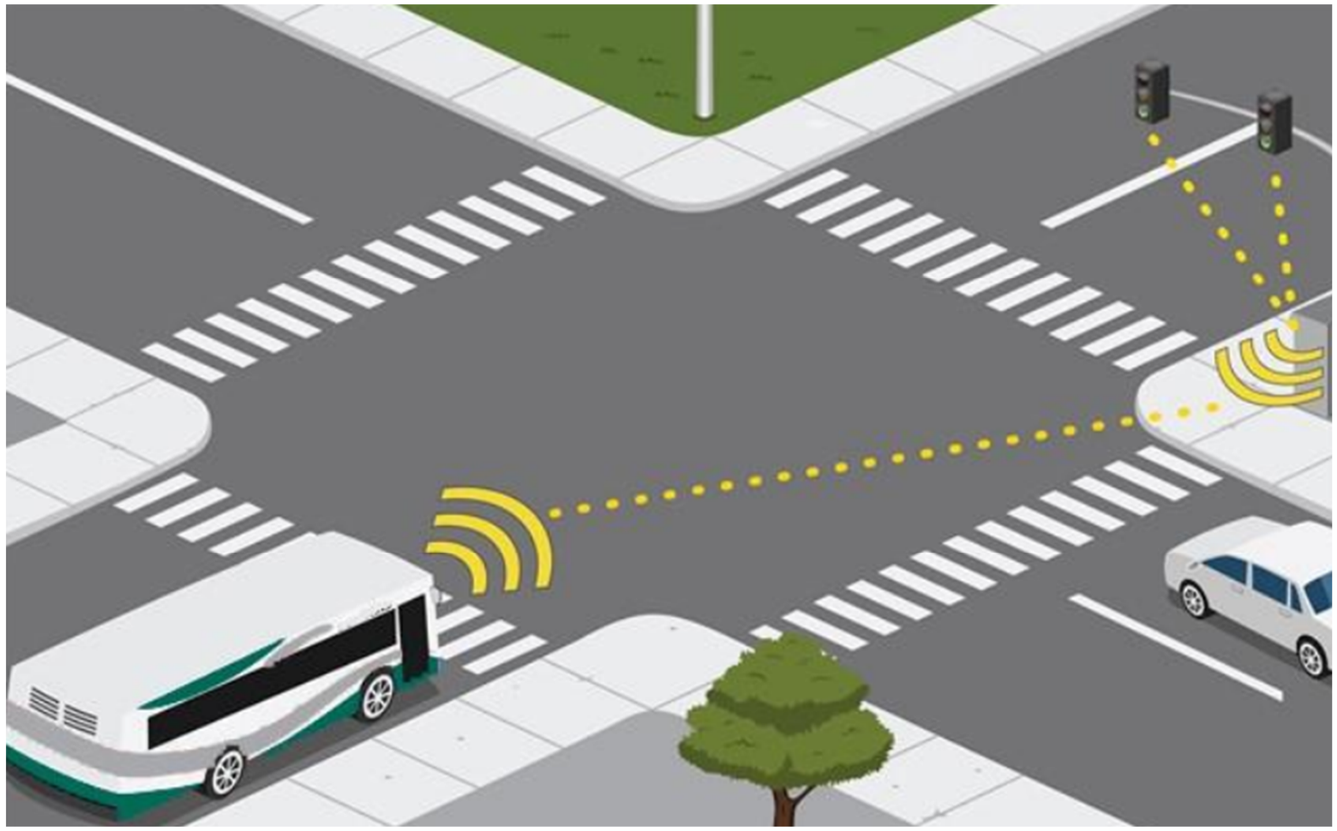
- 1
- 2
- 3
- 4
- 5

Map Legend

- City Limits
- Outside County Limits



TSM&O Strategies



- EVP
- CV
- PedSafe/ Computer Vision
- CCTV
- FSP
- TSP
- ATSPM (reviewed ATC Controller and Detection Upgrade)
- ADMS
- Bluetooth
- Fiber Optic Cable
- Field Switch
- UPS (Power backup systems)
- RPMU

Regional TSM&O Needs & Gaps Summary

Strategy	Technologies	Key Actions	Operational Impacts
Safety	Emergency Vehicle Preemption (EVP)	Expand EVP coverage and standardize configurations near emergency service facilities and evacuation routes	Reduces emergency response times and improves intersection safety during critical events
	Connected Vehicle (CV)	Deployment of C-V2X RSUs at intersections, integrating RSUs to support TSP based on county's preference	Enables connected vehicle functions and supports future connected applications
	PedSafe/Computer Vision Systems	Deploy vision-based detection for pedestrians and bicyclists for all intersections	Identifying potential conflicts and enhancing safety for VRU
	Freight Signal Priority (FSP)	Implement FSP at all intersections to be designated as freight corridors	Reduces delay and enhances efficiency and safety of freight movement

Regional TSM&O Needs & Gaps Summary

Strategy	Technologies	Key Actions	Operational Impacts
	Transit Signal Priority (TSP)	Implement TSP using the county-preferred communication method: RSU where supported, and radio-based where already in use.	Enhances transit travel time reliability and multimodal operations while maintaining compatibility with existing county systems. Integration with existing and future Bus Rapid Transit routes
Mobility and Performance	Automated Traffic Signal Performance Measures (ATSPM)	Integrate reliable detection and ATCs to fully enable ATSPM analytics	Provides quality performance data for signal optimization
	Arterial Dynamic Message Signs (ADMS)	Add ADMS near freeway interchanges and along evacuation routes	Improves driver awareness, supports incident and evacuation management
	Bluetooth	Install additional Bluetooth readers to complete coverage	Enables accurate travel-time and congestion analysis

Regional TSM&O Needs & Gaps Summary

Strategy	Technologies	Key Actions	Operational Impacts
Resilient Transportation System	Fiber Optic Communications	Complete fiber and close small connectivity gaps	Improves communication redundancy, reliability, and high-speed data transfer
	Field Switch Upgrades	Replace legacy 10/100 Mbps switches with secure Gigabit-capable hardware	Ensures secure, high-bandwidth communications
	Uninterruptible Power Supply (UPS)	Expand UPS coverage at remaining intersections	Maintains signal operation during power loss or severe weather events
	Remote Power Management Unit (RPMU)	Deploy RPMUs to support remote monitoring and power control of signal equipment	Enhance operational reliability and reduces field response during power and equipment issues
	Closed-Circuit Television (CCTV)	Install additional cameras where minor coverage gaps exist to achieve corridor-wide visibility	Improves incident verification, situational awareness, and supports future integration with AI-based event detection

Recommendations Summary
Collier County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Dollars	Potential Alignment with Programmed Projects
1	U.S. 41 (Tamiami Trail/S.R. 45	Lee County Line to Immokalee Rd (C.R. 846)	3.06 miles	4	CV, PedSafe, FSP, ATSPM, RPMU	$	$ 650,000	Project 456239-1 (FY 2029) - US 41, Old 41 Rd to Woods Edge Pkwy – Fiber Gap Collier to Lee County: The project could support integration of the technologies identified in the Primary Recommendation Focus.
2	U.S. 41 (Tamiami Trail/S.R. 90)	9th St to Airport-Pulling Road	2.04 miles	8	CV, PedSafe, FSP, ATSPM, Bluetooth, RPMU	$$	$1,410,000	Project 453415-1 (PD&E FY 2027) - U.S. 41 Intersection/Mobility Improvements from 3rd Avenue to S.R. 84: The project could support integration of the technologies identified in the Primary Recommendation Focus.
3	Pine Ridge Road	U.S. 41 (Tamiami Trail) to Airport-Pulling Road	1.98 miles	8	CV, PedSafe, FSP, ATSPM, Bluetooth, UPS, RPMU	$$	$1,330,000	None identified
4	Immokalee Road (C.R. 846)	U.S. 41 (Tamiami Trail/S.R. 45) to Collier Blvd	6.97 miles	16	CV, PedSafe, FSP, ATSPM, ADMS Bluetooth, RPMU	$$$	$3,200,000	None identified
5	Airport-Pulling Road	Golden Gate Pkwy to Davis Blvd	2.45 miles	9	CV, PedSafe, FSP, ATSPM, Bluetooth, RPMU	$$	$1,430,000	None identified

Recommendations Summary
Lee County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Dollars	Potential Alignment with Programmed Projects
1	Daniels Parkway (C.R. 876)	Metro Parkway to Treeline Avenue	3.79 miles	10	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Field Switch, UPS, RPMU	$$$	$2,440,000	None identified
2	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	Evans Avenue to I-75	3.71 miles	9	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, RPMU	$$$	$2,530,000	Project 446269-1 (Construction started October 2025) - SR 82 from Ford St to Veronica Showmaker - Pedestrian Safety Improvement: Since construction started in October 2025, immediate coordination may be needed for the project to support the integration of pedestrian-related technologies identified in the Primary Recommendation Focus. Project 454647-1 and 454647-2 (FY 2027) - SR 82 at Benchmark Ave Traffic Safety Improvements: The project could support integration of the technologies identified in the Primary Recommendation Focus.

Recommendations Summary
Lee County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Dollars	Potential Alignment with Programmed Projects
3	Colonial Boulevard (S.R. 884)	Summerlin Road to Metro Parkway	2.09 miles	7	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch, RPMU	$$	$1,370,000	None identified
4	U.S. 41 (Cleveland Avenue/S.R. 45)	College Parkway to Gladiolus Drive/Six Mile Cypress Parkway	1.98 miles	7	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch, RPMU	$$	$1,240,000	None identified
5	Colonial Boulevard (S.R. 884)	Metro Parkway to Dynasty Drive	3.96 miles	6	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Field Switch, RPMU	$$	$1,770,000	None identified

Recommendations Summary
Charlotte County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Estimated Cost [3] Dollars	Potential Alignment with Programmed Projects
								Project 457620-1 (FY 2029-2030) - Charlotte County Arterial Traffic Management System (ATMS): The project could support integration of the technologies identified in the Primary Recommendation Focus.
1	U.S. 41 (S.R. 45)	Toledo Blade Boulevard to Melbourne Street	7.78 miles	18	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, UPS, RPMU	$$$	$2,770,000	Project 451358-1 (FY 2026) - US 41 at Midway Blvd: The project could support integration of the technologies identified in the Primary Recommendation Focus for the intersection of US 41 (SR 45) at Midway Blvd

Recommendations Summary
Charlotte County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Dollars	Potential Alignment with Programmed Projects
2	S.R. 776 (McCall Road)	Pine Street to El Jobean Bridge	9.16 miles	11	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, RPMU	$$	$1,880,000	Project 457620-1 (FY 2029-2030) - Charlotte County Arterial Traffic Management System (ATMS): The project could support integration of the technologies identified in the Primary Recommendation Focus.
3	Kings Highway	U.S. 41 (Tamiami Trail) to I-75	5.29 miles	11	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Fiber, UPS, RPMU	$$$	$2,160,000	
4	Veterans Boulevard	U.S. 41 (Tamiami Trail) to Kings Highway	6.95 miles	4	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, RPMU	$	$ 680,000	
5	S.R. 776 (El Jobean Road)	El Jobean Bridge to U.S. 41 (Tamiami Trail)	6.15 miles	4	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, RPMU	$$	$1,010,000	

Discussion

- How do you feel about the proposed recommendations?
- Do you have any planned projects that may align well with proposed recommendations?

Next Steps

- **Documentation:** Finalize Report
- **Implementation:** Recommended technologies for regional improvements will be coordinated for future programming.

D1 TSM&O Master Plan Contacts

Katherine Chinault

FDOT D1 TSM&O Development Manager | Katherine.Chinault@dot.state.fl.us | 863.519.2511

Kathleen Keen

VHB Project Manager | kkeen@vhb.com | 617.607.2970

10B Attachment 2
CMC 3/18/26

FDOT District 1

TSM&O Master Plan

PREPARED FOR

FDOT District 1
801 N. Broadway Avenue
Bartow, FL, 33830

DRAFT

March 6, 2026

Executive Summary

Overview

The Florida Department of Transportation (FDOT) District 1 Transportation Systems Management & Operations (TSM&O) Master Plan provides a structured, data-driven framework to guide technology-focused investments that enhance safety, mobility, resilience, communications, and workforce capability across District 1's most critical corridors.

The TSM&O Master Plan focuses on the six most populous counties within District 1 — Collier, Lee, Charlotte, Sarasota, Manatee, and Polk — and prioritizes improvements along corridors that support regional connectivity and serve key functions such as hurricane evacuation, freight movement, transit service, commuter travel, and access to major economic and recreational destinations.

TSM&O improvements identified in the TSM&O Master Plan are technology focused, intended to optimize operations on the existing network, using Intelligent Transportation Systems (ITS) and operational strategies rather than relying solely on traditional capacity expansion. The TSM&O Master Plan builds a systematic process to:

- Identify a TSM&O Strategic Network;
- Evaluate performance and infrastructure conditions;
- Identify the Top 5 TSM&O Priority Corridors in each focus County;
- Determine gaps in TSM&O infrastructure and opportunities for technology focused improvements along the Top 5 Priority Corridors;
- Recommend TSM&O strategies and technology solutions at the corridor and intersection level; and
- Conduct stakeholder engagement.

Mission, Vision, and Goals

The following describes the Mission, Vision, and Goals associated with the District 1 TSM&O Master Plan.

Mission

To enhance the safety, mobility, and resilience of our transportation network through innovative technology solutions that meet the needs of all users.

Vision

To establish a transportation system that is connected and resilient for all users and operators.

Goals

1. **Safety Enhancement:** Improve detection of and response time to traffic incidents by traffic operators and first responders through additional and/or improved monitoring and alerting capabilities.

2. **Safety Enhancement:** Provide proactive measures to protect Vulnerable Road Users.
3. **Mobility Improvement:** Improve travel time reliability by reducing congestion using advanced technologies and data systems.
4. **Mobility Improvement:** Improve information dissemination to the traveling public.
5. **Mobility Improvement:** Enhance multimodal transportation options with technology investments to improve safety and travel time reliability.
6. **Resilience:** Identify resilient solutions for transportation infrastructure during and after severe weather events.
7. **Improved Communications:** Eliminate gaps in communications and add greater redundancy to enable advanced communications, innovative technology deployments, traffic operations, and automated data collection.
8. **Workforce Development:** Identify staffing needs and training opportunities to operate and maintain the advanced transportation system.

Purpose and Scope of the TSM&O Master Plan

The purpose of the TSM&O Master Plan is to prioritize TSM&O improvements for critical corridors in the six most populated counties within District 1, based on a variety of transportation-related factors, with a focus on using innovative technology to improve safety, mobility, resilience, communications, and workforce capability.

Overview of ITS Architecture and TSM&O Strategies

The Regional ITS Architecture (RITSA) is a framework for TSM&O and ITS systems integration. The architecture encompasses all modes of transportation, provides a shared regional vision for a safe, reliable, efficient transportation system; supports the systems engineering life cycle for TSM&O deployments (from concept through operations and maintenance), and identifies integration opportunities among stakeholder systems. All ITS-related projects must be developed within a systems engineering framework, to include the development of certain systems engineering documentation. At a minimum, the *Project Risk Assessment and Regulatory Compliance Checklist* (750-040-05) must be prepared to determine if a project is low risk or high risk. Other documentation may be appropriate, depending on the outcome of the Project Risk Assessment.

A variety of TSM&O strategies were examined, organized into these three categories:

- **Safety strategies** including emergency vehicle preemption, PedSafe and Computer Vision, and Work Zone Management;
- **Mobility and Performance strategies** including transit signal priority, automated traffic signal performance measurement (ATSPM), and travel-time devices; and
- **Resilient Transportation System strategies** including additional monitoring coverage, uninterruptible power supplies, remote power management units, and fiber optic communications.

Table 2 links each strategy to one or more of the eight TSM&O Master Plan goals, ensuring that corridor-level recommendations directly support safety, mobility, resilience, communications, and workforce objectives.

TSM&O Strategic Roadway Network and Prioritization

The TSM&O Strategic Roadway Network is comprised of roadways in the six focus counties that contribute to connectivity across the region and that are included within a variety of key datasets. Roadways were not included if they did not have certain data available to contribute to the TSM&O analysis. The final TSM&O Strategic Roadway Network, illustrated in Figure 2 through Figure 7, is comprised of U.S. Routes, State roads, and select local roadways, based on careful consideration of their contribution to the regional transportation network and data availability.

Prioritization criteria and weighting were developed to identify the Top 5 TSM&O priority corridors. Categories of criteria included Safety, Performance, Trucks and Freight, Roadway Characteristics and Design/Geometry, Transit, and Volume/Growth. Based on the priority scoring system, The top 5 TSM&O priority corridors were identified for each county, illustrated in Figure 8 through Figure 13.

Existing Conditions and Gap Analysis

An inventory of existing TSM&O strategies deployed and related ITS infrastructure, including field devices and their relevant software, was conducted for the Top 5 TSM&O Priority Corridors in each county. Planned and programmed improvements from the respective five-year Transportation Improvement Plan (TIP) were also identified. Each county's readiness for various TSM&O strategies was determined based on the ITS inventory.

Following the inventory of existing TSM&O strategies and ITS infrastructure and systems, a detailed gap analysis was conducted at the intersection level for each priority corridor. The gap analysis focused on three key considerations:

1. Where are key ITS hardware and systems installed and operational?
2. Which ITS infrastructure may need upgrades to be fully functional?
3. Where are devices missing for improved operations or specific TSM&O solutions?

Table 13 through Table 18 summarize the gap analysis results for each county's priority corridors.

Stakeholder Engagement

Stakeholders from Collier, Lee, Charlotte, Sarasota, Manatee, and Polk Counties, local municipalities, MPOs/TPOs, and FDOT staff were consulted during the development of the TSM&O Master Plan. Two rounds of meetings were held, split up into three groups, as noted below, to give stakeholders an opportunity to provide their input.

- Polk County stakeholders
- Manatee and Sarasota Counties stakeholders
- Charlotte, Collier, and Lee Counties stakeholders

The first round of stakeholder meetings were held after data collection and initial corridor prioritization to obtain stakeholders' local knowledge and their feedback on the project. Stakeholders confirmed the prioritization approach was similar to past efforts and the prioritization was generally consistent with local priorities.

The second round of meetings were held prior to finalizing TSM&O recommendations for the priority corridors allowing stakeholders to provide feedback. [ADD STATEMENT SUMMARIZING STAKEHOLDER FEEDBACK AFTER MEETINGS.]

Recommendations

TSM&O technology focused recommendations were informed by the existing conditions assessment, gap analysis, and alignment with the Mission, Vision, and Goals of this Master Plan. The TSM&O recommendations along each of the Top 5 Priority Corridors are summarized in Table 19 through Table 24. Estimated costs (in 2025 dollars) were developed and programmed projects that these recommendations could potentially align with were identified for each set of recommendations.

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List of Acronyms

AADT	Annual Average Daily Traffic
AADTT	Annual Average Daily Truck Traffic
ACS	American Community Survey
ADMS	Arterial Dynamic Message Sign
ARC-IT	Architecture Reference for Cooperative and Intelligent Transportation
ASC	Adaptive Signal Control
ATC	Advanced Traffic Controller
ATMS	Advanced Traffic Management Systems
ATSPM	Automated Traffic Signal Performance Measures
AVL	Automatic Vehicle Location
BEBR	Bureau of Economic and Business Research
BRT	Bus Rapid Transit
BSM	Basic Safety Messages
C.R.	County Road
CAV	Connected and Automated Vehicles
CCTV	Closed Circuit Television
CO	FDOT Central Office
CV	Connected Vehicle
C-V2X	Cellular Vehicle-to-Everything
DSRC	Dedicated Short-Range Communication
E	East
EB	Eastbound
EVP	Emergency Vehicle Preemption
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FSP	Freight Signal Priority
FTA	Federal Transit Administration
I-##	Interstate (e.g., I-75, I-4)
ICM	Integrated Corridor Management
IT	Information Technology
ITS	Intelligent Transportation Systems
LiDAR	Light detection and ranging
Mbps	Megabits per second
MP	Mile Post
MPO	Metropolitan Planning Organization
NITSA	National ITS Architecture
N	North
NB	Northbound
NTCIP	National Transportation Communications for Intelligent Transportation Systems Protocol
OBU	Onboard Unit

OTA	Over-the-Air
PedSafe	Pedestrian Detection and Safety Systems
PTI	Planning Time Index
PTZ	Pan-Tilt-Zoom (camera)
QWS	Queue Warning System
RCI	Roadway Characteristics Inventory
RITSA	Regional ITS Architecture
ROI	Return on Investment
RPMU	Remote Power Management Unit
RSU	Roadside Unit
RTSMO	Regional Transportation Systems Management & Operations
RWIS	Road Weather Information System
S.R.	State Road
SB	Southbound
SCMS	Security Credential Management System
SHS	State Highway System
SITSA	Statewide ITS Architecture
SMART	Specific, Measurable, Accountable, Relevant, and Time-bound (relating to goals)
SPaT	Signal Phase and Timing
SWZ	Smart Work Zone
TIM	Traffic Incident Management
TMC	Transportation Management Center
TPO	Transportation Planning Organization
TSM&O	Transportation Systems Management & Operations
TSP	Transit Signal Priority
U.S.	United States highway
UPS	Uninterruptible Power Supply
V2I	Vehicle-to-Infrastructure
V2N	Vehicle-to-Network
V2P	Vehicle-to-Pedestrian
V2V	Vehicle-to-Vehicle
V2X	Vehicle-to-Everything
vpd	Vehicles per Day
VRU	Vulnerable Road User
WAP	Wireless Access Points
W	West
WB	Westbound

1 Introduction

1.1 Purpose and Scope

1.1.1 Purpose

The purpose of the District 1 TSM&O Master Plan is to identify TSM&O solutions, focused on innovative technology solutions, that would provide quantifiable improvements in Safety, Mobility, and/or Resilience for the highest-priority corridors in District 1's most populous counties of Collier, Lee, Charlotte, Sarasota, Manatee, and Polk.

1.1.2 Scope of the District 1 TSM&O Master Plan

This TSM&O Master Plan prioritizes improvements for critical corridors within the six most populated counties within District 1, based on a variety of transportation-related factors. The scope of the District 1 TSM&O Master Plan is summarized below.

1.1.2.1 Identify TSM&O Strategic Network

The TSM&O Strategic Network was established as the base layer for the District 1 TSM&O Master Plan, serving as the study area for the data collection, analyses, prioritization, and recommendations related to the TSM&O Master Plan. The TSM&O Strategic Network is comprised of roadways within District 1 that contribute to regional connectivity and that are included within a variety of key datasets such as the FDOT Roadway Characteristics Inventory (RCI) database.

1.1.2.2 Data Collection

An inventory of existing ITS infrastructure was conducted along the TSM&O Strategic Network. Where local agency ITS data was unavailable, desktop reviews and further coordination with the agencies were conducted to determine the existing infrastructure. Upcoming projects identified in the FDOT Work Program, including planned ITS equipment deployments, were also included in the data collection.

Geospatial datasets for key performance metrics were also collected, including traffic volumes, transit and freight data, as well as crash data.

1.1.2.3 Develop Prioritization Criteria & Grading System

Following the development of the TSM&O Strategic Network and data collection, prioritization criteria were developed based on six key data pillars: Safety, Performance, Trucks/Freight, Roadway Characteristics & Design/Geometry, Transit, and Volume/Growth. Performance metrics and appropriate weights for each data pillar were then established based on District 1 priorities and to align with the Mission, Vision, and Goals of this Master Plan. Scoring ranges for each specific metric were also developed.

1.1.2.4 Identify Priority Corridors based on Criteria

After establishing the prioritization criteria/data pillars and weighting, the top seven corridors for each of the six counties were identified based on their performance metrics. These corridors were screened against FDOT programs and active projects to determine if projects were already planned or programmed to address deficiencies. After examining the priority corridors with stakeholders, the final top five priority corridors were identified and moved forward for TSM&O technology focused recommendations.

1.1.2.5 Gap Analysis

Using the previously collected data, a Gap Analysis was conducted along the priority corridors to evaluate the extent to which existing field infrastructure along the TSM&O Strategic Network is sufficient to meet the Department's mission and goals of using TSM&O solutions to enhance safety, mobility, resilience, communications, and workforce capability.

1.1.2.6 Stakeholder Engagement

Two sets of stakeholder meetings were conducted during the development of the District 1 TSM&O Master Plan with stakeholders from relevant municipalities, counties, Metropolitan Planning Organizations (MPO), Transportation Planning Organizations (TPO), and transit agencies invited to share their feedback on the TSM&O strategic roadway network, prioritization and grading system, Top 5 Priority Corridors, and recommendations.

The first round of meetings were held after the data collection and prioritization efforts to introduce the TSM&O Master Plan, and to receive stakeholder feedback on the priority corridors and the problems each agency was facing within their portion of the transportation network.

The second round of meetings were held prior to finalizing TSM&O recommendations for the priority corridors allowing stakeholders to provide feedback.

Throughout the District 1 TSM&O Master Planning process, stakeholders also provided their geospatial data and information on existing transportation technology infrastructure to support the data collection and gap analysis efforts.

1.1.2.7 Identify potential TSM&O Strategies and Solutions

Based on the data collection, performance metrics, and gap analysis, TSM&O strategies and solutions were recommended for each priority corridor that align with the Mission, Vision, and Goals of this Master Plan. The recommended improvements focused on enhancing safety, reducing congestion, improving freight mobility, and establishing a more resilient transportation system.

The recommendations for each corridor include detailed cost estimates (in 2025 dollars) at the intersection level. The recommended strategies were discussed during the second round of stakeholder meetings to garner local agency feedback.

1.2 Master Plan Mission, Vision, & Goals

The following Mission, Vision, and Goals were developed specifically for this District 1 TSM&O Master Plan working in coordination with District 1 staff. The Master Plan Mission, Vision, and Goals were used to guide the study process and development of recommendations.

1.2.1 Mission

To enhance the safety, mobility, and resilience of our transportation network through innovative technology solutions that meet the needs of all users.

1.2.2 Vision

To establish a transportation system that is connected and resilient for all users and operators.

1.2.3 Goals

1. **Safety Enhancement:** Improve detection of and response time to traffic incidents by traffic operators and first responders through additional and/or improved monitoring and alerting capabilities.
2. **Safety Enhancement:** Provide proactive measures to protect Vulnerable Road Users.
3. **Mobility Improvement:** Improve travel time reliability by reducing congestion using advanced technologies and data systems.
4. **Mobility Improvement:** Improve information dissemination to the traveling public.
5. **Mobility Improvement:** Enhance multimodal transportation options with technology investments to improve safety and travel time reliability.
6. **Resilience:** Identify resilient solutions for transportation infrastructure during and after severe weather events.
7. **Improved Communications:** Eliminate gaps in communications and add greater redundancy to enable advanced communications, innovative technology deployments, traffic operations, and automated data collection.
8. **Workforce Development:** Identify staffing needs and training opportunities to operate and maintain the advanced transportation system.

1.3 Role and Importance of TSM&O

TSM&O is a strategic enhancement to traditional infrastructure development that empowers agencies to maximize existing assets, respond adaptively to operational challenges, and deliver measurable improvements in system performance.

- **Operational Optimization Over Expansion:** TSM&O focuses on improving system performance using existing infrastructure, targeting non-recurring congestion sources (e.g., incidents, weather, work zones). According to the FHWA Office of Operations, these non-recurring congestion events account for approximately 50 percent of delay.[1]
- **Performance-Based and Data-Driven:** TSM&O relies on real-time data, system monitoring, and performance metrics to guide operational decisions and measure outcomes.
- **Integrated and Scalable Strategies:** Includes ITS, active traffic management, integrated corridor management, and demand-side tools such as congestion pricing and traveler information systems. These strategies are modular and adaptable to corridor-specific needs.

[1] U.S. Department of Transportation, Federal Highway Administration (2025). *Reducing Non-Recurring Congestion*. Accessed on February 13, 2026: https://ops.fhwa.dot.gov/program_areas/reduce-non-cong.htm.

- **Systemwide Coordination:** Facilitates cross-jurisdictional and multimodal integration, enabling unified responses to dynamic conditions and improving overall network resilience.
- **Cost-Effective Investment:** TSM&O offers high return on investment (ROI) by deferring or complementing capital-intensive projects, delivering near-term benefits with lower implementation costs.

1.4 Background and context of FDOT District 1

1.4.1 Overview of District 1

District 1 is comprised of 12 counties in southwest Florida: Charlotte, Collier, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Okeechobee, Polk, and Sarasota counties, comprising a land area of approximately 11,950 square miles. According to the FDOT RCI, there are 1,873 centerline miles on the State Highway System (SHS) within District 1.

According to American Community Survey (ACS) 2023 Five-Year Estimates, there were more than 3,250,000 residents in District 1 in 2023[2]. Table 1 summarizes key demographic information for District 1 and the six most populous counties, which are the subject of this TSM&O Master Plan.

Table 1: District 1 Demographic Information

ACS 2023 Five-Year Estimates	District 1 (12 Counties)	Six Study Counties
Population	3,258,854	3,001,448
Households	1,318,919	1,218,481
Percent of Households with No Vehicle Available	4.72%	4.67%
Percent of Population with a Disability	14.68%	14.32%
Percent of Population Below Poverty	12.10%	11.50%
Median Household Income	$62,534.33	$74,249.17

The largest annual average daily traffic (AADT) values within District 1 are located along Interstate 4 (I-4) in Polk County, with traffic volumes as high as 140,500 vehicles per day (vpd), and along Interstate 75 (I-75) within the coastal counties, with volumes as high as 150,500 vpd. In Polk County, the major north-south arterials such as United States highway (U.S.) 27 (as high as 75,300 vpd) and U.S. 98 (as high as 58,500 vpd) distribute traffic to the cities south of the interstate. Along I-75, the major east-west arterials serving traffic to coastal cities (e.g., Bradenton, Sarasota, Ft. Myers, etc.) reach AADTs as high as 66,500 vpd. U.S. 41 is a major north-south arterial running parallel to I-75 that serves local traffic, with traffic volumes as high as 70,000 daily vehicles near Ft. Myers.

[2] U.S. Census Bureau American Community Survey. 2023 Five-Year Estimates Detailed Tables: Sex by Age, B01001. Accessed on December 29, 2025: data.census.gov.

Annual average daily truck traffic (AADTT) is largest along I-4 and I-75, with the highest concentrations (17,000 to 21,000 daily trucks) near major cities, including Lakeland, Bradenton, Sarasota, and Ft. Myers.

1.4.1 District 1 TSM&O Master Plan Focus Counties

The geographic focus of this TSM&O Master Plan is the six most populous counties in District 1: Collier, Lee, Charlotte, Sarasota, Manatee, and Polk counties, comprising more than 92% (approximately 3 million residents) of the District 1 population. These six counties constitute a land area of approximately 6,858 square miles. Additionally, there are approximately 1,309 centerline miles on the SHS within these six counties.

According to the University of Florida's Bureau of Economic and Business Research (BEBR) *Projections of Florida Population by County, 2025-2050 (Medium Projection)*,[3] the six most populous counties are projected to increase in population by 33.2 percent from 2024 to 2050. This projected change in population is greater than the State of Florida's overall population growth projection (22.4 percent) and similar to the District 1 growth projection (32.3 percent).

Five of the counties (Collier, Lee, Charlotte, Sarasota, and Manatee) make up the coastline within District 1. Given their larger population and proximity to the Gulf of America, these counties are particularly susceptible to hurricanes and other adverse weather events. TSM&O strategies that provide mobility to the traveling public day-to-day as well as during emergency situations and resilience to the transportation network are critical for these coastal counties.

1.5 Overview of Past Efforts

The following sections summarize previous and relevant planning efforts to this TSM&O Master Plan.

1.5.1 District 1 Connected Vehicle Master Plan

The District 1 Connected Vehicle (CV) Master Plan sets out a strategic roadmap for deploying CV technologies to improve safety, mobility, reliability, and economic vitality across the District 1 region, including major corridors on both interstates and arterials. The Master Plan emphasizes that as Florida's "connected" roadway network grows, effective planning, stakeholder coordination, and cross-jurisdictional collaboration are essential to realizing the full benefits of CV technologies.

The CV Master Plan serves as an implementation guide for CV, using a data-driven approach to identify and prioritize projects. District 1 uses crash data and other safety metrics to identify high-risk locations and classify crashes (e.g., rear-end, left-turn, sideswipe). Evacuation and diversion routes are also factored into the prioritization process. The CV Master Plan also reviews existing ITS devices, Information Technology (IT) resources, network capacity, and server/storage environments to determine infrastructure readiness and identify gaps, especially given the high bandwidth and storage demands of CV applications and light detection and ranging (LiDAR) applications. Based on these factors, the CV Master Plan provides a ranked list

3 University of Florida Bureau of Economic and Business Research (2025). Projections of Florida Population by County, 2025-2050, with Estimates for *2024*. https://bebr.ufl.edu/wp-content/uploads/2025/08/projections_2025.pdf

of short-, medium-, and long-term CV projects aligned with FDOT's Work Program and potential MPO/TPO or local funding.

Beyond technology and infrastructure, the Master Plan addresses policy and organizational foundations needed for successful deployment. It outlines goals and strategies related to regulations, standards, and security – including compliance with national standards and use of a Security Credential Management System (SCMS) to protect the network – and calls for regional consistency in policies and operations. The CV Master Plan recommends updating Standard Operating Procedures, interagency agreements, and staffing plans to reflect CV responsibilities. Given the rapid technological change related to CV and other technologies, the CV Master Plan is explicitly designed as a living document to be updated periodically as crash trends, technologies, funding, and operational conditions evolve, guiding CV deployment through 2030.

1.5.2 2017 FDOT TSM&O Strategic Plan

The FDOT TSM&O Strategic Plan establishes the FDOT TSM&O program vision, mission, goals, objectives, and priority focus areas for the State. The TSM&O Priority Focus Areas include: TSM&O Mainstreaming, Arterial Management, CV, Express Lanes, Freeway Management, Information Systems, and Integrated Corridor Management (ICM). The Strategic Plan also identifies specific, measurable, accountable, relevant, and time-bound (SMART) action plans to be accomplished in the proceeding three to five years.

A major focus of the plan is institutionalizing TSM&O across the Department. The Strategic Plan defines TSM&O as a core business function, and emphasizes integrating traffic operations with planning, design, construction, and maintenance programs. It calls for clear roles and responsibilities at the FDOT Central Office (CO) and District levels, as well as consistent business processes to plan, program, fund, and evaluate TSM&O investments. Workforce development is highlighted, including training, recruitment of operations-focused staff, and building a culture that values real-time management of the system as much as capital delivery. The plan also emphasizes the need for stable, predictable funding for TSM&O programs and assets, including traffic management centers, ITS field devices, and communications infrastructure.

The FDOT TSM&O Strategic Plan promotes the use of real-time data and analytics to manage recurring and non-recurring congestion and highlights the use of advanced traffic management systems (ATMS), signal coordination, ramp metering, adaptive signal control, and dynamic messaging, along with data-sharing platforms that support traveler information and coordination with local agencies. The Strategic Plan also highlights the need to prepare for connected and automated vehicles (CAV), stressing interoperability, consistent standards, and scalable communications and data architectures.

1.5.3 Previous District 1 TSM&O Master Plans

Between 2018 and 2020, District 1 developed TSM&O Master Plans for the four most populous counties in District 1: Lee, Sarasota, Manatee, and Polk counties. The purpose of these TSM&O Master Plans was to identify corridors with the greatest need for operational improvements, develop TSM&O strategies tailored to those corridor needs, and to promote the inclusion of the TSM&O process in all project development phases. The goal of these TSM&O Master Plans was to incorporate the TSM&O process and considerations into all project development phases.

The TSM&O Master Plan development was comprised of four main components: Data Collection, Data Review and Needs Assessment, Prioritization by Roadway Segment, and Issue Identification. The TSM&O Strategic Network was established as the base layer for the analysis, comprised of state and local roadways, to be used for all TSM&O Master Plan analyses.

Prioritization was based on how roadway segments scored across seven categories: Safety, Capacity, Performance, Freight, Design/Geometry, Transit, and Volume/Growth.

The following subsections summarize the priority corridor segments from the previous referenced master plans for on-system and off-system facilities in each of the four counties.

1.5.3.1 Lee County TSM&O Master Plan – Priority Corridors (September 2020)

The following are the top ten on-system priority TSM&O corridor segments in Lee County:

1. State Road (S.R.) 884 (Colonial Boulevard) from U.S. 41 to Colonial Country Club Boulevard
2. S.R. 82 (Dr. Martin Luther King Jr. Boulevard) from Colonial Boulevard to Alabama Road
3. U.S. 41 (Cleveland Avenue) from S.R. 865 to S.R. 884
4. S.R. 865 (6 Mile Cypress Parkway) from Summerlin Road to Metro Parkway
5. S.R. 876 (Daniels Parkway) from U.S. 41 to Treeline Avenue
6. S.R. 867 (McGregor Boulevard) from Colonial Boulevard to College Parkway
7. S.R. 78 (Pine Island Road) from Santa Barbara Boulevard to Hancock Creek Boulevard
8. S.R. 82 (Dr. Martin Luther King Jr. Boulevard) from Michigan Avenue to I-75 NB On-ramps
9. U.S. 41B (Edison Bridge) from S.R. 80 to Mile Post (MP) 1.017
10. U.S. 41B (Park Avenue) from Second Street to First Street

The following are the top ten off-system priority TSM&O corridor segments in Lee County:

1. Del Prado Boulevard from SE 21st Lane to Hancock Bridge Parkway
2. Boy Scout Drive from Summerlin Road to Colonial Boulevard
3. Bonita Beach Road from Vanderbilt Drive to Old 41 Road
4. Del Prado Boulevard from Cape Coral Parkway to Veterans Parkway Ramps
5. Ortiz Avenue from S.R. 884 to S.R. 80
6. Cape Coral Parkway from Coronado Parkway to Santa Barbara Boulevard
7. Corkscrew Road from U.S. 41 to I-75
8. Veterans Parkway from W of Skyline Boulevard to S.R. 867
9. Summerlin Road from S.R. 884 to College Parkway
10. Leonard Boulevard from Lee Boulevard to Sunshine Boulevard

1.5.3.2 Sarasota County TSM&O Master Plan – Priority Corridors (August 2020)

The following are the top ten on-system priority TSM&O corridor segments in Sarasota County:

1. S.R. 780 (Fruitville Road) from U.S. 301 to E of Coburn Road
2. S.R. 758 (Bee Ridge Road) from U.S. 41 to W of Mauna Loa Boulevard
3. U.S. 301 (Washington Boulevard) from U.S. 41 to Manatee County Line
4. U.S. 41 (Tamiami Trail) from Dr. Martin Luther King Way to Weber Street

5. U.S. 41 (Venice Bypass / Tamiami Trail) from S.R. 776 to U.S. 41B
6. S.R. 72 (Stickney Point Road) from S.R. 758 to I-75
7. S.R. 758 (Midnight Pass Road) from S.R. 72 to Higel Avenue
8. U.S. 41 (Tamiami Trail) from Beneva Road to Proctor Road
9. U.S. 41 (Tamiami Trail) N River Road to Charlotte County Line
10. I-75 from S.R. 758 to Manatee County Line

The following are the top ten off-system priority TSM&O corridor segments in Sarasota County:

1. University Parkway from U.S. 41 to I-75
2. Center Road from U.S. 41 to N River Road
3. Beneva Road from S.R. 72 to S.R. 780
4. Fruitville Road from U.S. 41 to U.S. 301
5. Honore Avenue from Richardson Road to Bee Ridge Road
6. Vencie Avenue from U.S. 41B (Tamiami Trail) to Jacaranda Boulevard
7. Tuttle Avenue from 17th Street to Siesta Drive
8. Bahia Vista Street from S Osprey Avenue to S Beneva Road
9. Siesta Drive from S Tuttle Avenue to S Osprey Avenue
10. Sidell Road from S.R. 72 to Manatee County Line

1.5.3.3 Manatee County TSM&O Master Plan – Priority Corridors (August 2020)

The following are the top ten on-system priority TSM&O corridor segments in Manatee County:

1. U.S. 41 (Tamiami Trail) from 44th Avenue to U.S. 301
2. S.R. 70 (53rd Avenue) from Lockwood Ridge Road to Lakewood Ranch Boulevard
3. S.R. 70 (53rd Avenue) from 301 Boulevard to Lockwood Ridge Road
4. S.R. 64 (Manatee Avenue) from 15th Street to 27th Street
5. U.S. 41 (14th Street) from S.R. 684 to Saunders Road
6. S.R. 684 (Cortez Road/44th Avenue) from 75th Street to 14th Street
7. U.S. 301 from 14th Street to Sarasota County Line
8. U.S. 41 (Tamiami Trail) from U.S. 301 to 49th Street
9. U.S. 41B (9th Avenue/8th Avenue) from 8th Avenue to 10th Street
10. S.R. 70 (15th Street) from 51st Avenue to U.S. 301

The following are the top ten off-system priority TSM&O corridor segments in Manatee County:

1. 301 Boulevard from 8th Avenue to Sarasota County Line
2. Moccasin Wallow Road from U.S. 41 to I-75
3. 26th Street from El Conquistador Parkway to S.R. 64
4. 63rd Avenue from U.S. 41 to Tuttle Avenue
5. Lakewood Ranch Boulevard from S.R. 64 to S.R. 70
6. Rye Road from S.R. 64 to Upper Manatee River Road
7. Tallevast Road from 301 Boulevard to Lockwood Ridge Road

8. 43rd Street from S.R. 64 to Cortez Road
9. Tuttle Avenue from Manatee County Line to 63rd Avenue
10. Bayshore Gardens Parkway from 34th Street to U.S. 41

1.5.3.4 Polk County TSM&O Master Plan – Priority Corridors (November 2020)

The following are the top ten on-system priority TSM&O corridor segments in Polk County:

1. S.R. 540 (Cypress Gardens Boulevard) from U.S. 17 / S.R. 555 to Overlook Drive
2. U.S. 98 (Bartow Road) from N Combee Road to N Florida Avenue
3. U.S. 98 (N Florida Avenue) from Main Street to Marcum Road
4. S.R. 649 (N Combee Road) from U.S. 98 to U.S. 92/ S.R. 600
5. S.R. 33 (Massachusetts Avenue) from E Main Street to E Bella Vista Street
6. S.R. 655 (Recker Highway) from Coleman Road to S.R. 559
7. U.S. 92 (Magnolia Avenue) from Polk Parkway to Arianna Avenue
8. S.R. 37 (S Florida Avenue) from Shepherd Road to W Beacon Road
9. S.R. 563 (Harden Boulevard) from Polk Parkway to Ariana Street
10. U.S. 17 / S.R. 555 (6th Street) from S.R. 540 to Havendale Boulevard

The following are the top ten off-system priority TSM&O corridor segments in Polk County:

1. Wabash Avenue from Ariana Street to U.S. 92
2. W. Lemon Street from George Jenkins Boulevard to S.R. 33
3. Parkview Place from Kathleen Road to W. Lake Parker Drive
4. Main Street from Sloan Avenue to Massachusetts Avenue
5. Clubhouse Road from U.S. 98 to Lakeland Highlands Road
6. County Line Road from I-4 to Drane Field Road
7. 6th Street SE from Avenue C NE to Cypress Gardens Boulevard
8. Dairy Road from Stadium Road to Recker Highway SW
9. Griffin Road from Lakeland Hills Boulevard to Kathleen Road
10. N Socrum Loop Road from Pearce Avenue to Lakeland Hills Boulevard

1.5.4 Regional TSM&O Strategic Plan

The Regional Transportation Systems Management and Operations (RTSMO) Program and Working Group were formed to support the Central Florida region's ten MPOs and TPOs including the Sarasota/Manatee MPO and the Polk TPO, in advancing TSM&O planning. In 2021, a Memorandum of Understanding was executed between the MPOs and TPOs participating in the RTSMO Program. The purpose of the RTSMO Program is to facilitate regional coordination, strengthen the position of TSM&O in planning, identify cross-agency touchpoints between projects, leverage collaboration to pursue funding, and serve as a go-to resource for sharing best practices and building awareness, provide education and awareness to foster TSM&O champions and support, and advance a more uniform approach to planning for TSM&O.

The RTSMO Program published the RTSMO Strategic Plan in 2025. The RTSMO Strategic Plan was developed to leverage the individual and combined strengths of the RTSMO Program members to maximize effective TSM&O planning. The goals of the Strategic Plan include:

- Goal 1 – Advance regional TSM&O planning through multi-jurisdictional coordination, collaboration, and partnership;
- Goal 2 – Enhance the role of TSM&O in meeting the region's mobility demands and safety concerns; and
- Goal 3 – Provide assistance as needed to cultivate a culture at the MPOs/TPOs in Central Florida that enables a methodology for supporting TSM&O projects.

The Strategic Plan includes an assessment comparing national best practices against the region's current TSM&O program as well as its aspirational vision. A list of actions is identified in the Strategic Plan to move the RTSMO Program towards its stated goals.

The Strategic Plan identifies four strategic initiatives and associated actions:

- Strategic Initiative 1 – Strategically position the RTSMO Program for successful implementation;
- Strategic Initiative 2 – Institutionalize RTSMO planning support;
- Strategic Initiative 3 – Provide education and foster communication to advance regional TSM&O planning; and
- Strategic Initiative 4 – Facilitate regional TSM&O collaboration and coordination.

The RTSMO Strategic Plan also establishes a target organizational structure that will formalize the RTSMO Program. It recommends a short-term or interim governance model to maintain momentum while a long-term structure and funding strategy are developed. Over time, the region is expected to identify sufficient, stable, dedicated funding, establish formal governance with clear roles for member agencies, and create dedicated staffing to support continuous coordination.

2

Overview of TSM&O Strategies

TSM&O refers to integrated strategies that enhance the transportation infrastructure by coordinating multimodal, cross jurisdictional systems and services. Its goal is to preserve capacity and improve safety, security, and reliability without major capital investments. TSM&O strategies are scalable across regional, corridor, and project levels, and can be embedded into capacity, preservation, and safety initiatives.

Most TSM&O strategies involve some elements of ITS. In accordance with 23 CFR 940 (also known as Rule 940), any ITS projects or ITS components of a larger project shall conform to the National ITS Architecture (NITSA), commonly referred to as the Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT). To conform to the National ITS Architecture, jurisdictions using federal funding for ITS projects must adopt and maintain a Regional ITS Architecture (RITSA). District 1 maintains a RITSA that complies with 23 CFR 940 and conforms to ARC-IT, version 9.3.

The following subsections describe an overview of the District 1 RITSA, a variety of TSM&O technology-focused strategies, consistent with this Master Plan's Mission, Vision, and Goals, that can improve safety, mobility/performance, and/or resilience for arterial corridors and the larger transportation network.

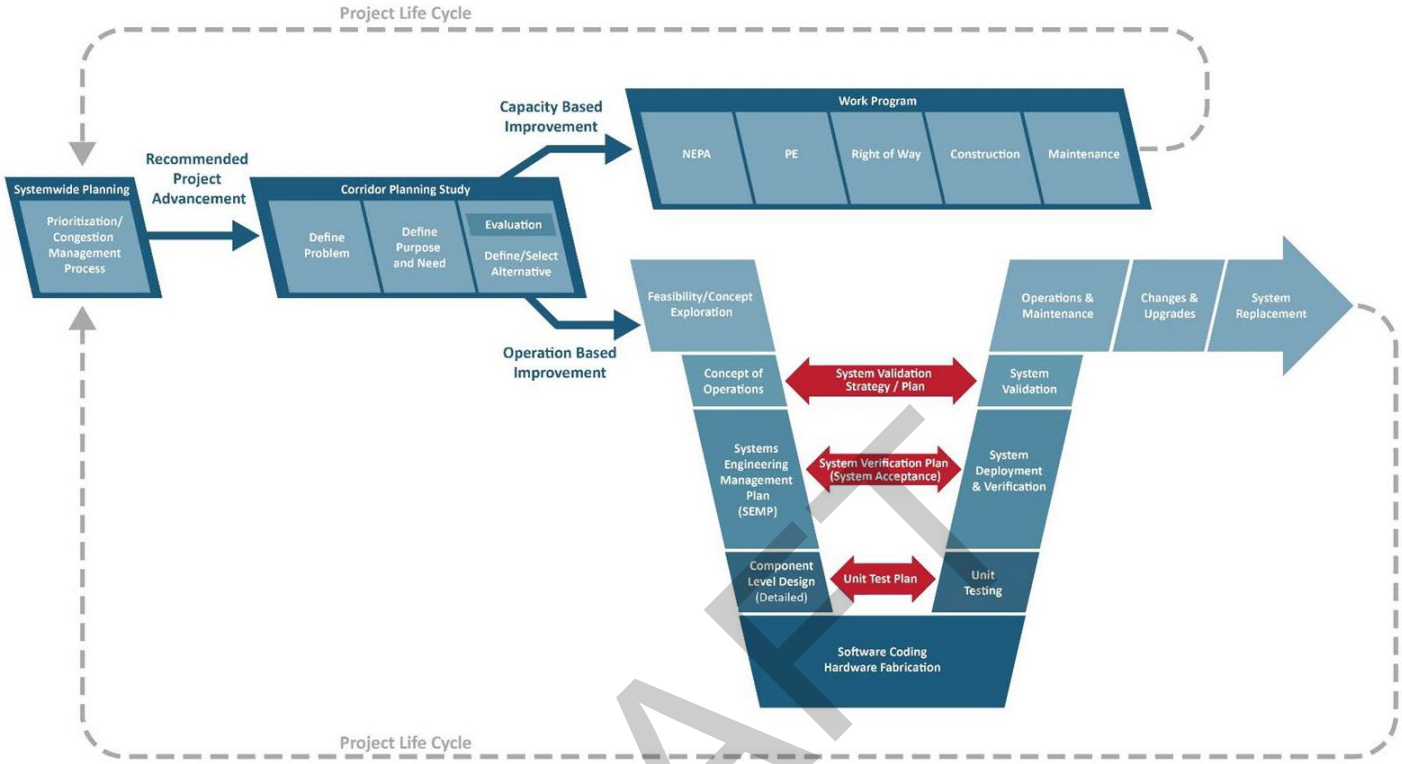
2.1 ITS Architecture Overview

The District 1 RITSA is a systems engineering process roadmap for transportation systems integration over a ten-year horizon, serving as a guide for the current and future course of ITS deployment in the District 1 region. Developed cooperatively across the region's transportation agencies, the District 1 RITSA encompasses all modes of transportation, representing a shared regional vision of a safe, reliable, and efficient transportation system for all users. The District 1 RITSA provides a guide for the integration of TSM&O projects incorporating needs across traffic, safety, and transit. A primary purpose of the District 1 RITSA is to identify opportunities for integration among the stakeholder ITS elements.

The District 1 RITSA , defines the interactions and information flows for ITS systems operated within the region. These interactions and information flows can be further refined and developed for specific projects through the systems engineering process. In the project life cycle process, operations-based projects should follow the systems engineering process as graphically represented by the V-diagram, as shown in Figure 1. Figure 1 depicts how the systems engineering project life cycle compares to the traditional project development process for capacity based projects.

The District 1 RITSA was designed to align with Statewide ITS Architecture (SITSA), including assisting with satisfying the requirement from the Federal Highway Administration (FHWA) Rule 940 and Federal Transit Administration (FTA) policy directives. Both the RITSA and the SITSA must conform to the current National ITS Architecture, ARC-IT, Version 9.3.

Figure 1: Project Life Cycle Process



The RITSA should be consulted when assessing the strategies and deployments identified in this section and subsequent sections. If proposed projects are not currently represented in the RITSA, or if new stakeholders are proposed for existing systems in the RITSA, the *ITS Architecture Change Request Form* (750-040-04) is required for updating the RITSA to document these new elements. In District 1, the minimum Systems Engineering documentation is the *Project Risk Assessment and Regulatory Compliance Checklist* (750-040-05). Additional Systems Engineering documentation may be needed based on project risk, including but not limited to a *Concept of Operations* (ConOps) and a *Project Systems Engineering Management Plan* (PSEMP).

2.2 Safety Strategies

2.2.1 Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption (EVP) systems are implemented at signalized intersections to provide first responders the ability to preempt the normal traffic signal cycle in order to expedite travel in a safe manner during emergencies. If a first responder is on an emergency call, the EVP system can override normal traffic signal operations as the emergency vehicle approaches to disperse queued vehicles and provide the first responder with the right-of-way through intersections. This reduces the arrival time of first responders to an emergency, while also reducing their potential conflicts when moving through signalized intersections.

There are a variety of EVP systems available using a range of technologies, from basic vehicle-to-infrastructure (V2I) transmitter-detector systems to more advanced, networked solutions.

Several existing and traditional systems rely on direct vehicle detection at the intersection approach while more advanced systems incorporate location, speed, and direction information to predict vehicle arrival and coordinate traffic signal responses at a corridor level. Depending on the technology used, EVP may operate based on line-of-sight detection, wireless communications, or network-based data exchange.

More advanced EVP implementations can leverage centralized software platforms that track responding vehicles, assess their routing, and coordinate preemption across multiple upstream intersections. These approaches support more consistent emergency vehicle progression along corridors and reduce the need for repeated, isolated preemption events at individual intersections. The effectiveness of any EVP system depends on local operating practices, communications infrastructure, and agency preferences, which are reflected in the existing conditions and gap assessments presented in subsequent chapters.

2.2.2 Connected Vehicle (CV) Technology

CV technology enables advanced safety and mobility communication between the roadside infrastructure and participating/equipped travelers. CV technology includes communications across multiple systems:

- Vehicle-to-Vehicle (V2V) – Vehicles share safety-critical information with each other such as speed, location, trajectory, and braking status, culminating in alerts between vehicles and to driver(s) to help prevent collisions.
- Vehicle-to-Infrastructure (V2I) – Vehicles communicate with infrastructure to receive safety-critical alerts and mobility-related information.
- Vehicle-to-Pedestrian (V2P) – Vehicles detect and communicate with vulnerable road users (VRU) using smartphones or other wearable devices to provide safety-critical alerts regarding potential conflicts with vehicles.
- Vehicle-to-Network (V2N) – Vehicles communicate with a wider network, such as a cellular network, cloud services, or the internet, enabling over-the-air (OTA) updates, real-time traffic updates, navigation, and connectivity to other services.
- Vehicle-to-Everything (V2X) – V2X includes all the communication types described above, representing the full breadth of the CV technology.

Using the roadside unit (RSU) and the onboard unit (OBU) or CV-enabled smartphone applications, agencies can utilize CV communications to send and receive alerts such as Basic Safety Messages (BSM), Personal Safety Message, and Traveler Information Message. RSUs can transmit alerts derived from local conditions identified by the RSU and other edge devices, or even send messages generated from a traffic management center (if properly connected).

In 2025, CV alerts are carried out via Cellular-Vehicle-to-Everything (C-V2X) communication, utilizing the upper range of the 5.9 GHz spectrum's "ITS Band" (5.905 GHz to 5.925 GHz). Earlier iterations of CV technology utilized Dedicated Short-Range Communication (DSRC) on the ITS band, but the band was reallocated to C-V2X and unlicensed Wi-Fi use following a lack of national, industry-wide DSRC adoption.

2.2.3 PedSafe / Computer Vision

Pedestrian Detection and Safety Systems (PedSafe) are an emerging technology that may improve a driver's awareness of pedestrians and bicyclists at signalized intersections. These systems use computer vision and video analytics to detect VRUs near and within the intersection. PedSafe systems can support supplemental safety functions, such as monitoring crossing activity or identifying potential conflict conditions.

When deployed, these systems are most appropriate as targeted enhancements at locations with elevated pedestrian activity or documented safety concerns for VRUs. RSUs and connected vehicle messaging are not essential to basic PedSafe functionality and, where present, do not currently represent a necessary or determinant component of intersection operations.

As computer vision technologies mature and agency needs evolve, PedSafe applications may provide additional situational awareness and support future safety initiatives. Consideration of these systems should be guided by local priorities, operational objectives, and demonstrated benefit rather than as a baseline requirement.

2.2.4 Traffic Incident Management (TIM)

Traffic Incident Management (TIM) is a planned and coordinated approach to quickly detect, respond to, and clear unplanned roadway incidents. The goal of TIM is to quickly clear traffic crashes and incidents and restore traffic flow while protecting first responders and the public. The efficient clearing of incidents can reduce secondary crashes and improve system reliability, enhancing both safety and mobility. The TIM program uses several strategies to carry out this directive, including the Road Ranger initiative, Rapid Incident Scene Clearance, Dynamic Message Signs and other communications, as well as Integrated Corridor Management and Diversion Routing, all in close coordination with TIM Teams across District 1. Additional strategies include training and workforce development programs. These TIM Teams are comprised of state, regional, and local transportation agencies, public safety providers, first responders, emergency management agencies, and professional tow truck operators, among other entities.

District 1 has a robust TIM program along the freeway system within the region and has expanded the TIM program to include major arterial roadways within District 1.

2.2.5 Work Zone Management

Transportation agencies implement Work Zone Management strategies to organize and operate areas impacted by roadway construction to maintain safety for workers and travelers, minimize traffic delays, and accomplish the construction work efficiently. A variety of ITS equipment can be deployed as part of a work zone management program.

- Portable and Arterial Dynamic Message Signs (ADMS) can inform motorists of upcoming construction work and suitable diversion routes.
- Traffic monitoring devices, including Closed-Circuit Television (CCTV) cameras and vehicle detection systems can help operators determine real-time traffic conditions near the construction site.

- Queue warning systems (QWS) can automatically detect slow or stopped traffic and activate warning signs upstream to alert motorists that they should slow down as they are approaching backups caused by construction.
- CV technologies can send advisories and alerts to nearby travelers relating to the construction activities.
- Smart Work Zone (SWZ) systems can be deployed at construction sites to monitor traffic near the construction site, display messages to motorists, and collect data for planning future construction efforts. The SWZ system will also identify any vehicles that have entered the restricted area of the construction site and can audibly alert construction workers and drivers of the imminent safety issue.

A key component of Work Zone Management is active and consistent communication between partner agencies and with the traveling public, providing real-time awareness of on-going construction activities. Work Zone Management supports the effective and predictable movement of traffic through the work zone.

2.2.6 Freight Signal Priority (FSP)

Freight Signal Priority (FSP) is an advanced safety and mobility system deployed at signalized intersections along major arterial roadways that serve as freight corridors. FSP employs advanced detection systems and Advanced Traffic Controllers (ATC) to detect equipped freight vehicles as they approach traffic signals. The FSP system will determine their approximate speed and calculate if the vehicle can slow down quickly enough to stop at the intersection in a safe manner. If the FSP system determines the truck does not have enough pavement to slow down safely, the system can extend the green phase timing to allow an approaching truck to safely clear the signalized intersection, while keeping cross traffic in a red phase. This protects cross traffic from dangerous conflicts with larger freight vehicles approaching the intersection at higher speeds. Priority may also be provided to approaching trucks on an uphill approach so that the truck can clear the intersection, reducing delay and congestion caused by lost start-up time.

An FSP system can facilitate more efficient and reliable freight movement through signalized intersections by giving freight vehicles priority along a series of traffic signals. By smoothing traffic flow for freight vehicles along a series of signalized intersections, the FSP system can reduce the occurrences of sudden braking (and potentially jackknife scenarios), as well as wear and tear on the vehicle and roadway.

Once the FSP system determines the freight vehicle has safely navigated the intersection, it will return the signal to normal operations.

The earliest FSP systems utilized OBUs in the freight vehicles paired with RSUs along the corridor to activate the priority call. However, this requires significant upfront coordination and buy-in from a diverse group of fleet operators. The industry is pivoting away from this CV approach to advanced detection systems automatically identifying freight vehicles and communicating that information to the controller to activate FSP protocols at the intersection. This approach eliminates the need for an OBU and the need for coordination with freight providers while still providing exceptional safety and mobility benefits to the trucking industry and the general public.

2.2.7 Road Weather Management (RWIS)

Road Weather Information System (RWIS) is a combination of environmental sensor stations in the field, communication to field equipment, and a central management software. The sensors collect data for a variety of environmental conditions, including atmospheric conditions (e.g., temperature, humidity, precipitation, visibility, etc.), pavement conditions (e.g., pavement temperature, wet, flooded, etc.), and water level of nearby waterbodies.

RWIS technology allow traffic operations staff to identify unsafe conditions for travelers, as well as monitor rapidly changing water levels near roadways, and send alerts accordingly.

2.3 Mobility and Performance Strategies

2.3.1 Transit Signal Priority (TSP)

TSP can improve the schedule adherence for transit agencies to provide more reliable service to their patrons. The TSP system utilizes Automatic Vehicle Location (AVL) technologies to track the bus location along the route and compares that location against a schedule software system to determine if the bus is on schedule along its route. When a bus is running behind, the driver can enact the TSP system on the bus, requesting priority service from the signal controller. Receiving the request, the ATMS central software will interface with the transit agency's schedule software server to determine whether the bus is on schedule. When the ATMS central software confirms that the bus is behind schedule, the ATMS can notify the signal controller to grant priority to the approaching bus, modifying the existing timing plan to extend the green time for the bus approach. If the ATMS confirms with the transit agency's schedule that the bus is running ahead of schedule or on time, priority will not be granted, and the signal timing will not adjust for the bus. This will ensure the bus will arrive at the scheduled time, thus improving the reliability of the transit service.

An activated TSP call should minimally impact normal signal operations, only extending or shortening phases to accommodate improved transit movement through the intersection when a bus is falling behind schedule. Conversely, an EVP system will disrupt normal signal operations, stopping conflicting movements as quickly as it can safely do so, in order to get first responders to the emergency as quickly as possible. In the event that a controller receives an EVP call and a TSP call simultaneously, the EVP will be given priority at the signalized intersection.

2.3.2 Advanced Transportation Management System (ATMS)

The ATMS is the backbone of a traffic operations program, allowing for real-time monitoring of and response to conditions on the transportation network. It enables traffic operators to observe traffic conditions and make necessary adjustments in real-time. The ATMS will also alert operators to potential incidents based on real-time metrics collected by ITS devices. In order to fully leverage the capabilities of an ATMS platform, ITS and TSM&O field equipment must be integrated with the system, typically through fiber optic communications or cell modems. Where feasible, traffic signals should be fully integrated (*interconnected and monitored*) with the ATMS to ensure the most responsive and effective operations possible along the corridor.

2.3.3 Automated Traffic Signal Performance Measures (ATSPM)

ATSPM is a system that automatically collects real-time performance at signalized intersections and can store data to keep an historical record of performance at each intersection. ATSPM data is derived from second-by-second signal controller data, detector activations, pedestrian calls, and other events at the traffic signal. ATSPMs can capture approach volumes, approach speeds, arrivals on red, and Purdue split failure events, among other data. The real-time and historical data derived from ATSPMs can alert traffic operations staff to potential congestion issues caused by timing or detection issues. Operations staff can correct the issue with modified timing and other countermeasures, leading to smoother traffic flow and reduced red-light running. Additionally, ATSPMs can help operations staff identify detection failures that are resulting in poor signal performance.

Some of the data collected, such as high approach speeds, shortened green intervals, and frequent queue spillbacks, can help traffic engineers identify unsafe conditions and implement proactive countermeasures before crashes occur.

Several ITS hardware and software components are needed to facilitate ATSPM, including:

- ATC in an ATC cabinet
- Advanced detection systems (inductive loop detectors, video detection, or radar)
- High-resolution Data Logger
- Reliable communications (fiber optic communications or cellular)

2.3.4 Arterial Dynamic Message Signs (ADMS)

ADMS provide traveler information in advance of decision points along the arterial roadway network. ADMS are connected to a traffic management center via the ATMS, where traffic operations staff can deploy messages that would benefit travelers and improve operations in the area. ADMS can help operations agencies reroute motorists around traffic incidents and special events on the arterial roadway network. ADMS can also alert motorists to potential safety/congestion issues on the nearby freeway system, providing alternative routing. ADMS can also support ICM efforts to reroute interstate traffic around a traffic incident or congestion event on the interstate, providing diversion route instructions to motorists using the nearby arterial network.

2.3.5 Travel-Time Devices

Travel-time devices collect anonymized data from motorists over a series of travel-time devices, allowing the system to identify the time it took users to get from one device to another device further downstream.

Travel-time devices, such as Bluetooth and Wi-Fi readers, enable traffic operations staff to determine the approximate travel-time for motorists along a corridor, which can help operators understand how well the corridor is performing in real-time. Travel-time devices can also help operators identify traffic incidents that just happened, due to the resultant congestion.

2.3.6 Integrated Corridor Management (ICM)

ICM is a proactive, coordinated program managing multiple transportation modes and networks along a major corridor that serves large, consistent daily volumes like I-75. An ICM program requires significant coordination between FDOT, regional and local transportation agencies, first responders, and other entities to provide a unified response to congestion, traffic incidents, and special events. Rather than optimizing each system or corridor in isolation, ICM integrates all assets and operations.

A successful ICM program will maximize the assets and resources available to participating agencies to provide for the safe and efficient movement of people and goods across the transportation network.

2.4 Resilient Transportation System Strategies

2.4.1 Communications

Fiber optic cable provides a high speed, high bandwidth communication path which has become the standard medium for communicating with traffic signals and other ITS field equipment. Fiber optic communications accommodate significantly larger and more reliable data transfer from field equipment to a traffic management center. This enables many advanced ITS deployments on the transportation network that rely on heavier data transfers to and from the field. Fiber optic communications also accommodate real-time monitoring and control of traffic signals, cameras, and other transportation systems. Fiber optic communications are a foundational component of ITS infrastructure. Wireless access points (WAPs) are utilized for short range communication between intersections to extend the range of an ATMS system and can be utilized as a stop gap for where there are physical constraints for fiber communications.

Fiber optic conduit is typically deployed within roadway right-of-way, approximately three feet below the surface, depending on various characteristics. Fiber optic cables are channeled through the protective conduit. Though underground fiber optic communications are typically well-protected, they can be impacted or severed by active construction work. Due to the reliance on fiber optic communication to enable remote operation of ITS equipment in the field, agencies will often deploy redundant circuits of fiber optic cabling throughout their jurisdiction so that a single fiber “break” does not significantly impact communication to a large portion of ITS field devices.

Fiber optic communication relies on ethernet switches at nodes and terminal locations within the network. The switches control the speed of data transfer, and with certain managed switches, the control of data flow within the network. These ethernet switches are typically installed in traffic signal cabinets and ITS field cabinets, as well as head-end switches located at the transportation management centers (TMC).

Cellular communications is an alternative medium for communicating with traffic signals and other ITS field equipment. A cell modem is required to manage the data flow. Cellular communications can be a suitable short-term solution for ITS devices until fiber optic cable can be installed for long-term use. Alternatively, a cell modem can be a viable long-term solution for field equipment in remote or rural locations where fiber deployment is unfeasible. Cellular service may have a higher maintenance cost (e.g., monthly subscription fees) than fiber optic communication, but they require a much lower upfront capital cost and shorter timeline to

deployment. Cellular service is typically managed and controlled by third-party cellular service providers.

2.4.2 Traffic Signal Enhancements

The traffic signal is an integral part of the transportation system, providing safety-critical guidance to motorists and vulnerable roadway users, while ensuring the efficient movement of all modes of transportation through the intersection. As such, it is necessary that the traffic signal continues to operate under any condition. Certain ITS components and strategies can fortify the traffic signal system, contributing to sustained operations and uptime. The following are some ITS devices that contribute to a resilient traffic signal system:

- ATC – The ATC is the current industry standard for traffic signal controllers, offering a variety of benefits over legacy traffic signal controllers. ATCs are equipped with increased processing power to handle advanced operations at the traffic signal. They also have a modular design, allowing for easier customization and plug-and-play integration of additional ITS equipment. ATCs have additional features to protect against power failures and downtime. They are also compatible with advanced ITS solutions, including Adaptive Signal Control (ASC), EVP, TSP, VRU detection, and CV technology. ATCs can collect detailed traffic data, and are necessary to facilitate ATSPMs and additional analyses.
- Advanced Traffic Signal Detection Systems – With ATCs, modern traffic signals can perform a variety of TSM&O tasks. Some of those tasks require more extensive detection systems than traditional stop bar detection. The advanced detection systems may include video detection with AI features that can distinguish cars from trucks and vehicles from pedestrians while providing speed measurement, traffic counting, classification, directionality and occupancy data. These advanced detection systems collect and process data in real-time to supply algorithms that manage the traffic signal operations and allow for PedSafe, ASC, TSP, FSP, and CV technologies.
- Uninterruptible Power Supply (UPS) – A UPS provides continuous, uninterrupted power to a traffic signal in the event of a power outage, enabling the traffic signal to continue operating as normal for a certain amount of time. The additional uptime provided by a UPS system is contingent on the size of the intersection, power draw of the equipment, buildout of the UPS, and traffic signal operations during the outage. However, the FDOT Traffic Engineering Research Laboratory (TERL) UPS Compliance Matrix Specification 685[4] indicates a UPS must be capable of providing a minimum 400 watts (at 120 volts) of continuous power to a traffic signal controller cabinet for a minimum of 6.5 hours.
  Most UPS systems can also provide “clean” power to a traffic signal. Aging or poorly maintained public utility infrastructure can sometimes disrupt the smooth flow of electricity. A UPS will also protect the traffic signal’s sensitive components from damage caused by power surges and other electrical fluctuations. The UPS ensures the traffic signal can stay online for an additional period of time, giving staff additional time to resolve the issue or provide alternative power (e.g., generator) to the intersection.
- Remote Power Management Unit (RPMU) – An RPMU provides the ability to remotely monitor, control, and schedule power to critical field equipment like traffic cameras and sensors via the internet. A key benefit of an RPMU is to power cycle unresponsive

[4] Florida Department of Transportation (2025). *Product Compliance Matrices, Specification 685 – Uninterruptible Power Supply*. Accessed on January 2, 2026: https://www.fdot.gov/traffic/traf-sys/product-specifications.shtm

equipment remotely, without requiring a maintenance technician to travel to the equipment. The RPMU can also monitor the system voltage for unusual power surges or power drains.

2.4.3 Additional Monitoring

While detection systems can monitor the characteristics of the traffic flow through the intersections, there is benefit to system operators and first responders being able to see the intersections in real-time. CCTV cameras can help provide operators and first responders with increased real-time situational awareness during traffic incidents, congestion, or other emergency situations. Deploying monitoring devices at signalized intersections and at midblock locations can help staff verify conditions on the roadway and can also verify that traffic signals and ADMS systems are working as intended.

2.5 TSM&O Strategies & Master Plan Goals

The TSM&O strategies previously described all advance the Goals of this Master Plan. A crosswalk indicating how each TSM&O strategy advances Master Plan goal(s) is presented in Table 2.

Table 2: TSM&O Strategies & Master Plan Goals Crosswalk

#	Goal Focus Area	Goal	TSM&O Strategy: ADMS	ATC Controller	ATSPM	Bluetooth	CCTV	CV Technology	EVP	Fiber Redundancy/ Connectivity [1]	Switch Upgrade [1]	FSP	PedSafe/ Computer Vision	TSP	UPS
1	Safety Enhancement	Improve detection of and response time to traffic incidents by traffic operators and first responders through additional and/or improved monitoring and alerting capabilities.	✓	✓		✓	✓	✓	✓		✓		✓		
2	Safety Enhancement	Provide proactive measures to protect Vulnerable Road Users.		✓	✓			✓					✓		✓
3	Mobility Improvement	Improve travel time reliability by reducing congestion using advanced technologies and data systems.	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓
4	Mobility Improvement	Improve information dissemination to the traveling public.	✓			✓		✓			✓				
5	Mobility Improvement	Enhance multimodal transportation options with technology investments to improve safety and travel time reliability.	✓	✓	✓			✓				✓	✓	✓	✓
6	Resilience	Identify resilient solutions for transportation infrastructure during and after severe weather events.	✓	✓	✓		✓				✓		✓		✓
7	Improved Communications	Eliminate gaps in communications and add greater redundancy to enable advanced communications, innovative technology deployments, traffic operations, and automated data collection.						✓		✓	✓				✓
8	Workforce Development	Identify staffing needs and training opportunities to operate and maintain the advanced transportation system.		✓	✓		✓	✓			✓	✓	✓	✓	

Key

✓ Indicates recommendation advances the goal

Notes

1 Fiber Redundancy/Connectivity and Switch Upgrades are both required to advance some goals.

General Notes

Traffic Incident Management strategies are supported and advanced by CCTV, UPS, Fiber Redundancy/Connectivity, and Bluetooth technologies.
Work Zone Management strategies are supported and advanced by ATC, ADMS, UPS, CCTV, and Bluetooth.
Road Weather Management strategies are supported and advanced by ADMS, Fiber Redundancy/Connectivity, and CCTV.
Advanced Transportation Management System strategies can be supported and advanced by all technologies listed.
Travel Time Devices include Bluetooth technology.
Integrated Corridor Management strategies are supported and advanced by ADMS, CCTV, Fiber Redundancy/Connectivity, and potentially Bluetooth.
Communications strategies generally refer to fiber infrastructure; cables plus switches.
Traffic Signal Enhancements includes ATC, Fiber Redundancy/Connectivity, UPS, and RPMU.
Additional Monitoring includes CCTV, PedSafe, and Bluetooth.

3

TSM&O Strategic Roadway Network

This Master Plan focuses on a set of Top 5 Priority Corridors for each of the counties included in this assessment: Collier, Lee, Charlotte, Sarasota, Manatee, and Polk. These Top 5 Priority corridors were identified using a data driven approach, starting with identification of the TSM&O Strategic Roadway Network, development of a prioritization and weighting system for the roadway segments, and ranking and review of the top corridors, as described below.

3.1 Identification of TSM&O Strategic Roadway Network

The TSM&O Strategic Roadway Network was developed to establish a base roadway network from which performance metrics, issues, needs, and opportunities could be identified for TSM&O implementation. The TSM&O Strategic Roadway Network is comprised of roadways within District 1 that contribute to connectivity across the region and that are included within a variety of key datasets, including the RCI Database maintained by the Department, as well as other datasets such as the HERE Travel-Time *Jam Factor* index. If a roadway did not have certain data available to contribute to the TSM&O analysis, it was not included in the TSM&O Strategic Roadway Network; this primarily affected local roadways. The final TSM&O Strategic Roadway Network is comprised of U.S. Routes, State roads, and select local roadways, based on careful consideration of their contribution to the regional transportation network and data availability. Figure 2 through Figure 7 illustrate the TSM&O Strategic Roadway Network within each county.

Network segmentation was performed based on logical criteria, including jurisdictional boundaries, major intersections, functional classifications, lane counts, and AADT, to maintain connectivity and context. The network segmentation was reviewed by stakeholders with detailed knowledge of the roadway network to ensure the segments were terminated at appropriate locations.

Figure 2: TSM&O Strategic Roadway Network - Collier County

FDOT District 1 – TSM&O Master Plan

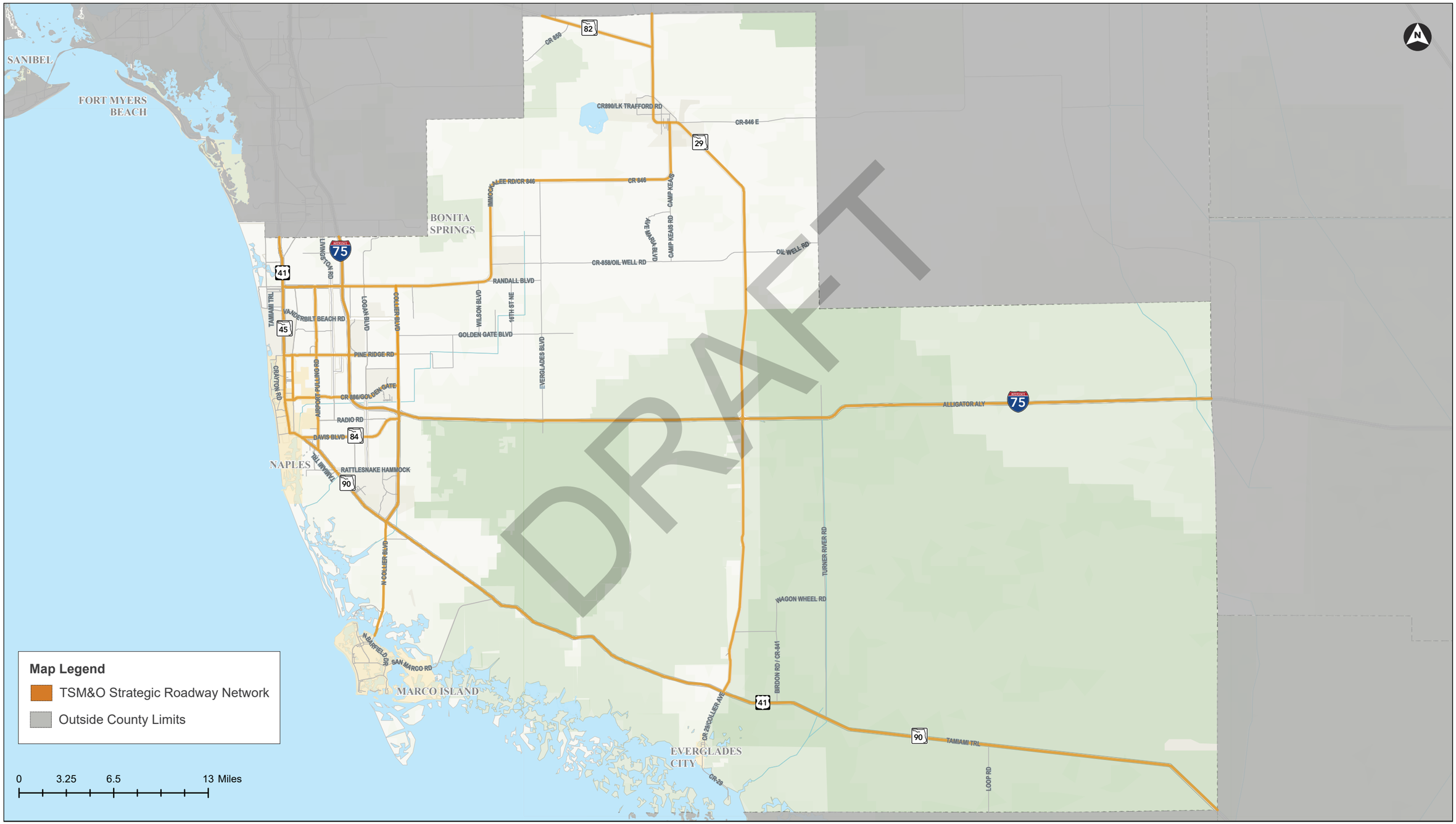


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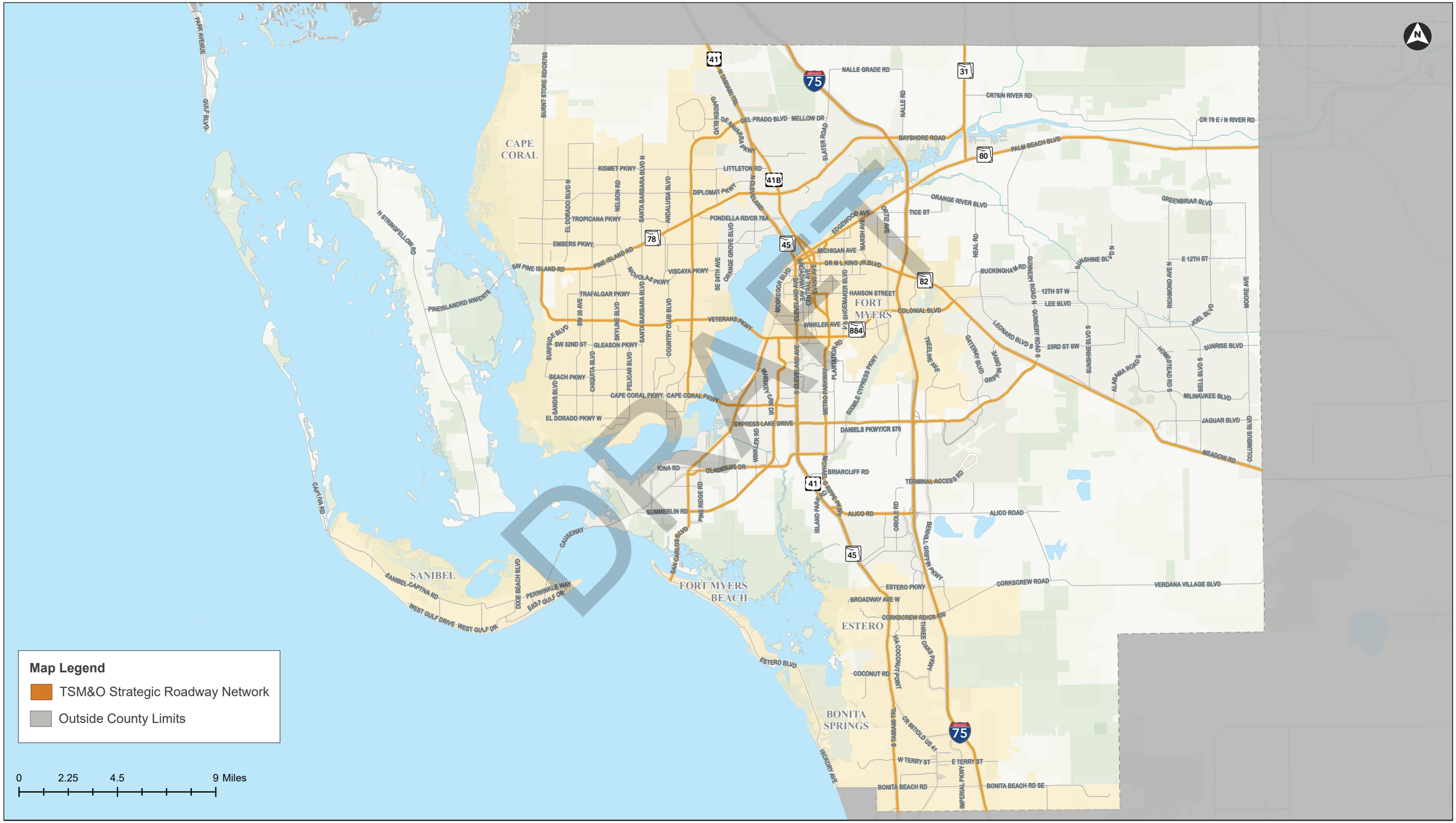
Figure 3: TSM&O Strategic Roadway Network - Lee County

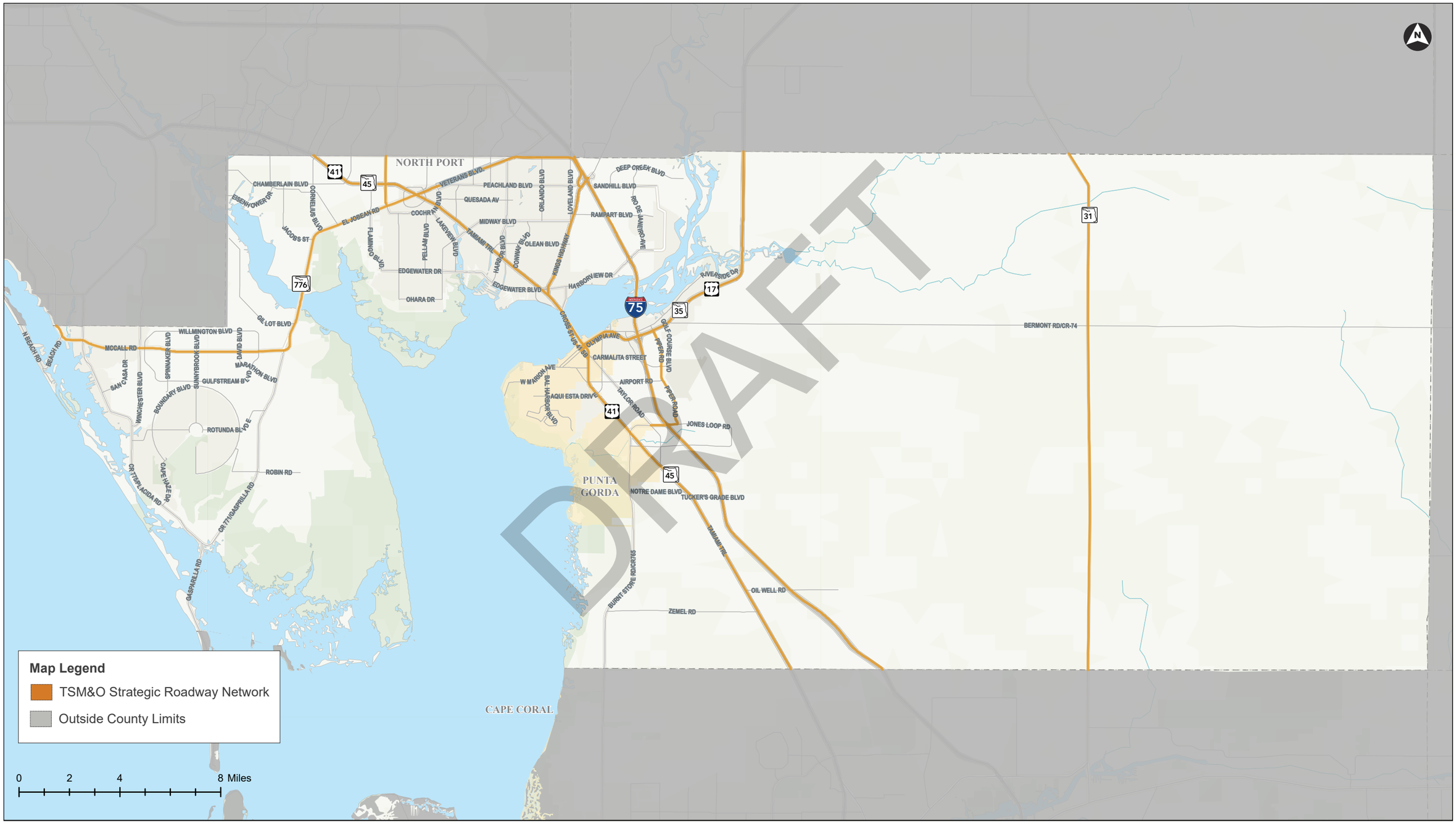
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 4: TSM&O Strategic Roadway Network - Charlotte County

FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 5: TSM&O Strategic Roadway Network - Sarasota County

FDOT District 1 – TSM&O Master Plan

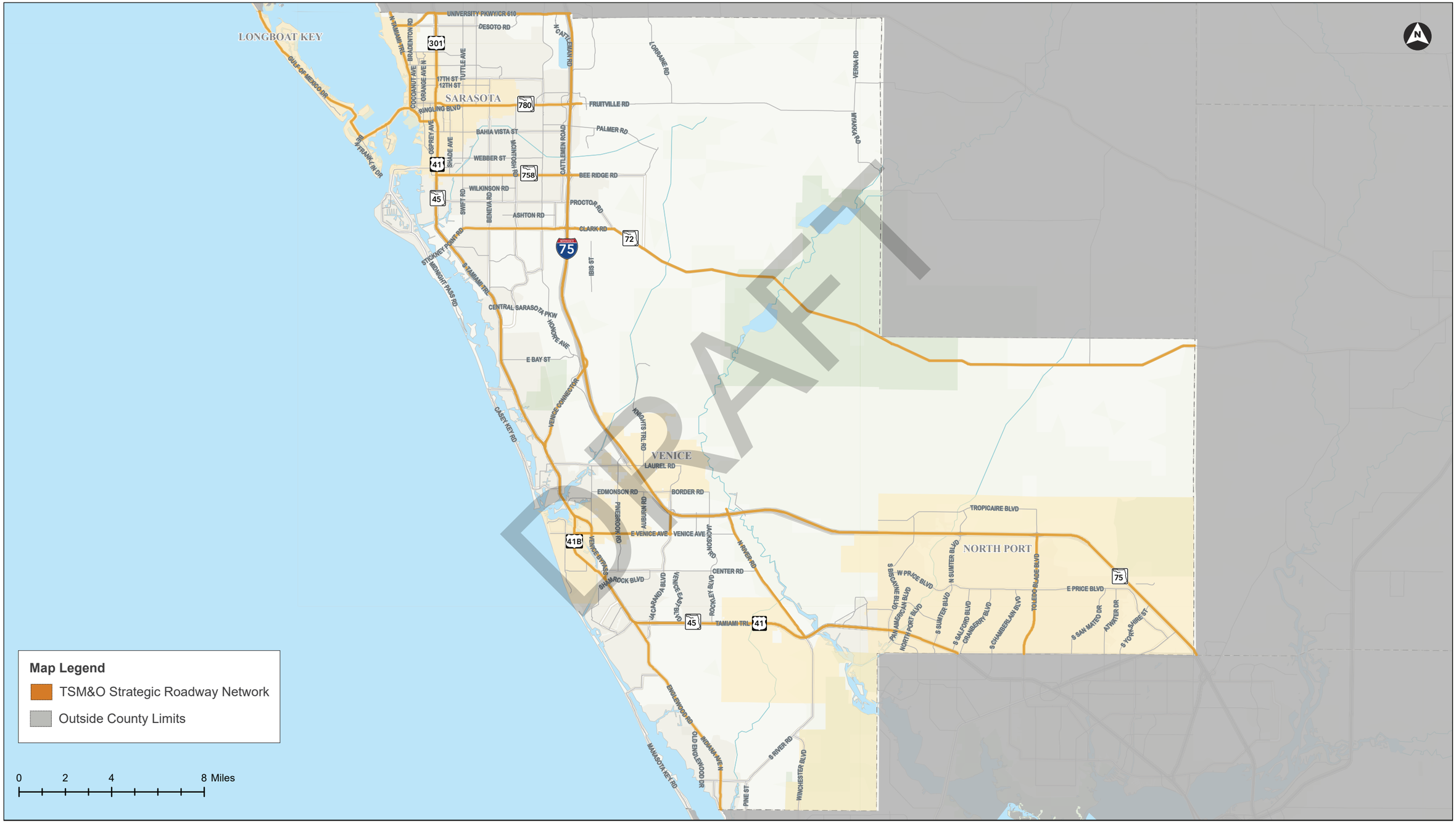


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Figure 6: TSM&O Strategic Roadway Network - Manatee County

FDOT District 1 – TSM&O Master Plan

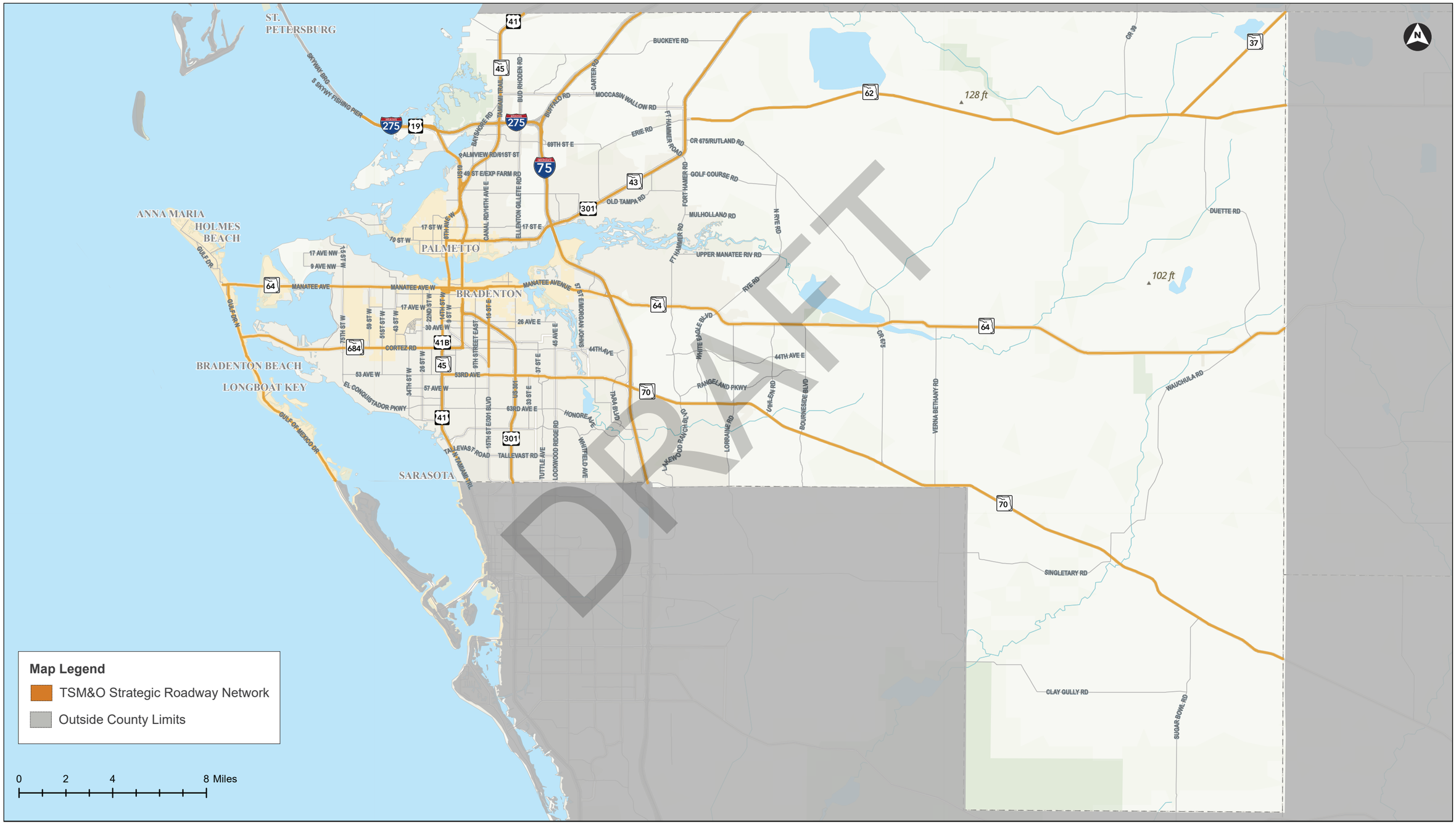

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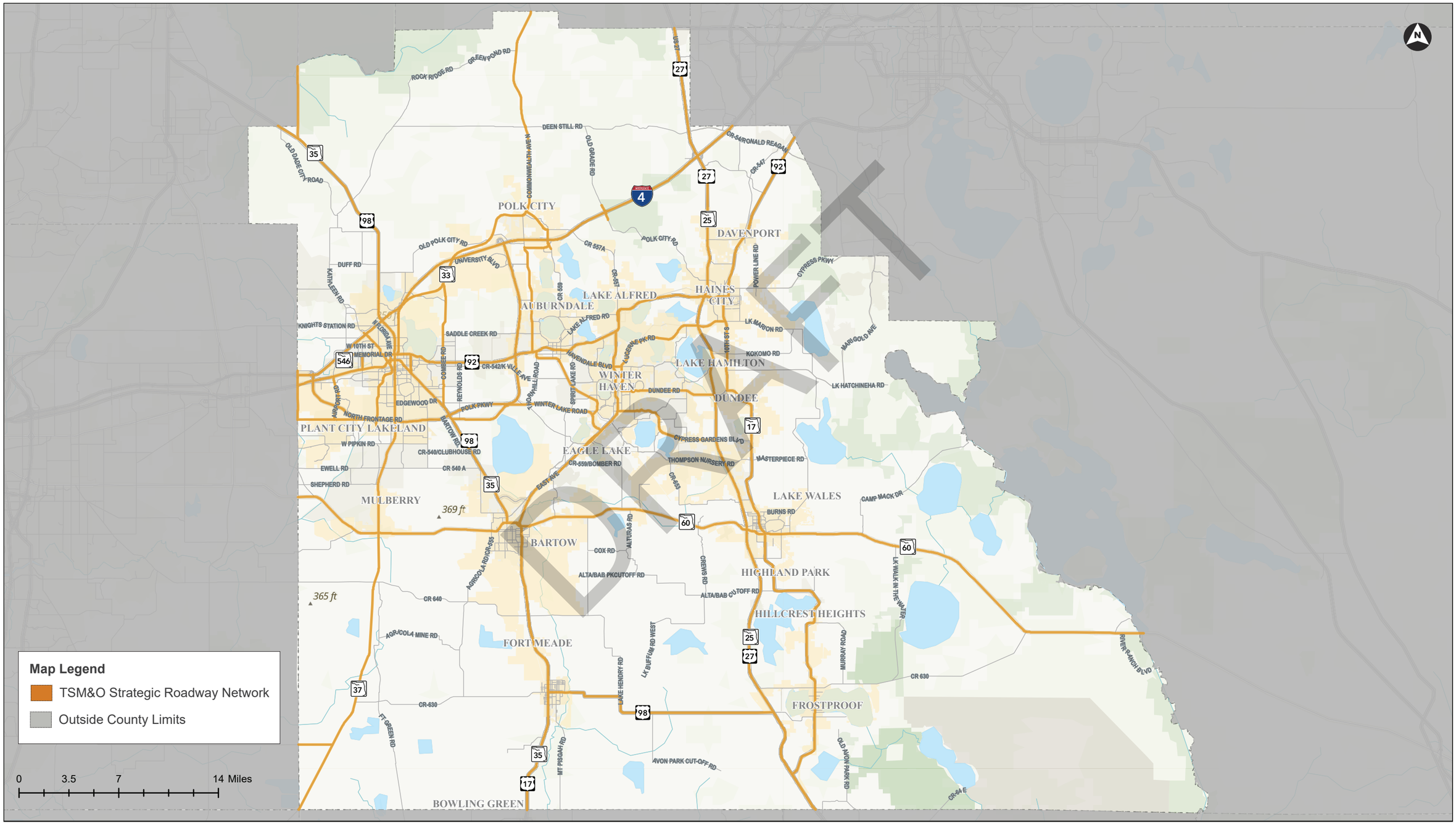
Figure 7: TSM&O Strategic Roadway Network - Polk County

FDOT District 1 – TSM&O Master Plan



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3.2 Prioritization and Grading System

A set of prioritization criteria were developed based on six key data pillars: Safety, Performance, Trucks/Freight, Roadway Characteristics & Design/Geometry, Transit, and Volume/Growth. Performance metrics and appropriate weights were then established for these prioritization criteria based on District 1 priorities and to align with the Mission, Vision, and Goals of this Master Plan. The data pillars and assigned weights are shown in **Table 3**.

Table 3: Data Pillar Weights

Data Pillar	Weight
Safety	30%
Performance	25%
Trucks/Freight	5%
Roadway Characteristics & Design/Geometry	10%
Transit	5%
Volume/Growth	25%
Total	**100%**

As noted, each of the data pillars considered various performance metrics which are summarized in Table 4. Additional details on the performance metrics are included in the Appendix.

Table 4: Data Pillar Metrics

Data Pillar	Metrics
Safety	Bike/Ped Crashes
	Fatal/Incapacitating Crash
	Crash Rate
	Transit Risk
Performance	Planning Time Index (PTI) AM
	Congestion Percentage AM
	Planning Time Index (PTI) PM
	Congestion Percentage PM
Trucks/Freight	Annual Average Daily Truck Traffic (AADTT) Percentage
Roadway Characteristics & Design/Geometry	Number of Lanes (max)
	Medians Present
	Constrained Facility
Transit	Transit Present
Volume/Growth	Historic Growth
	Annual Average Daily Traffic (AADT)
	Volume/Capacity

After establishing the prioritization criteria and weighting, all roadway segments of the identified TSM&O Strategic Roadway Network were scored and ranked by County. The top seven

corridors for each of the six counties were identified based on their total corridor score. Additionally, in some cases, adjacent roadway segments were ranked within the top scoring segments. As part of the review, these adjacent segments were sometimes combined to form one segment if appropriate. These corridors were screened against FDOT programs and active projects to determine if projects were already planned or programmed to address deficiencies. After examining the priority corridors with stakeholders, the final top five priority corridors were identified and moved forward for TSM&O technology-focused recommendations. Additional details on the scoring are included in Appendix A.

3.3 Top 5 Priority Corridors

The Top 5 Priority Corridors by County are listed below. Table 5 shows the corridor scores, Figure 8 through Figure 13 depict the Top 5 Priority Corridors by County, and Figure 14 through Figure 43 depict each individual corridor.

Table 5: Top 5 Priority Corridor Scores

				Score (Adjusted)						
County	Priority Rank	Corridor Name	Limits	Safety	Performance	Trucks/ Freight	Roadway Characteristics & Design/ Geometry	Transit	Volume/ Growth	Total
Collier	1	U.S. 41 (Tamiami Trail/S.R. 45)	from the Lee County Line to Immokalee Road (C.R. 846)	16.15	16.07	0.00	3.33	5.00	18.75	59.31
Collier	2A	U.S. 41 (Tamiami Trail/S.R. 90)	from Airport-Pulling Road to 9th Street S	18.46	14.29	0.00	3.33	5.00	16.67	57.75
Collier	2B	U.S. 41 (Tamiami Trail/S.R. 90)		16.15	14.29	0.00	3.33	5.00	16.67	55.44
Collier	3	Pine Ridge Road	from U.S. 41 (Tamiami Trail) to Airport-Pulling Road	18.46	17.86	0.00	0.00	5.00	14.58	55.90
Collier	4A	Immokalee Road (C.R. 846)	from U.S. 41 (Tamiami Trial) to Collier Boulevard	18.46	17.86	0.00	0.00	5.00	12.50	53.82
Collier	4B	Immokalee Road (C.R. 846)		20.77	19.64	0.00	0.00	5.00	8.33	53.75
Collier	5	Airport-Pulling Road	from Davis Boulevard to Golden Gate Parkway	18.46	16.07	0.00	0.00	5.00	14.58	54.12
Lee	1	Daniels Parkway (C.R. 876)	from Metro Parkway to Treeline Avenue	20.77	21.43	0.00	0.00	5.00	20.83	68.03
Lee	2	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	from Evans Avenue to I-75	20.77	17.86	1.67	3.33	5.00	20.83	69.46
Lee	3A	Colonial Boulevard (S.R. 884)	from Summerlin Road to Metro Parkway	16.15	21.43	0.00	3.33	5.00	22.92	68.83
Lee	3B	Colonial Boulevard (S.R. 884)		16.15	21.43	0.00	0.00	5.00	20.83	63.42
Lee	4A	U.S. 41 (Cleveland Avenue/S.R. 45)	from Gladiolus Drive/Six Mile Cypress to College Parkway	18.46	17.86	0.00	3.33	5.00	20.83	65.49
Lee	4B	U.S. 41 (Cleveland Avenue/S.R. 45)		20.77	14.29	0.00	3.33	5.00	20.83	64.22
Lee	5A	Colonial Boulevard (S.R. 884)	from Metro Parkway to Dynasty Drive	18.46	19.64	0.00	3.33	5.00	16.67	63.10
Lee	5B	Colonial Boulevard (S.R. 884)		11.54	19.64	0.00	3.33	5.00	22.92	62.43
Charlotte	1	U.S. 41 (S.R. 45)	from Melbourne Street to Toledo Blade Boulevard	20.77	7.14	0.00	3.33	0.00	14.58	45.83
Charlotte	2A	S.R. 776 (McCall Road)	from Pine Street to El Jobean Bridge	18.46	8.93	0.00	3.33	0.00	14.58	45.31
Charlotte	2B	S.R. 776 (McCall Road)		18.46	5.36	1.67	3.33	0.00	14.58	43.40
Charlotte	3	Kings Highway	from U.S. 41 (Tamiami Trail) to I-75	18.46	12.50	1.67	0.00	0.00	10.42	43.04
Charlotte	4	Veterans Boulevard	from U.S. 41 (Tamiami Trail) to Kings Highway	20.77	7.14	3.33	0.00	0.00	10.42	41.66
Charlotte	5	S.R. 776 (El Jobean Road)	from El Jobean Bridge to U.S. 41 (Tamiami Trail)	18.46	3.57	1.67	3.33	0.00	14.58	41.62
Sarasota	1	U.S. 301 (Washington Boulevard/S.R. 683)	from University Parkway to Mound Street	18.46	19.64	0.00	3.33	5.00	16.67	63.10
Sarasota	2	Fruitville Road (S.R. 780)	from N School Avenue to Coburn Road	18.46	16.07	0.00	3.33	5.00	18.75	61.62
Sarasota	3	University Parkway (C.R. 610)	from U.S. 301 (Washington Boulevard) to I-75	20.77	14.29	0.00	3.33	0.00	18.75	57.14
Sarasota	4	U.S. 41 (Tamiami Trail/S.R. 45)	from Bee Ridge Road to S.R. 72	16.15	19.64	0.00	0.00	5.00	16.67	57.46
Sarasota	5	Clark Road (S.R. 72)	from U.S. 41 (Tamiami Trail) to I-75	20.77	12.50	0.00	0.00	5.00	14.58	52.85
Manatee	1A	53rd Avenue (S.R. 70)	from 15th Street E to I-75	25.38	25.00	0.00	3.33	5.00	14.58	73.30
Manatee	1B	53rd Avenue (S.R. 70)		23.08	21.43	0.00	3.33	5.00	18.75	71.59
Manatee	2	Cortez Road (S.R. 684)	from 75th Street W to 44th Ave E	27.69	16.07	0.00	3.33	5.00	18.75	70.85
Manatee	3	U.S. 41 (8th Avenue/S.R. 45)	from 10th Street W to Riverside Drive	20.77	23.21	0.00	5.00	5.00	16.67	70.65
Manatee	4	U.S. 41 (14th Street/S.R. 45)	from Sarasota County Line to S.R. 684	30.00	16.07	0.00	0.00	5.00	16.67	67.74
Manatee	5	53rd Avenue (S.R. 70)	from U.S. 41 to 15th Street E	25.38	17.86	0.00	3.33	5.00	12.50	64.08
Polk	1	Bartow Road (U.S. 98/S.R. 35)	from S Combee Road to S Lake Parker Avenue	20.77	19.64	0.00	0.00	5.00	16.67	62.08
Polk	2	N Florida Avenue (U.S. 98/S.R. 35)	from Memorial Boulevard (U.S. 92) to I-4	18.46	19.64	0.00	3.33	5.00	14.58	61.02
Polk	3A	Memorial Boulevard (U.S. 92/S.R. 546)	from Kathleen Road to N Lake Parker Avenue	20.77	19.64	0.00	0.00	5.00	14.58	60.00
Polk	3B	Memorial Boulevard (U.S. 92/S.R. 546)		18.46	21.43	0.00	0.00	5.00	12.50	57.39
Polk	4	Florida Avenue (U.S. 98/S.R. 35)	from Main Street to Memorial Boulevard (U.S. 92)	18.46	19.64	0.00	3.33	5.00	10.42	56.85
Polk	5	U.S. 27 (S.R. 25)	from U.S. 17/92 to I-4	9.23	16.07	1.67	3.33	5.00	20.83	56.14

Figure 8: Top 5 Priority Corridors – Collier County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
03010000	U.S. 41 (Tamiami Trail/S.R. 45)	0	3.06	1	59.3
03010000	U.S. 41 (Tamiami Trail/S.R. 90)	12.8	14.1	2A	57.7
03010000	U.S. 41 (Tamiami Trail/S.R. 90)	12.064	12.8	2B	55.4
03003000	Pine Ridge Road	5.844	7.819	3	55.9
03590000	Immokalee Road (C.R. 846)	0	3.67	4A	53.8
03590000	Immokalee Road (C.R. 846)	3.67	6.97	4B	53.7
03003000	Airport-Pulling Road	0.79	3.24	5	54.1

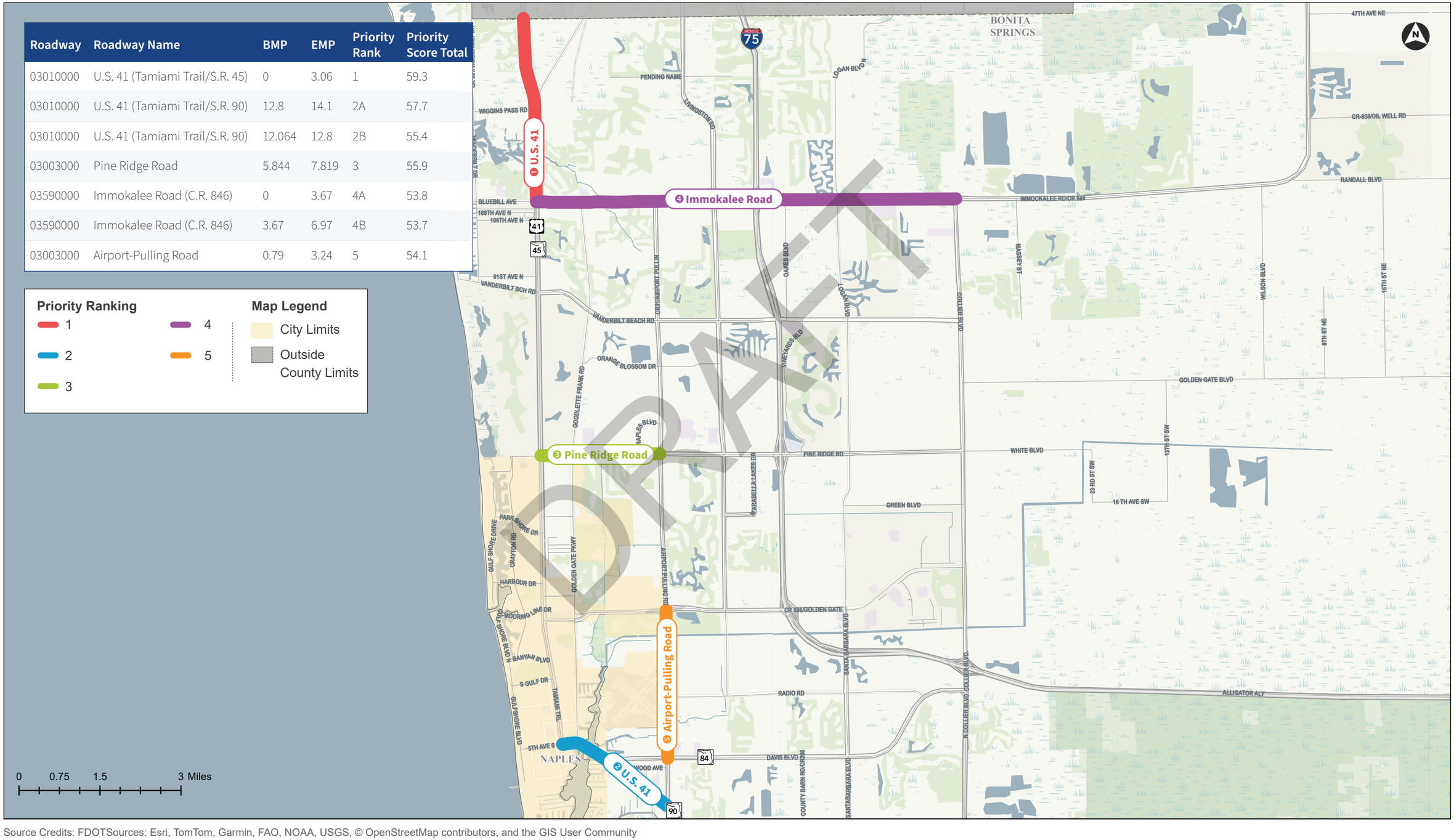

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Figure 9: Top 5 Priority Corridors - Lee County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
12100000	Daniels Parkway (C.R. 876)	4.21	7.991	1	68
12070000	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	0.7	4.41	2	69.5
12005000	Colonial Boulevard (S.R. 884)	1.171	2.5	3A	68.8
12005000	Colonial Boulevard (S.R. 884)	0.414	1.171	3B	63.4
12010000	U.S. 41 (Cleveland Avenue/S.R. 45)	15.77	17.04	4A	65.5
12010000	U.S. 41 (Cleveland Avenue/S.R. 45)	17.04	17.75	4B	64.2
12005000	Colonial Boulevard (S.R. 884)	4.06	6.46	5A	63.1
12005000	Colonial Boulevard (S.R. 884)	2.5	4.06	5B	62.4

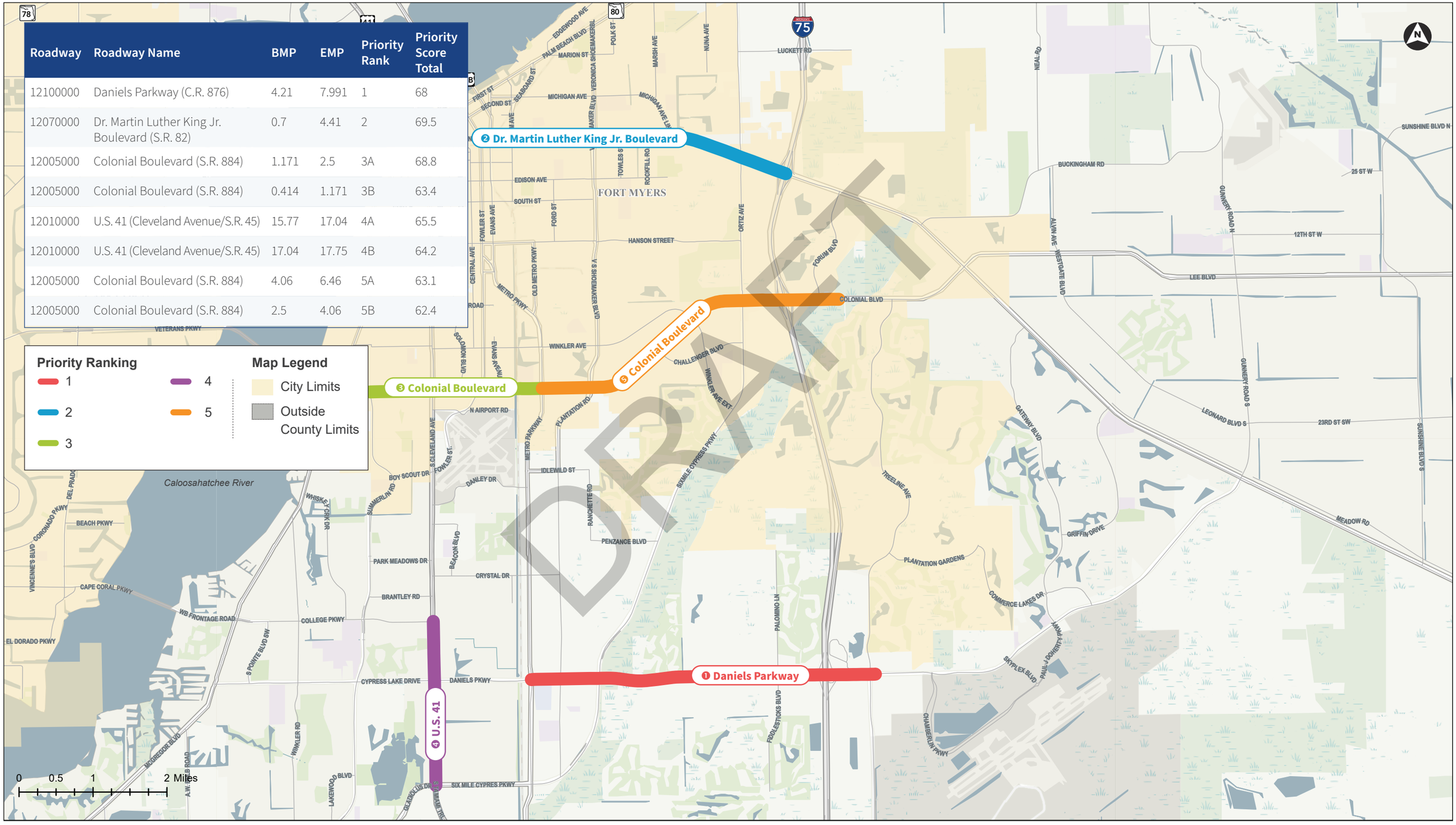

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Figure 10: Top 5 Priority Corridors - Charlotte County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
01010000	U.S. 41 (S.R. 45)	15.295	23.07	1	45.8
01050000	S.R. 776 (McCall Road)	2.237	7.85	2A	45.3
01050000	S.R. 776 (McCall Road)	7.85	11.4	2B	43.4
01501000	Kings Highway	0	5.289	3	43
01000102	Veterans Boulevard	0	6.951	4	41.7
01050000	S.R. 776 (El Jobean Road)	11.4	17.549	5	41.6

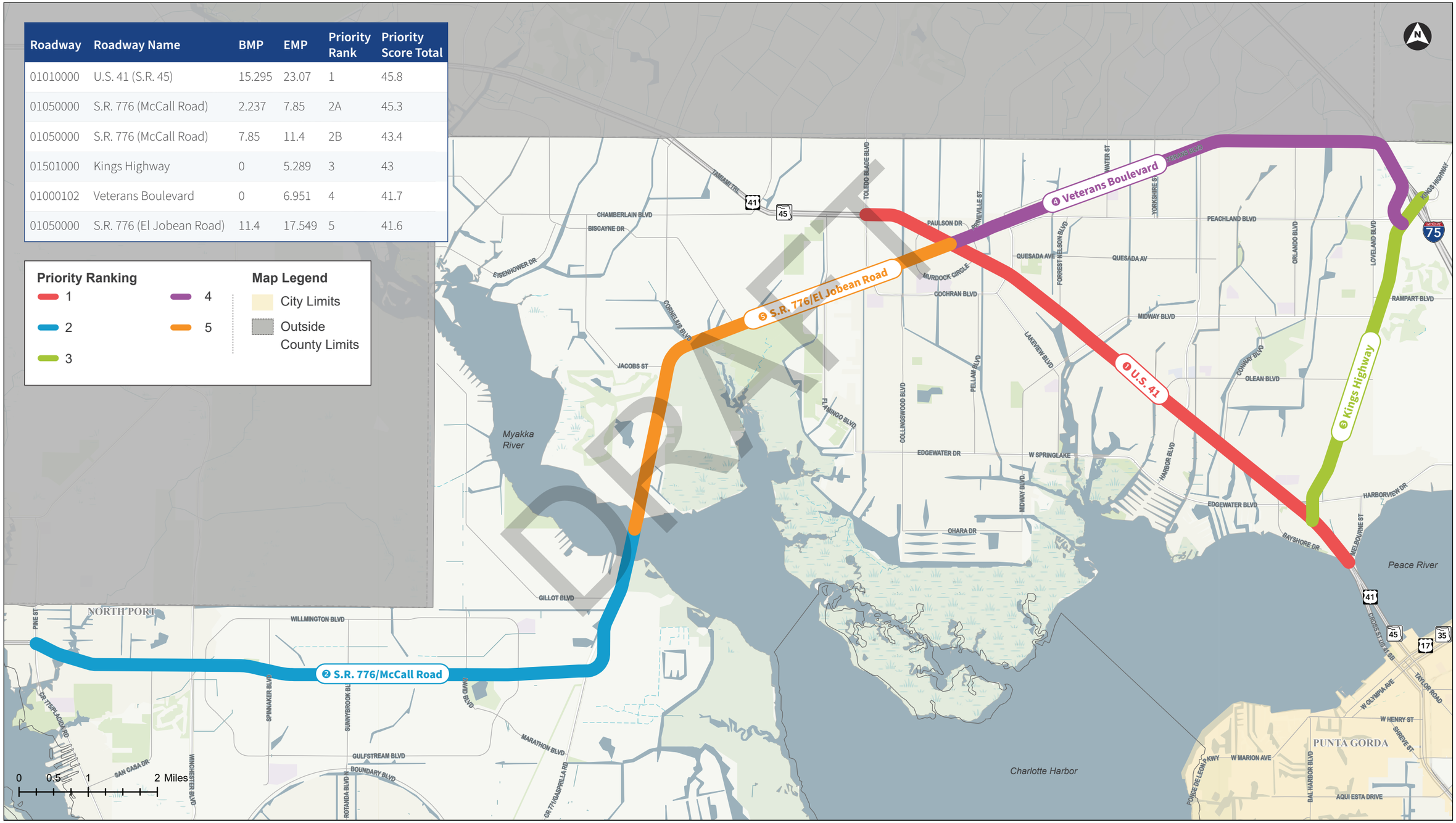

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Figure 11: Top 5 Priority Corridors - Sarasota County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
17120000	U.S. 301 (Washington Boulevard/S.R. 683)	0	4.184	1	63.1
17040000	Fruitville Road (S.R. 780)	0.381	5.692	2	61.6
17192000	University Parkway (C.R. 610)	1.73	6.945	3	57.1
17020000	U.S. 41 (Tamiami Trail/S.R. 45)	12.46	15.28	4	57.5
17070000	Clark Road (S.R. 72)	0	4.83	5	52.9

Priority Ranking

1
2
3
4
5

Map Legend

City Limits
Outside County Limits

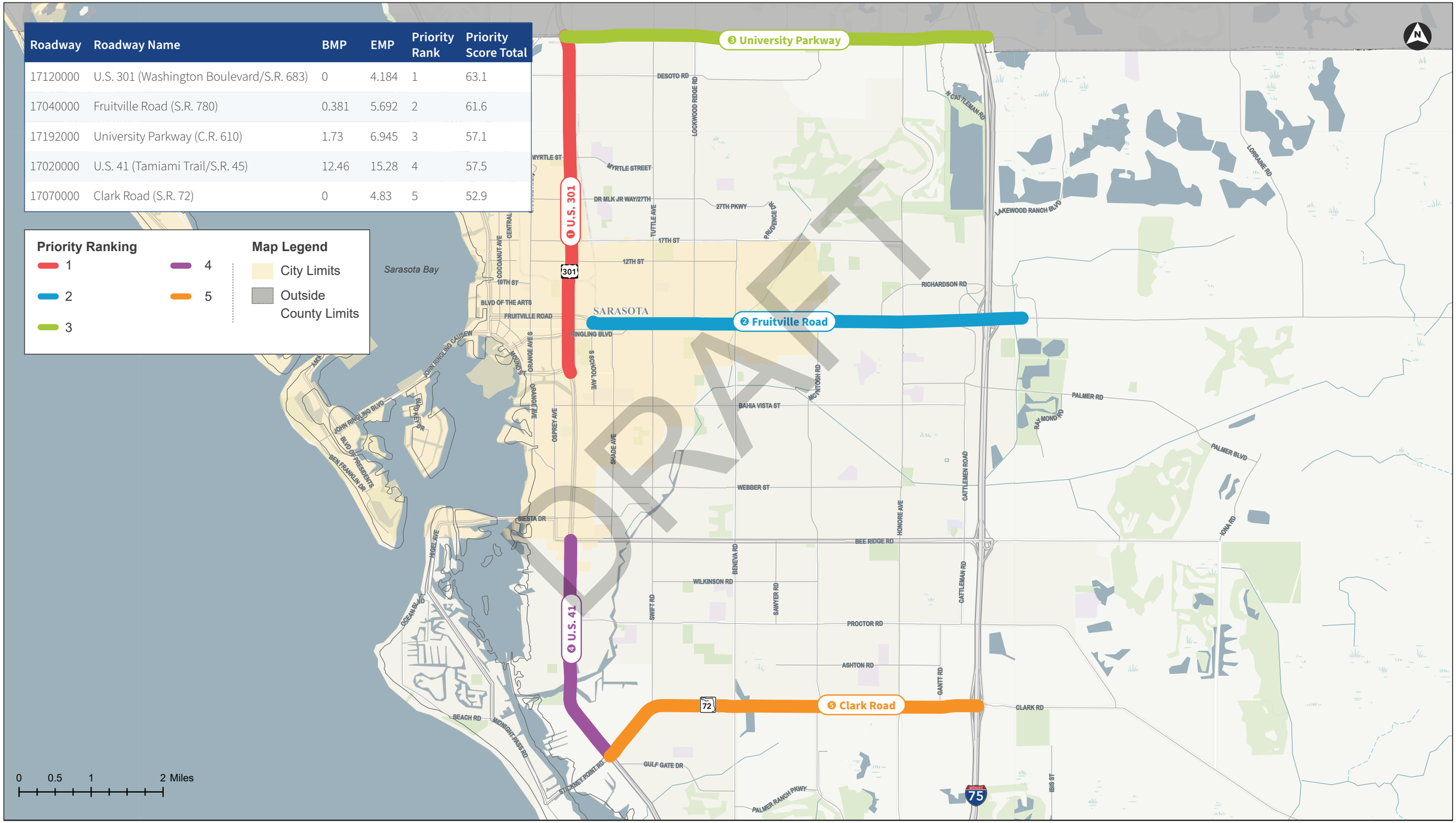

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Figure 12: Top 5 Priority Corridors - Manatee County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
13160000	53rd Avenue (S.R. 70)	0	1.01	1A	73.3
13160000	53rd Avenue (S.R. 70)	1.01	5.44	1B	71.6
13040000	Cortez Road (S.R. 684)	3.98	8.425	2	70.8
13010000	U.S. 41 (8th Avenue/S.R. 45)	8.878	9.498	3	70.7
13010000	U.S. 41 (14th Street/S.R. 45)	0	5.26	4	67.7
13162000	53rd Avenue (S.R. 70)	0	1.761	5	64.1

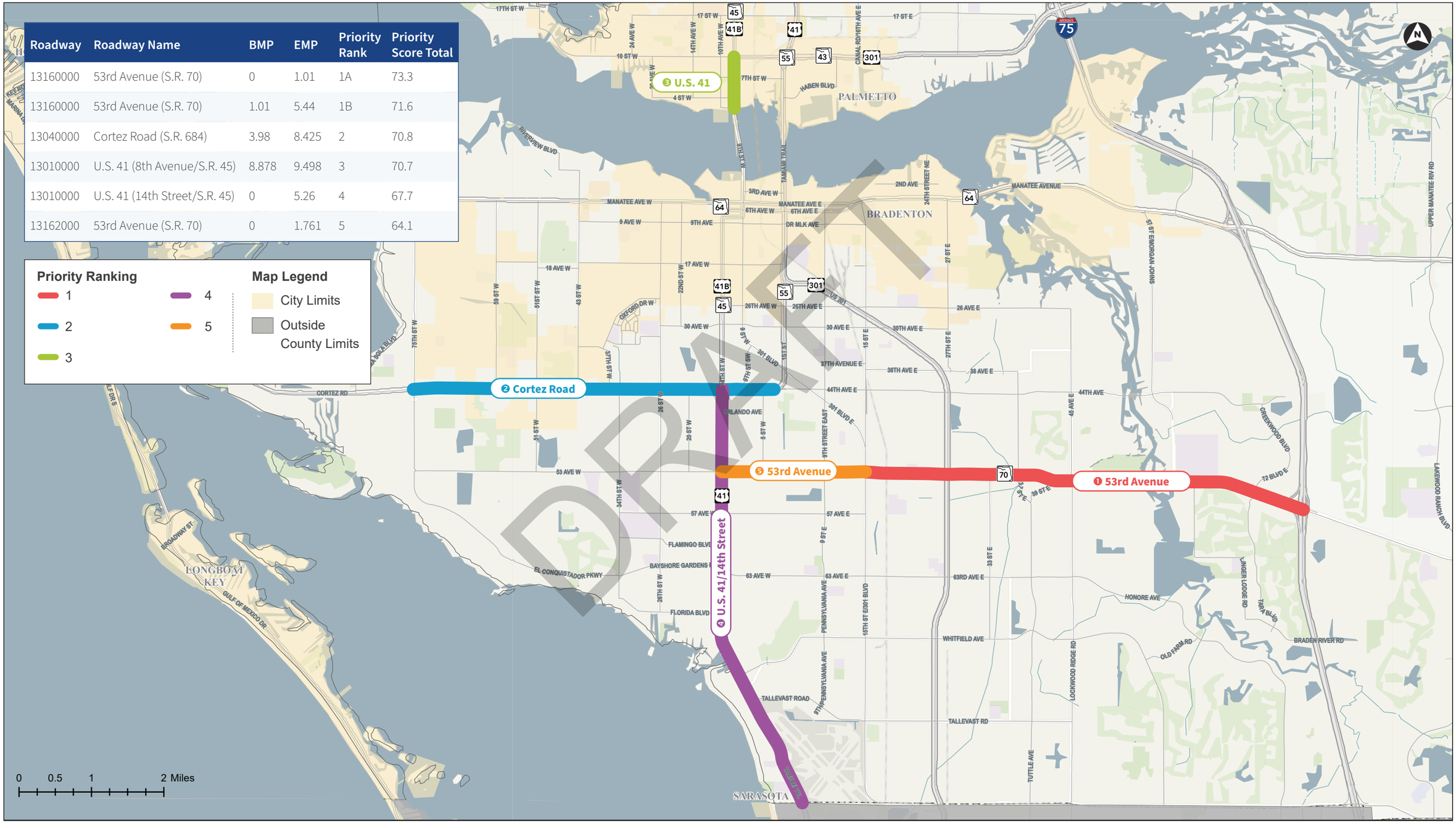

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Figure 13: Top 5 Priority Corridors - Polk County

FDOT District 1 – TSM&O Master Plan

Roadway	Roadway Name	BMP	EMP	Priority Rank	Priority Score Total
16060000	Bartow Road (U.S. 98/S.R. 35)	11.68	12.222	1	62.1
16210000	N Florida Avenue (U.S. 98/S.R. 35)	0.74	3.09	2	61
16100000	Memorial Boulevard (U.S. 92/S.R. 546)	3.72	4.72	3A	60
16100000	Memorial Boulevard (U.S. 92/S.R. 546)	2.94	3.72	3B	57.4
16210000	Florida Avenue (U.S. 98/S.R. 35)	0	0.74	4	56.9
16180000	U.S. 27 (S.R. 25)	15.08	23.94	5	56.1

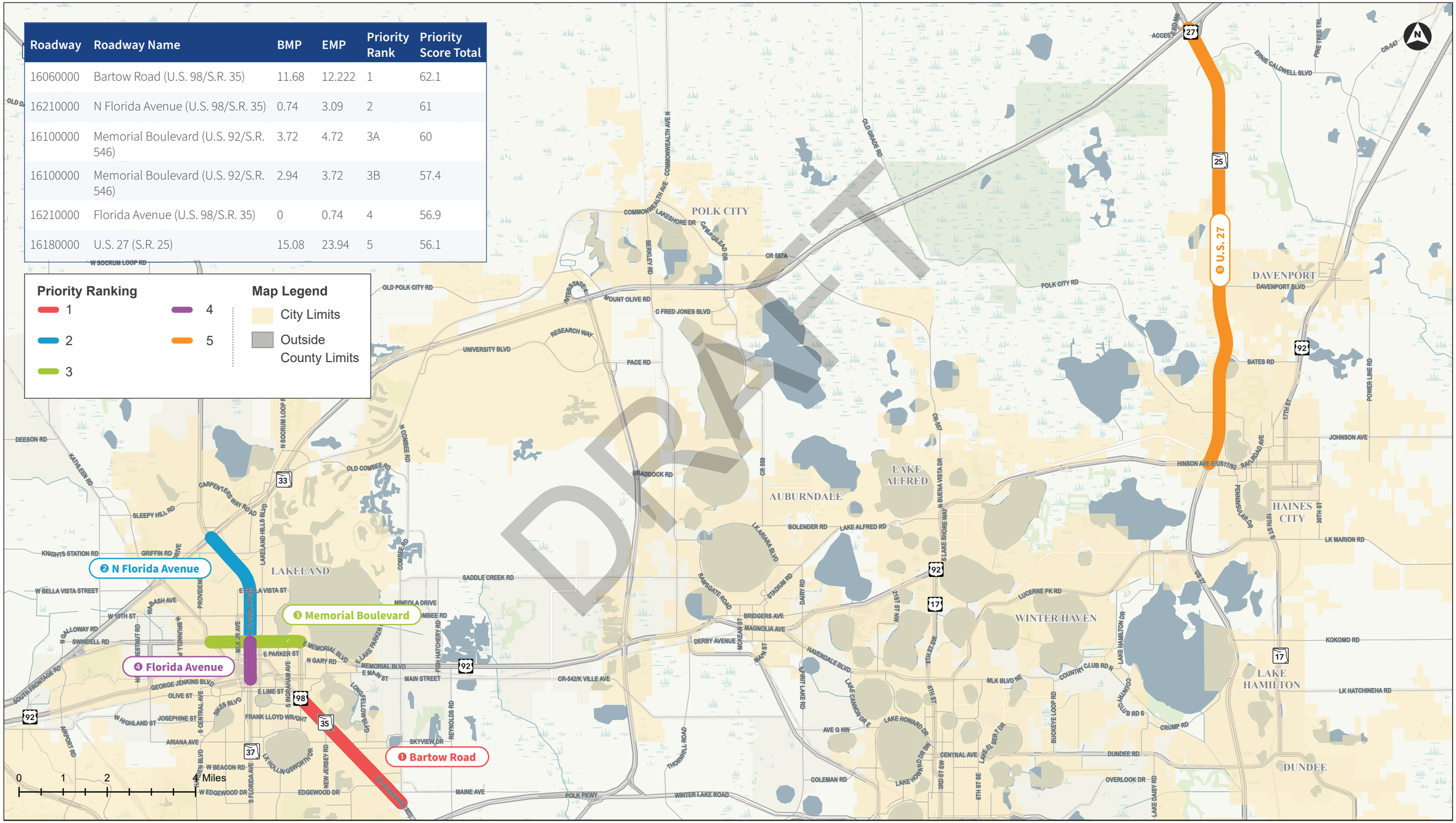

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Figure 14: Collier County Priority Corridor 1 - U.S. 41 (Tamiami Trail/S.R. 45)

FDOT District 1 – TSM&O Master Plan

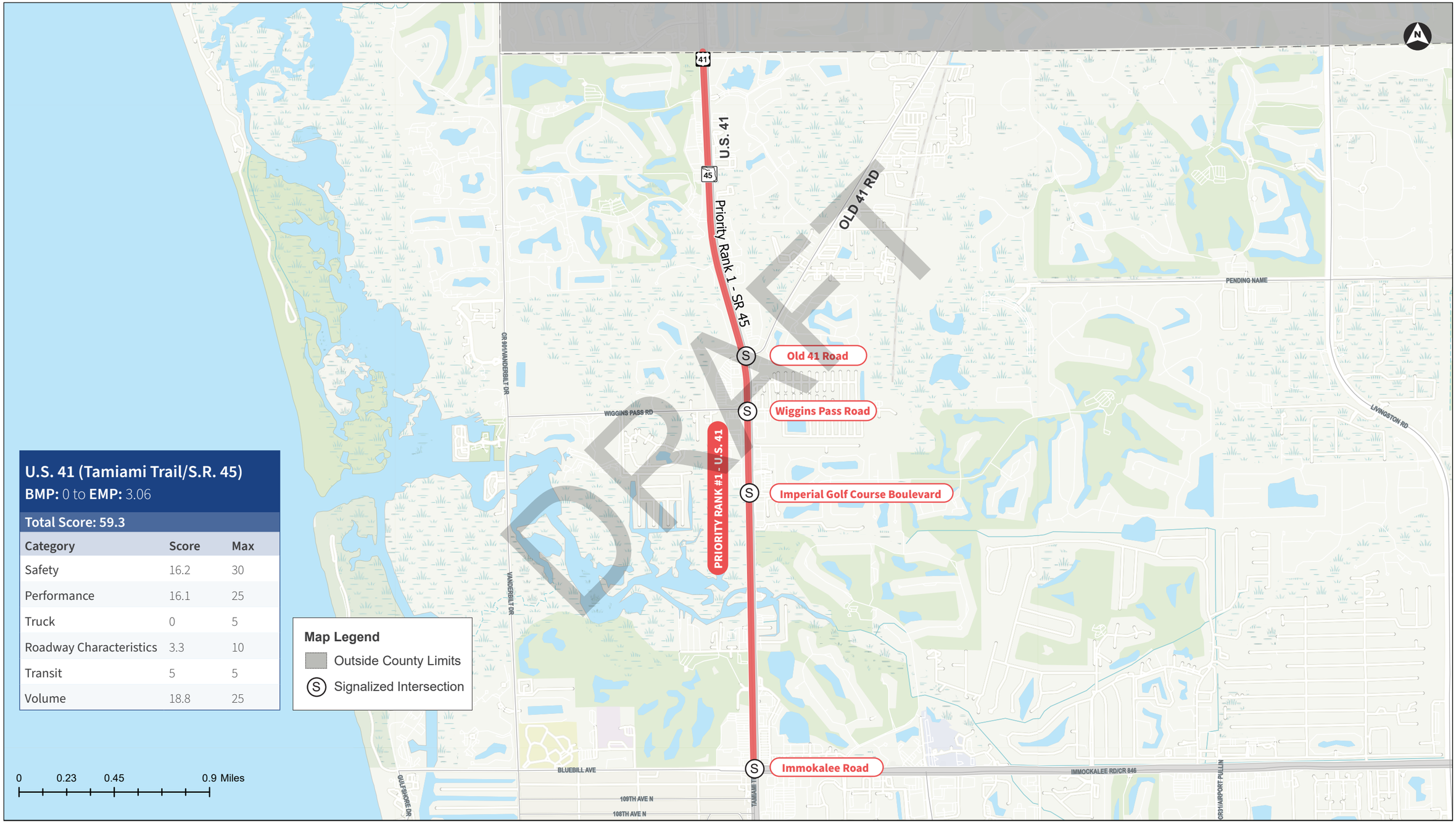

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Figure 15A: Collier County Priority Corridor 2A - U.S. 41 (Tamiami Trail/S.R. 90)

FDOT District 1 – TSM&O Master Plan

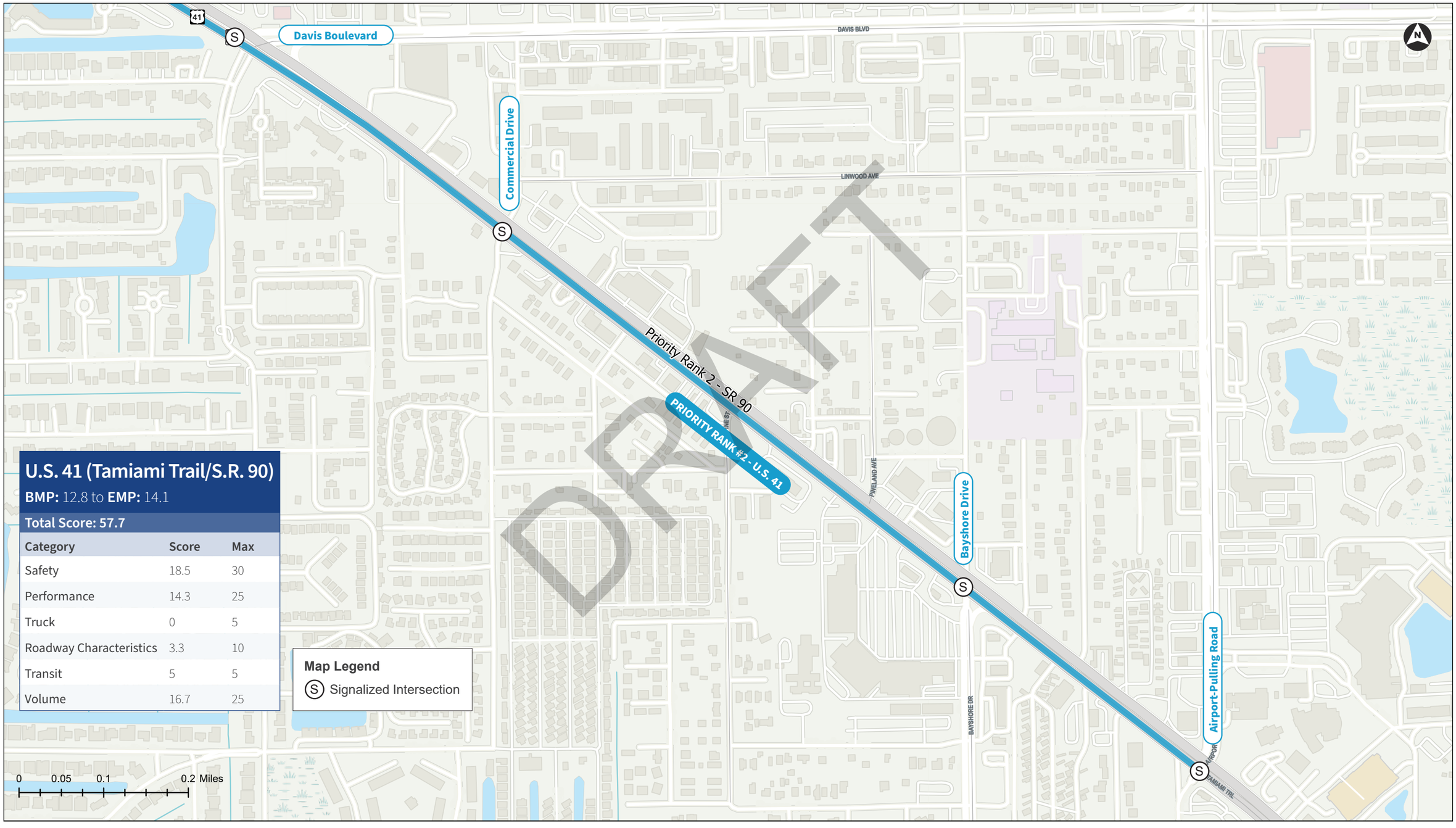

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Figure 15B: Collier County Priority Corridor 2B - U.S. 41 (Tamiami Trail/S.R. 90)

FDOT District 1 – TSM&O Master Plan

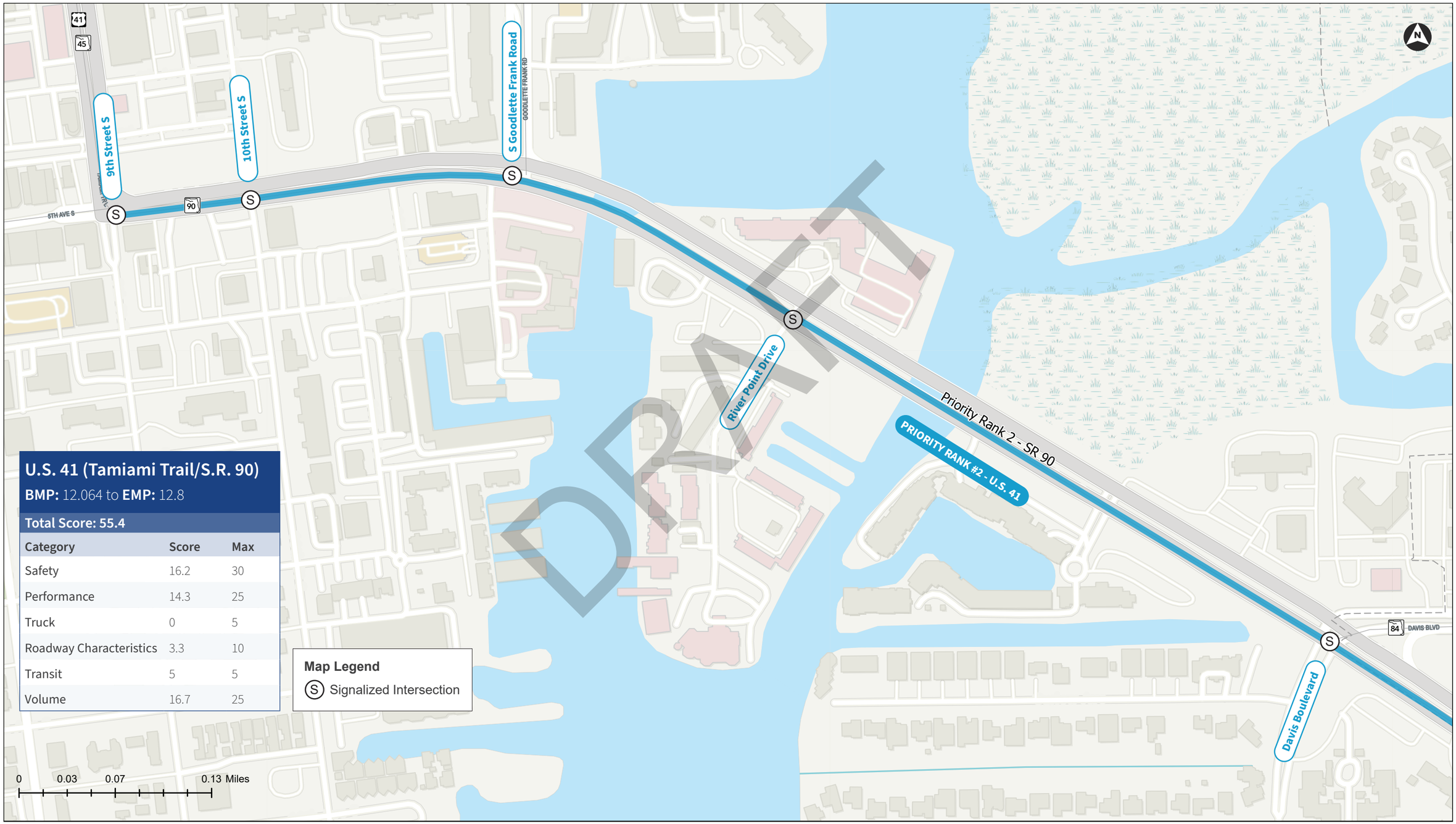

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Figure 16: Collier County Priority Corridor 3 - Pine Ridge Road

FDOT District 1 – TSM&O Master Plan

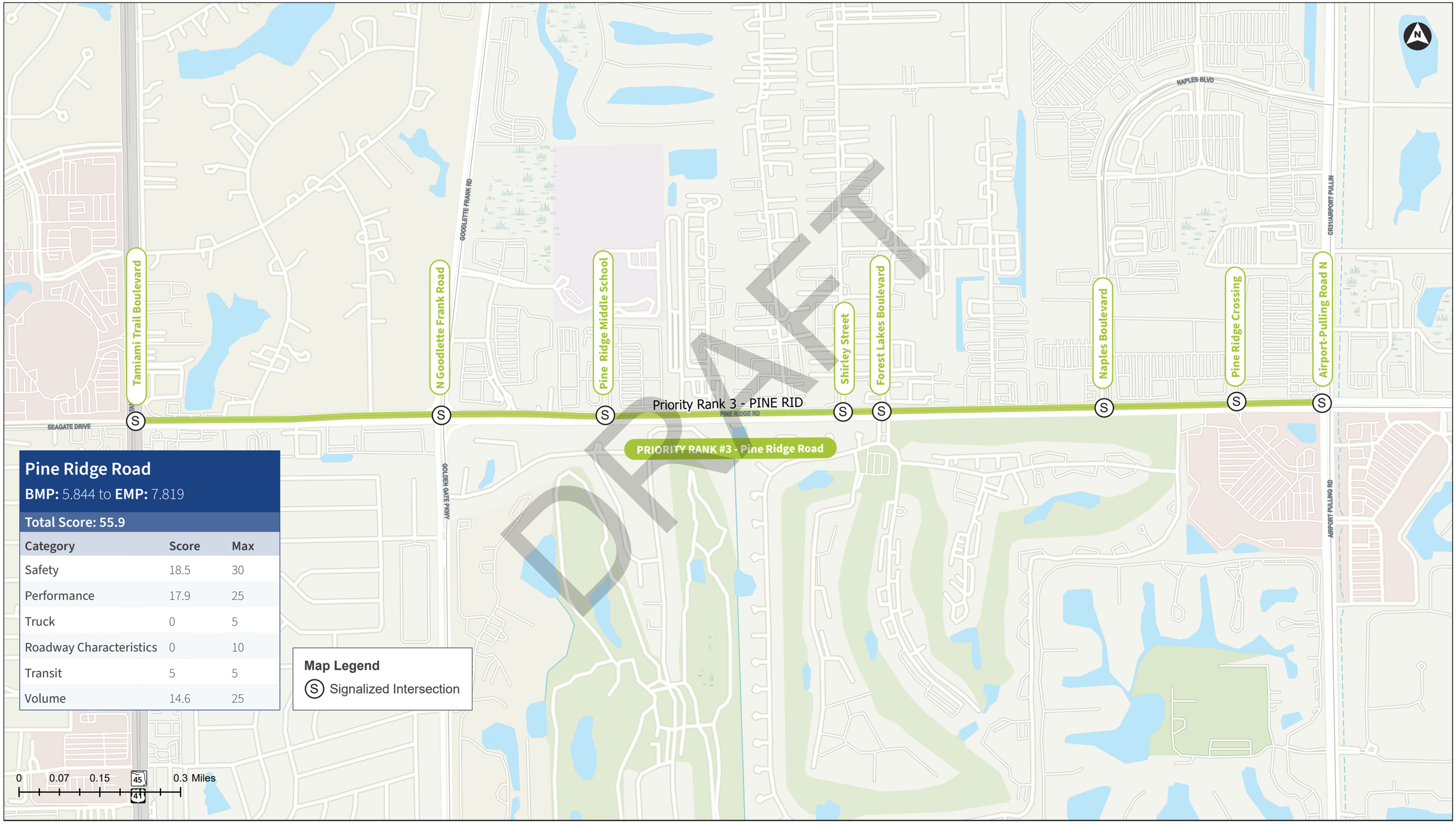

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Figure 17A: Collier County Priority Corridor 4A - Immokalee Road (C.R. 846)

FDOT District 1 – TSM&O Master Plan

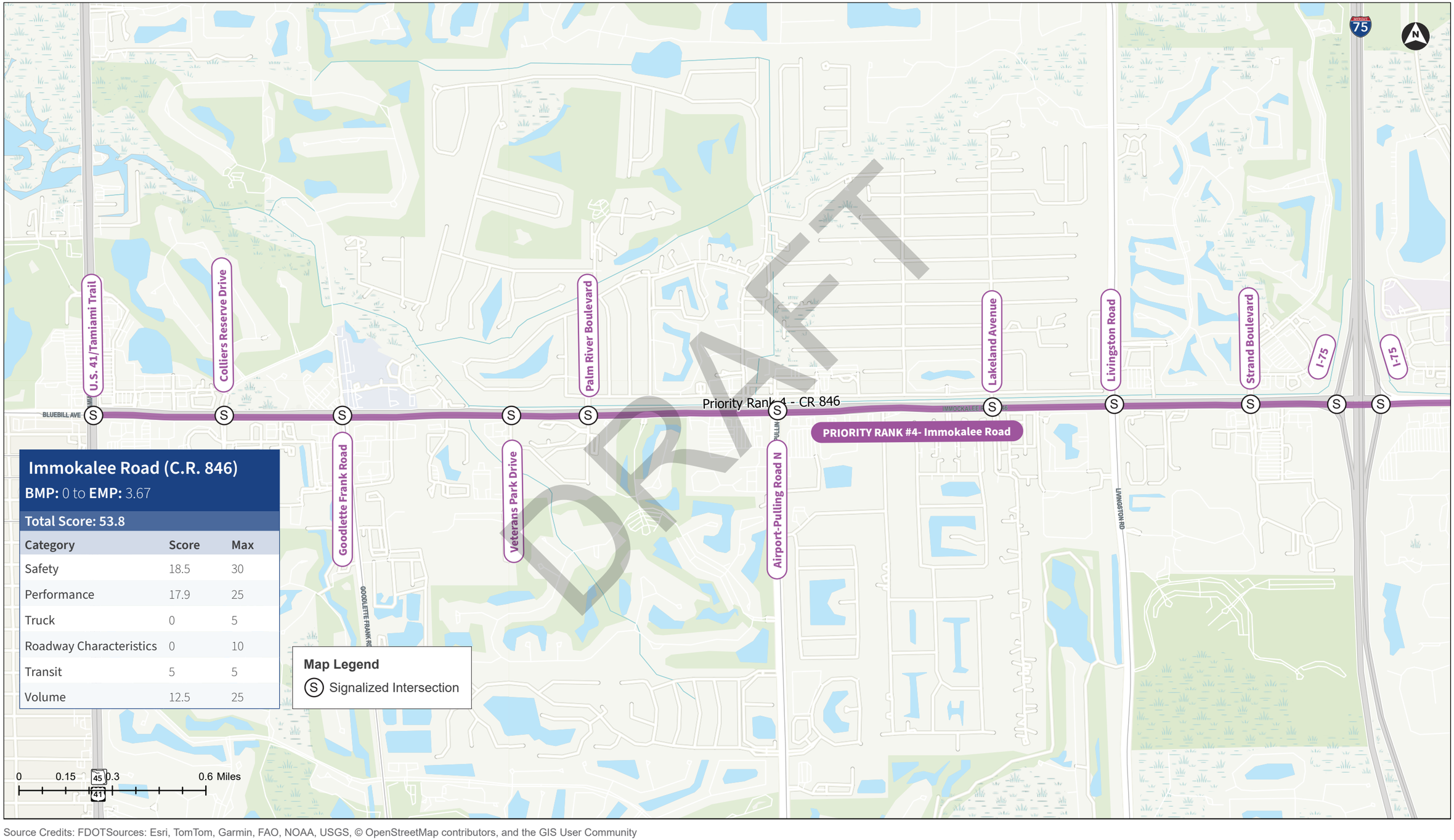

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Figure 17B: Collier County Priority Corridor 4B - Immokalee Road (C.R. 846)

FDOT District 1 – TSM&O Master Plan

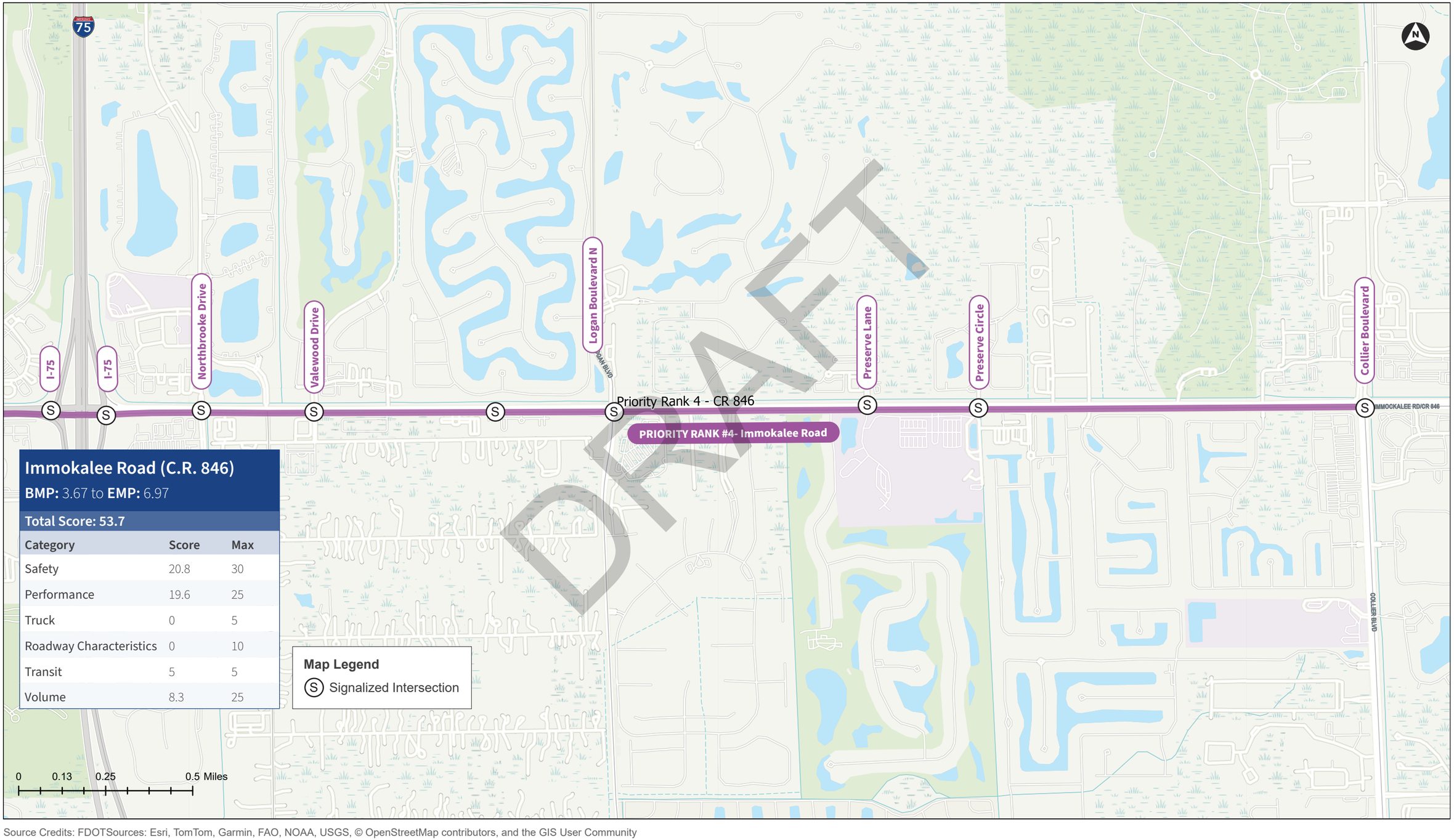

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Figure 18: Collier County Priority Corridor 5 - Airport-Pulling Road

FDOT District 1 – TSM&O Master Plan

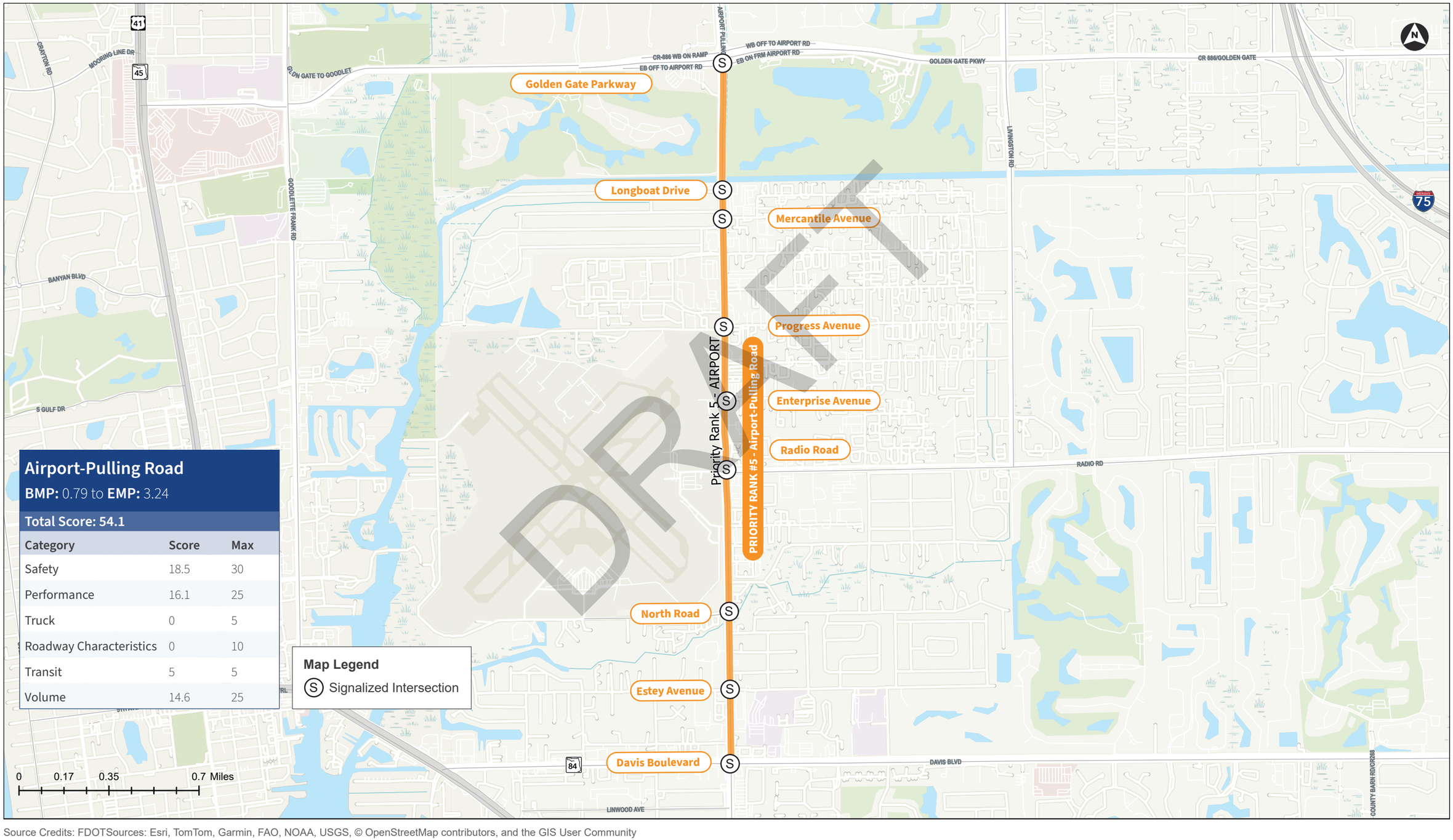

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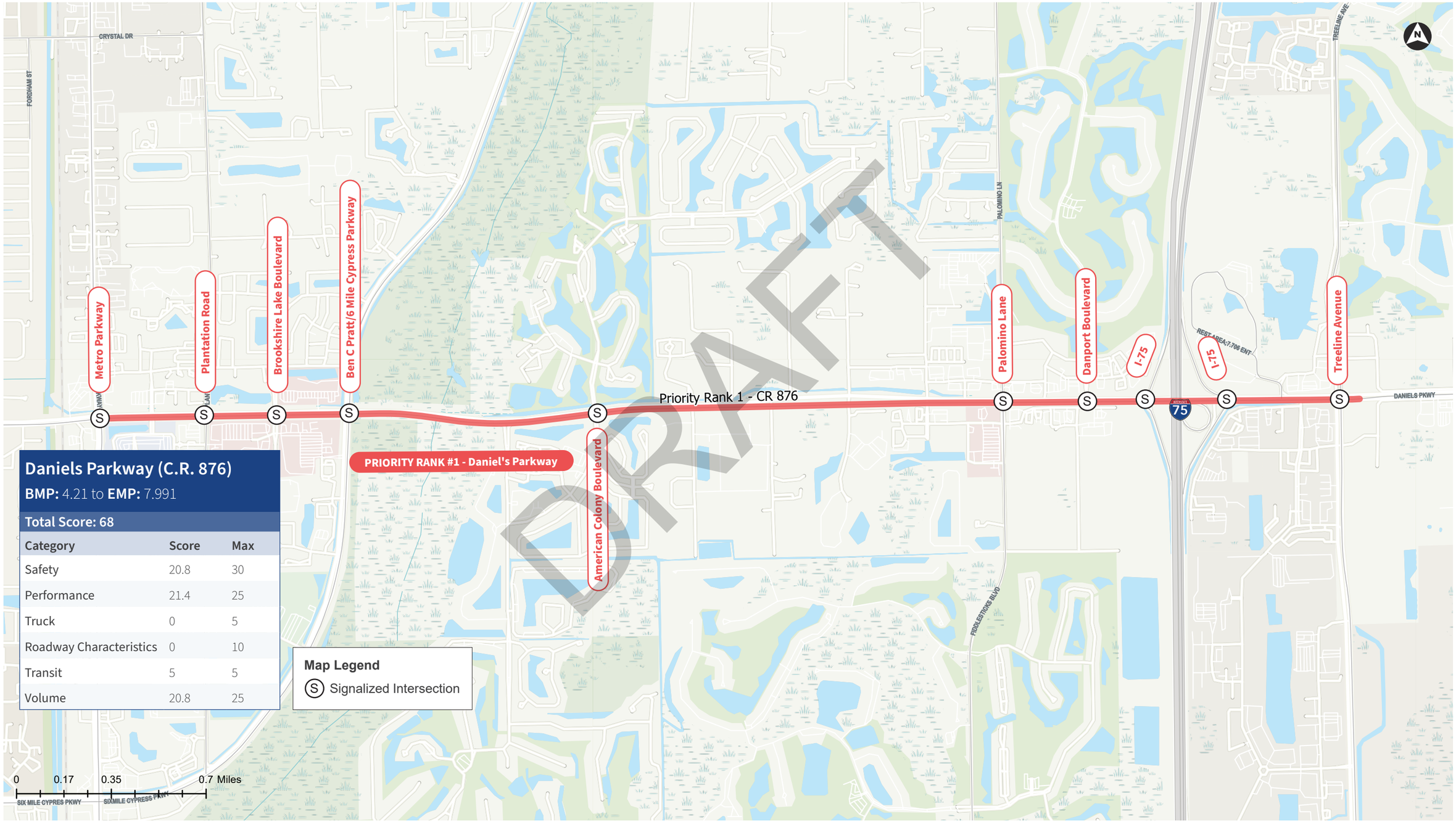
Figure 19: Lee County Priority Corridor 1 - Daniels Parkway (C.R. 876)

FDOT District 1 – TSM&O Master Plan



Category	Score	Max
Safety	20.8	30
Performance	21.4	25
Truck	0	5
Roadway Characteristics	0	10
Transit	5	5
Volume	20.8	25

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 20: Lee County Priority Corridor 2 - Dr. Martin Luther King Jr. Boulevard (S.R. 82)

FDOT District 1 – TSM&O Master Plan

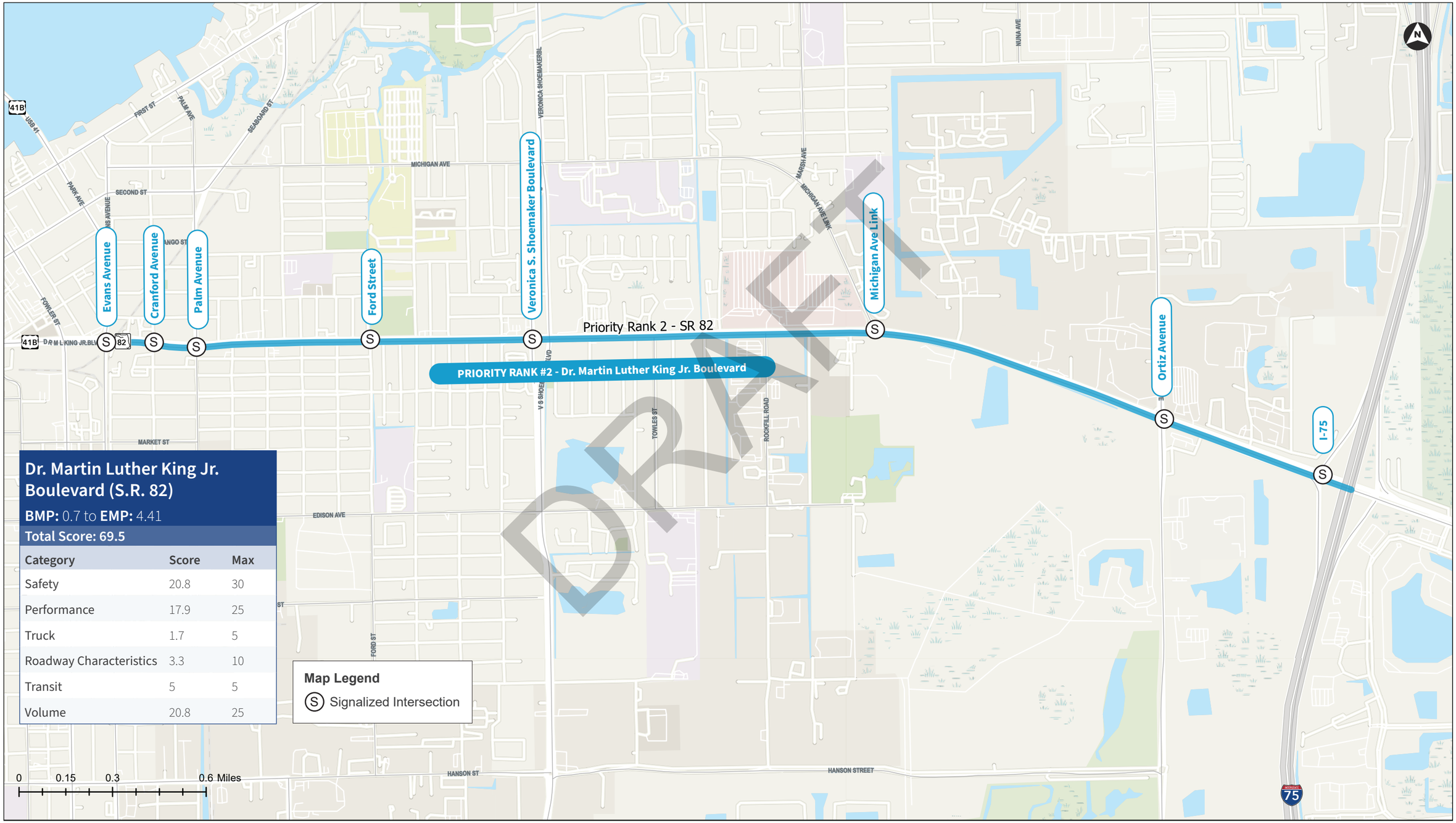


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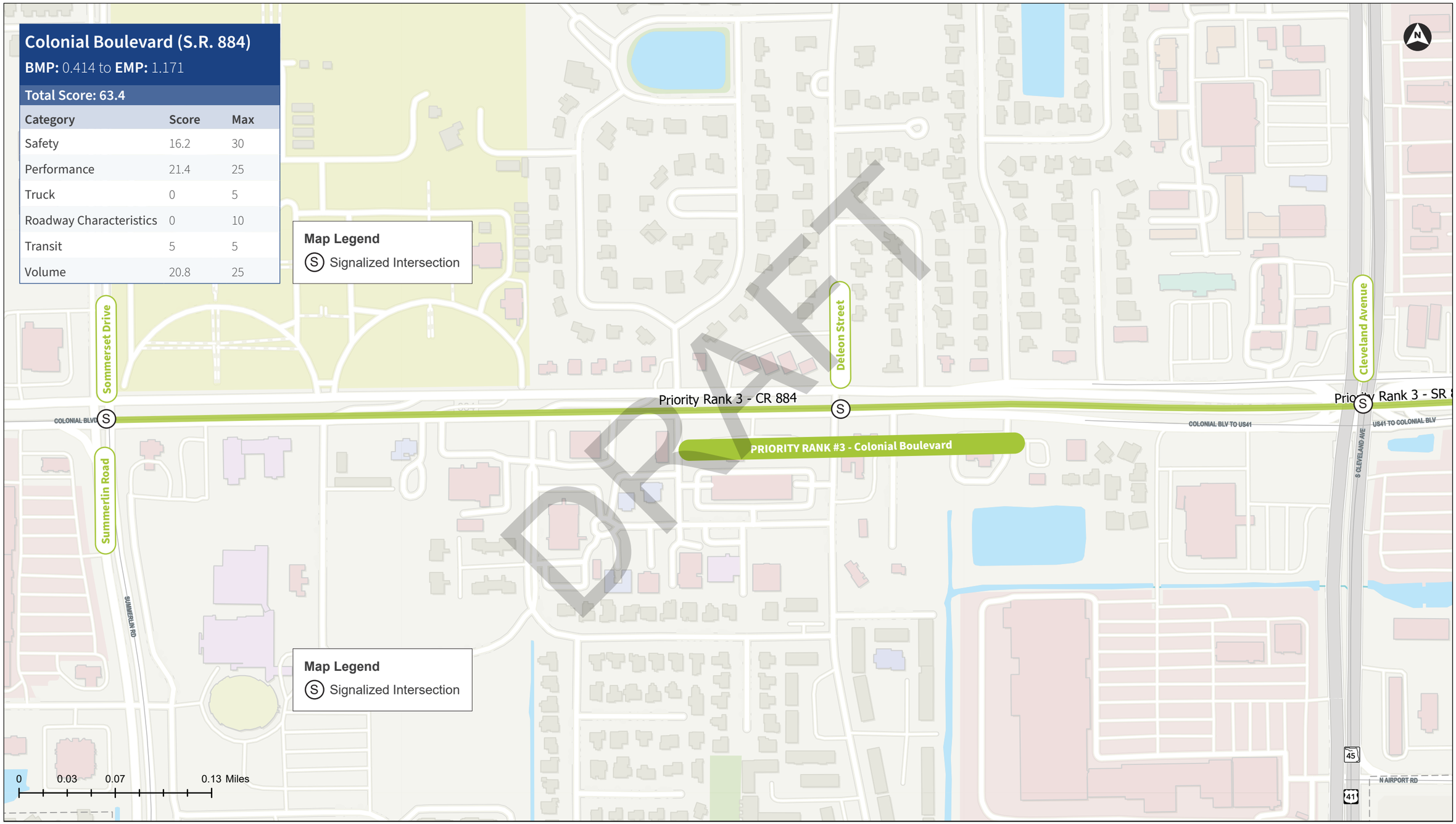
Figure 21A: Lee County Priority Corridor 3A - Colonial Boulevard (S.R. 884)

FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 21B: Lee County Priority Corridor 3B - Colonial Boulevard (S.R. 884)

FDOT District 1 – TSM&O Master Plan

Colonial Boulevard (S.R. 884)

BMP: 1.171 to **EMP:** 2.5

Total Score: 68.8

Category	Score	Max
Safety	16.2	30
Performance	21.4	25
Truck	0	5
Roadway Characteristics	3.3	10
Transit	5	5
Volume	22.9	25

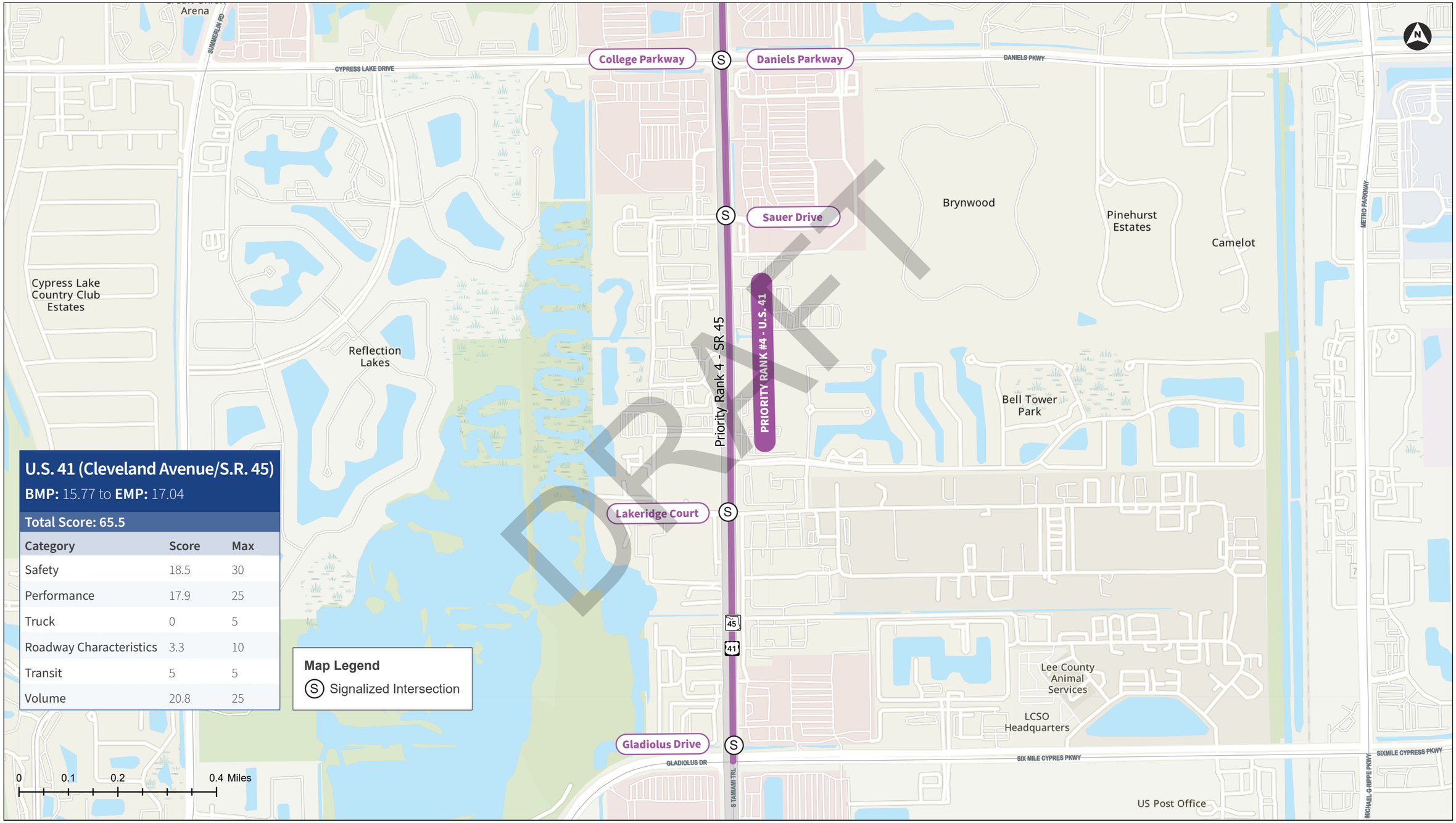
Map Legend

Ⓢ Signalized Intersection

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 22A: Lee County Priority Corridor 4A - U.S. 41 (Cleveland Avenue/S.R. 45)

FDOT District 1 – TSM&O Master Plan



U.S. 41 (Cleveland Avenue/S.R. 45)

BMP: 15.77 to **EMP:** 17.04

Total Score: 65.5

Category	Score	Max
Safety	18.5	30
Performance	17.9	25
Truck	0	5
Roadway Characteristics	3.3	10
Transit	5	5
Volume	20.8	25

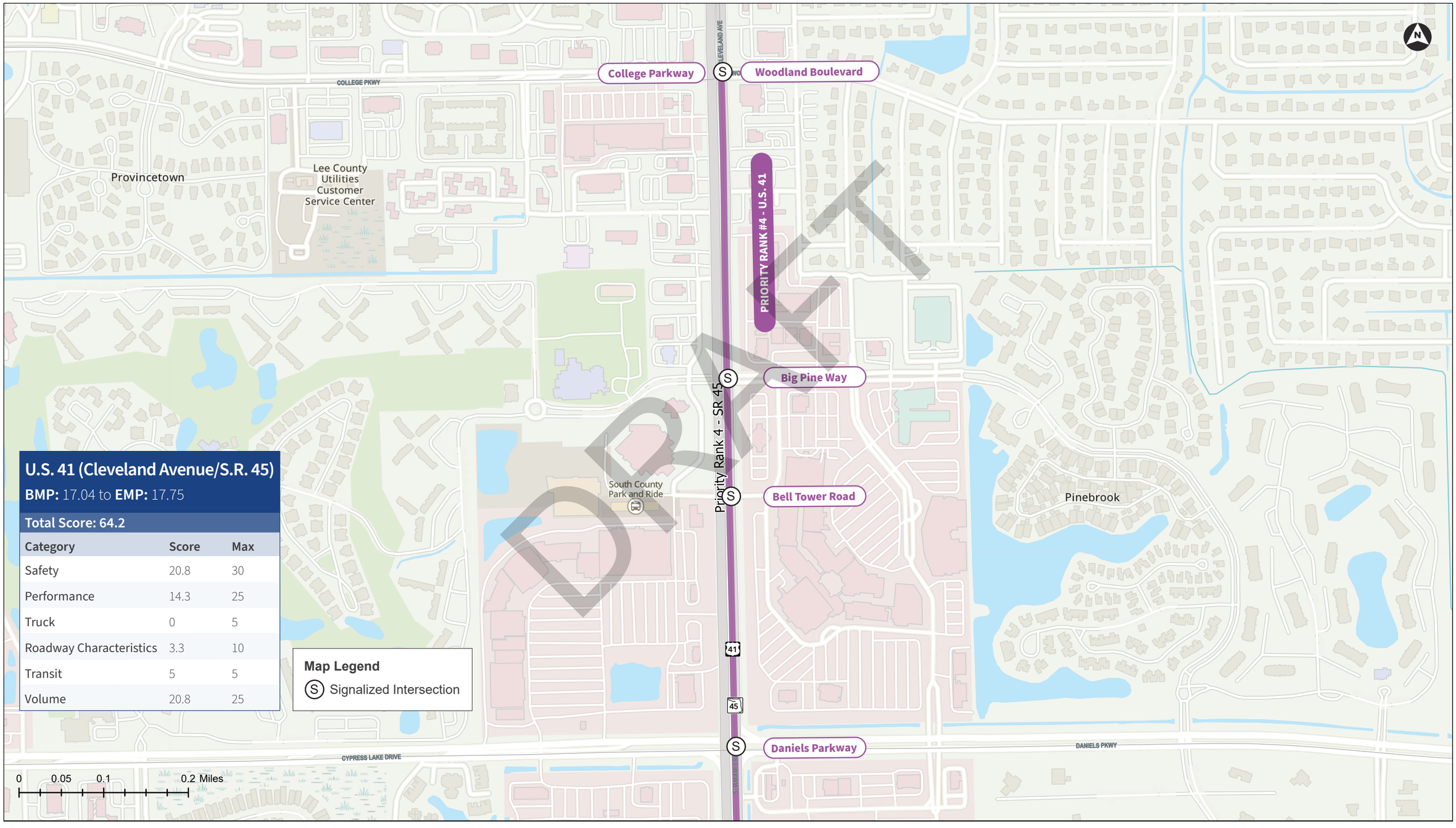
Map Legend

Ⓢ Signalized Intersection

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 22B: Lee County Priority Corridor 4B - U.S. 41 (Cleveland Avenue/S.R. 45)

FDOT District 1 – TSM&O Master Plan

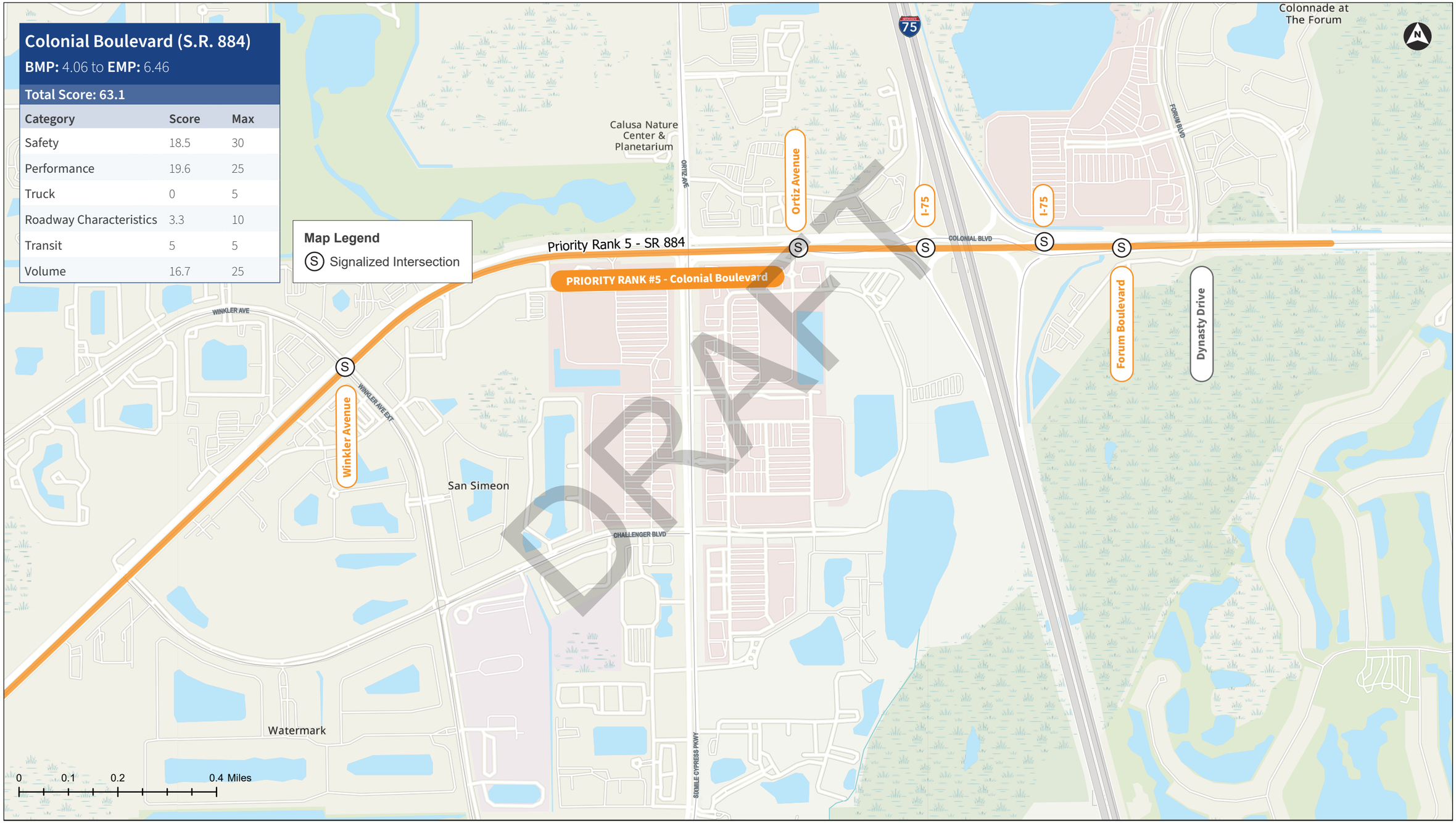


Category	Score	Max
Safety	20.8	30
Performance	14.3	25
Truck	0	5
Roadway Characteristics	3.3	10
Transit	5	5
Volume	20.8	25

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 23A: Lee County Priority Corridor 5A - Colonial Boulevard (S.R. 884)

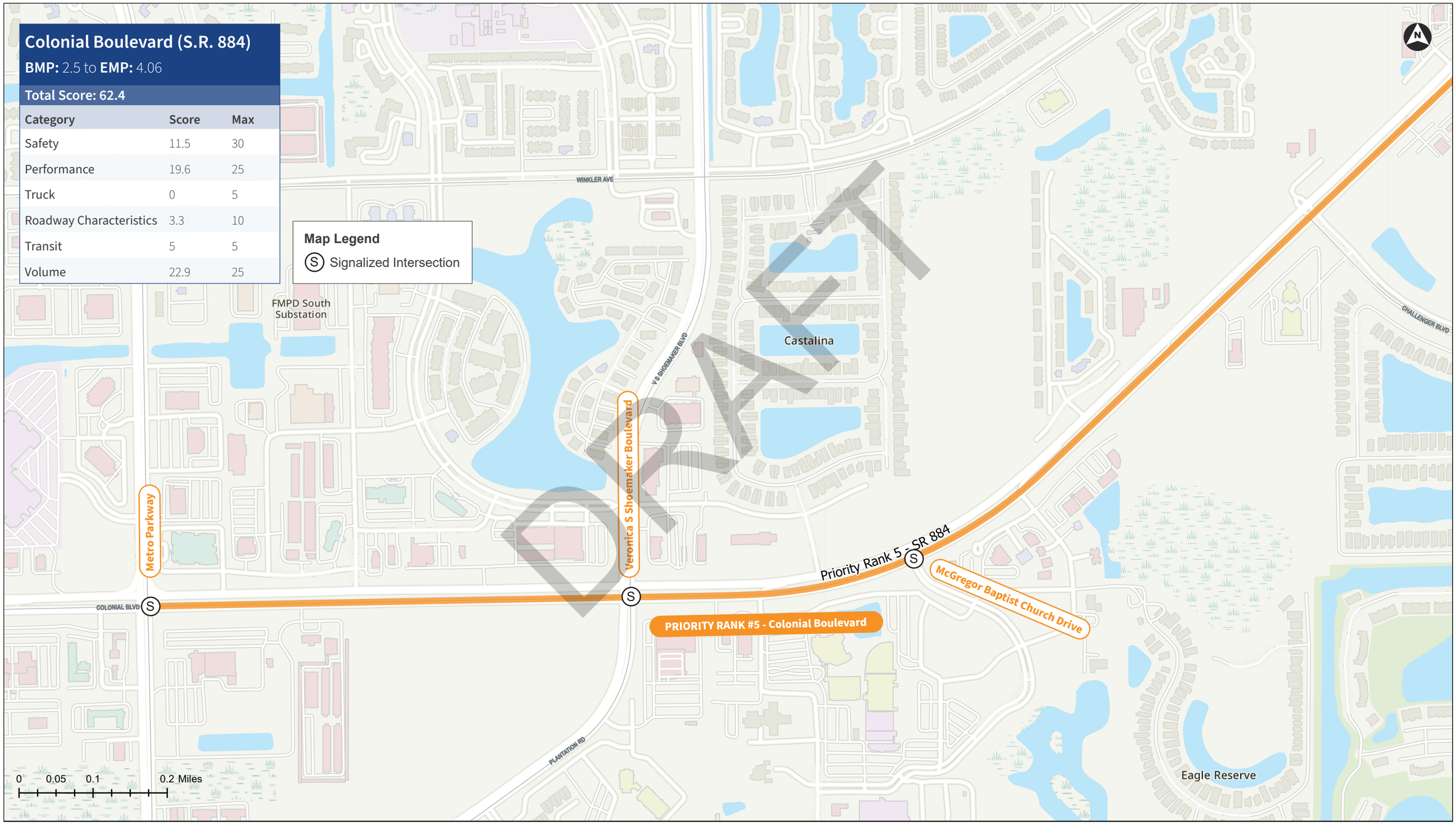
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 23B: Lee County Priority Corridor 5B - Colonial Boulevard (S.R. 884)

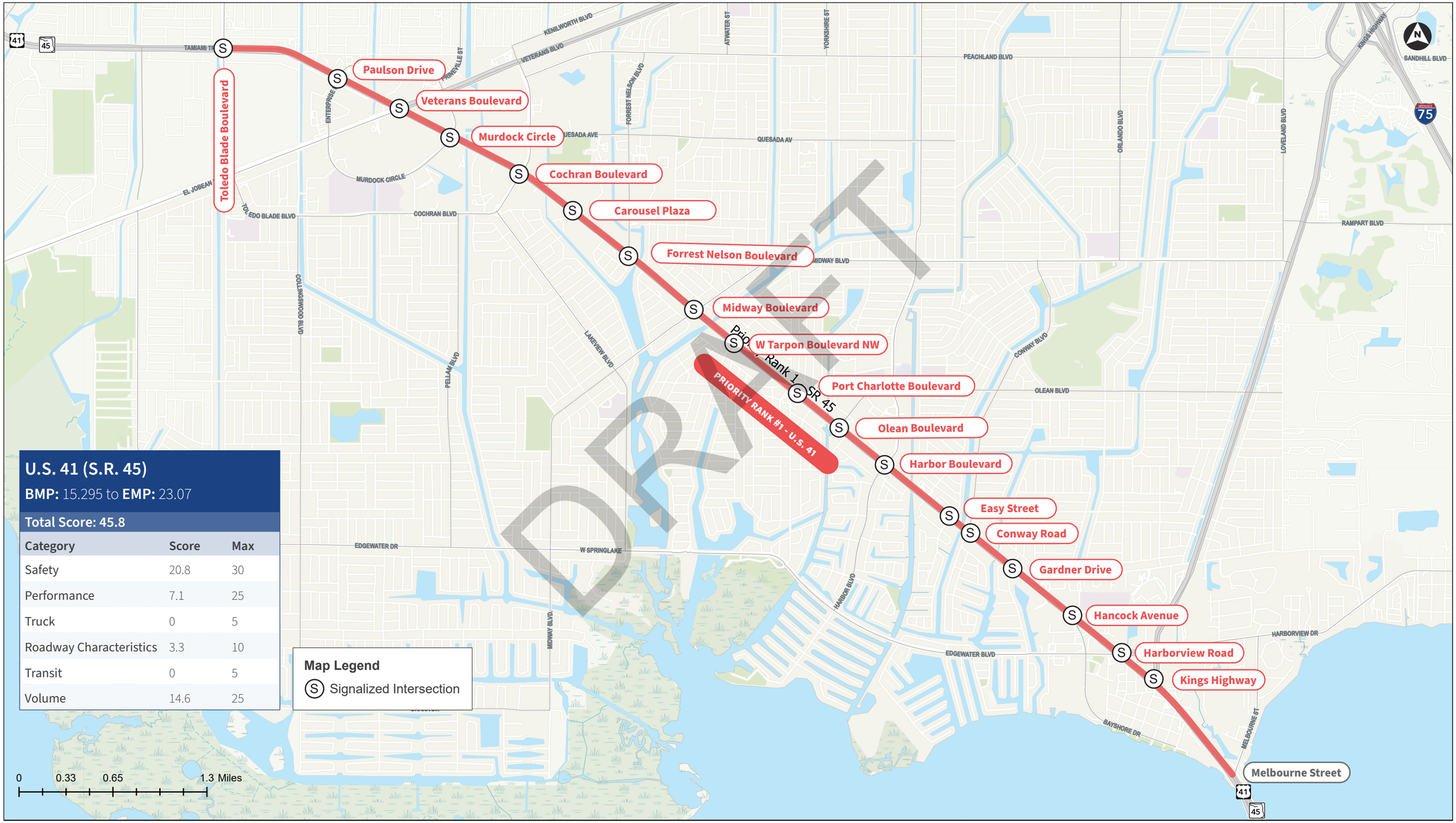
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 24: Charlotte County Priority Corridor 1 - U.S. 41 (S.R. 45)

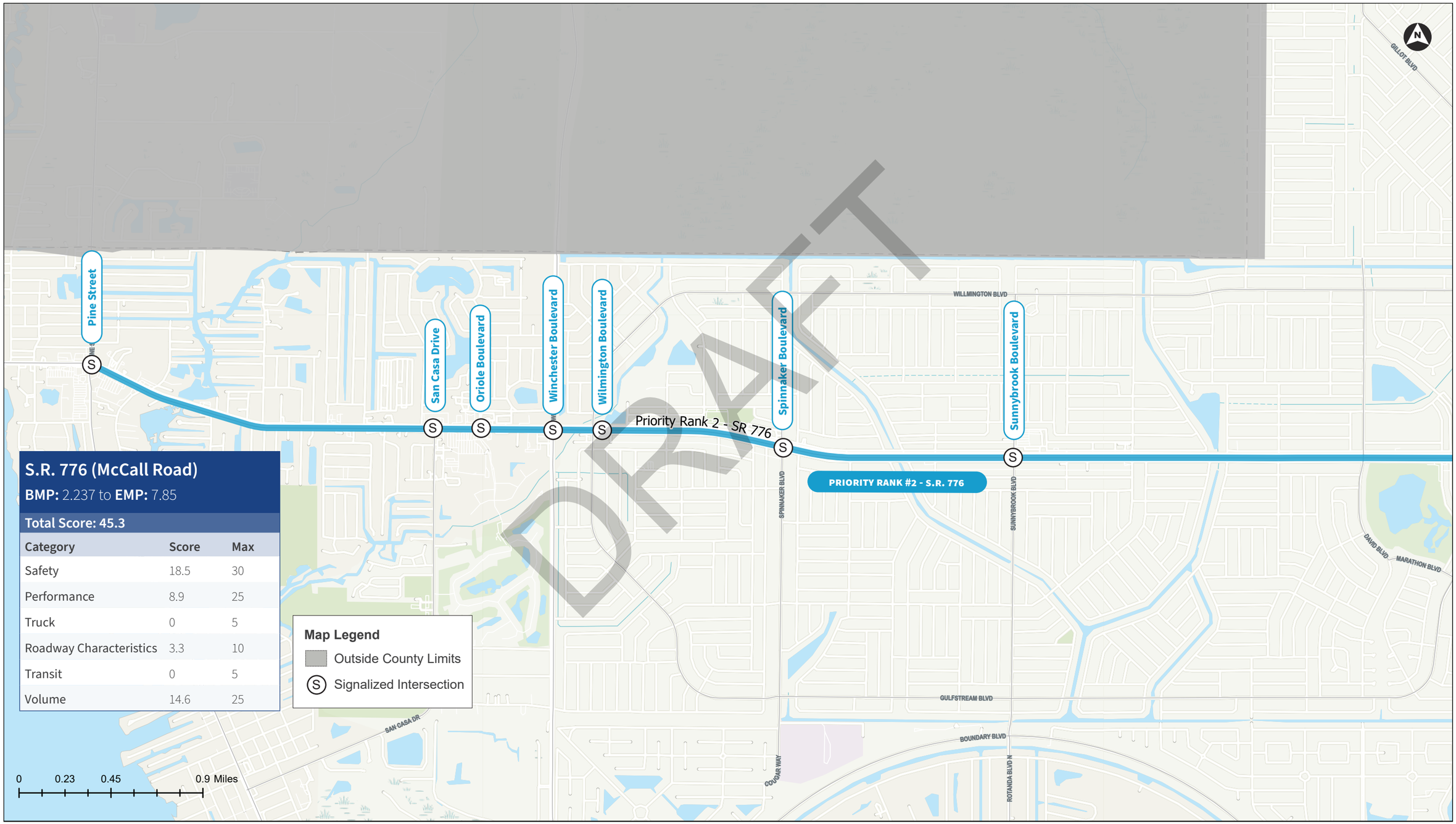
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 25A: Charlotte County Priority Corridor 2A - S.R. 776 (McCall Road)

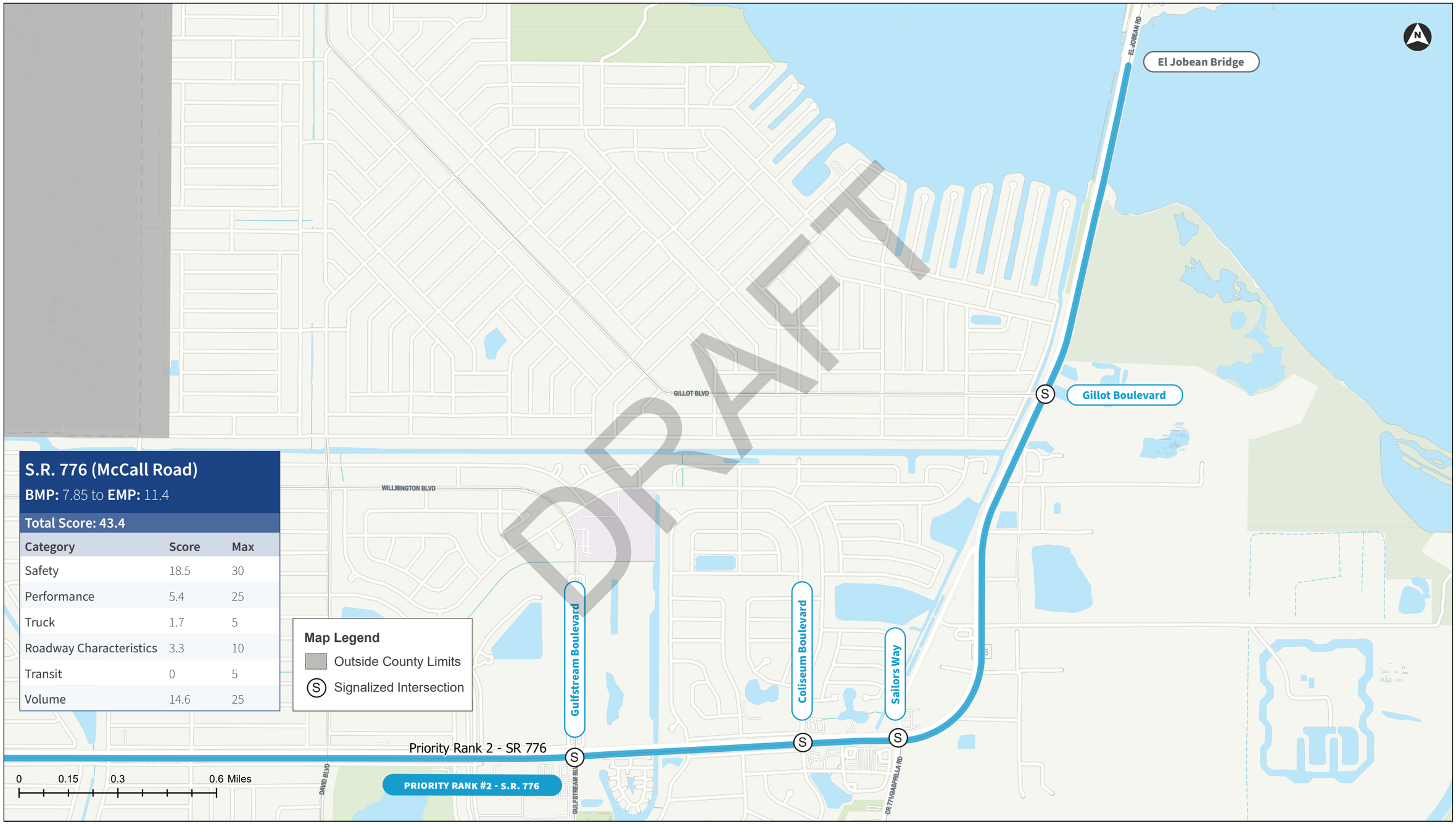
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 25B: Charlotte County Priority Corridor 2B - S.R. 776 (McCall Road)

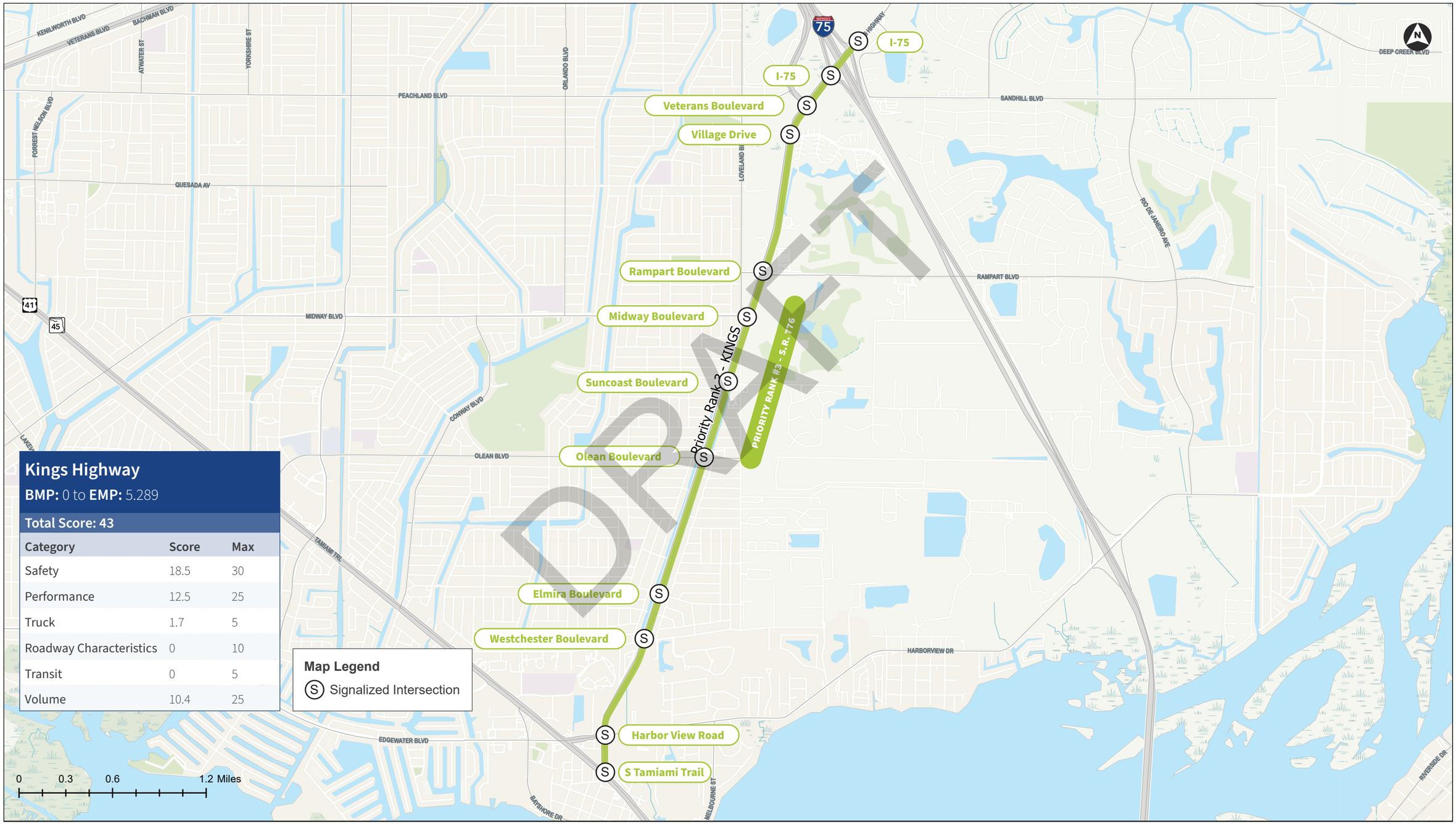
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 26: Charlotte County Priority Corridor 3 - Kings Highway

FDOT District 1 – TSM&O Master Plan



Kings Highway

BMP: 0 to **EMP:** 5.289

Total Score: 43

Category	Score	Max
Safety	18.5	30
Performance	12.5	25
Truck	1.7	5
Roadway Characteristics	0	10
Transit	0	5
Volume	10.4	25

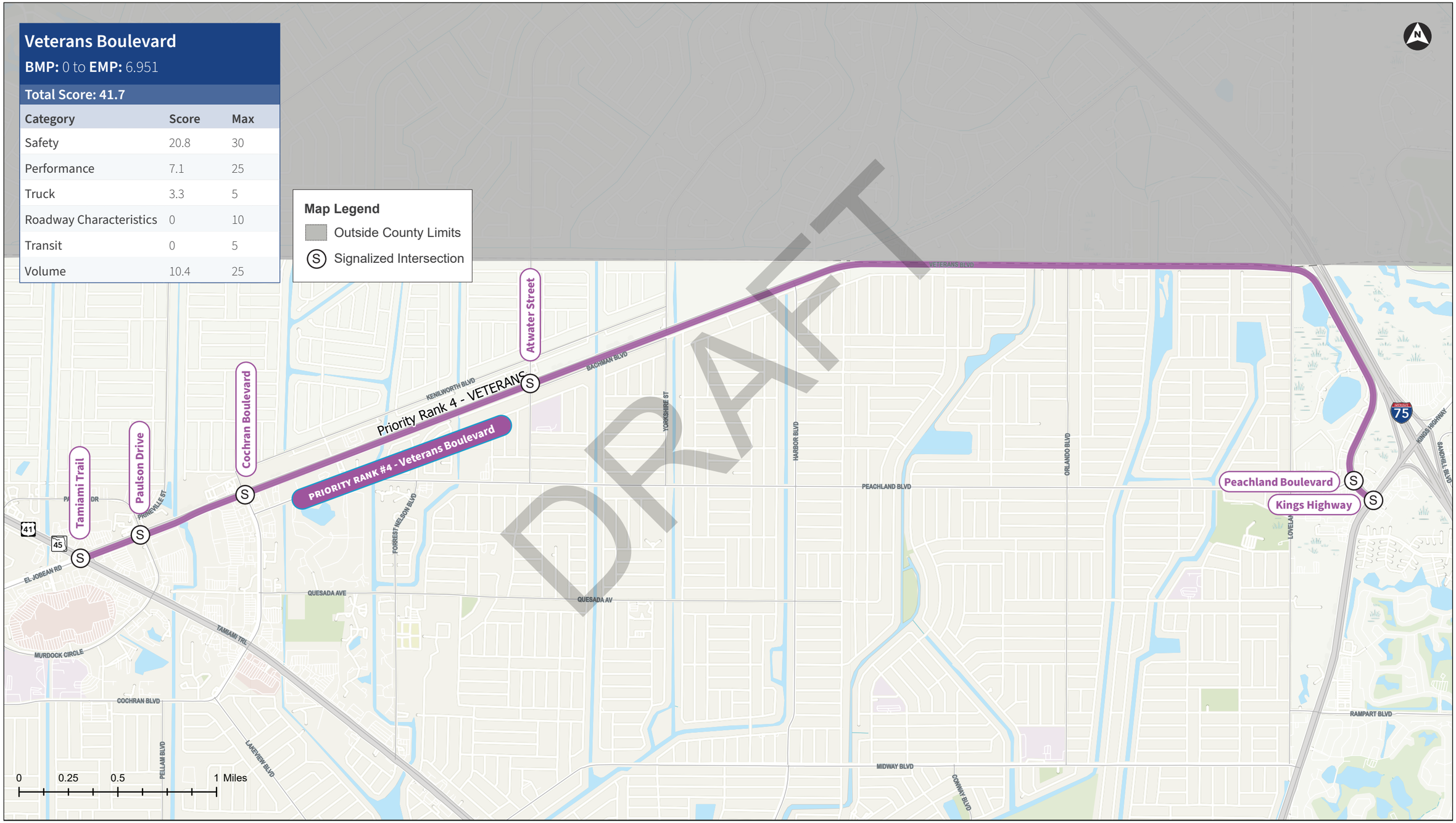
Map Legend

Ⓢ Signalized Intersection

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 27: Charlotte County Priority Corridor 4 - Veterans Boulevard

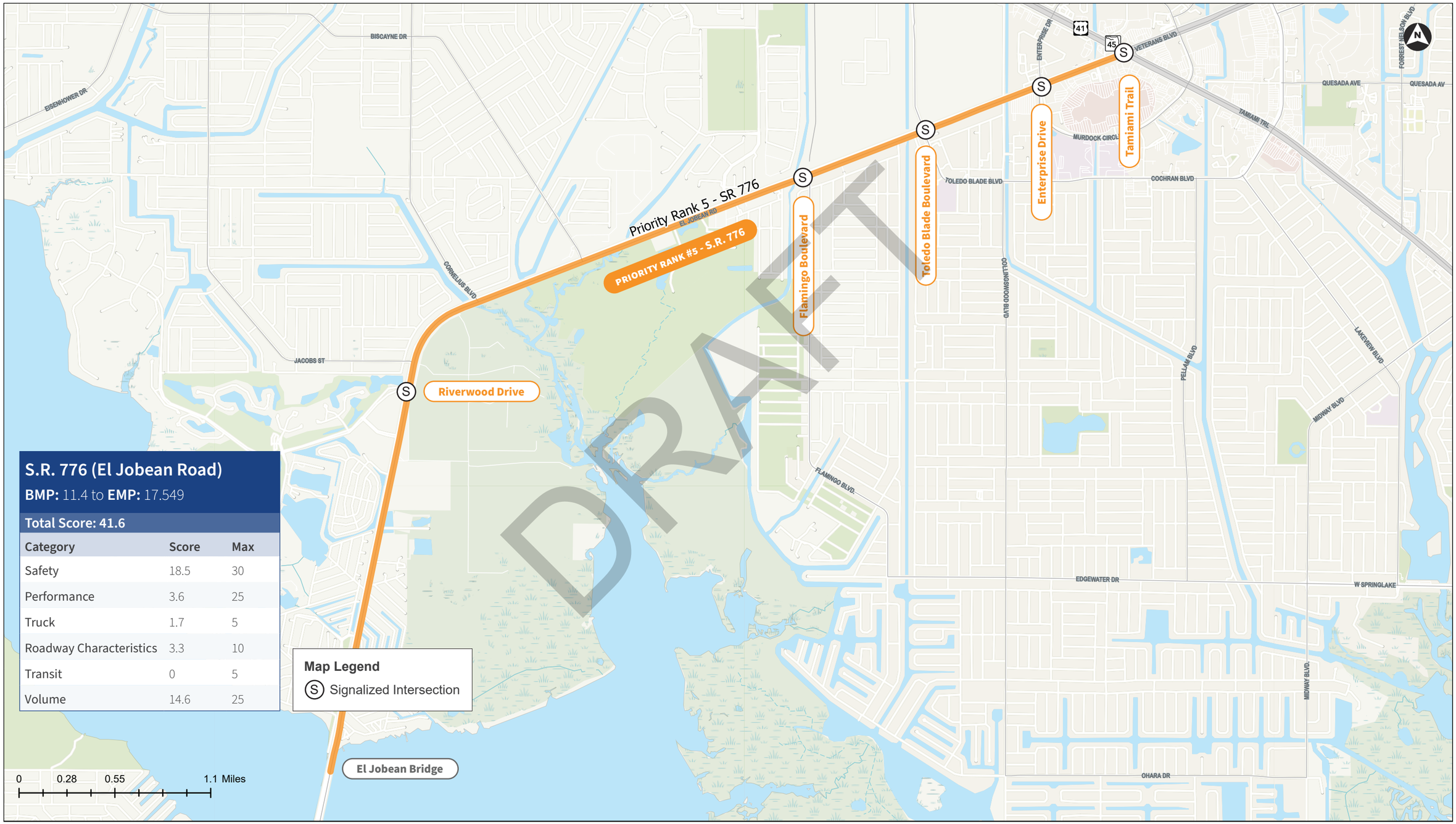
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 28: Charlotte County Priority Corridor 5 - S.R. 776 (El Jobean Road)

FDOT District 1 – TSM&O Master Plan

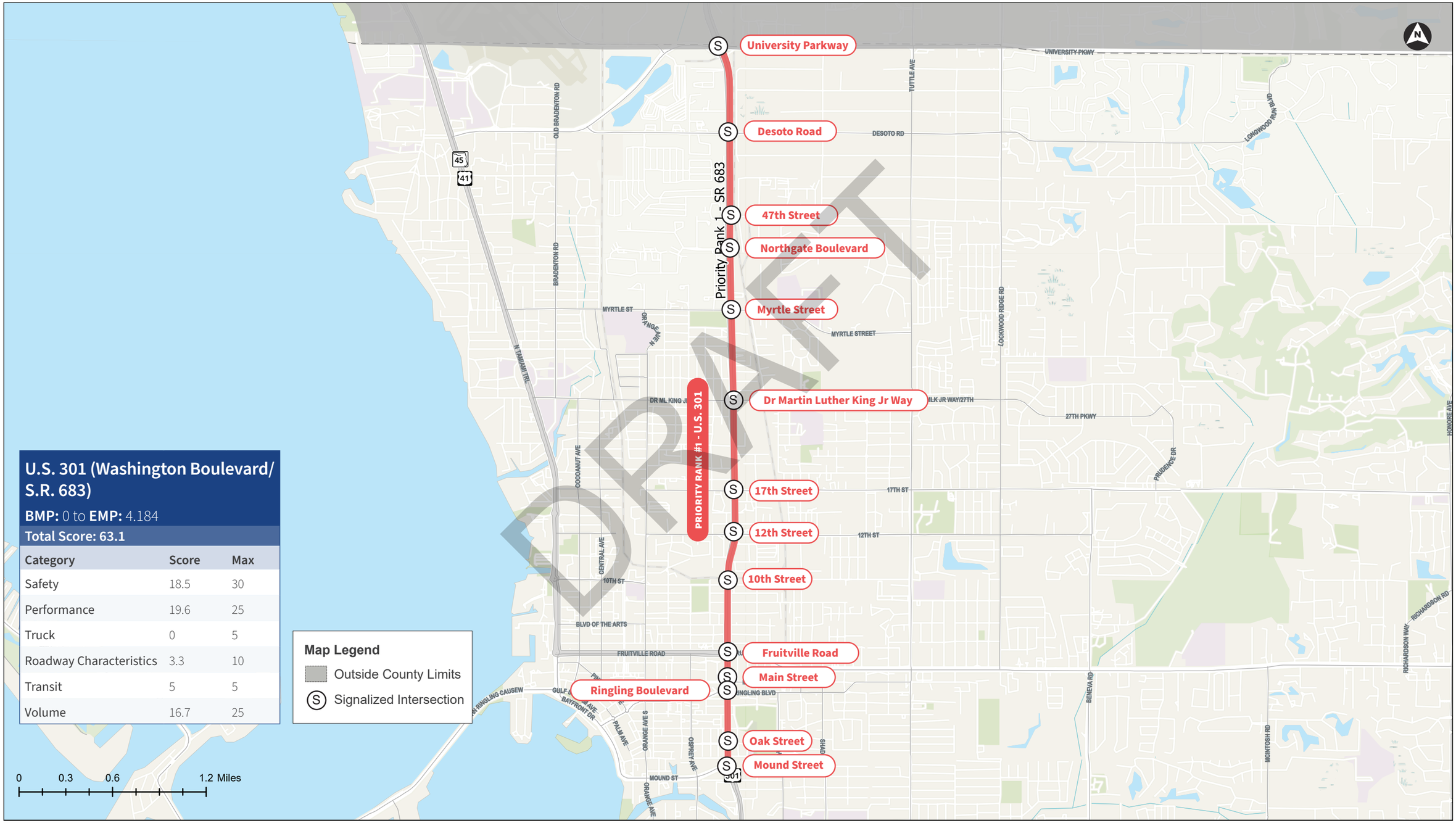


Category	Score	Max
Safety	18.5	30
Performance	3.6	25
Truck	1.7	5
Roadway Characteristics	3.3	10
Transit	0	5
Volume	14.6	25

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 29: Sarasota County Priority Corridor 1 - U.S. 301 (Washington Boulevard/S.R. 683)

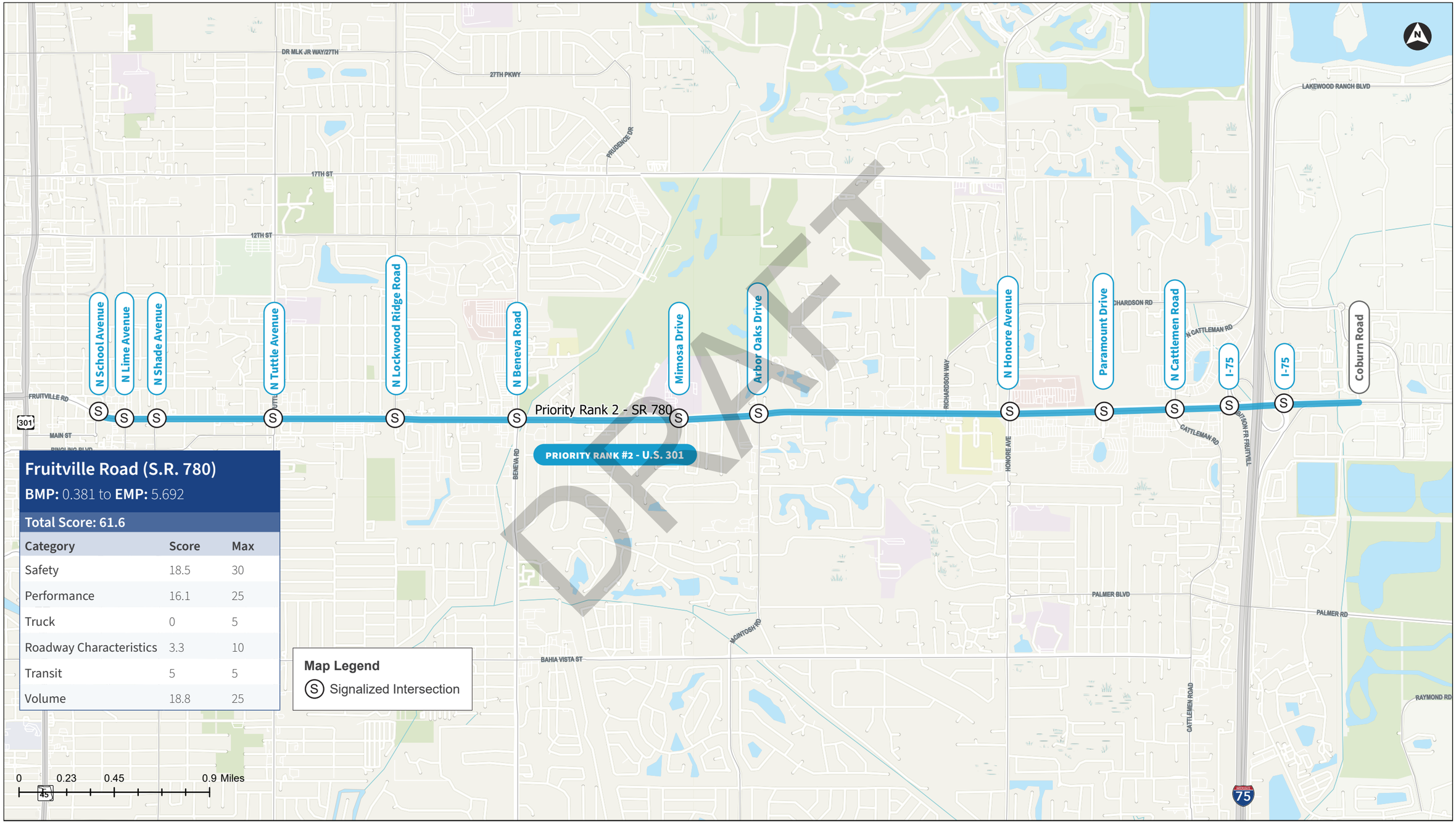
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 30: Sarasota County Priority Corridor 2 - Fruitville Road (S.R. 780)

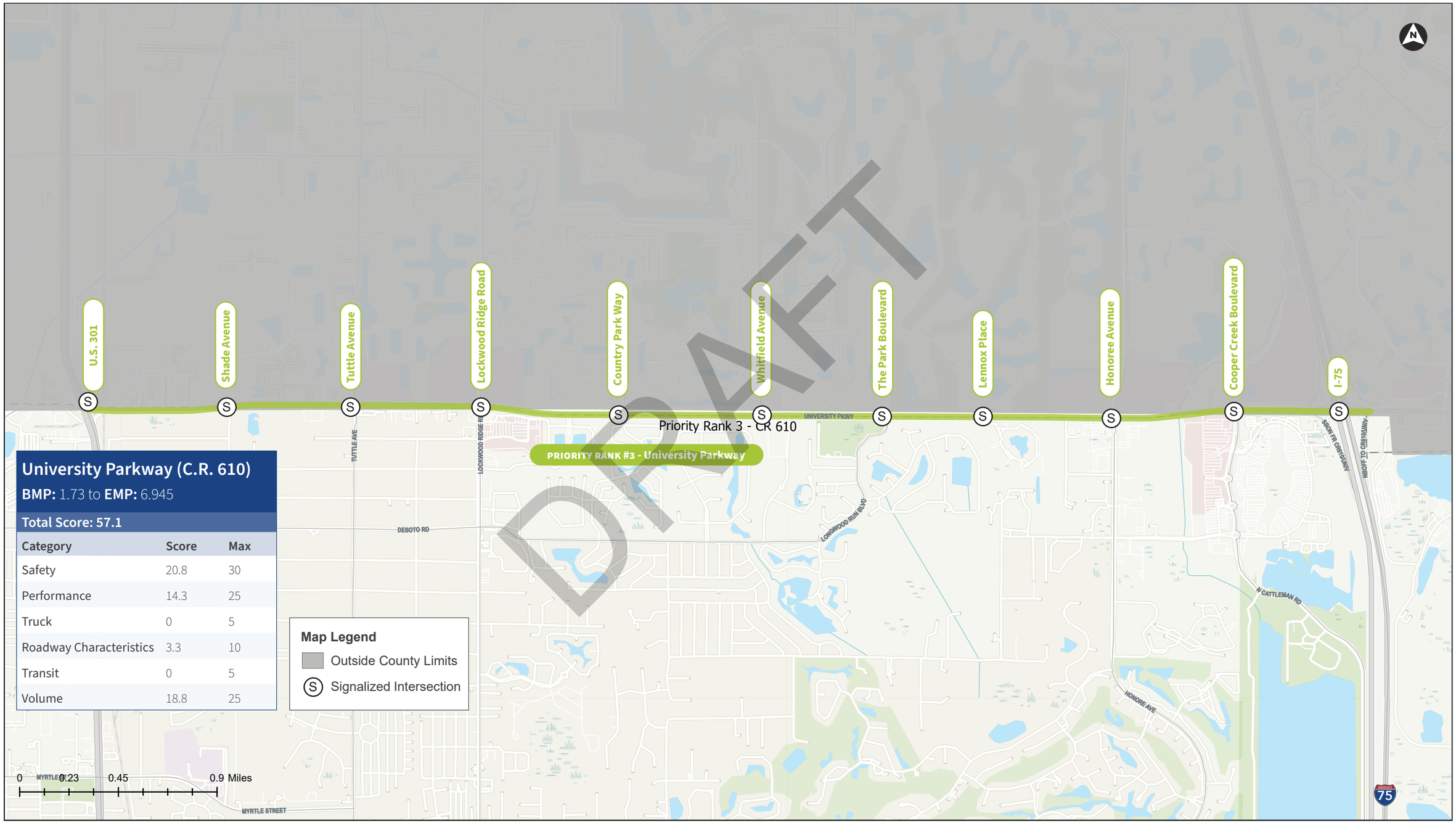
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 31: Sarasota County Priority Corridor 3 - University Parkway (C.R. 610)

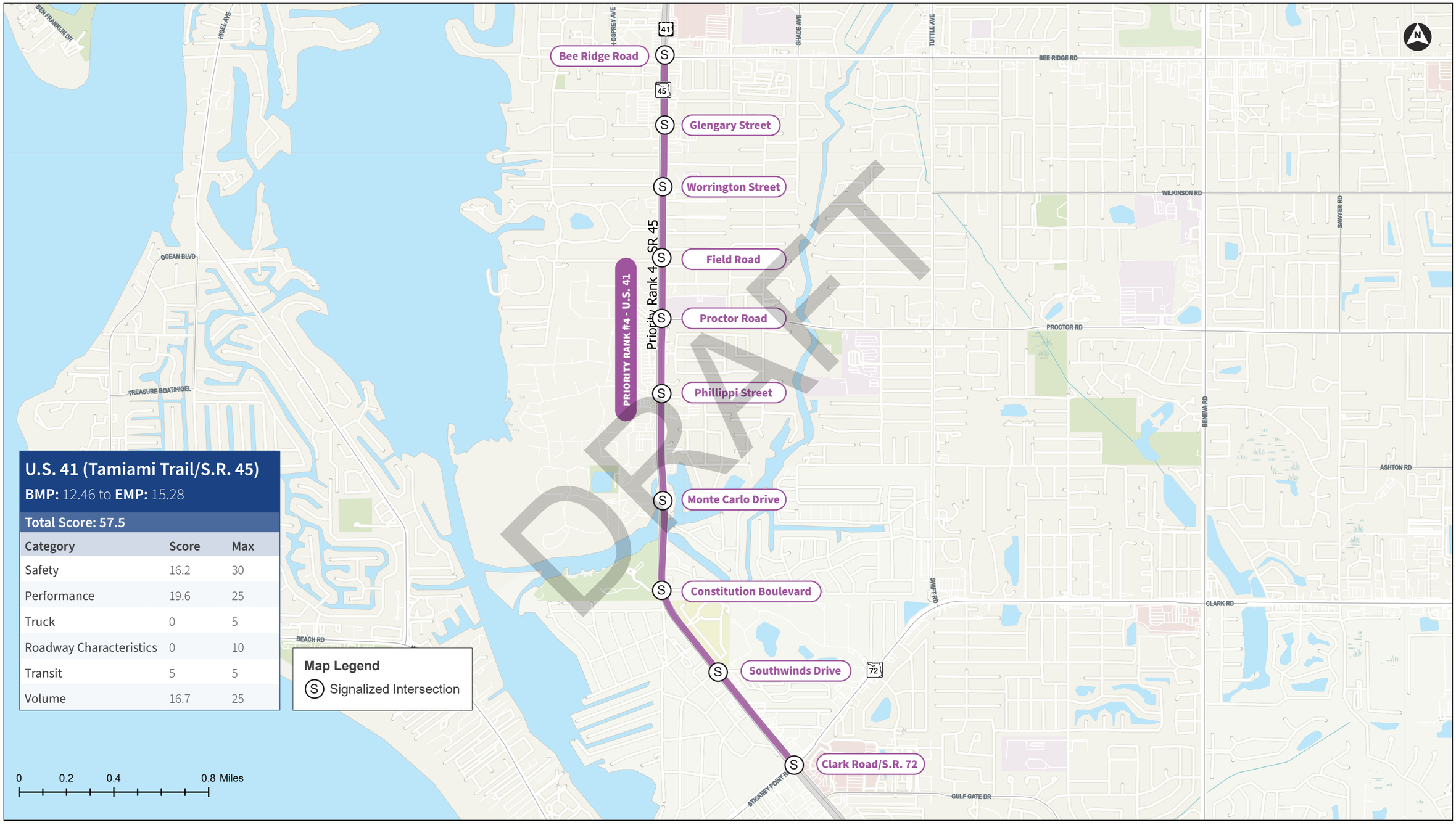
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 32: Sarasota County Priority Corridor 4 - U.S. 41 (Tamiami Trail/S.R. 45)

FDOT District 1 – TSM&O Master Plan



U.S. 41 (Tamiami Trail/S.R. 45)

BMP: 12.46 to **EMP:** 15.28

Total Score: 57.5

Category	Score	Max
Safety	16.2	30
Performance	19.6	25
Truck	0	5
Roadway Characteristics	0	10
Transit	5	5
Volume	16.7	25

Map Legend

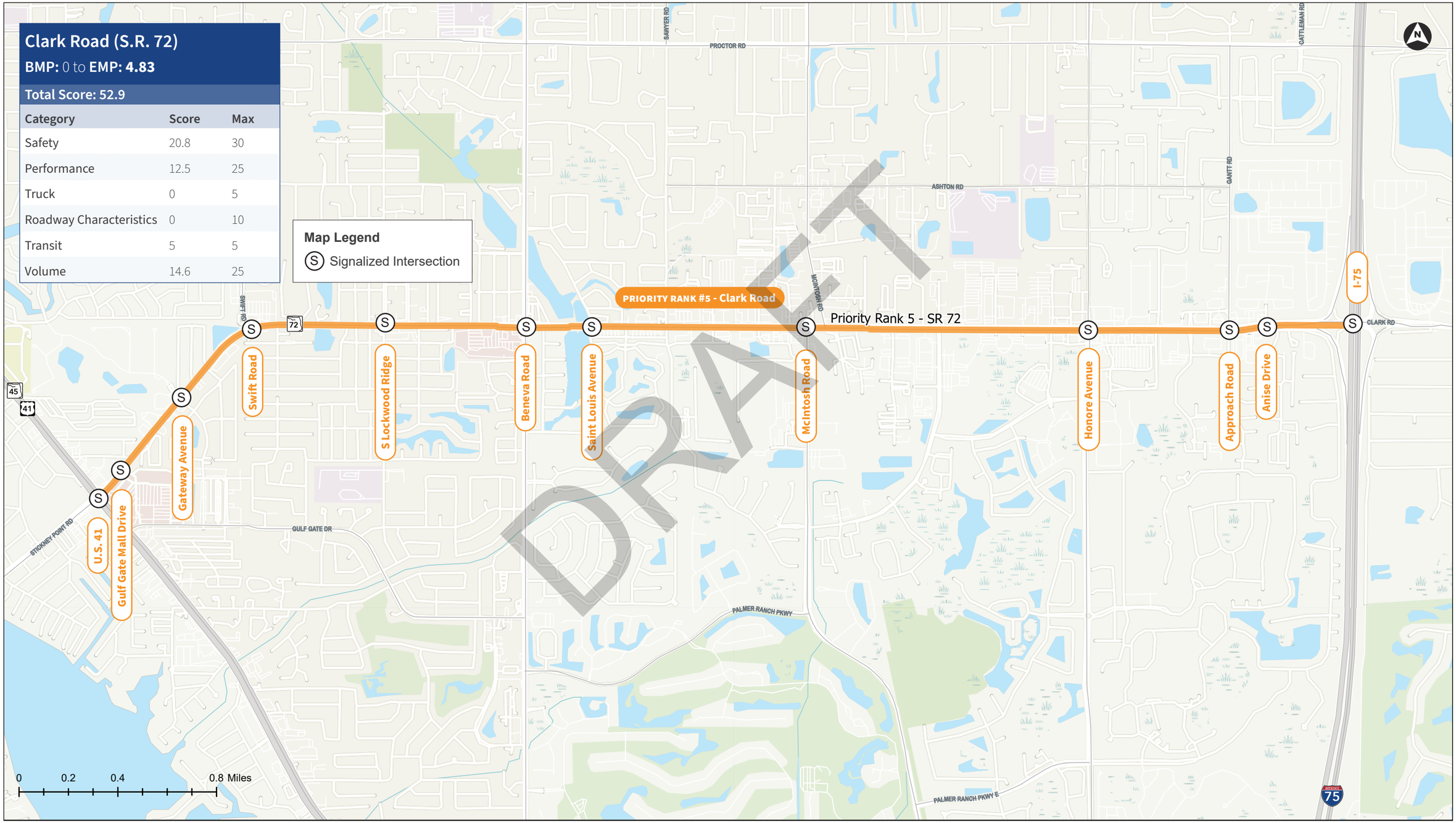
Ⓢ Signalized Intersection

0 0.2 0.4 0.8 Miles

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 33: Sarasota County Priority Corridor 5 - Clark Road (S.R. 72)

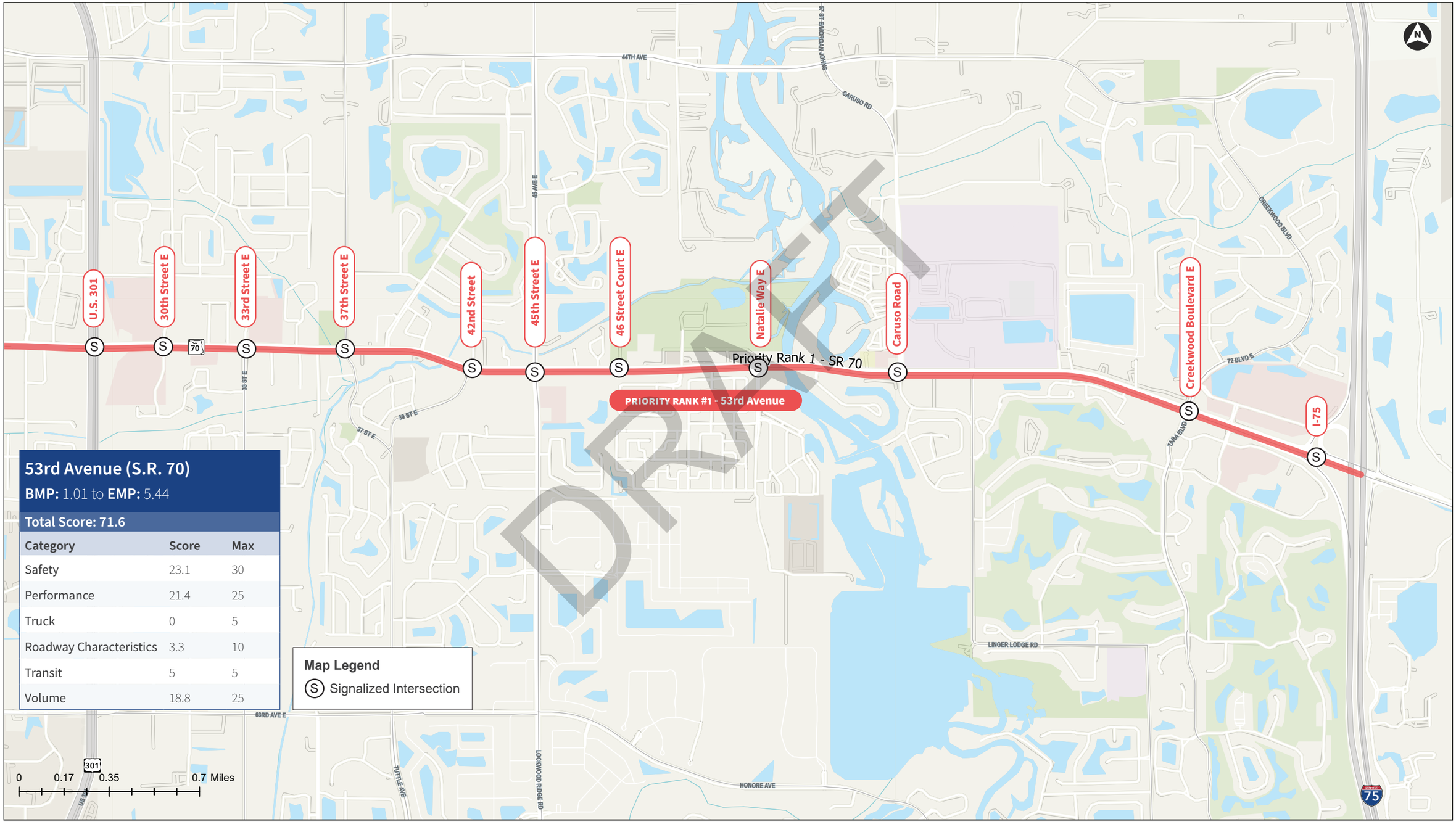
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 34A: Manatee County Priority Corridor 1A - 53rd Avenue (S.R. 70)

FDOT District 1 – TSM&O Master Plan

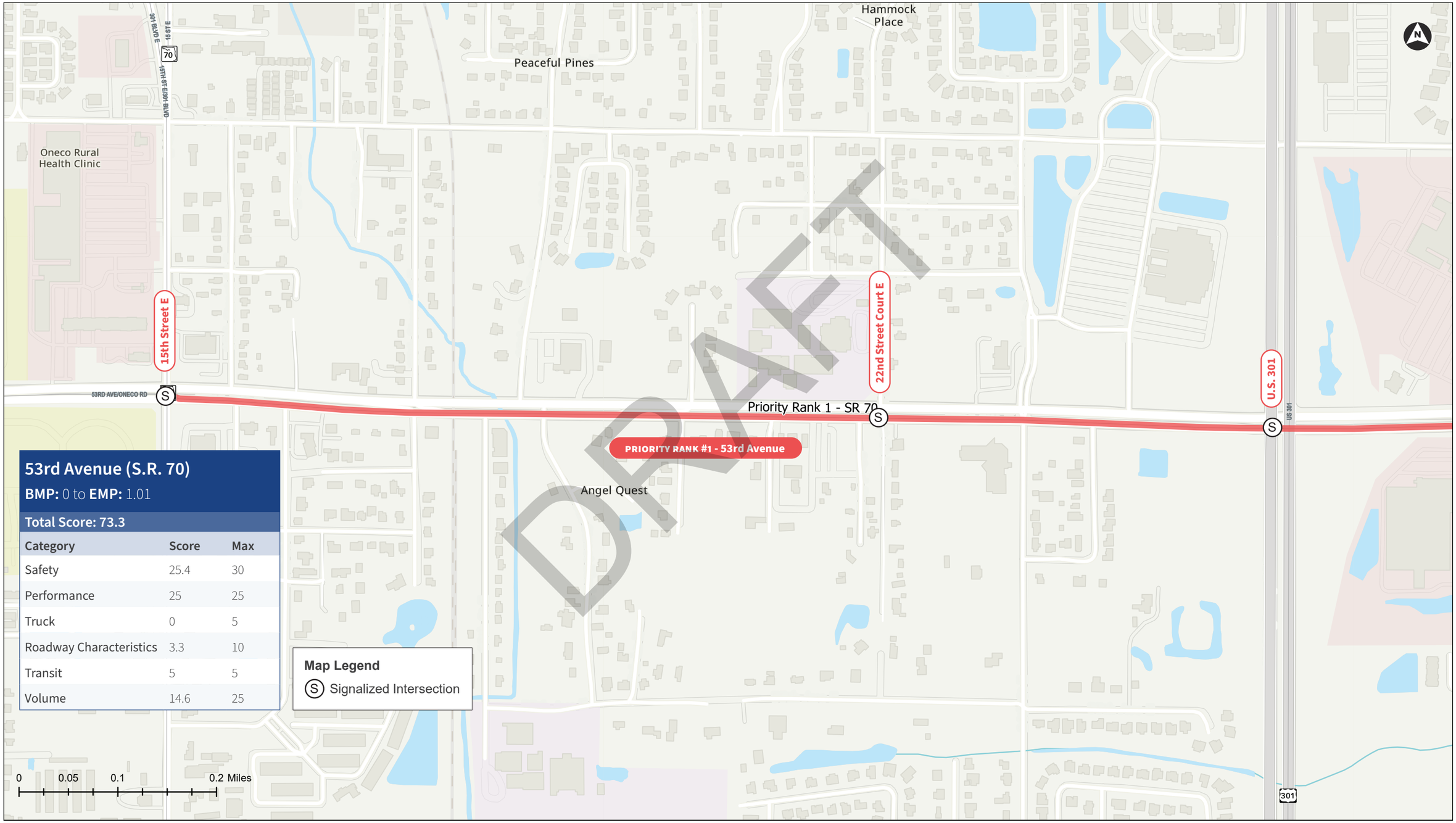


Category	Score	Max
Safety	23.1	30
Performance	21.4	25
Truck	0	5
Roadway Characteristics	3.3	10
Transit	5	5
Volume	18.8	25

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 34B: Manatee County Priority Corridor 1B - 53rd Avenue (S.R. 70)

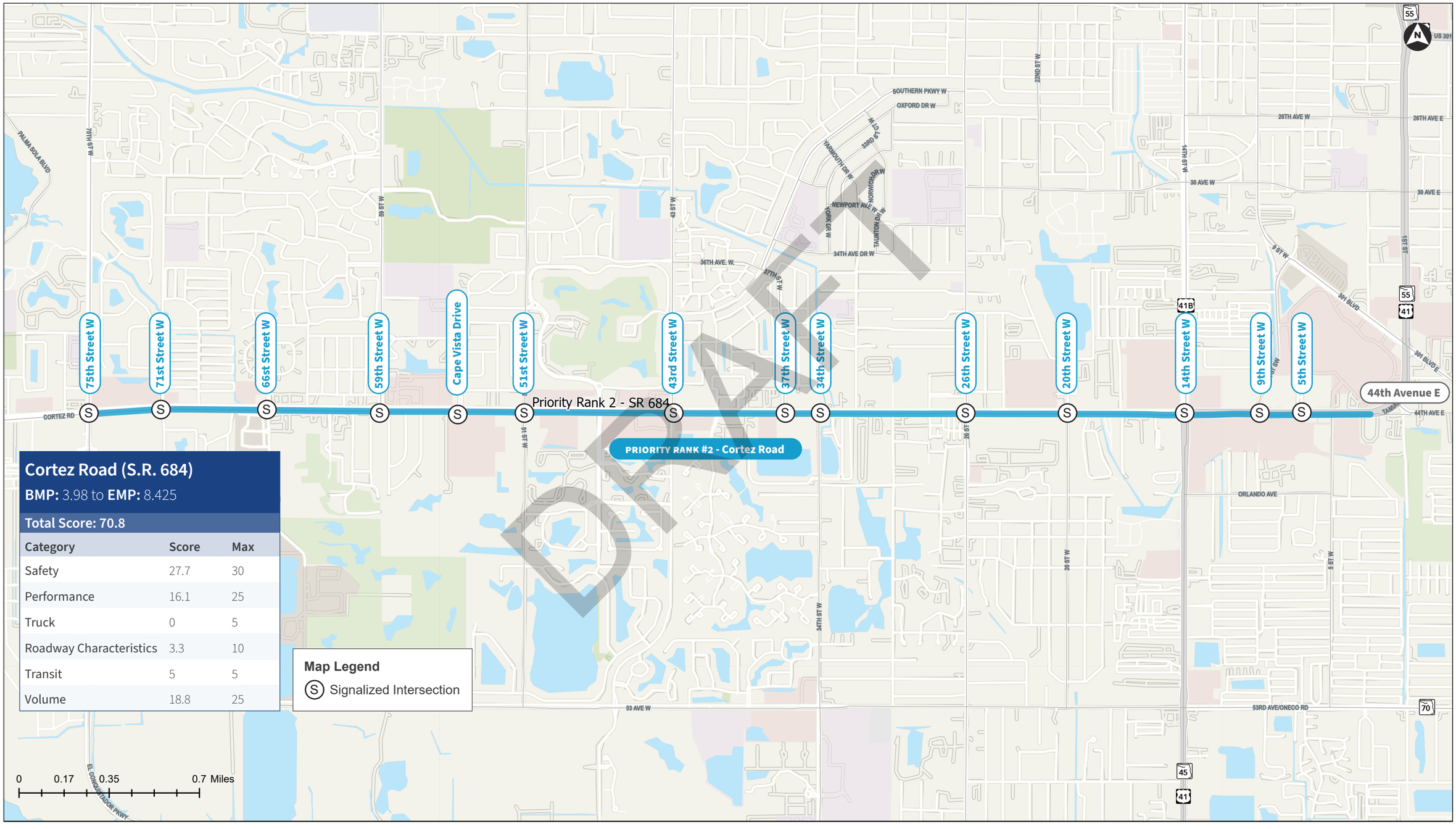
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 35: Manatee County Priority Corridor 2 - Cortez Road (S.R. 684)

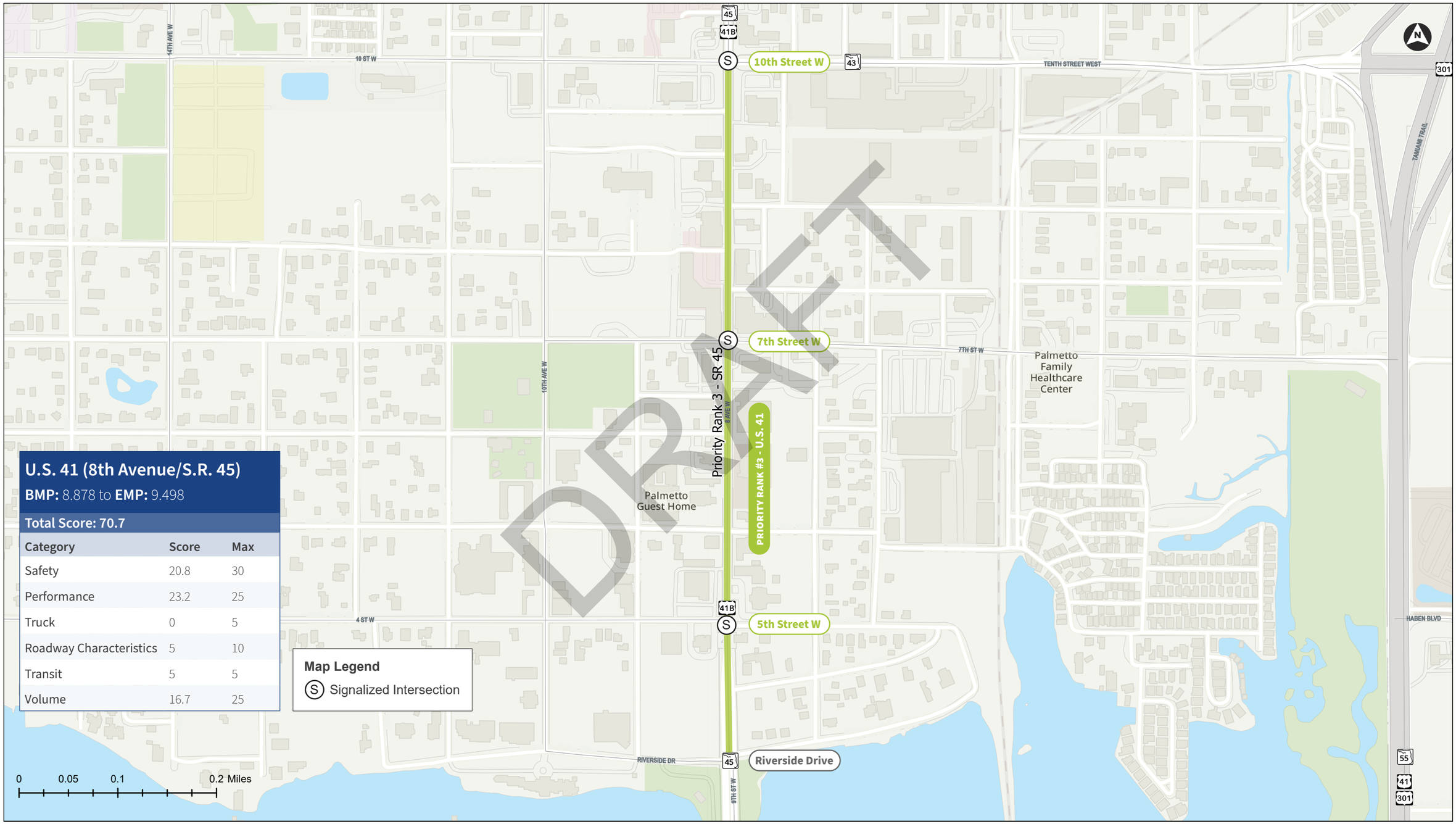
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 36: Manatee County Priority Corridor 3 - U.S. 41 (8th Avenue/S.R. 45)

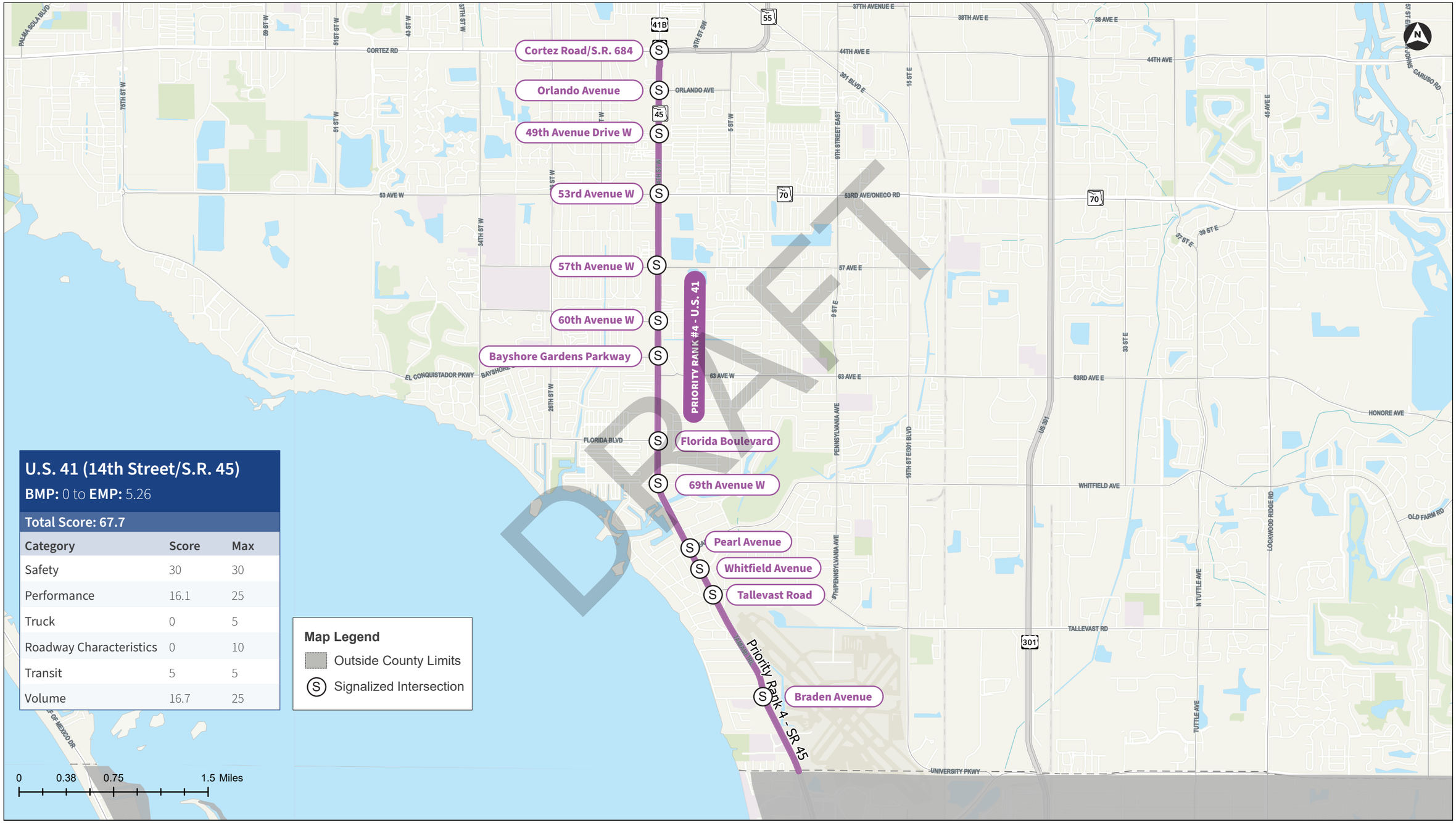
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 37: Manatee County Priority Corridor 4 - U.S. 41 (14th Street/S.R. 45)

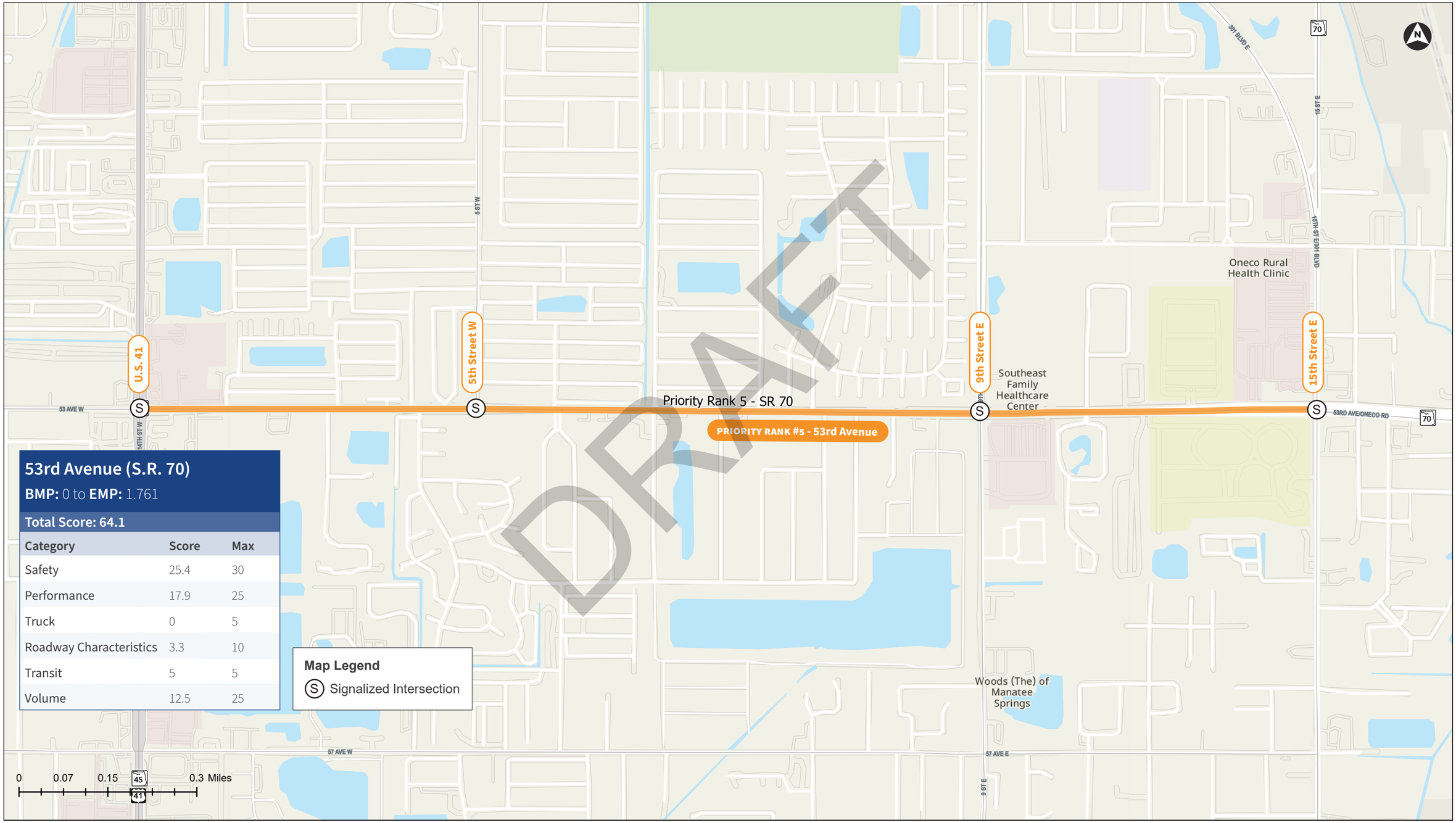
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 38: Manatee County Priority Corridor 5 - 53rd Avenue (S.R. 70)

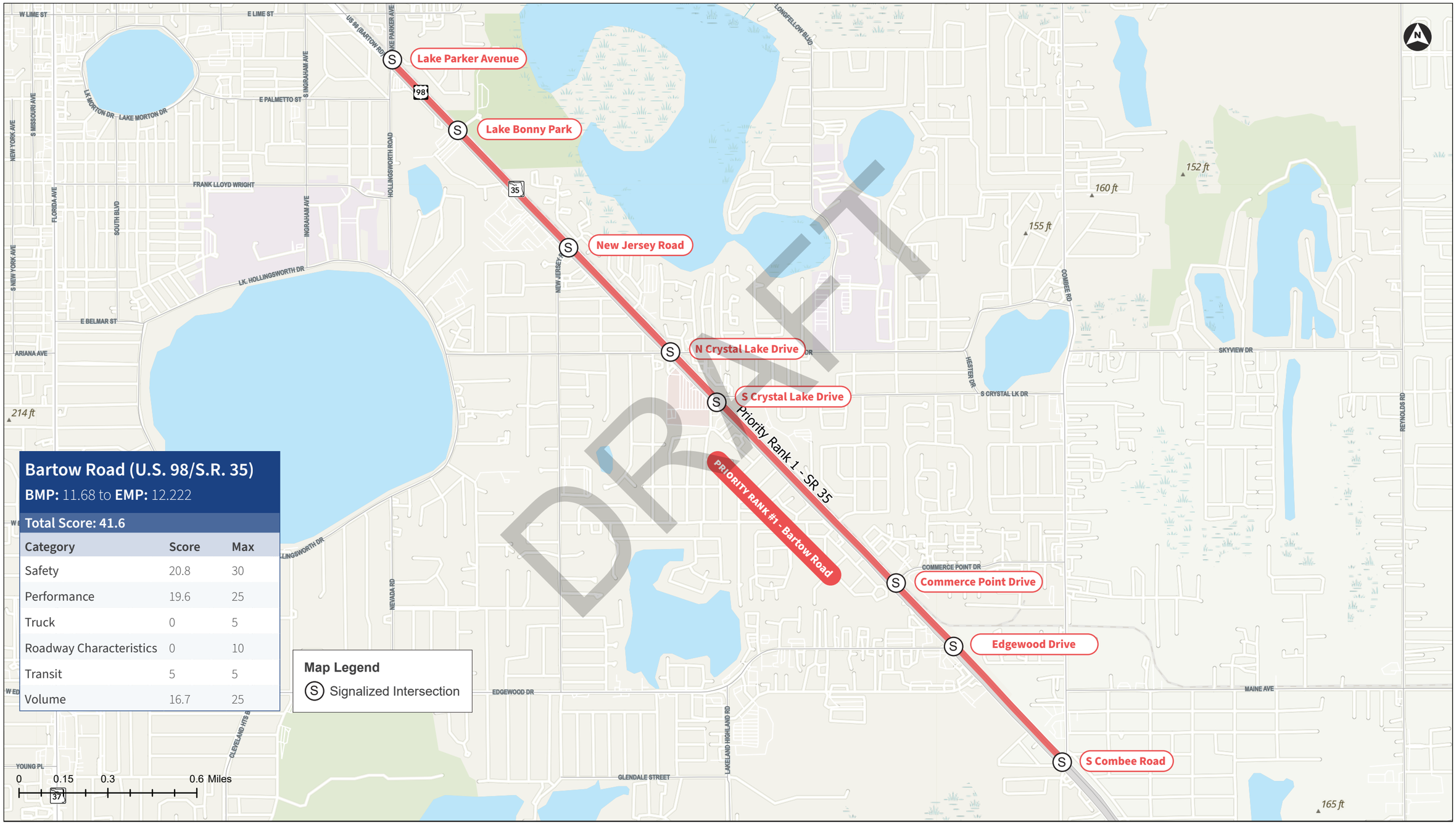
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 39: Polk County Priority Corridor 1 - Bartow Road (U.S. 98/S.R. 35)

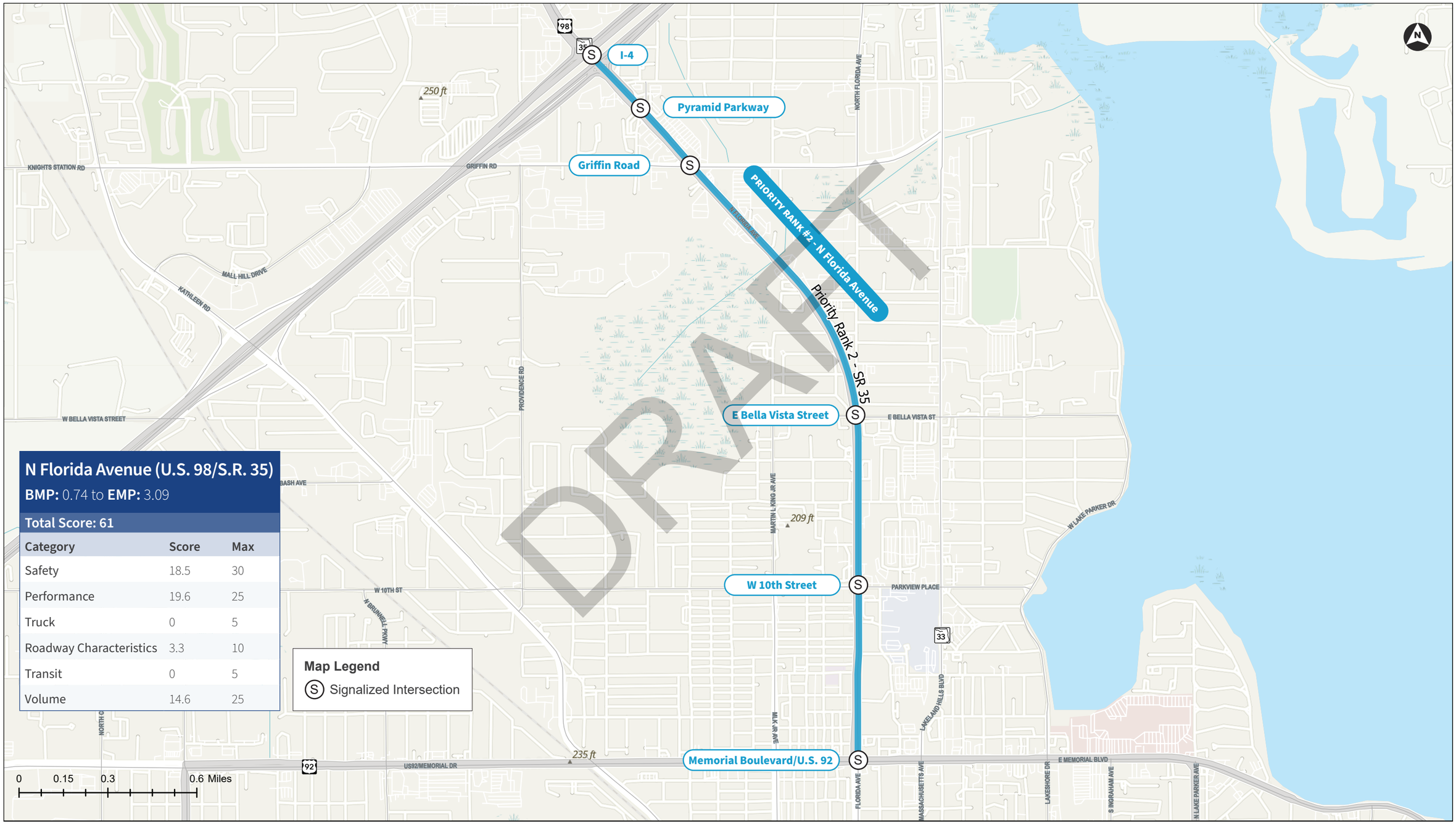
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 40: Polk County Priority Corridor 2 - N Florida Avenue (U.S. 98/S.R. 35)

FDOT District 1 – TSM&O Master Plan



N Florida Avenue (U.S. 98/S.R. 35)

BMP: 0.74 to **EMP:** 3.09

Total Score: 61

Category	Score	Max
Safety	18.5	30
Performance	19.6	25
Truck	0	5
Roadway Characteristics	3.3	10
Transit	0	5
Volume	14.6	25

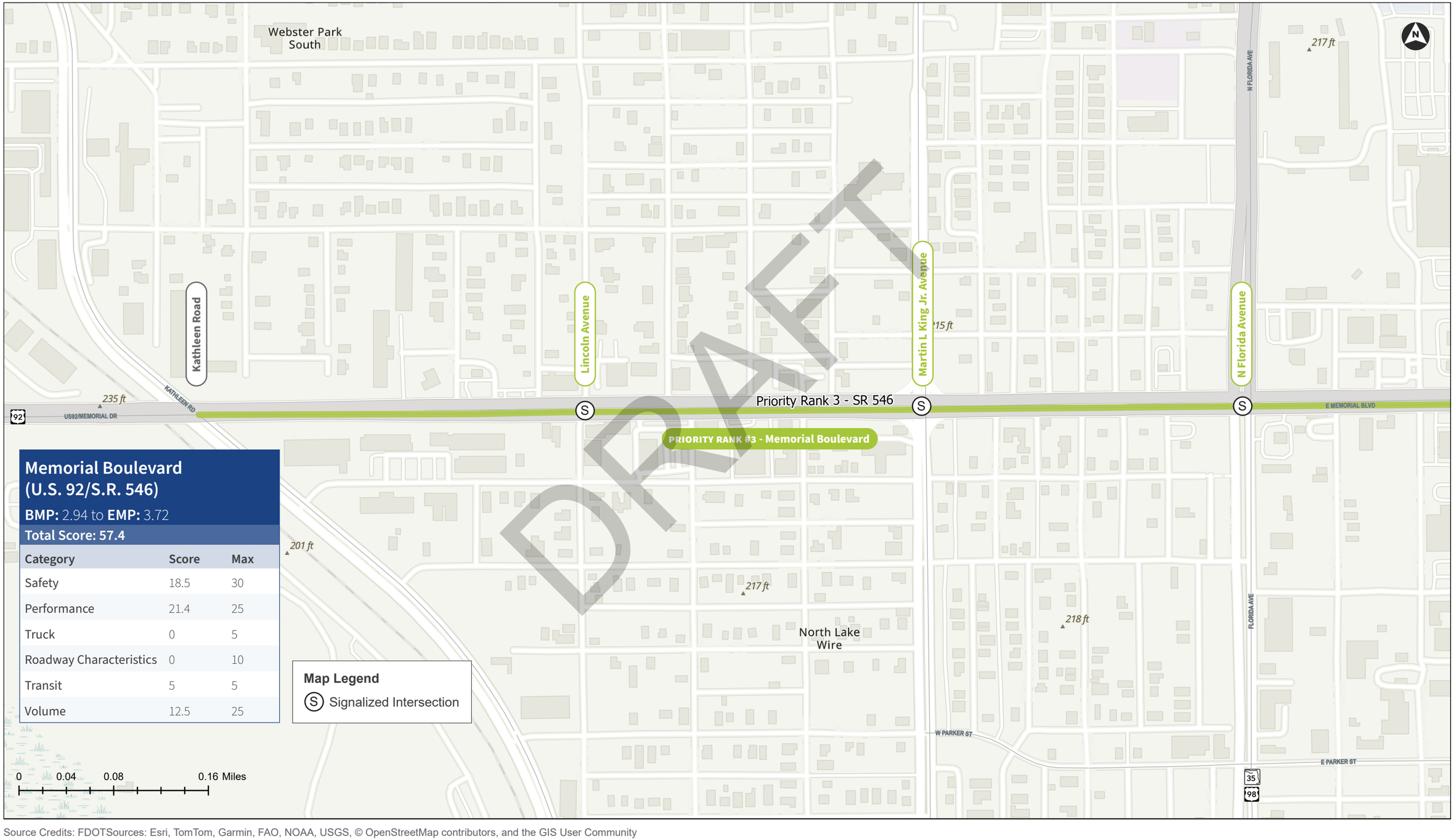
Map Legend

Ⓢ Signalized Intersection

Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 41A: Polk County Priority Corridor 3A - Memorial Boulevard (U.S. 92/S.R. 546)

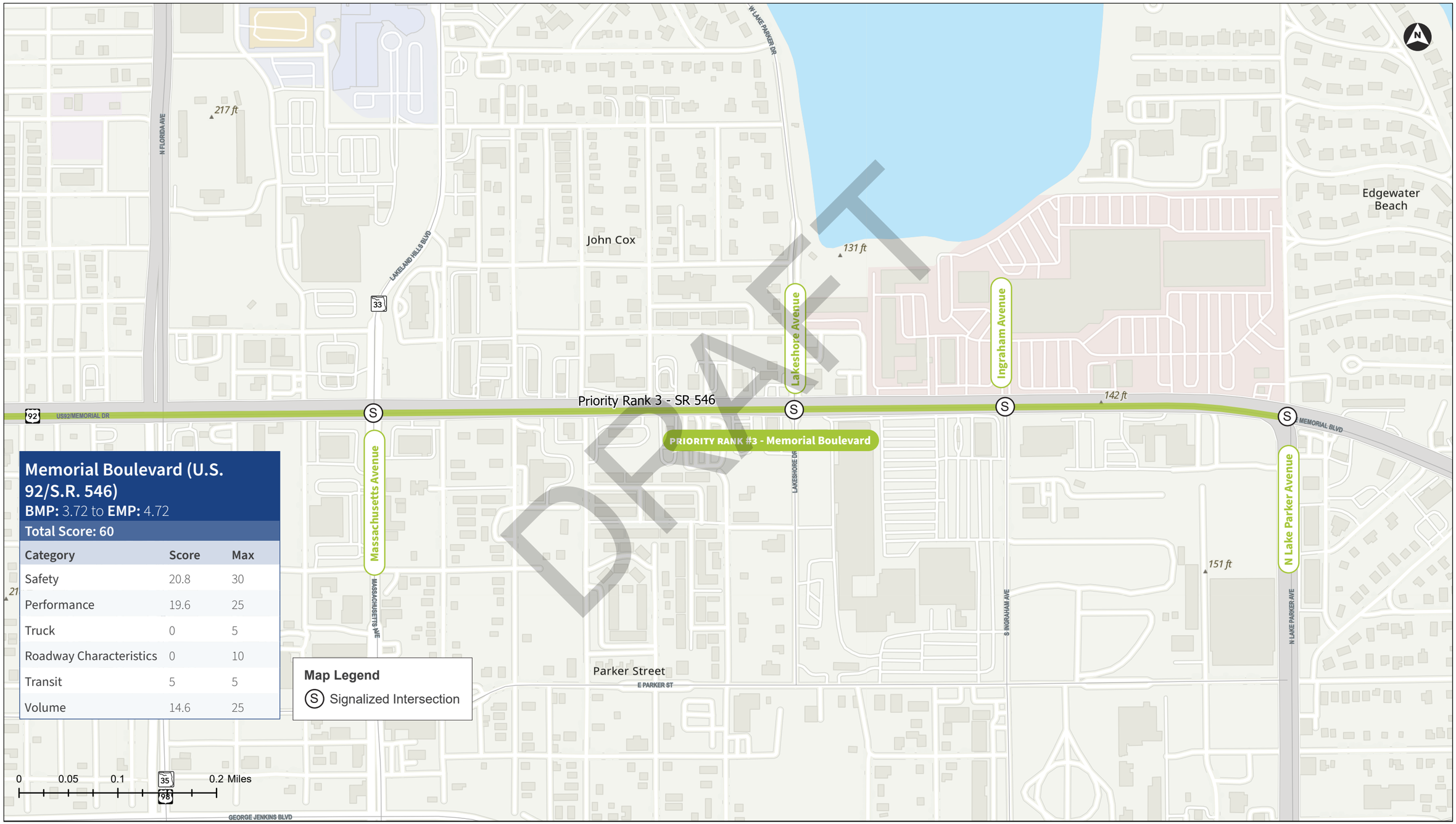
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 41B: Polk County Priority Corridor 3B - Memorial Boulevard (U.S. 92/S.R. 546)

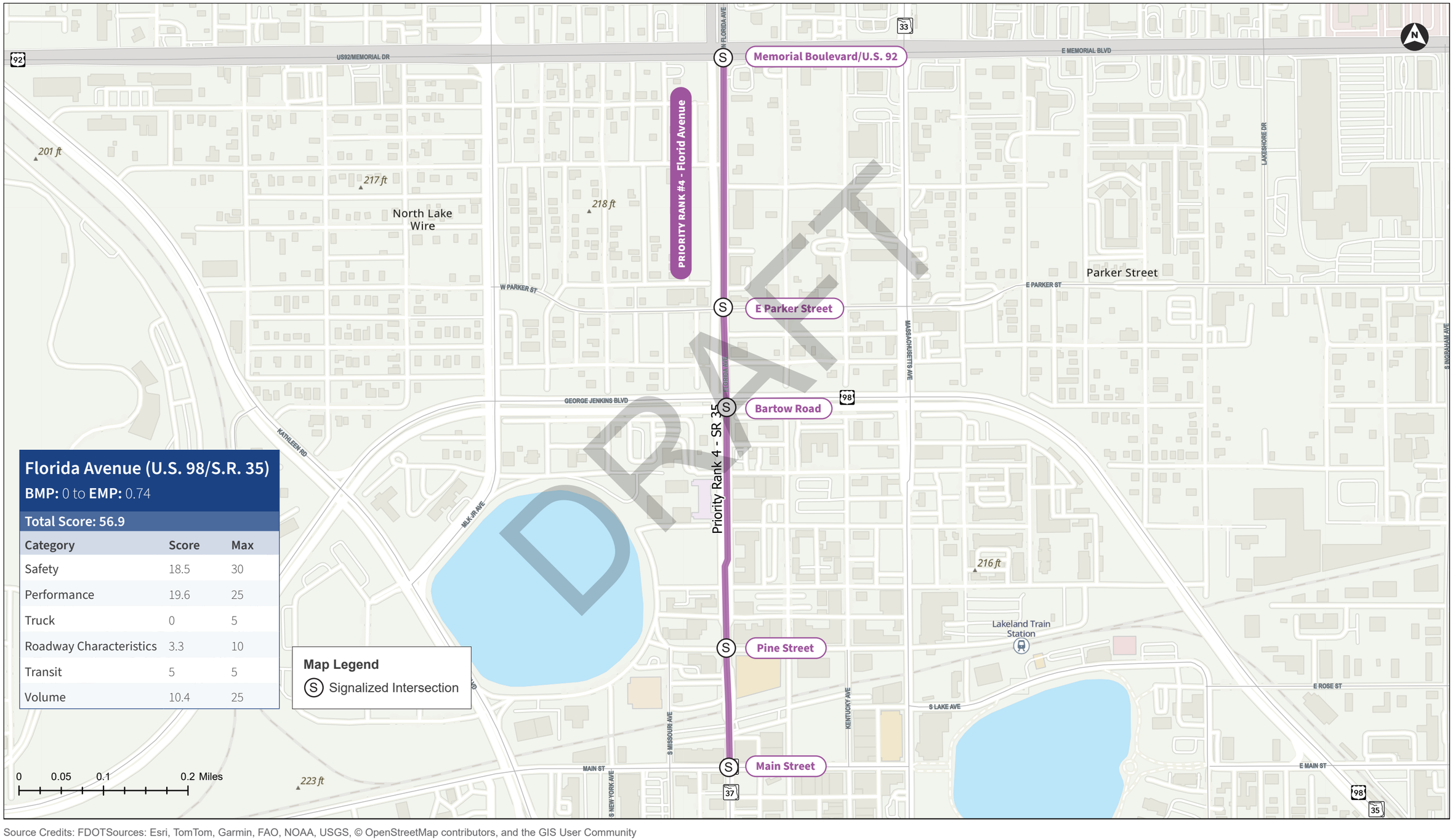
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 42: Polk County Priority Corridor 4 - Florida Avenue (U.S. 98/S.R. 35)

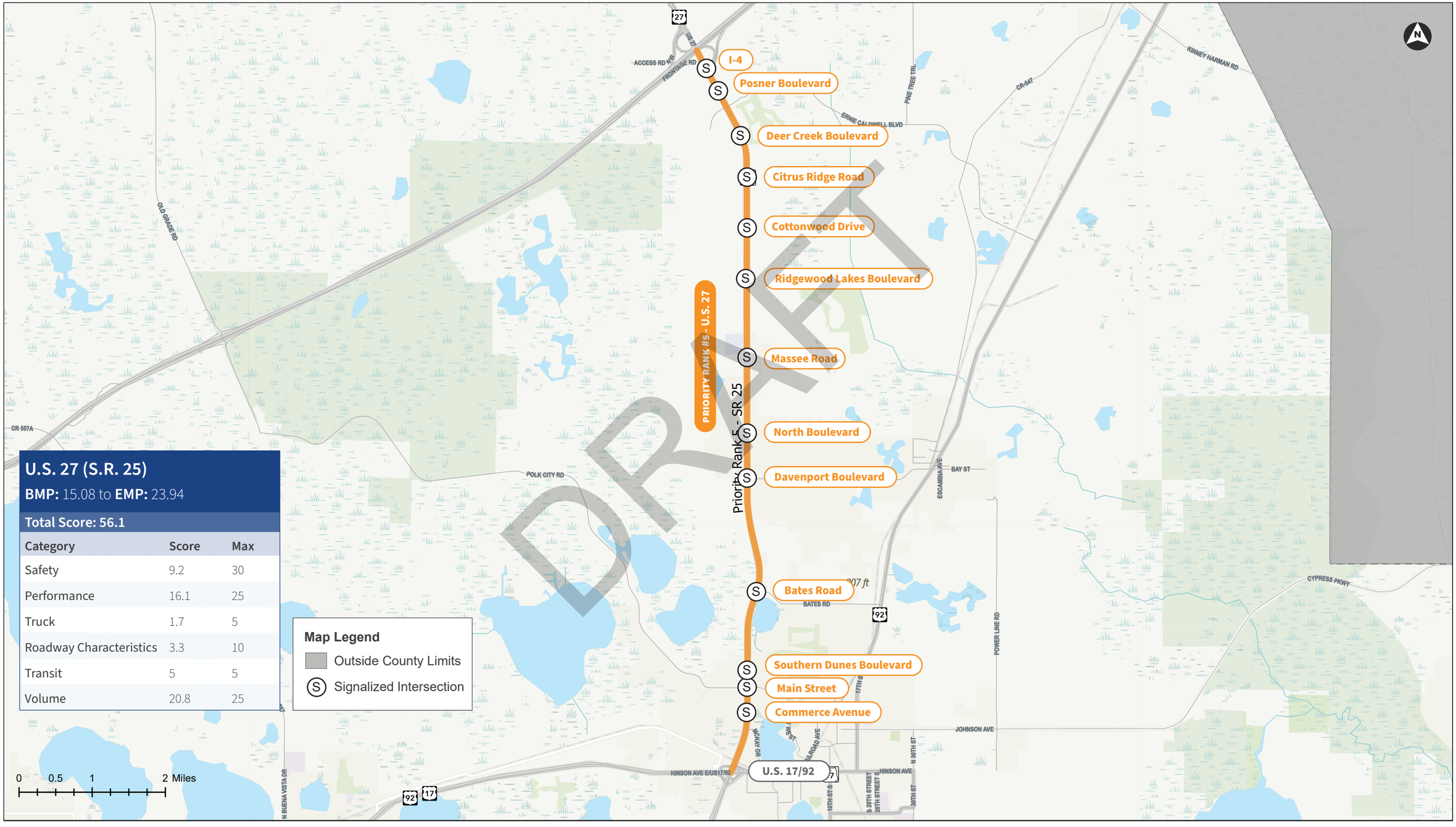
FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 43: Polk County Priority Corridor 5 - U.S. 27 (S.R. 25)

FDOT District 1 – TSM&O Master Plan



Source Credits: FDOTSources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

4

Existing Conditions Assessment

Existing traffic control and traffic operation infrastructure was documented to determine existing conditions within the TSM&O Strategic Network. Working with the maintaining agencies within each county, an inventory was completed including controllers, UPS, EVP, CCTV cameras, Layer 2 Switches, ATSPM capabilities and detectors, ATCs, Bluetooth, computer vision systems, TSP systems, connected vehicle modules, and communication networks. A web map containing geotagged form entries for each intersection was developed as part of the existing conditions assessment.

The existing conditions documented in Chapter 4 reflect only TSM&O infrastructure that was verified as installed and operational in the field as of October 1, 2025. Infrastructure that had not yet been installed by this date is not included as an existing condition, regardless of whether it was in design, procurement, or implementation at the time of documentation.

TSM&O devices or systems associated with projects that are planned, programmed, funded, or under active design or construction after October 1, 2025, are addressed separately in Chapter 5, Gap Analysis & TSM&O Strategy Development, where future system needs and enhancements are evaluated. While these projects are acknowledged as part of planned system improvements, they are excluded from regional TSM&O gap cost estimates to avoid duplication with projects that are already programmed or funded

4.1 Existing Data Collection

4.1.1 Collier County

The Collier County study area includes five priority corridors that represent a mix of urban and suburban arterial facilities. These corridors represent key multimodal routes supporting regional mobility, emergency response, and traffic operations. The corridors include signalized intersections along U.S. 41 (Tamiami Trail/S.R. 45), U.S. 41 (Tamiami Trail/S.R. 90), Pine Ridge Road, Immokalee Road (C.R. 846), and Airport-Pulling Road.

Across these corridors, Collier County has established a strong foundation of traffic management infrastructure, with varying levels of deployment of TSM&O technology by type and corridor.

4.1.1.1 Existing Infrastructure

Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption is fully deployed at all signalized intersections along the priority corridors using infrared-based preemption technology. The existing EVP coverage provides consistent pre-emption capability to support emergency response operations throughout the priority corridors and reflects countywide implementation of this technology.

Connected Vehicle (CV)

Connected Vehicle infrastructure is present at a limited number of intersections across all priority corridors and is not deployed continuously along any single corridor. From 45 signalized intersections evaluated across the priority corridors, 15 intersections (approximately one-third) are currently equipped with C-V2X RSUs.

RSU installations are distributed across all five priority corridors, with three intersections along U.S. 41 (Tamiami Trail/S.R. 45), two along U.S. 41 (Tamiami Trail/S.R. 90), three along Pine Ridge Road, five along Immokalee Road (C.R. 846), and two along Airport-Pulling Road. These deployments are generally isolated and not located at consecutive intersections, indicating that existing CV infrastructure is implemented on a location-specific basis rather than as a coordinated corridor system.

While the existing RSUs provide localized support for connected vehicle applications, the current level and distribution of deployment limit the ability to support corridor-wide V2I operations or coordinated applications. As a result, CV functionality along the priority corridors remains focused on individual intersections rather than networked or corridor-level performance.

PedSafe/Computer Vision

This TSM&O strategy does not exist along the priority corridors in Collier County.

Closed Circuit Television (CCTV)

CCTV coverage is available at all signalized intersections within the priority corridors. In accordance with District 1 practice, each signalized intersection includes one camera for better visibility of the mainline and side streets. The existing camera infrastructure consists of pan-tilt-zoom (PTZ) cameras, which support real-time monitoring, incident verification, and operational oversight from the traffic management center. This consistent coverage aligns with District 1 practice and provides strong baseline visibility across the corridor network.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Collier County.

Transit Signal Priority (TSP)

This TSM&O strategy does not exist along the priority corridors in Collier County.

Advanced Traffic Controllers (ATC)

ATCs are deployed at the majority of intersections along the priority corridors, supporting modern signal operations and providing a platform for advanced applications such as ATSPM and priority treatments. ATC coverage is complete along U.S. 41 (Tamiami Trail/S.R. 45) and Airport-Pulling Road. Along the remaining corridors, a small number of intersections continue to operate with legacy controllers: one intersection along U.S. 41 (Tamiami Trail/S.R. 90) (at Palm Street/Commercial Drive), and one intersection along Pine Ridge Road (Forest Lakes Boulevard). These locations represent isolated gaps rather than corridor-wide limitations.

ATSPM capability within Collier County varies by maintaining agency. Intersections maintained by the City of Naples are configured to support ATSPM using existing controller and detection infrastructure, with performance analytics provided through the Maxview ATSPM platform. In

contrast, intersections maintained by Collier County are not currently configured to operate ATSPM. As a result, ATSPM functionality along the priority corridors is present only at locations maintained by the City of Naples, reflecting differences in agency practices rather than controller availability alone.

Upgrading the remaining legacy controllers, along with targeted detection enhancements where needed, would complete ATC coverage across all priority corridors and establish a consistent foundation for expanded data-driven signal management, performance monitoring, and future multimodal and CV applications.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Collier County.

Bluetooth

Bluetooth detection infrastructure is present at a limited number of signalized intersections along Collier County's priority corridors and is not deployed on a corridor-wide basis. Existing installations are generally isolated or occur in short segments, providing localized travel time and performance data rather than continuous corridor monitoring.

Along U.S. 41 (Tamiami Trail/S.R. 45), Bluetooth detection is installed at most signalized intersections, with only one location lacking a device, resulting in near-continuous coverage along this corridor. In contrast, U.S. 41 (Tamiami Trail/S.R. 90) includes Bluetooth detection at only two adjacent intersections, forming a short but continuous segment within a generally unequipped corridor. Pine Ridge Road includes Bluetooth detection at three intersections, which are not fully consecutive and therefore provide partial, segment-level coverage. Immokalee Road has Bluetooth detection installed at five intersections distributed along the corridor, offering intermittent coverage rather than a continuous monitoring segment. Airport-Pulling Road includes Bluetooth detection at only two of nine intersections, which are not adjacent.

Overall, while Bluetooth detection is present at select locations across the priority corridors, deployments are limited in number and consistency. Existing installations support localized performance monitoring at individual intersections or short segments but do not currently provide comprehensive corridor-level travel time measurement across most priority corridors.

Fiber Optic Communications

Fiber optic communication infrastructure is available end-to-end along each priority corridor, providing continuous high-speed connectivity between signalized intersections, field devices, and central systems. This enables integration of signal operations, CCTV, detection systems, and other ITS infrastructure.

Field switches are present at all signalized intersections along the priority corridors and are predominantly Cisco Rugged series with a few intersections having ITS Express, supporting 1-gigabit to 10-gigabit Ethernet performance suitable for current and anticipated data demands. The existing field switching infrastructure provides consistent network performance to support ongoing corridor-level ITS operations.

Uninterruptible Power Supply (UPS)

UPS systems are installed at nearly all signalized intersections within the priority corridors, with a single exception along Pine Ridge Road at Forest Lakes Boulevard. The existing UPS infrastructure provides short-duration backup power to support continued signal operations during brief utility outages and enhances overall system reliability.

Outreach was made to agency stakeholders to verify the presence of a generator access panel for back-up power during storm events. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Remote Power Management Unit (RPMU)

Outreach was made to agency stakeholders to verify RPMU deployment. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Table 6: Existing Infrastructure Summary – Collier County

Intersection	EVP	CV	CCTV	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
U.S. 41 (Tamiami Trail/S.R. 45)									
Old 41 Rd	●	●	●	●	●	●	●	●	⊗
Wiggins Pass Rd	●	●	●	●	●	●	●	●	⊗
Imperial Golf Course Blvd	●	⊗	●	●	⊗	●	●	●	⊗
Immokalee Rd	●	●	●	●	●	●	●	●	⊗
U.S. 41 (Tamiami Trail/S.R. 90)									
9th St/5th Ave	●	⊗	●	●	⊗	●	●	●	⊗
10th St	●	⊗	●	●	⊗	●	●	●	⊗
Goodlette-Frank Rd	●	⊗	●	●	⊗	●	●	●	⊗
River Point Dr	●	⊗	●	●	⊗	●	●	●	⊗
Davis Blvd/Sandpiper St	●	⊗	●	●	⊗	●	●	●	⊗
Palm St/Commercial Dr	●	⊗	●	⊗	⊗	●	●	●	⊗
Bayshore Dr/Shadowland Dr	●	●	●	●	●	●	●	●	⊗
Airport Pulling Rd	●	●	●	●	●	●	●	●	⊗
Pine Ridge Road									
Tamiami Trl/9th St	●	●	●	●	●	●	●	●	⊗
N Goodlette Frank Rd	●	●	●	●	●	●	●	●	⊗
Pine Ridge MS	●	⊗	●	●	⊗	●	●	●	⊗
Shirley St	●	⊗	●	●	⊗	●	●	●	⊗
Forest Lakes Blvd	●	⊗	●	⊗	⊗	●	●	⊗	⊗
Naples Blvd	●	⊗	●	●	⊗	●	●	●	⊗
Pine Ridge Crossing	●	⊗	●	●	⊗	●	●	●	⊗
Airport Pulling Rd	●	●	●	●	●	●	●	●	⊗
Immokalee Road (C.R. 846)									
Collier Reserve Dr	●	⊗	●	●	⊗	●	●	●	⊗
N Goodlette Frank Rd	●	●	●	●	●	●	●	●	⊗
Veterans Park Dr	●	⊗	●	●	⊗	●	●	●	⊗
Palm River Blvd	●	⊗	●	●	⊗	●	●	●	⊗
Airport Pulling Rd	●	●	●	●	●	●	●	●	⊗
Lakeland Ave	●	⊗	●	●	⊗	●	●	●	⊗
Livingston Rd	●	●	●	●	●	●	●	●	⊗
Juliet Blvd/Strand Blvd	●	⊗	●	●	⊗	●	●	●	⊗
I-75 SB Ramp	●	⊗	●	●	⊗	●	●	●	⊗
I-75 NB Ramp	●	⊗	●	●	⊗	●	●	●	⊗
Northbrooke Dr	●	⊗	●	●	⊗	●	●	●	⊗
Valewood Dr	●	⊗	●	●	⊗	●	●	●	⊗
Logan Blvd	●	●	●	●	●	●	●	●	⊗
Preserve Ln	●	⊗	●	●	⊗	●	●	●	⊗
Preserve Cir	●	⊗	●	●	⊗	●	●	●	⊗
Collier Blvd	●	●	●	●	●	●	●	●	⊗
Airport-Pulling Road									
Golden Gate Pkwy	●	●	●	●	●	●	●	●	⊗
Longboat Dr	●	⊗	●	●	⊗	●	●	●	⊗
Mercantile Ave	●	⊗	●	●	⊗	●	●	●	⊗
Progress Ave	●	⊗	●	●	⊗	●	●	●	⊗
Enterprise Ave	●	⊗	●	●	⊗	●	●	●	⊗
Radio Rd	●	⊗	●	●	⊗	●	●	●	⊗
North Rd	●	⊗	●	●	⊗	●	●	●	⊗
Estey Ave	●	⊗	●	●	⊗	●	●	●	⊗
Davis Blvd	●	●	●	●	●	●	●	●	⊗

Legend

⊗	Not Existing
●	Existing

4.1.1.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Collier MPO TIP FY2026 – FY2030,* adopted June 13, 2025 and amended November 14, 2025, for the top five priority corridors.

1. U.S. 41 (Tamiami Trail/S.R. 45) from the Lee County Line to Immokalee Road (C.R. 846)
   - 451272-1 U.S. 41 Pavement-Only Resurfacing from Lee County Line to N of Old U.S. 41
     - Construction (FY 2026)
   - 456239-1 – U.S. 41, Old 41 Road to Woods Edge Pkwy – Fiber Gap Collier to Lee County
     - Construction (FY 2029). The project will provide fiber connectivity to make a network connection between the ATMS networks for both Collier and Lee Counties. The intent is to complete the network ring along U.S. 41 to provide a redundant network ring for both Counties' ATMS and District 1 freeway management operational resiliency.
   - 441512-1 U.S. 41 Resurfacing from N of Old U.S. 41 to S of Gulf Park Drive
     - Construction (FY 2027)
2. U.S. 41 (Tamiami Trail/S.R. 90) from Airport-Pulling Road to 9th Street S
   - 453415-1 U.S. 41 Intersection/Mobility Improvements from 3rd Avenue to S.R. 84
     - PD&E (FY 2027)
3. Pine Ridge Road from U.S. 41 (Tamiami Trail) to Airport-Pulling Road
   - No projects identified
4. Immokalee Road (C.R. 846) from U.S. 41 (Tamiami Trial) to Collier Boulevard
   - 440441-1 – Airport Pulling Road from Vanderbilt Road to Immokalee Road
     - Pre-construction underway (FY 2026). Add thru lanes
   - 452544-4 Immokalee Road at I-75 Diverging Diamond Interchange
     - Design (FY 2026)
     - Right-of-Way (FY 2026)
     - Construction (FY 2028)
   - 452247-1 Immokalee Road Paved Shoulders from Livingston Road to Logan Boulevard
     - Design (FY 2026)
     - Construction (FY 2028)
5. Airport-Pulling Road from Davis Boulevard to Golden Gate Parkway
   - No projects identified

4.1.2 Lee County

The Lee County study area includes five priority corridors that support regional mobility, emergency response, and traffic operations across a mix of urban and suburban arterial facilities. These corridors include signalized intersections along Daniels Parkway (C.R. 876), Dr. Martin Luther King Jr. Boulevard (S.R. 82), Colonial Boulevard (S.R. 884), and U.S. 41 (Cleveland Avenue/S.R. 45). Existing traffic management infrastructure is deployed across all corridors, with varying levels of coverage by technology and corridor.

4.1.2.1 Existing Infrastructure Framework

Emergency Vehicle Preemption (EVP)

According to stakeholders from District 1, EVP is implemented countywide using a radio-based preemption approach integrated with the County's Centracs traffic signal system. Lee County has previously procured an EVP module within Centracs, which is intended to support EVP functionality at all signalized intersections maintained by the County. As a result, EVP capability is considered available across the priority corridors, providing a consistent platform for emergency response operations.

Where deployed and activated, the Centracs-based EVP system enables emergency vehicles to request signal priority using radio-based communications, supporting improved response times and coordinated emergency operations. While corridor-level activation, agency participation, or field equipment configuration may vary, the underlying EVP capability is established systemwide through the Centracs platform.

Connected Vehicle (CV)

Connected Vehicle infrastructure is limited within the Lee County priority corridors. A single C-V2X RSU is installed along Colonial Boulevard (S.R. 884) at S Tamiami Trail, representing approximately one of seven signalized intersections along the corridor. No RSUs are currently deployed along Daniels Parkway (C.R. 876), Dr. Martin Luther King Jr. Boulevard (S.R. 82), or U.S. 41 (Cleveland Avenue/S.R. 45).

PedSafe/Computer Vision

This TSM&O strategy does not exist along the priority corridors in Lee County.

Closed Circuit Television (CCTV)

CCTV infrastructure is deployed at multiple signalized intersections across all priority corridors, providing operational visibility for traffic management. CCTV coverage is present at five intersections along Daniels Parkway, four intersections along Dr. Martin Luther King Jr. Boulevard (S.R. 82), nine intersections along Colonial Boulevard (S.R. 884), and four intersections along U.S. 41 (Cleveland Avenue/S.R. 45). All existing CCTV installations consist of PTZ cameras, supporting real-time monitoring, incident verification, and operational oversight. While not installed at every intersection, the existing CCTV deployments provide meaningful coverage along key segments of each corridor.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Lee County.

Transit Signal Priority (TSP)

Transit Signal Priority is currently implemented at a single intersection along Colonial Boulevard (S.R. 884) at S Tamiami Trail/Cleveland Avenue as part of the U.S. 41 corridor. While this installation demonstrates the County's ability to support TSP operations, Tamiami Trail/Cleveland Avenue itself is not included as one of the study's priority corridors.

According to stakeholders from District 1, TSP capability is available at all signalized intersections in Lee County through the County's Centracs traffic signal system, which includes the Econolite Priority Module supporting TSP operations. This provides the system-level capability to support transit priority requests countywide.

Advanced Traffic Controllers (ATC)

Advanced Traffic Controllers are deployed across much of the Lee County priority corridor network, supporting modern signal operations and advanced applications. ATC coverage is complete along Daniels Parkway (C.R. 876) and U.S. 41 (Cleveland Avenue/S.R. 45). Along Colonial Boulevard (S.R. 884), twelve of thirteen signalized intersections are equipped with ATCs. Dr. Martin Luther King Jr. Boulevard (S.R. 82) has a single ATC-equipped intersection, while the remaining intersections along the corridor continue to operate with legacy controllers. These locations represent corridor-specific gaps rather than systemwide limitations.

Additionally, Lee County currently operates ATSPM using its existing traffic signal infrastructure. ATSPM analytics are supported through the Econolite Mobility platform, which is used countywide to collect, process, and visualize high-resolution traffic signal performance data. All ATC signalized intersections within Lee County, including those along the identified priority corridors, are configured to support ATSPM data collection through the current controller and detection systems.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Lee County.

Bluetooth

Bluetooth detection infrastructure is deployed at a limited number of intersections across Lee County's priority corridors to support probe-based travel time monitoring and corridor performance analysis. Deployment varies by corridor and is generally not continuous, with most installations appearing as isolated locations rather than long consecutive segments.

Along Daniels Parkway (C.R. 876), Bluetooth detection is present at four of ten intersections, with installations distributed as individual locations rather than forming a continuous corridor segment. Dr. Martin Luther King Jr. Boulevard (S.R. 82) includes isolated Bluetooth detection at two of nine intersections. Across Colonial Boulevard (S.R. 884), Bluetooth detection is installed at four of thirteen intersections, with the majority of intersections not equipped and the installed devices not forming continuous coverage. Along U.S. 41 (Cleveland Avenue/S.R. 45), Bluetooth detection is present at three of seven intersections, with installations spaced along the corridor rather than clustered at adjacent intersections.

Overall, Bluetooth deployments provide targeted point measurements that can support limited travel-time monitoring. However, the current gaps in coverage limit the ability to consistently measure end-to-end travel times across several priority corridors under existing conditions.

Fiber Optic Communications

Fiber optic communication infrastructure is available end-to-end along all priority corridors, providing continuous connectivity between signalized intersections, field devices, and central systems. This fiber backbone supports reliable data transmission for signal operations, CCTV, detection systems, and other ITS infrastructure. Field switches are installed at the majority of intersections and are primarily CiscoRugged series, supporting 1-gigabit to 10-gigabit Ethernet performance suitable for current and anticipated operational needs. A very limited number of locations require switch upgrades with gigabit or higher speeds or higher-capacity equipment; however, these represent isolated gaps and do not affect overall corridor connectivity.

Uninterruptible Power Supply (UPS)

UPS systems are installed at nearly all signalized intersections along the priority corridors, providing short-duration backup power to support continued signal operations during brief utility outages. Two intersections along Daniels Parkway (C.R. 876) do not currently have UPS systems installed. All other intersections across the priority corridors are equipped with UPS, enhancing operational reliability and supporting continuity of signal operations during short-term power disruptions.

Outreach was made to agency stakeholders to verify the presence of a generator access panel for back-up power during storm events. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Remote Power Management Unit (RPMU)

Outreach was made to agency stakeholders to verify RPMU deployment. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Table 7: Existing Infrastructure Summary – Lee County

Intersection	EVP	CV	CCTV	TSP	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
Daniels Parkway (C.R. 876)										
Metro Pkwy	●	✕	●	●	●	●	●	●	●	✕
Plantation Rd	●	✕	✕	●	●	✕	●	●	●	✕
Brookshire Lake Blvd	●	✕	✕	●	●	✕	●	●	●	✕
6 mile Cypress Pkwy	●	✕	●	●	●	●	●	●	●	✕
American Colony Blvd	●	✕	✕	●	●	✕	●	●	✕	✕
Palomino Ln	●	✕	●	●	●	✕	●	●	✕	✕
Danport Blvd	●	✕	✕	●	●	✕	●	●	●	✕
I-75 SB Ramp	●	✕	●	●	●	●	●	●	●	✕
I-75 NB Ramp	●	✕	✕	●	●	✕	●	●	●	✕
Treeline Ave	●	✕	●	●	●	●	●	●	●	✕
Dr. Martin Luther King Jr. Boulevard (S.R. 82)										
Evans Ave	●	✕	✕	●	✕	●	●	●	●	✕
Cranford Ave	●	✕	✕	●	✕	✕	●	●	●	✕
Palm Ave	●	✕	●	●	✕	✕	●	●	●	✕
Ford St	●	✕	●	●	✕	✕	●	●	●	✕
Veronica Shoemaker Blvd	●	✕	✕	●	●	✕	●	●	●	✕
Michigan Ave Link	●	✕	●	●	✕	✕	●	●	●	✕
Ortiz Ave	●	✕	●	●	✕	●	●	●	●	✕
I-75 SB Ramp	●	✕	✕	●	✕	✕	●	●	●	✕
I-75 NB Ramp	●	✕	✕	●	✕	✕	●	●	●	✕
Colonial Boulevard (S.R. 884)										
Summerlin Rd/Sommerset Dr	●	✕	●	●	●	●	●	●	●	✕
Deleon St	●	✕	✕	●	●	✕	●	●	●	✕
Cleveland Ave/S Tamiami Trl	●	●	●	●	●	●	●	●	●	✕
Solomon Blvd	●	✕	✕	●	●	✕	●	●	●	✕
Fowler St	●	✕	●	●	●	✕	●	●	●	✕
Evans Ave	●	✕	✕	●	●	✕	●	●	●	✕
Metro Pkwy	●	✕	●	●	●	●	●	●	●	✕
U.S. 41 (Cleveland Avenue/S.R. 45)										
College Pkwy/Woodland Blvd	●	✕	●	●	●	●	●	●	●	✕
Seven Lakes Blvd/Big Pine Wy	●	✕	●	●	●	✕	●	●	●	✕
Bell Tower Shops	●	✕	✕	●	●	✕	●	●	●	✕
Daniels Pkwy	●	✕	●	●	●	●	●	●	●	✕
Cypress Terrace/Sauer Dr	●	✕	✕	●	●	✕	●	●	●	✕
Lakeridge Ct/Andrea Ln	●	✕	✕	●	●	✕	●	●	●	✕
6 Mile Cypress Pkwy	●	✕	●	●	●	●	●	●	●	✕
Colonial Boulevard (S.R. 884)										
Veronica Shoemaker Blvd	●	✕	✕	●	✕	✕	●	●	●	✕
McGregor Baptist Church Dr	●	✕	●	●	●	✕	●	●	●	✕
Wrinkler Ave	●	✕	●	●	●	●	●	●	●	✕
Ortiz Ave/6 Mile Cypress Pkwy	●	✕	●	●	●	✕	●	●	●	✕
I-75 NB/SB Ramps DDI	●	✕	●	●	●	✕	●	●	●	✕
Forum Blvd	●	✕	●	●	●	✕	●	●	●	✕

Legend

✕ Not Existing

● Existing

4.1.2.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Lee County MPO TIP FY2025/26 – FY2029/30,* adopted June 20, 2025, for the top five priority corridors.

1. S.R. 739 (Metro Parkway) from S of Daniels Parkway to N of Daniels Parkway
   - 431334-2 – Add Lanes and Reconstruct Intersection – S.R. 739 at Daniels Parkway
     - Construction (FY 2029)
2. Dr. Martin Luther King Jr. Boulevard (S.R. 82) from Evans Avenue to I-75
   - 453557-1 – S.R. 82 Sidewalk from Michigan Avenue Link to Ortiz Avenue
     - Design (FY 2031)
   - 448955-1 – S.R. 82 Resurfacing from Ortiz Avenue to Colonial Boulevard
     - Construction (FY 2028)
   - 446269-1 – S.R. 82 from Ford Street to Veronica Shoemaker
     - Pedestrian Safety Improvement. Construction started in October 2025
   - 454647-1 and 454647-2 – S.R. 82 at Benchmark Avenue Traffic Safety Improvements
     - Traffic Signal Project. Construction (FY 2027)
3. Colonial Boulevard (S.R. 884) from Summerlin Road to Metro Parkway
   - No projects identified
4. U.S. 41 (Cleveland Avenue/S.R. 45) from Gladiolus Drive/Six Mile Cypress Parkway to College Parkway
   - 456031-1 S.R. 45 (U.S. 41) From North of Elwood Road to USB 41
     - Routine Maintenance. Construction (FY 2026)
5. Colonial Boulevard (S.R. 884) from Metro Parkway to Dynasty Drive
   - No projects identified

4.1.3 Charlotte County

4.1.3.1 Existing Infrastructure

Charlotte County's priority corridors include U.S. 41 (S.R. 45), S.R. 776 (McCall Road), Kings Highway, Veterans Boulevard, and S.R. 776 (El Jobean Road). These arterials provide critical connectivity between Punta Gorda, Port Charlotte, the I-75 corridor, and major commercial and residential areas. They also function as important evacuation routes and support daily commuter travel and regional mobility. Existing ITS infrastructure is present throughout the corridors; however, coverage varies by technology, and several systems remain limited or absent, constraining the County's ability to fully support advanced TSM&O strategies.

Emergency Vehicle Preemption (EVP)

This TSM&O strategy does not exist along the priority corridors in Charlotte County.

Connected Vehicle (CV)

This TSM&O strategy does not exist along the priority corridors in Charlotte County.

PedSafe/Computer Vision

This TSM&O strategy does not exist along the priority corridors in Charlotte County.

Closed Circuit Television (CCTV)

CCTV coverage is present across all priority corridors, though not at every intersection. Along U.S. 41 (S.R. 45), approximately 15 of 18 signalized intersections are equipped with CCTV. Coverage is more limited on S.R. 776 (McCall Road) and Kings Highway, where eight of eleven and seven of eleven intersections, respectively, include cameras. Veterans Boulevard and S.R. 776 (El Jobean Road) have CCTV at two of four and three of four intersections, respectively. All existing cameras are PTZ units, providing flexible visual coverage for incident monitoring and traffic management. While CCTV infrastructure is well established, remaining gaps reduce corridor-wide visibility and limit continuous monitoring capabilities.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Charlotte County.

Transit Signal Priority (TSP)

This TSM&O strategy does not exist along the priority corridors in Charlotte County.

Advanced Traffic Controllers (ATC)

Advanced Traffic Controllers are deployed at all signalized intersections across Charlotte County's priority corridors. This consistent controller deployment supports modern signal operations and provides a strong platform for advanced applications, including ATSPM, priority treatments, and future connected technologies.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Charlotte County.

Bluetooth

The Bluetooth detection infrastructure is present at a limited number of signalized intersections within Charlotte County's priority corridors and is not deployed in a corridor-wide or continuous manner. Along U.S. 41 (S.R. 45), Bluetooth detection is installed at 5 of 18 signalized intersections. These installations are generally isolated and not consistently adjacent, resulting in localized data collection rather than continuous corridor-level monitoring.

Bluetooth detection is not present at any signalized intersections along the remaining priority corridors, including S.R. 776 (McCall Road), Kings Highway, Veterans Boulevard, and S.R. 776 (El Jobean Road). As a result, no consecutive or segment-based Bluetooth monitoring is currently available in these corridors.

Overall, existing Bluetooth deployments within Charlotte County are limited in both scale and continuity. While the installations along U.S. 41 provide some localized probe-based performance data, the absence of Bluetooth detection on the other priority corridors and the lack

of adjacent installations restrict the County's ability to conduct consistent corridor-level travel time and performance monitoring under existing conditions.

Fiber Optic Communications

Fiber optic communication cable is available end-to-end along all priority corridors, with one exception along Kings Highway at Harborview Road, where connectivity is not currently established. Field cabinet communications are generally supported by ITS Express switches, capable of 1 gigabit to 10-gigabit throughput, providing sufficient bandwidth for current ITS devices. All intersections include field switching infrastructure, supporting reliable communications between field devices and central systems.

Uninterruptible Power Supply (UPS)

UPS coverage is present at most signalized intersections, supporting short-duration power continuity during utility interruptions. Along U.S. 41 (S.R. 45), two intersections lack UPS, and along Kings Highway five intersections do not have UPS installed. All remaining intersections across the priority corridors are equipped with UPS systems. While coverage is generally strong, these remaining gaps reduce operational reliability during outages, particularly along evacuation and high-volume routes.

Outreach was made to agency stakeholders to verify the presence of a generator access panel for back-up power during storm events. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Remote Power Management Unit (RPMU)

Outreach was made to agency stakeholders to verify RPMU deployment. The site-specific information for each intersection within priority corridors could not be confirmed before finalizing this report.

Table 8: Existing Infrastructure Summary – Charlotte County

Intersection	EVP	CV	CCTV	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
U.S. 41 (S.R. 45)									
Toledo Blade Blvd	✗	✗	○	○	○	○	○	○	✗
Enterprise Dr/Paulson Dr	✗	✗	○	○	✗	○	○	○	✗
El Jobean Rd/Veterans Blvd	✗	✗	○	○	○	○	○	✗	✗
Murlock Cir	✗	✗	○	○	✗	○	○	○	✗
Cochran Blvd	✗	✗	○	○	○	○	○	✗	✗
Lowes Driveway/Carousel Plaza	✗	✗	✗	○	✗	○	○	○	✗
Forrest Nelson Blvd	✗	✗	○	○	○	○	○	○	✗
Midway Blvd	✗	✗	○	○	○	○	○	○	✗
W Tarpon Blvd	✗	✗	○	○	✗	○	○	○	✗
Port Charlotte Blvd	✗	✗	○	○	✗	○	○	○	✗
Olean Blvd	✗	✗	○	○	✗	○	○	○	✗
Harbor Blvd	✗	✗	○	○	✗	○	○	○	✗
Easy St	✗	✗	○	○	✗	○	○	○	✗
Conway Blvd	✗	✗	✗	○	✗	○	○	○	✗
Gardner Dr	✗	✗	○	○	✗	○	○	○	✗
Hancock Ave	✗	✗	✗	○	✗	○	○	○	✗
Harborview Rd	✗	✗	○	○	✗	○	○	○	✗
Kings Hwy	✗	✗	○	○	✗	○	○	○	✗
S.R. 776 (McCall Road)									
Placida Rd/Pine St	✗	✗	○	○	✗	○	○	○	✗
San Casa Dr	✗	✗	○	○	✗	○	○	○	✗
Oriole Blvd	✗	✗	✗	○	✗	○	○	○	✗
Winchester Blvd	✗	✗	○	○	✗	○	○	○	✗
Gulstream Blvd/Willmington Blvd	✗	✗	✗	○	✗	○	○	○	✗
Spinnaker Blvd	✗	✗	○	○	✗	○	○	○	✗
Sunnybrook Blvd	✗	✗	○	○	✗	○	○	○	✗
Gulstream Blvd/Willmington Blvd	✗	✗	○	○	✗	○	○	○	✗
Coliseum Blvd/Pinedale Dr	✗	✗	✗	○	✗	○	○	○	✗
Sailors Wy/Gasparilla Rd	✗	✗	○	○	✗	○	○	○	✗
Gillot Blvd	✗	✗	○	○	✗	○	○	○	✗
Kings Highway									
Harborview Rd	✗	✗	✗	○	✗	✗	○	○	✗
Westchester Blvd	✗	✗	✗	○	✗	○	○	✗	✗
Elmira Blvd	✗	✗	○	○	✗	○	○	✗	✗
Olean Blvd	✗	✗	✗	○	✗	○	○	○	✗
Suncoast Blvd	✗	✗	✗	○	✗	○	○	✗	✗
Midway Blvd	✗	✗	○	○	✗	○	○	○	✗
Rampart Blvd	✗	✗	○	○	✗	○	○	✗	✗
Village Dr	✗	✗	○	○	✗	○	○	✗	✗
Veterans Blvd	✗	✗	○	○	✗	○	○	○	✗
I-75 SB Ramp	✗	✗	○	○	✗	○	○	○	✗
I-75 NB Ramp	✗	✗	○	○	✗	○	○	○	✗
Veterans Boulevard									
Murdock Cir/Paulson Dr	✗	✗	✗	○	✗	○	○	○	✗
Cochran Blvd	✗	✗	○	○	✗	○	○	○	✗
Atwater St	✗	✗	○	○	✗	○	○	○	✗
Peachland Blvd	✗	✗	✗	○	✗	○	○	○	✗
S.R. 776 (El Jobean Road)									
Riverwood Dr	✗	✗	○	○	✗	○	○	○	✗
Flamingo Blvd	✗	✗	○	○	✗	○	○	○	✗
Toledo Blade Blvd	✗	✗	○	○	✗	○	○	○	✗
Murdock Cir/Enterprise Dr	✗	✗	✗	○	✗	○	○	○	✗

Legend

✗	Not Existing
○	Existing

4.1.3.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Charlotta County Punta Gorda MPO TIP FY2026 – FY2030,* adopted May 19, 2025, for the top five priority corridors.

- 457620-1 – Charlotte County Advanced Traffic Management Systems
    - Design (FY 2029) and Construction (FY 2030). The project is expected to introduce additional ITS infrastructure and operational enhancements. The specific locations, devices, and scope of improvements are not available at the time of documentation.

1. U.S. 41 (S.R. 45) from Melbourne Street to Toledo Blade Boulevard
    - 446830-1 – U.S. 41 Eastside from Kings Highway to Conway Boulevard – Multi-Use Recreational Trail (MURT) with 8-foot sidewalk
        - Design (FY 2026)
        - Construction (FY 2030)
    - 438262-1 – U.S. 41 Eastside from Conway Boulevard to Midway Boulevard – MURT with 8-foot sidewalk
        - Construction (FY 2027)
    - 440442-1 – U.S. 41 Eastside from Midway Boulevard to Paulson Drive – MURT with 8-foot sidewalk
        - Design was funded in FY 2024. Construction was previously funded; however, funds for Construction have been removed.
    - 451358-1 – U.S. 41 at Midway Boulevard – Intersection Improvement Program
        - Construction (FY 2026)
2. S.R. 776 (McCall Road) from Pine Street to El Jobean Bridge
    - 449652-1 – S.R. 776 from Merchants Crossing to Sarasota County Line – Safety Improvements
        - Design underway and Construction (FY 2027)
    - S.R. 776 Intersection Improvements derived from S.R. 776 Corridor Planning Study from Sarasota County Line to U.S. 41
        - Proposed improvements vary by intersection, based on need. All intersection improvements are unfunded (Design, Right-of-Way, and Construction) as of January 2026.
            - at Placida Road / Pine Street
            - at San Casa Drive
            - at Oriole Boulevard
            - at Winchester Boulevard
            - at Willmington Boulevard (western intersection)

        - at Spinnaker Boulevard
        - at Sunnybrook Boulevard
        - at Gulfstream Boulevard
        - at Coliseum Boulevard
        - at Gasparilla Road
        - at Gillot Boulevard
    - 451360-1 - S.R. 776 Median Modifications at Oceanspray Boulevard
        - Design (FY 2026)
        - Construction (FY 2027)
3. Kings Highway from U.S. 41 (Tamiami Trail) to I-75
    - Add Turn Lanes at Kings Highway at Veterans Boulevard
        - Proposed improvements are part of the Veterans Boulevard Corridor Study
4. Veterans Boulevard from U.S. 41 (Tamiami Trail) to Kings Highway
    - Veterans Boulevard Improvements derived from Veterans Boulevard Corridor Study. All intersection improvements are unfunded (Design, Right-of-Way, and Construction) as of January 2026.
        - Add Turn Lanes at Veterans Boulevard at Kings Highway
        - Add Turn Lanes at Veterans Boulevard at Peachland Boulevard
        - Add Turn Lanes at Veterans Boulevard at Murdock Circle / Paulson Drive
5. S.R. 776 (El Jobean Road) from El Jobean Bridge to U.S. 41 (Tamiami Trail)
    - S.R. 776 Intersection Improvements derived from S.R. 776 Corridor Planning Study from Sarasota County Line to U.S. 41
        - Proposed improvements vary by intersection, based on need. All intersection improvements are unfunded (Design, Right-of-Way, and Construction) as of January 2026.
            - at Toledo Blade Boulevard
            - at Murdock Circle / Enterprise Drive
            - at U.S. 41
            - at Jacobs Street
            - at Riverwood Drive
    - 446393-1 – S.R. 776 at Charlotte Sports Park
        - Construction (FY 2028). Add right-turn lanes
    - 453416-1 – S.R. 776 at Jacobs Street
        - Construction (FY 2027 – FY 2029). Add right-turn lanes

- 453479-1 – S.R. 776 at Cornelius Boulevard
    - Construction (FY 2027 – FY 2029). Add right-turn lanes

4.1.4 Sarasota County

4.1.4.1 Existing Infrastructure

Sarasota County's priority corridors include U.S. 301 (Washington Boulevard/S.R. 683), Fruitville Road (S.R. 780), University Parkway (C.R. 610), U.S. 41 (Tamiami Trail/S.R. 45), and Clark Road (S.R. 72). These corridors serve key regional travel markets, including commuter traffic, freight movement, transit operations, and hurricane evacuation routing. Together, they provide critical east–west and north–south connectivity across the county and support access to major employment centers, educational institutions, and regional destinations.

Across the priority corridors, Sarasota County has implemented a range of ITS infrastructure elements, with deployment levels varying by technology and corridor. While several corridors demonstrate moderate to strong coverage for certain systems, other technologies remain limited or inconsistently deployed, influencing the County's ability to support advanced TSM&O applications on a corridor-wide basis.

Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption is deployed at the majority of signalized intersections along the priority corridors using radio-based preemption technology. Full EVP coverage is present along U.S. 301 (Washington Boulevard/S.R. 683), Fruitville Road (S.R. 780), U.S. 41 (Tamiami Trail/S.R. 45), and Clark Road (S.R. 72), with the exception of one intersection along Clark Road. Along University Parkway (C.R. 610), EVP is installed at six of eleven signalized intersections, leaving several gaps within the corridor. Where deployed, the existing radio-based EVP systems support emergency response operations and are consistent with the County's preferred preemption approach.

Connected Vehicle (CV)

Connected Vehicle infrastructure is deployed selectively and is not continuous along any priority corridor. Along U.S. 301 (Washington Boulevard/S.R. 683), eight of thirteen intersections (approximately 60 percent) are equipped with C-V2X RSUs, primarily concentrated along the central portion of the corridor.

No RSUs are currently deployed along Fruitville Road (S.R. 780), University Parkway (C.R. 610) and Clark Road (S.R. 72). Along U.S. 41 (Tamiami Trail/S.R. 45), a single RSU is installed at the intersection with Bee Ridge Road, representing an isolated deployment rather than a corridor-based implementation. Overall, existing CV infrastructure within Sarasota County is implemented on a location-specific basis, limiting the ability to support coordinated corridor-level connected vehicle applications.

PedSafe/Computer Vision

Pedestrian and computer vision–based safety technology is currently deployed at a limited number of locations within Sarasota County's priority corridors. Along U.S. 301 (Washington Boulevard/S.R. 683), PedSafe/computer vision systems are in place at the intersections of 3rd Street/Fruitville Road, Main Street, and Mound Street. These installations support enhanced

detection of pedestrian activity and crossing behavior at locations with higher pedestrian demand.

Outside of these locations, PedSafe and computer vision technologies are not widely deployed along the remaining priority corridors. As a result, corridor-level coverage for advanced pedestrian and VRU detection remains limited.

Closed Circuit Television (CCTV)

CCTV infrastructure is widely deployed across the priority corridors, providing operational visibility for traffic management and incident response. CCTV coverage is present at eleven intersections along U.S. 301 (Washington Boulevard/S.R. 683), eleven intersections along Fruitville Road (S.R. 780), ten intersections along University Parkway (C.R. 610), and all signalized intersections along both U.S. 41 (Tamiami Trail/S.R. 45) and Clark Road (S.R. 72).

Where installed, CCTV systems generally consist of PTZ cameras configured to monitor both mainline and side-street approaches. While not installed at every intersection along all corridors, the existing CCTV deployments provide strong coverage along key segments and support real-time monitoring, incident verification, and operational decision-making.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Sarasota County.

Transit Signal Priority (TSP)

This TSM&O strategy does not exist along the priority corridors in Sarasota County.

Advanced Traffic Controllers (ATC)

Advanced Traffic Controllers are deployed at a limited number of intersections across Sarasota County's priority corridors. Along U.S. 301 (Washington Boulevard/S.R. 683), eight intersections along each corridor are equipped with ATCs, representing partial corridor coverage. University Parkway (C.R. 610) and U.S. 41 (Tamiami Trail/S.R. 45) include a single ATC-equipped intersection, respectively, while all remaining intersections along the corridor continue to operate with legacy controllers.

No ATCs controllers are currently deployed along Fruitville Road (S.R. 780), or Clark Road (S.R. 72), where all signalized intersections operate with legacy controller hardware. The uneven distribution of ATCs controllers across the priority corridors limits the County's ability to fully support data-driven signal management and advanced applications on a corridor-wide basis.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Sarasota County.

Bluetooth

Bluetooth detection infrastructure is present at a limited number of signalized intersections across Sarasota County's priority corridors, providing localized probe-based travel time and performance data. Deployment varies by corridor and is generally sparse, with installations occurring at isolated or short consecutive segments rather than forming continuous corridor coverage.

Along U.S. 301 (Washington Boulevard/S.R. 683), Bluetooth readers are installed at one of thirteen signalized intersections, representing a highly limited deployment with no consecutive coverage. Fruitville Road (S.R. 780) includes Bluetooth readers at four of thirteen intersections, with installations occurring at select locations that do not form a continuous segment. University Parkway (C.R. 610) has Bluetooth readers at six of eleven intersections, including several adjacent intersections that provide partial corridor-level monitoring. Along U.S. 41 (Tamiami Trail/S.R. 45), Bluetooth is present at three of ten intersections, primarily at isolated locations. Clark Road (S.R. 72) includes Bluetooth readers at three of eleven intersections, with installations not consistently adjacent.

Overall, Bluetooth detection is not widely deployed across Sarasota County's priority corridors, and existing installations are insufficient to support comprehensive corridor-level performance monitoring. While limited segments with adjacent devices provide localized data, the lack of continuous or near-continuous coverage along corridors constrains the County's ability to conduct consistent data collection and systemwide performance evaluation.

Fiber Optic Communications

Fiber optic communication infrastructure is available end-to-end along all priority corridors, providing continuous connectivity between signalized intersections, field devices, and central systems. The fiber backbone supports reliable data transmission for signal operations, CCTV, detection systems, and other ITS infrastructure.

Field switches are deployed at each signalized intersection and are primarily Ruggedcom devices supporting 1-gigabit to 10-gigabit Ethernet performance. These high-capacity switch devices (with speeds higher than 1 Gigabit) are available at two intersections along U.S. 301 (Washington Boulevard/S.R. 683), five along Fruitville Road (S.R. 780), eleven along University Parkway (C.R. 610), one along U.S. 41 (Tamiami Trail/S.R. 45) at Stickney Point Road, and five along Clark Road (S.R. 72). Remaining locations operate with lower-capacity equipment that would benefit from switch installations with higher speeds to support future data demands. Outreach was made to City of Sarasota and Sarasota County to verify the field switches capabilities for intersections within priority corridors. The site-specific information for some intersections within the city limits could not be confirmed before finalizing this report.

Uninterruptible Power Supply (UPS)

UPS systems are installed at many, but not all, signalized intersections along the priority corridors. UPS coverage is present at seven intersections along U.S. 301 (Washington Boulevard/S.R. 683), six along Fruitville Road (S.R. 780), all intersections along University Parkway (C.R. 610), nine of ten intersections along U.S. 41 (Tamiami Trail/S.R. 45), and all intersections along Clark Road (S.R. 72). Where installed, UPS systems provide short-duration backup power to support continued signal operations during brief utility outages and enhance operational reliability. In addition, signal cabinets at all intersections maintained by Sarasota County are equipped with generator access panels to provide backup power during extended outages associated with storm events. Outreach was made to the City of Sarasota to verify the presence of a generator access panel for back-up power during storm events for intersections maintained by the city. The site-specific information for a few intersections within the city limits could not be confirmed before finalizing this report.

Remote Power Management Unit (RPMU)

RPMUs are deployed at all signal cabinets maintained by the County within the priority corridors. Outreach was made to the City of Sarasota to verify RPMU deployment for intersections maintained by the city. The site-specific information for a few intersections within the city limits could not be confirmed before finalizing this report. RPMUs enable remote monitoring and control of cabinet power status, allowing for improved outage detection, faster response during storm events, and enhanced system maintenance and operational efficiency.

Table 9: Existing Infrastructure Summary – Sarasota County

Intersection	EVP	CV	PedSafe/ Computer Vision	CCTV	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
U.S. 301 (Washington Boulevard/S.R. 683)										
Desoto Rd	●	✕	✕	●	✕	✕	●	●	●	●
47th St	●	✕	✕	●	✕	✕	●	●	●	●
Northgate Blvd	●	✕	✕	●	✕	✕	●	●	●	●
Myrtle St	●	✕	✕	●	✕	✕	●	●	●	●
Dr Martin Luther King Jr Way	●	✕	✕	●	✕	✕	●	●	●	●
17th St	●	●	✕	●	●	✕	●	●	✕	✕
12th St	●	●	✕	●	●	✕	●	●	✕	✕
10th St	●	●	✕	●	●	✕	●	●	✕	✕
3rd St/Fruitville Rd	●	●	●	●	●	●	●	●	✕	✕
Main St	●	●	●	●	●	✕	●	●	●	✕
Ringling Blvd	●	●	✕	✕	●	✕	●	●	✕	✕
Oak St	●	●	✕	✕	●	✕	●	●	✕	✕
Mound St	●	●	●	●	●	✕	●	●	●	✕
Fruitville Road (S.R. 780)										
N School Ave	●	✕	✕	●	✕	✕	●	●	✕	●
N Lime Ave	●	✕	✕	●	✕	✕	●	●	✕	●
N Shade Ave	●	✕	✕	●	✕	✕	●	●	✕	●
N Tuttle Ave	●	✕	✕	●	✕	✕	●	●	✕	●
N Lockwood Ridge Rd	●	✕	✕	●	✕	✕	●	●	✕	●
N Beneva Rd	●	✕	✕	●	✕	●	●	●	✕	●
Mimosa Dr	●	✕	✕	●	✕	✕	●	●	✕	●
Arbor Oaks Dr/McIntosh Rd	●	✕	✕	●	✕	●	●	●	●	●
N Honore Ave	●	✕	✕	●	✕	●	●	●	●	●
Paramount Dr	●	✕	✕	●	✕	✕	●	●	●	●
Cattlemen Rd	●	✕	✕	●	✕	●	●	●	●	●
I-75 SB Ramp	●	✕	✕	✕	✕	✕	●	●	●	●
I-75 NB Ramp	●	✕	✕	✕	✕	✕	●	●	●	●
University Parkway (C.R. 610)										
N Washington Blvd	●	✕	✕	●	✕	●	●	●	●	●
N Shade Ave	●	✕	✕	●	✕	✕	●	●	●	●
N Tuttle Ave	●	✕	✕	●	✕	●	●	●	●	●
N Lockwood Ridge Rd	●	✕	✕	●	✕	●	●	●	●	●
Conservatory Dr/Country Park Wy	✕	✕	✕	●	✕	✕	●	●	●	●
Whitfield Ave	✕	✕	✕	●	✕	●	●	●	●	●
Longwood Run Blvd/ The Park Blvd	✕	✕	✕	●	✕	✕	●	●	●	●
Medici Ct/Lenox Pl	✕	✕	✕	●	✕	✕	●	●	●	●
Honore Ave	●	✕	✕	●	✕	●	●	●	●	●
Cattlemen Rd/Cooper Creek Blvd	✕	✕	✕	●	✕	●	●	●	●	●
I-75 NB/SB Ramps DDI	●	✕	✕	✕	●	✕	●	●	●	●
U.S. 41 (Tamiami Trail/S.R. 45)										
Bee Ridge Rd	●	●	✕	●	●	●	●	●	●	●
Glengary St	●	✕	✕	●	✕	✕	●	●	●	●
Worrington Rd	●	✕	✕	●	✕	✕	●	●	●	●
Field Rd	●	✕	✕	●	✕	✕	●	●	●	●
Proctor Rd	●	✕	✕	●	✕	●	●	●	●	●
Phillippi St	●	✕	✕	●	✕	✕	●	●	●	●
Monte Carlo Dr	●	✕	✕	●	✕	✕	●	●	✕	●
Constitution Blvd	●	✕	✕	●	✕	✕	●	●	●	●
Upper Beechwood Ave/Southwinds Dr	●	✕	✕	●	✕	✕	●	●	●	●
Clark Rd/SR 72	●	✕	✕	●	✕	●	●	●	●	●
Clark Road (S.R. 72)										
Gulf Gate Mall	●	✕	✕	●	✕	✕	●	●	●	●
Vacaro Dr/Gateway Ave	●	✕	✕	●	✕	✕	●	●	●	●
Swift Rd	●	✕	✕	●	✕	●	●	●	●	●
S Lockwood Ridge Rd	●	✕	✕	●	✕	✕	●	●	●	●
Beneva Rd	●	✕	✕	●	✕	●	●	●	●	●
Sawyer Rd	●	●	✕	●	✕	✕	●	●	●	●
McIntosh Rd	●	●	✕	●	✕	✕	●	●	●	●
Honore Ave	●	●	✕	●	✕	●	●	●	●	●
Gantt Rd/Approach Rd	●	●	✕	●	✕	✕	●	●	●	●
Catamaran Dr/Anise Dr	●	●	✕	●	✕	✕	●	●	●	●
I-75 NB/SB Ramps DDI	✕	●	✕	●	✕	✕	●	●	●	●

Legend

✕ Not Existing

● Existing

4.1.4.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Sarasota / Manatee MPO TIP Fiscal Years 2025/26 – 2029/30,* adopted May 19, 2025, amended September 29, 2025, and modified October 22, 2025, for the top five priority corridors.

1. U.S. 301 (Washington Boulevard/S.R. 683) from University Parkway to Mound Street
   - 451017-1 – U.S. 301 Resurfacing from U.S. 41 to S of 10th Street
     - Construction (FY 2026)
   - 456052-1 – Traffic Signal ITS Equipment Purchase
     - MPO funds for upgrading traffic signal controllers
2. Fruitville Road (S.R. 780) from N School Avenue to Coburn Road
   - 453539-1 – S.R. 780 ATSPM/CV Upgrades from U.S. 301 to Honore Avenue
     - Construction (FY 2028)
   - 447871-1 – S.R. 780 Intersection Improvements at Beneva Road
     - Construction (FY 2025)
   - 456052-1 – Traffic Signal ITS Equipment Purchase
     - MPO funds for upgrading traffic signal controllers
3. University Parkway (C.R. 610) from U.S. 301 (Washington Boulevard) to I-75
   - No projects identified
4. U.S. 41 (Tamiami Trail/S.R. 45) from Bee Ridge Road to S.R. 72
   - 453538-1 – U.S. 41 ATSPM/CV Upgrades from Gulf Gate Drive to Glengary Street
     - Construction (FY 2028)
   - 456052-1 – Traffic Signal ITS Equipment Purchase
     - MPO funds for upgrading traffic signal controllers
5. Clark Road (S.R. 72) from U.S. 41 (Tamiami Trail) to I-75
   - 201277-3 – I-75 Interchange Improvements at S.R. 72
     - Construction recently completed
   - 446289-1 – S.R. 72 Resurfacing from Honore Avenue to W of Gantt Road
     - Construction (FY 2026)
   - 456052-1 – Traffic Signal ITS Equipment Purchase
     - MPO funds for upgrading traffic signal controllers

4.1.5 Manatee County

4.1.5.1 Existing Infrastructure

Manatee County's priority corridors include 53rd Avenue (S.R. 70), Cortez Road (S.R. 684), U.S. 41 (8th Avenue/S.R. 45), and U.S. 41 (14th Street/S.R. 45). These corridors support a mix of commuter travel, freight movement, local transit activity, and regional connectivity, while also serving as important evacuation and emergency response routes. Together, they represent key east–west and north–south facilities within the County's arterial network.

Across the priority corridors, Manatee County has deployed several foundational ITS elements; however, infrastructure coverage varies notably by technology type and corridor. While some systems demonstrate broad deployment, others remain limited or absent, influencing the County's ability to support more advanced TSM&O strategies on a corridor-wide basis.

Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption is minimally deployed along Manatee County's priority corridors. Radio/cellular-based EVP is present at two signalized intersections along U.S. 41 (14th Street/S.R. 45), specifically at Pearl Avenue and Whitfield Avenue. No EVP infrastructure is currently deployed at the remaining signalized intersections along the priority corridors. As a result, emergency response priority is limited to isolated locations rather than supported consistently across corridors.

Connected Vehicle (CV)

This TSM&O strategy does not exist along the priority corridors in Manatee County.

PedSafe/Computer Vision

This TSM&O strategy does not exist along the priority corridors in Manatee County.

Closed Circuit Television (CCTV)

CCTV infrastructure is widely deployed across Manatee County's priority corridors, providing operational visibility for traffic management and incident response. All signalized intersections along 53rd Avenue (S.R. 70) are equipped with CCTV. Coverage is also extensive along Cortez Road (S.R. 684), with cameras present at all but one intersection (71st Street). Along U.S. 41 (8th Avenue/S.R. 45), two of three intersections include CCTV, while U.S. 41 (14th Street/S.R. 45) includes cameras at the majority of intersections except at the intersection of Whitfield Avenue. Good coverage is present along the remaining segment of 53rd Avenue (S.R. 70) with two of three intersections with CCTV installation.

Where installed, CCTV systems consist of PTZ cameras configured to provide visibility of both mainline and side-street approaches.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Manatee County.

Transit Signal Priority (TSP)

Transit Signal Priority is currently implemented at seven intersections along U.S. 41 (14th Street/S.R. 45). These TSP-equipped intersections are generally located at adjacent locations along the corridor, supporting localized transit priority operations within this segment. Outside of this corridor, no additional TSP infrastructure is present along the remaining priority corridors. As a result, existing TSP functionality in Manatee County is limited to a single corridor segment and does not yet provide corridor-wide transit priority coverage across the broader priority network.

Advanced Traffic Controllers (ATC)

Although none of the signalized intersections along Manatee County's priority corridors currently operate with ATCs, select intersections along 53rd Avenue (S.R. 70) are configured to support ATSPM using existing controller and detection infrastructure. ATSPM analytics at these locations are supported through the Miovision ATSPM platform.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Manatee County.

Bluetooth

Bluetooth detection infrastructure is deployed across Manatee County's priority corridors, with coverage varying by corridor and generally concentrated at adjacent or consecutive intersections to support segment-level travel time and performance monitoring.

Along 53rd Avenue (S.R. 70), which includes Priority Corridors 1 and 5, Bluetooth detection is present at twelve of fifteen intersections (combined), with deployments primarily located at consecutive intersections along the main corridor. The remaining three intersections along the extended segment lack Bluetooth coverage, resulting in partial but functionally continuous monitoring across most of the corridor. Cortez Road (S.R. 684) has Bluetooth installation at seven of fourteen signalized intersections. These deployments are largely clustered along the central portion of the corridor, forming multiple short consecutive segments rather than isolated installations. Along U.S. 41 (8th Avenue/S.R. 45), Bluetooth detection is present at one of three intersections, representing a limited and isolated deployment that does not currently support corridor-level performance monitoring. For U.S. 41 (14th Street/S.R. 45), Bluetooth readers are installed at five of twelve intersections, generally distributed in small clusters, providing localized segment-level monitoring but not continuous corridor coverage.

While Bluetooth readers are not installed at every signalized intersection, Bluetooth installations are located at adjacent or consecutive intersections, enabling effective segment-level travel time and performance monitoring rather than isolated point measurements along key segments of Manatee County's priority corridors, while gaps remain where Bluetooth coverage is absent.

Fiber Optic Communications

Fiber optic communication infrastructure is available end-to-end along all priority corridors. This fiber backbone supports reliable data transmission between field devices and central systems.

Field switches are deployed at most signalized intersections and are primarily Ruggedcom devices supporting 1-gigabit to 10-gigabit Ethernet performance. High-capacity switches are available at all intersections along 53rd Avenue (S.R. 70), as well as at multiple locations along

Cortez Road (S.R. 684), U.S. 41 (8th Avenue/S.R. 45), and U.S. 41 (14th Street/S.R. 45). Some locations would benefit from field switch upgrades with gigabit or higher speeds to support increased data demand.

Uninterruptible Power Supply (UPS)

UPS systems are installed at all signalized intersections along the priority corridors, providing short-duration backup power during utility interruptions. UPS systems enhance operational reliability and help maintain signal operations during brief outages. In addition, all signalized intersections within Manatee County's priority corridors are equipped with generator access panels and/or separate lockable generator housings, allowing for extended backup power support during prolonged outages or storm events.

Remote Power Management Unit (RPMU)

Remote Power Management Units are not currently deployed as a fully functional, network-connected system along Manatee County's priority corridors. While Manatee County maintains UPS backup units at each signalized intersection under its maintenance responsibility for FDOT, these units are not integrated with remote power monitoring or control capabilities along priority corridors. Existing backup power infrastructure supports local signal continuity during short-term outages but does not provide the remote monitoring, diagnostics, or management functionality typically associated with RPMU deployments.

Table 10: Existing Infrastructure Summary – Manatee County

Intersection	EVP	CV	CCTV	TSP	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
53rd Avenue (S.R. 70)										
22nd St	✗	✗	○	✗	✗	✗	○	○	○	✗
US Hwy 301	✗	✗	○	✗	✗	○	○	○	○	✗
30th St	✗	✗	○	✗	✗	✗	○	○	○	✗
33rd St	✗	✗	○	✗	✗	○	○	○	○	✗
37th St	✗	✗	○	✗	✗	○	○	○	○	✗
39th St/42nd St	✗	✗	○	✗	✗	○	○	○	○	✗
Loockwood Ridge Rd/45th St	✗	✗	○	✗	✗	○	○	○	○	✗
Natalie Wy	✗	✗	○	✗	✗	✗	○	○	○	✗
Caruso Rd	✗	✗	○	✗	✗	○	○	○	○	✗
Tara Blvd/Creekwood Blvd	✗	✗	○	✗	✗	○	○	○	○	✗
I-75 SB Ramp	✗	✗	○	✗	✗	○	○	○	○	✗
I-75 NB Ramp	✗	✗	○	✗	✗	○	○	○	○	✗
Cortez Road (S.R. 684)										
75th St	✗	✗	○	✗	✗	○	○	○	○	✗
71st St	✗	✗	○	✗	✗	✗	○	○	○	✗
66th St	✗	✗	○	✗	✗	✗	○	○	○	✗
59th St	✗	✗	○	✗	✗	○	○	○	○	✗
Cape Vista Dr	✗	✗	○	✗	✗	✗	○	○	○	✗
51st St	✗	✗	○	✗	✗	✗	○	○	○	✗
43rd St	✗	✗	○	✗	✗	○	○	○	○	✗
37th St	✗	✗	○	✗	✗	✗	○	○	○	✗
34th St	✗	✗	○	✗	✗	○	○	○	○	✗
26th St	✗	✗	○	✗	✗	○	○	○	○	✗
20th St	✗	✗	○	✗	✗	○	○	○	○	✗
14th St	✗	✗	○	✗	✗	○	○	○	○	✗
9th St	✗	✗	○	✗	✗	✗	○	○	○	✗
5th St	✗	✗	○	✗	✗	✗	○	○	○	✗
U.S. 41 (8th Avenue/S.R. 45)										
10th St	✗	✗	○	✗	✗	✗	○	○	○	✗
7th St	✗	✗	✗	✗	✗	✗	○	○	○	✗
5th St	✗	✗	○	✗	✗	○	○	○	○	✗
U.S. 41 (14th Street/S.R. 45)										
Orlando Ave	✗	✗	○	✗	✗	✗	○	○	○	✗
49th Ave Dr	✗	✗	○	✗	✗	✗	○	○	○	✗
53rd Ave	✗	✗	○	✗	✗	○	○	○	○	✗
57th Ave	✗	✗	○	✗	✗	✗	○	○	○	✗
60th Ave	✗	✗	○	✗	✗	✗	○	○	○	✗
Bayshore Gardens Pkwy	✗	✗	○	○	✗	○	○	○	○	✗
Florida Blvd	✗	✗	○	○	✗	✗	○	○	○	✗
69th Ave	✗	✗	○	○	✗	✗	○	○	○	✗
Pearl Ave	○	✗	○	○	✗	✗	○	○	○	✗
Whitfield Ave	○	✗	✗	○	✗	○	○	○	○	✗
Tallevast Rd/Gaines Ave	✗	✗	○	○	✗	○	○	○	○	✗
Branden Ave	✗	✗	○	○	✗	○	○	○	○	✗
53rd Avenue (S.R. 70)										
5th St	✗	✗	✗	✗	✗	○	○	○	○	✗
9th St	✗	✗	○	✗	✗	○	○	○	○	✗
15th St	✗	✗	○	✗	✗	○	○	○	○	✗

Legend	
✗	Not Existing
○	Existing

4.1.5.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Sarasota / Manatee MPO TIP Fiscal Years 2025/26 – 2029/30,* adopted May 19, 2025, amended September 29, 2025, and modified October 22, 2025, for the top five priority corridors.

1. 53rd Avenue (S.R. 70) from 15th Street E to I-75
   - 455188-1 – S.R. 70 (15th Street) Safety Project from SR 45 (U.S. 41) to Tara Boulevard
     - Construction (FY 2029)
   - 456052-2 - Manatee Traffic Signal ITS Equipment Purchase
     - Construction (FY 2026)
   - 442097-1 – I-75 (S.R. 93) ADMS from Sarasota County Line to I-275
     - Currently in construction by time of the report preparation (FY 2025)
2. Cortez Road (S.R. 684) from 75th Street W to 1st Street
   - 445044-1 – S.R. 684 Resurfacing from 86th Street to W of 30th Street includes CV and ATSPM upgrades
     - Construction (FY 2026)
   - 455925-1 – S.R. 684 ATSPM/CV Upgrades from 26th Street to U.S. 301
     - Construction (FY 2026)
   - 456052-2 - Manatee Traffic Signal ITS Equipment Purchase
     - Construction (FY 2026)
3. U.S. 41 (8th Avenue/S.R. 45) from 10th Street W to Riverside Drive
   - No projects identified
4. U.S. 41 (14th Street/S.R. 45) from Sarasota County Line to S.R. 684
   - 449646-1 – U.S. 41 (14th Street W.) from 53rd and Orlando Avenue. (installing three Pedestrian Hybrid Beacons along U.S. 41) goes with 433592-6
     - Right-of-Way (FY 2026)
     - Construction (FY 2029)
   - 433592-6 – S.R. 45 (U.S. 41) Sidewalk Project from 53rd Avenue to Cortez Boulevard goes with 449646-1
     - Construction (FY 2029)
   - 444612-1 - S.R. 45 (U.S. 41) Resurfacing North of Edwards Drive to North of Magellan Drive
     - Advertised. Construction (FY 2026)
   - 448390-1 - S.R. 45 (U.S. 41) Safety Project from 63rd Avenue to 53rd Avenue
     - Construction (FY 2025). Under Construction.

- 449653-1 – U.S. 41 Safety Project from Magellan Drive to 63rd Avenue goes with 451026-1, 433592-5 (sidewalk project), 455644-1 (lighting project)
    - Construction (FY 2027)
- 451026-1 - S.R. 45 (U.S. 41) Resurfacing North of Magellan Drive to North of 63rd Avenue W
    - Construction (FY 2027)
- 455644-1 U.S. 41 (Tamiami Trail from N of Magellan Drive to 69th Avenue/Ebay Drive
    - Construction (FY 2027)
- 456052-2 - Manatee Traffic Signal ITS Equipment Purchase
    - Construction (FY 2026)

5. 53rd Avenue (S.R. 70) from U.S. 41 to 15th Street E
    - No projects identified

4.1.6 Polk County

4.1.6.1 Existing Infrastructure

Polk County's priority corridors include Bartow Road (U.S. 98/S.R. 35), North Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), Florida Avenue (U.S. 98/S.R. 35), and U.S. 27 (S.R. 25). These corridors serve as key north–south and east–west facilities supporting commuter travel, freight movement, regional connectivity, and emergency response across the County. Several of the corridors also function as important evacuation routes and provide access to major commercial and employment centers.

Across the priority corridors, Polk County has deployed a broad range of ITS infrastructure elements, with coverage varying by technology and corridor. While some systems demonstrate strong and continuous deployment, others are present only at select locations, influencing the County's ability to support advanced TSM&O strategies uniformly across the network.

Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption is deployed selectively across the priority corridors using infrared-based technology. Along Bartow Road (U.S. 98/S.R. 35), EVP is present at three signalized intersections. N Florida Avenue (U.S. 98/S.R. 35) includes EVP at four intersections, which are generally located at adjacent locations, supporting localized emergency response continuity. Memorial Boulevard (U.S. 92/S.R. 546) has EVP installed at two intersections, while all signalized intersections along Florida Avenue (U.S. 98/S.R. 35) are equipped with EVP. Along U.S. 27 (S.R. 25), EVP is present at three intersections, which are distributed across the corridor rather than fully consecutive. Overall, existing EVP deployment provides targeted emergency response benefits but does not yet support consistent corridor-wide coverage.

Connected Vehicle (CV)

Connected Vehicle infrastructure using C-V2X RSUs is well established along several Polk County priority corridors. Along Bartow Road (U.S. 98/S.R. 35), five of eight signalized intersections are equipped with RSUs, with installations generally clustered at adjacent

intersections. All signalized intersections along N Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), and U.S. 27 (S.R. 25) include RSU deployments, providing full corridor coverage and enabling continuous V2I communications. Florida Avenue (U.S. 98/S.R. 35) includes RSUs at two of four intersections, representing partial and non-continuous deployment. Overall, CV infrastructure in Polk County ranges from isolated deployments to fully connected corridors, with several corridors already positioned to support corridor-level connected vehicle applications.

PedSafe/Computer Vision

This TSM&O strategy does not exist along the priority corridors in Polk County.

Closed Circuit Television (CCTV)

CCTV infrastructure is deployed at multiple intersections across all priority corridors, supporting operational visibility and incident monitoring. Along Bartow Road (U.S. 98/S.R. 35), six of eight intersections are equipped with CCTV. N Florida Avenue (U.S. 98/S.R. 35) includes cameras at four of five intersections, while all signalized intersections along Memorial Boulevard (U.S. 92/S.R. 546) are equipped with CCTV. Florida Avenue (U.S. 98/S.R. 35) includes CCTV at two of four intersections, and U.S. 27 (S.R. 25) has cameras at ten of thirteen intersections, with several deployments located at consecutive intersections. All existing CCTV installations consist of PTZ cameras, providing flexible coverage of both mainline and side-street approaches.

Freight Signal Priority (FSP)

This TSM&O strategy does not exist along the priority corridors in Polk County.

Transit Signal Priority (TSP)

This TSM&O strategy does not exist along the priority corridors in Polk County.

Advanced Traffic Controllers (ATC)

ATCs are deployed at all signalized intersections across Polk County's priority corridors. This consistent controller coverage supports modern signal operations and provides a strong foundation for advanced applications, including ATSPM, priority treatments, and connected vehicle technologies.

ATSPM analytics were previously supported through the ClearGuide platform for signals maintained by the City of Lakeland; however, that effort was discontinued due to staffing constraints. Currently, ATSPM data for Polk County signals are collected and supported through FDOT systems. This arrangement allows the County to retain access to performance data while leveraging the existing ATC infrastructure across the priority corridors, positioning the network for expanded and more consistent ATSPM use as resources allow.

Arterial Dynamic Message Signs (ADMS)

This TSM&O device does not exist along the priority corridors in Polk County.

Bluetooth

Bluetooth detection infrastructure is present at select intersections along Polk County's priority corridors, with coverage varying by corridor and deployment pattern. Along Bartow Road (U.S.

98/S.R. 35), Bluetooth detection is installed at six of eight signalized intersections, providing broad coverage across the corridor. Several of these installations occur at adjacent intersections, creating short continuous segments that support corridor-level travel time and performance monitoring rather than isolated point measurements. For N Florida Avenue (U.S. 98/S.R. 35) and Memorial Boulevard (U.S. 92/S.R. 546), Bluetooth readers are not currently installed at any signalized intersections. Florida Avenue (U.S. 98/S.R. 35) includes Bluetooth readers at two of four signalized intersections. Along U.S. 27 (S.R. 25), Bluetooth detection is installed at six of thirteen signalized intersections. These installations are distributed across the corridor, with a mix of adjacent and isolated locations that provide partial corridor coverage but do not form a fully continuous monitoring segment.

Overall, existing Bluetooth deployments in Polk County are concentrated along Bartow Road (U.S. 98/S.R. 35) and portions of U.S. 27 (S.R. 25), where multiple installations, though few at consecutive intersections, support meaningful corridor-level performance analysis. However, the absence of Bluetooth readers along N Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), and Florida Avenue (U.S. 98/S.R. 35), limits comprehensive and consistent travel time monitoring across the full priority corridor network.

Fiber Optic Communications

Fiber optic communication infrastructure is available end-to-end along priority corridors, providing connectivity between signalized intersections, field devices, and central systems. All intersections along the priority corridors are connected to Lakeland Electric fiber, with the exception of Pine Street, which remains outside the Lakeland Electric fiber network. Overall, fiber connectivity across the corridors supports continuous communications and ongoing TSM&O operations.

Field switches are primarily Ruggedcom devices supporting 1-gigabit to 10-gigabit Ethernet performance. Gigabit to 10-gigabit switch capacity is available at all intersections along Bartow Road (U.S. 98/S.R. 35), N Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), U.S. 27 (S.R. 25). However, information regarding the specifications of field switches along U.S. 27 (S.R. 25) was not available at the time of this assessment. As a result, it is unknown what switch types or capacities are deployed at this corridor to determine if intersections would benefit from upgrades to support higher speeds and increasing data demands.

Uninterruptible Power Supply (UPS)

UPS systems are installed at many signalized intersections along the priority corridors, providing short-duration backup power to support continued signal operations during brief utility interruptions. Along Bartow Road (U.S. 98/S.R. 35), UPS coverage is present at all signalized intersections. Along North Florida Avenue (U.S. 98/S.R. 35), four of five intersections are equipped with UPS, while Memorial Boulevard (U.S. 92/S.R. 546) includes UPS at six of seven intersections. Florida Avenue (U.S. 98/S.R. 35) has UPS installed at two of four intersections, and U.S. 27 (S.R. 25) includes UPS at eight of thirteen intersections, with installations generally clustered rather than evenly distributed.

Additionally, UPS-equipped intersections include generator connection capability integrated with the UPS units. At some older intersections where UPS is not installed, backup power capability may still be provided via a separate generator plug located on the power pole with an associated transfer switch. These configurations provide backup power during extended outages associated with storm events.

Remote Power Management Unit (RPMU)

RPMU devices are not currently deployed at any signalized intersections along Polk County's priority corridors. As a result, remote monitoring and control of cabinet power conditions are not available, and response to power disruptions or equipment faults relies on traditional field-based troubleshooting and maintenance practices.

The absence of RPMU capability reflects a network-wide gap in centralized power management across all priority corridors, limiting real-time visibility into cabinet power status and constraining the County's ability to proactively manage power-related issues.

Table 11: Existing Infrastructure Summary – Polk County

Intersection	EVP	CV	CCTV	ATC Controller	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
Bartow Road (U.S. 98/S.R. 35)									
Lake Parker Ave	✗	✗	○	○	○	○	○	○	✗
Lake Bonny Park	✗	✗	✗	○	✗	○	○	○	✗
New Jersey Rd	✗	○	○	○	○	○	○	○	✗
N Crystal Lake Dr	○	○	○	○	○	○	○	○	✗
Fredricksburg Ave/S Crystal Lake Dr	✗	○	○	○	○	○	○	○	✗
Commerce Point Dr	✗	○	✗	○	○	○	○	○	✗
Edgewood Dr	○	✗	○	○	○	○	○	○	✗
S Combee Rd	○	○	○	○	✗	○	○	○	✗
N Florida Avenue (U.S. 98/S.R. 35)									
I-4 Ramps	○	○	○	○	✗	○	○	○	✗
Pyramid Lkwy	○	○	✗	○	✗	○	○	✗	✗
Griffin Rd	○	○	○	○	✗	○	○	○	✗
Bella Vista St	✗	○	○	○	✗	○	○	○	✗
10th St/Parkview Pl	○	○	○	○	✗	○	○	○	✗
Memorial Boulevard (U.S. 92/S.R. 546)									
Lincoln Ave	✗	○	○	○	✗	○	○	✗	✗
Martin L King Jr Ave	✗	○	○	○	✗	○	○	○	✗
N Florida Ave	○	○	○	○	✗	○	○	○	✗
Lakeland Hills Blvd/Massachusetts Ave	○	○	○	○	✗	○	○	○	✗
Lakeshore Dr	✗	○	○	○	✗	○	○	○	✗
Ingraham Ave	✗	○	○	○	✗	○	○	○	✗
Lake Parker Ave	✗	○	○	○	✗	○	○	○	✗
Florida Avenue (U.S. 98/S.R. 35)									
Parker St	○	○	✗	○	○	○	○	○	✗
Bartow Rd	○	○	○	○	○	○	○	○	✗
Pine St	○	✗	✗	○	✗	✗	○	✗	✗
Main St	○	✗	○	○	✗	○	○	✗	✗
U.S. 27 (S.R. 25)									
I-4 NB Ramp	○	○	○	○	○	○	○	○	✗
Home Run Blvd/Posner Blvd	✗	○	○	○	○	○	○	○	✗
Deer Creek Blvd	✗	○	○	○	✗	○	○	○	✗
Citrus Ridge Dr	✗	○	○	○	✗	○	○	○	✗
Cottonwood Dr	○	○	✗	○	✗	○	○	○	✗
Ridgewood Lakes Blvd	✗	○	○	○	○	○	○	○	✗
Holly Hill Rd/Massee Rd	○	○	○	○	✗	○	○	○	✗
North Blvd/Holly Hill Cutoff Rd	✗	○	○	○	✗	○	○	○	✗
Sanders Rd/Davenport Blvd	✗	○	○	○	○	○	○	✗	✗
Bates Rd	✗	○	○	○	✗	○	○	✗	✗
Southern Dunes Blvd	✗	○	✗	○	○	○	○	✗	✗
Old Polk City Rd/ Main St	✗	○	✗	○	✗	○	○	✗	✗
Commerce Ave	✗	○	○	○	○	○	○	✗	✗

Legend

✗	Not Existing
○	Existing

4.1.6.2 Review of Transportation Improvement Plans

The following subsection summarizes planned and programmed improvements identified within the *Polk TPO TIP FY 2025/26 – 2029/30,* adopted June 12, 2025, for the top five priority corridors.

- 442103-1 – Polk County Advanced Traffic Management Systems
    - Design (FY 2030) and Construction (FY 2031). The project is expected to introduce additional ITS infrastructure and operational enhancements. Since most of the intersections within the priority corridors are maintained by the City of Lakeland, only U.S. 27 (S.R. 25) may benefit from funds for this programmed project. However, there is some infrastructure already installed at intersections along U.S. 27 (S.R. 25). The specific locations, devices, and scope of improvements are not available at the time of documentation.

1. Bartow Road (U.S. 98/S.R. 35) from S Combee Road to S Lake Parker Avenue
    - 457732-1 – S.R. 35 (US98) Resurfacing from C.R. 540A to South of Bonney Park
        - Construction (FY 2027)
2. N Florida Avenue (U.S. 98/S.R. 35) from Memorial Boulevard (U.S. 92) to I-4
    - 451480-1 – U.S. 98 from N of S.R. 546 to S of Griffin Road (this is a pavement only resurfacing project)
        - Construction (FY 2027)
    - 445468-1 – S.R. 700/35 (U.S. 98) from S of Griffin Road (C.R. 582) to Sharon Drive flexible pavement reconstruction
        - Construction (FY 2024). Under Construction.
3. Memorial Boulevard (U.S. 92/S.R. 546) from Kathleen Road to N Lake Parker Avenue
    - 449049-1 – S.R. 546 (U.S. 92) (Memorial Boulevard) Rigid Pavement Reconstruction from Wabash Avenue to West of E Gary Drive
        - Design (FY 2027)
        - Construction (FY 2030)
4. Florida Avenue (U.S. 98/S.R. 35) from Main Street to Memorial Boulevard (U.S. 92)
    - No projects identified
5. U.S. 27 (S.R. 25) from U.S. 17/92 to I-4
    - 449659-1 – U.S. 27 Safety Project at Airport Road / Patterson Road and South Boulevard
        - Construction (FY 2030)

5

Gap Analysis & TSM&O Strategy Development

TSM&O strategies play a key role in how Florida's District 1 and maintaining partner agencies manage congestion, respond to incidents, support freight movement, and enhance safe mobility for all roadway users. As communities expand and travel demand increases across District 1, the effectiveness of roadway operations is increasingly influenced not by new capacity alone, but by the performance of the existing capacity using intelligent systems already in place and those still needed.

This chapter examines where infrastructure and operational capabilities along key arterials could be enhanced to better support desired safety, mobility, and resiliency outcomes. The analysis focuses on the top priority corridors identified in each of the six focus counties (Collier, Lee, Charlotte, Sarasota, Manatee, and Polk), roadways that serve vital functions such as hurricane evacuation, freight movement, transit service, commuter travel, and access to major economic and recreational destinations. The assessment evaluates where critical TSM&O components are:

- Installed and functioning
- Installed but due for an upgrade
- Missing along priority corridors

The findings advance District 1's goals to enhance roadway safety, improve travel time reliability, expand communication and data capabilities, increase resiliency for major weather events, and ensure that operations staff are equipped to support a more advanced transportation system, helping District 1 focus resources on the locations and technologies where TSM&O improvements will deliver the greatest regional benefit.

5.1 Methodology

The gap analysis evaluates the extent to which existing field infrastructure along District 1's priority arterial corridors support the operational capabilities required to enhance safety, improve mobility, and increase the resilience of the transportation network. This analysis builds upon the identified priority established in earlier chapters and focuses on determining what infrastructure exists today, how effectively that infrastructure supports TSM&O functions, and what additional devices or upgrades are needed to enable modern operational strategies.

A detailed intersection-level inventory was performed across the six focus counties. Existing infrastructure was reviewed along the priority corridors to assess the availability, condition, and operational readiness of existing and recommended ITS technologies required to support active TSM&O enhancements. The evaluation focused on the following key equipment and system types:

- EVP capabilities to enhance incident response and intersection safety.

- C-V2X RSUs to support future V2I applications and readiness for connected and automated vehicles technologies.
- PedSafe using computer-vision detection for VRU safety and incident management at intersections.
- CCTV cameras for real-time incident monitoring.
- FSP capabilities to facilitate freight movements.
- TSP functionality to improve transit reliability along key routes.
- ATSPM readiness, based on the availability of ATCs, to collect and convert traffic controller data into actionable system performance enhancements.
- ADMS to support real-time operational messaging such as to evacuation guidance, roadway closures, traffic incidents, and work zone activities.
- Bluetooth data readers enabling active arterial performance measurement.
- Fiber optic infrastructure and cabinet field switch communications to provide secure and high-bandwidth connectivity.
- UPS to maintain signal operations during power outages and storm events.
- RPMU to support remote monitoring and control of signal cabinet power components, including the ability to assess power status, cycle equipment, and support recovery actions during outages or post-storm operations.

These systems, further described below, enable the strategies detailed in Chapter 2, supporting more proactive roadway operations from real-time performance monitoring and coordinated corridor management to improved traveler information dissemination and enhanced safety for all roadway users.

Beyond simply identifying whether devices are present, as is shown in Chapter 4 Existing Conditions Assessment, the gap analysis evaluated whether the technology currently in place is sufficient to meet District 1's Mission, Vision, and Goals for this Master Plan of enhancing safety, mobility, resiliency, communications, and workforce capability. For example, an intersection with signal detection that does not meet the needs of ATSPM analytics was documented as a functional gap, even when equipment was physically present. Similarly, communications limitations were noted where low bandwidth, lack of redundancy, or power stability issues could impair field device performance or real-time operational oversight.

This methodology provides a clear identification of the technology, communications, and operational improvements needed to close the gap between existing capabilities and desired TSM&O performance. These results provide the basis for strategy development, cost-benefit evaluation, and implementation recommendations.

5.2 Regional TSM&O Needs and Gaps

While each priority corridor within the District 1 region has its own operational characteristics, a common set of technology and infrastructure gaps emerged across all six counties to support advanced TSM&O strategies.

5.2.1 Emergency Vehicle Preemption (EVP)

Emergency Vehicle Preemption remains an important opportunity area across District 1's arterial corridors since it is not consistently available along the evaluated routes, contributing to delays during emergency response. Expanding EVP coverage and standardizing system configurations will improve response times for authorized emergency vehicles and enhance overall safety at signalized intersections, particularly along major evacuation and high-priority response routes.

5.2.2 Connected Vehicle (CV)

Connected Vehicle infrastructure is still in its early stages across District 1. Implementing C-V2X-capable RSUs at intersections enables communication between roadside infrastructure and vehicle-based OBUs to exchange information such as real-time signal phase and timing (SPaT), and safety-related messages. RSUs function as the fixed communication interface at intersections, broadcasting infrastructure data and receiving status or request messages from OBU-equipped vehicles or compatible mobile applications. This exchange supports applications such as red-light violation warnings, severe weather warnings, and localized work-zone notifications. The installation of RSUs provides a foundation for future integration with emerging connected and automated vehicle technologies consistent with District 1's vision for a more connected and data-driven roadway network. Deployment of RSUs can also support other types of TSM&O functions, such as TSP and FSP.

Penetration of CV-equipped vehicles across District 1 remains limited at this time. As a result, near-term benefits of RSU deployment are expected to focus on system readiness and foundational V2I capability rather than immediate, widespread operational impacts. As OBU adoption/integration increases over time, the value of these deployments is expected to grow, enabling broader safety and mobility applications. Fleet vehicles (transit, freight and logistics) may be expected to be early adopters of OBUs allowing current RSU deployments to support TSP and FSP functionality while more automakers begin building OBU technology into new vehicles. In some counties, existing priority requests, such as TSP or EVP, are already supported through established radio-based systems. RSU deployment strategies differ by county based on existing systems and local preferences; therefore, RSUs are recommended only where they provide added operational value or align with county-established communication methods. This approach ensures compatibility with current agency practices while maintaining flexibility for future CV deployment at intersections where V2I functions provide clear safety or mobility benefits.

5.2.3 PedSafe/Computer Vision

PedSafe and similar computer-vision-based safety systems provide advanced detection for pedestrians, bicyclists, and other VRUs. These systems rely on edge or cloud-processed video analytics to identify crossing behavior, near-miss events, and potential conflicts before they result in crashes.

While the priority corridor evaluation found that none of the reviewed intersections currently operate PedSafe systems, Sarasota County has a limited number of deployments in the county, including two intersections along S.R. 683/U.S. 301 (Washington Boulevard) and a few additional locations outside the priority corridors. These existing installations demonstrate the county's early adoption of computer vision-based safety tools, but do not change the gaps identified along the evaluated corridors.

Integrating PedSafe systems with ATSPM analytics would allow District 1 to monitor pedestrian service levels, adjust timing dynamically, and track crossing compliance trends over time. As urban and suburban areas continue to develop, deploying computer-vision-based technology will protect VRUs and reduce crash severity at locations with high pedestrian volumes, multimodal activity, and transit stops.

5.2.4 Closed Circuit Television (CCTV)

CCTV coverage was observed to be generally continuous along most of the evaluated arterial corridors, providing operators with strong visual monitoring capabilities. Consistent with District 1 practice, one CCTV is typically provided at each signalized intersection to allow visibility of both the mainline and side-street approaches. A limited number of intersections would benefit from improved camera coverage to close visibility gaps and improve corridor-wide monitoring. Expanded CCTV coverage allows traffic management staff to verify incidents, coordinate response, and evaluate the effectiveness of signal timing adjustments in real time.

Expansion of CCTV coverage will support centralized monitoring and future integration with automated or analytics-based event detection tools

5.2.5 Freight Signal Priority (FSP)

FSP remains a developing capability within District 1. While several corridors carry significant truck volumes, none of the intersections within the priority corridors currently support freight-specific signal adjustments. Implementing FSP along designated freight routes would improve efficiency, reduce delays, and enhance safety by minimizing heavy-vehicle braking and acceleration cycles.

Near-term FSP strategies can be implemented using existing signal system capabilities, such as time-of-day plans, vehicle detection, and corridor-based signal coordination retiming, without relying on widespread adoption of CV technology. These approaches allow District 1 to support freight mobility objectives while maintaining consistency with current infrastructure and operational practices.

As freight data availability and supporting technologies mature, additional FSP strategies may be evaluated to further enhance freight movement and support long-term supply chain reliability goals. This phased approach allows District 1 to advance freight operations without placing near-term dependence on CV adoption or vehicle-based equipment penetration.

5.2.6 Transit Signal Priority (TSP)

In locations where public transit routes overlap with priority corridors, intersections were reviewed for TSP readiness. Expanding TSP across priority corridors will help improve transit travel times, reducing delays and supporting more reliable bus operations.

Although several corridors support regular bus service, only a limited number of intersections are currently equipped to make real-time signal adjustments. Controllers that support National Transportation Communications for Intelligent Transportation Systems Protocol (NTCIP) 1211 protocols can process TSP requests directly, allowing the system to extend or advance green time for transit vehicles without disrupting the overall signal cycle.

In other locations, TSP is implemented through legacy systems that simulate a priority request by temporarily adjusting the signal sequence to favor approaching buses, even when non-ATCs are in use. These legacy systems provide partial signal priority rather than full phase interruption, offering improved transit flow while maintaining coordination along the corridor.

Under the recommended CV deployment, C-V2X RSUs will facilitate digital TSP requests from equipped transit vehicles through two primary methods. In the direct RSU-to-controller configuration, the RSU receives a request and relays it to the controller using NTCIP 1211 protocols for immediate response. Alternatively, RSUs can operate as a gateway for legacy radio-based TSP systems by converting CV messages into signals recognized by existing radio equipment. This approach maintains compatibility with current county systems while creating a pathway toward more integrated and connected TSP operations across District 1.

However, in some counties, TSP is currently provided through established radio-based priority systems that do not utilize C-V2X RSUs. In these areas, RSUs are not recommended solely for TSP purposes, since existing radio-based communication already supports reliable priority requests. Controllers will continue to be configured for TSP readiness, allowing future expansion to use the same locally preferred radio-based communication. This maintains consistency with existing county practices while preserving a transition path toward connected, RSU-enabled TSP if adopted in the future.

5.2.7 Automated Traffic Signal Performance Measures (ATSPM)

All agencies currently employ various detection technologies for signal actuation and ATSPM. The effectiveness of ATSPM is closely tied to the quality of detection, with more plentiful, reliable, and accurate inputs enabling traffic operations to make better-informed decisions. It is acknowledged that a combination of detection technologies, such as microwave and video, can be applied to optimize ATSPM performance. Microwaves and video detection systems have a smaller physical and wiring footprint requiring fewer cabinet inputs than traditional in-pavement loops, minimizing cabinet space and I/O demand while achieving equivalent detection coverage. In segments where ATSPM is not deployed, the analysis utilizes video detection for vehicle presence (stop bar) and microwave detection for advanced vehicle monitoring. Depending on existing field conditions, full ATSPM functionality may require upgrades to detection infrastructure, signal controllers, or both. This strategic deployment ensures the most accurate and efficient ATSPM outputs, while also minimizing infrastructure impacts. ATSPM requires high-resolution data that can only be processed utilizing ATC equipment. Older controllers lack the processing power and the ability to store and transmit the data required for ATSPM. Several agencies utilize legacy controllers that support some but not all ATC functionalities. To achieve the benefits of ATSPM, these legacy non-ATCs should be upgraded to the current generation ATC.

Recent ATCs can also be utilized for better EVP and TSP functionality. It is recommended to replace controllers where it was noted that an agency is utilizing a controller that supports ATSPM, but would need to be replaced for the functionality of other technologies, such as CV, more advanced EVP, and TSP.

This evaluation found that the use of ATSPM software varies by agency, falling into categories: either not available, with software licenses that have expired, or currently deployed and in use.

5.2.8 Arterial Dynamic Message Signs (ADMS)

ADMS play a key role in supporting real time operational messaging. Although several ADMS units are installed across District 1, additional signs would enhance the ability to share incident, congestion, lane closures, detours, and weather-related information along diversion routes, evacuation routes, and major arterials within the priority corridors. Expanding ADMS coverage may improve driver awareness, reduce secondary crashes, and strengthen corridor performance during planned and unplanned events.

ADMS serves a critical function in evacuation management and route guidance during adverse weather by providing timely, location-specific instructions that help direct motorists to safer routes and coordinate movement away from vulnerable areas. Future ADMS systems can also integrate with ATSPM and CV data feeds to support predictive operational messaging or lane-specific advisories. Coordinating ADMS with central software platforms ensures consistent messaging across regional corridors and supports District 1's goals of improved safety, reliability, and real-time customer communication.

5.2.9 Bluetooth

While Bluetooth readers are deployed throughout the priority corridors, select intersections with growing congestion would benefit from additional devices to strengthen data collection and support more effective arterial performance monitoring. Bluetooth data also feeds into traveler-information systems and ADMS messaging, improving real-time information sharing and supporting adaptive management strategies. As part of this gap analysis, Bluetooth readers are recommended for installation at intersections where devices are not currently present to provide more consistent corridor-level coverage and improve the quality and continuity of arterial performance data.

5.2.10 Fiber Optic Communications

Across the network, fiber-optic communications are well established and provide robust connectivity at most signalized intersections. Remaining locations with limited communications redundancy represent a relatively small portion of the system. In these areas, the primary need is not new fiber optic cable installation but rather upgrading legacy cabinet switches that currently operate at 10/100 megabits per second (Mbps) to ensure secure and resilient Gigabit (10/100/1000) Ethernet performance. Existing fiber optic cable can support higher bandwidth communications and is only restricted by the switch gear that produces and renews the signal. Upgrading to 1 Gigabit or even 10 Gigabit-capable switches will expand available bandwidth to accommodate future data demand. This improvement supports future technology deployments that require higher throughput and continuous communication across the network.

5.2.11 Uninterruptible Power Supply (UPS)

Power continuity challenges remain at select locations and can affect signal operations during utility outages and post-storm recovery periods, when traffic demands and operational needs are often elevated. UPS systems provide critical short-duration backup power that helps maintain signal operations during brief interruptions and supports safe and orderly traffic control until normal power is restored or longer-term backup solutions are activated.

While UPS systems are an important component of power continuity, their effectiveness depends on battery capacity, condition, and maintenance practices. Remaining gaps should be addressed to ensure full coverage of UPS systems along evacuation routes, emergency access corridors, and high-volume arterials. Expanding UPS deployment will minimize downtime, preserve signal coordination (and mobility) during utility power loss, and enhance post-storm recovery operations. Expanding the presence of UPS, particularly along evacuation routes and essential emergency response corridors, would support District 1's focus on safe roadway operations in adverse weather conditions.

5.2.12 Remote Power Management Unit (RPMU)

RPMUs support reliable signal operations by allowing agencies to remotely monitor, control, and reset power to field equipment within traffic signal cabinets. RPMUs provide operations staff with the ability to cycle power, monitor cabinet status, and respond to device failures without requiring immediate on-site dispatch, reducing response times and improving operational efficiency.

RPMUs are particularly valuable during storm events and post-storm recovery, when power interruptions, communication disruptions, or device lockups can affect signal performance even after utility power is restored. When integrated with UPS systems, RPMUs allow agencies to better manage limited backup power resources by prioritizing critical devices and restoring normal operations more efficiently once conditions stabilize.

Across District 1, RPMU deployment varies by agency and corridor. Expanding RPMU capabilities at select priority-corridor intersections would enhance system resiliency, reduce maintenance response times, and improve District 1's ability to maintain safe and reliable signal operations during and after power disruptions, severe weather events, and other operational incidents.

5.2.13 Summary

Table 12 summarizes the TSM&O needs and gaps, providing key actions and operational impacts for each TSM&O strategy.

Table 12: TSM&O Needs and Gaps Summary

Strategies	Technologies	Key Actions	Operational Impacts
Safety	Emergency Vehicle Preemption (EVP)	Expand EVP coverage and standardize configurations near emergency service facilities and evacuation routes	Reduces emergency response times and improves intersection safety during critical events
	Connected Vehicle (CV)	Deployment of C-V2X RSUs at intersections, integrating RSUs to support TSP based on county's preference	Enables connected vehicle functions and supports future connected applications
	PedSafe/Computer Vision Systems	Deploy vision-based detection for pedestrians and bicyclists for all intersections	Identifying potential conflicts and enhancing safety for VRU
	Freight Signal Priority (FSP)	Implement FSP at all intersections to be designated as freight corridors	Reduces delay and enhances efficiency and safety of freight movement
Mobility and Performance	Transit Signal Priority (TSP)	Implement TSP using the county-preferred communication method: RSU where supported, and radio-based where already in use.	Enhances transit travel time reliability and multimodal operations while maintaining compatibility with existing county systems. Integration with existing and future Bus Rapid Transit (BRT) routes
	Automated Traffic Signal Performance Measures (ATSPM)	Integrate reliable detection and ATCs to fully enable ATSPM analytics	Provides quality performance data for signal optimization
	Arterial Dynamic Message Signs (ADMS)	Add ADMS near freeway interchanges and along evacuation routes	Improves driver awareness, supports incident and evacuation management
	Bluetooth	Install additional Bluetooth readers to complete coverage	Enables accurate travel-time and congestion analysis
Resilient Transportation System	Fiber Optic Communications	Complete fiber and close small connectivity gaps	Improves communication redundancy, reliability, and high-speed data transfer
	Field Switch Upgrades	Replace legacy 10/100 Mbps switches with secure Gigabit-capable hardware	Ensures secure, high-bandwidth communications
	Uninterruptible Power Supply (UPS)	Expand UPS coverage at remaining intersections	Maintains signal operation during power loss or severe weather events
	Remote Power Management Unit (RPMU)	Deploy RPMUs to support remote monitoring and power control of signal equipment	Enhance operational reliability and reduces field response during power and equipment issues
	Closed-Circuit Television (CCTV)	Install additional cameras where minor coverage gaps exist to achieve corridor-wide visibility	Improves incident verification, situational awareness, and supports future integration with AI-based event detection

5.3 District 1 County Corridor Gap Analysis

The corridor Gap Analysis evaluates TSM&O needs and gaps based on existing and operational field infrastructure as of October 1, 2025, including locations where systems are partially deployed, planned, programmed, or funded for future implementation. This chapter documents anticipated system enhancements needed to achieve corridor-level TSM&O objectives, regardless of whether those improvements are already advancing through design or construction.

Projects that are programmed, funded, or under active development after the existing-conditions cutoff date are acknowledged in this chapter to reflect future system direction; however, improvements associated with such projects are excluded from regional TSM&O gap cost estimates to avoid duplication with investments that are already committed. As a result, Chapter 5 focuses on identifying remaining unmet needs and opportunities for system expansion beyond those addressed through existing or programmed initiatives.

5.3.1 Collier County

Collier County's priority corridors include U.S. 41 (Tamiami Trail/S.R. 45), U.S. 41 (Tamiami Trail/S.R. 90), Pine Ridge Road, Immokalee Road (C.R. 846), and Airport-Pulling Road. These roadways serve as major mobility and access routes for the Naples urbanized area, supporting tourism, commuter travel, and important east-west connections to the interior of the region. They also play a vital role in hurricane evacuation and access to critical medical, commercial, and emergency response facilities.

Collier County's priority corridors are generally well equipped with existing ITS infrastructure, including widespread CCTV coverage and fully deployed EVP systems. Most intersections operate on modern ATCs, but several locations require additional detection upgrades to support full ATSPM capabilities. The evaluation also identified opportunities to enhance VRU safety, expand connected vehicle functionality, support freight and transit priority, and improve multimodal reliability through targeted technology deployments. These findings reflect the distinction between baseline infrastructure availability and the additional capabilities required to support advanced operational objectives.

FDOT Project 453415-1 (U.S. 41 Intersection/Mobility Improvements from 3rd Avenue to S.R. 84), currently programmed for PD&E in FY 2027 currently programmed for construction in FY 2029, falls within the limits of U.S. 41 (Tamiami Trail/S.R. 90). However, consistent with the study methodology, the specific scope, locations, and technologies associated with these projects were not available at the time of report documentation. Therefore, no assumptions regarding potential installations or upgrades have been incorporated into the gap analysis or recommended strategies.

5.3.1.1 Emergency Vehicle Preemption (EVP)

Infrastructure supporting emergency response is already well established, as EVP is deployed along these corridors, and no additional installations are required.

5.3.1.2 Connected Vehicle (CV)

While each corridor includes at least two intersections with CV infrastructure, RSU deployment is anticipated to be needed at multiple intersections to provide consistent benefits through each

corridor. C-V2X RSUs are recommended at all intersections not currently within the priority corridors to establish consistent V2I communications. These RSUs will support safety messaging, incident warnings, and signal-status exchange while also enabling integration with TSP and other emerging connected-mobility applications.

5.3.1.3 PedSafe/Computer Vision

PedSafe and computer-vision safety detection are considered beneficial at all intersections within the priority corridors to enhance protection for pedestrians and bicyclists.

5.3.1.4 Closed Circuit Television (CCTV)

Full CCTV coverage is already in place, providing complete visibility and operational monitoring along the corridors. No additional installations are needed.

5.3.1.5 Freight Signal Priority (FSP)

FSP systems are identified as recommended for implementation at all intersections within the priority corridors to improve heavy-vehicle progression and support regional freight mobility.

5.3.1.6 Transit Signal Priority (TSP)

TSP is considered beneficial across the priority corridors to improve transit schedule reliability and enhance multimodal performance. Because TSP is not currently deployed along these corridors, the County has an opportunity to integrate TSP through the Connected Vehicle infrastructure already planned as part of this master plan. With C-V2X RSUs recommended at all intersections, equipped transit vehicles will be able to send standardized digital priority requests directly to the signal controller, supporting timely green extensions or phase adjustments. This approach allows the county to maintain operational continuity while preparing the network for future connected and automated transit applications, including potential BRT expansion.

5.3.1.7 Automated Traffic Signal Performance Measures (ATSPM)

Three intersections require controller upgrades and although vehicular detection is present at all intersections, several intersections require detection upgrades to fully enable ATSPM capabilities. Upgrading and standardizing remaining legacy controllers and software, in addition to enhancing detection, will support real-time performance analytics and proactive traffic signal optimization.

Even though the county already collects ATSPM data, upgrading existing detection infrastructure and standardizing controller platforms will allow for real-time performance monitoring and data-driven signal optimization.

5.3.1.8 Arterial Dynamic Message Signs (ADMS)

Two ADMS units are recommended for eastbound and westbound drivers along Immokalee Road near the I-75 ramps to provide traveler information during congestion or evacuation.

5.3.1.9 Bluetooth

Bluetooth data readers coverage is incomplete, reducing the availability of real-time travel time and corridor performance metrics. To address these gaps, additional Bluetooth devices are

identified for installation at signalized intersections where Bluetooth detection is not currently installed, supporting more continuous travel-time monitoring and corridor-level performance evaluation.

5.3.1.10 Fiber Optic Communications

Fiber optic connectivity is fully established along all priority corridors in Collier County, with field switches installed at all signalized intersections. The existing communications infrastructure is modern, robust, and capable of supporting current and anticipated TSM&O applications. As a result, no additional fiber optic or field switch upgrades are identified as part of this gap analysis.

5.3.1.11 Uninterruptible Power Supply (UPS)

UPS systems are broadly deployed throughout the priority corridors, with one additional installation identified as appropriate along Pine Ridge Road to ensure complete power continuity.

5.3.1.12 Remote Power Management Unit (RPMU)

RPMU has been recommended for all intersections as part of the gap analysis since the presence of RPMU could not be verified by agency stakeholders before finalizing this report.

Table 13: Gap Analysis & Recommended Strategy Summary – Collier County

Intersection	EVP	CV *	PedSafe/ Computer Vision	CCTV	FSP	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU **
						ATC Controller	Detection Upgrade						
U.S. 41 (Tamiami Trail/S.R. 45)													
Old 41 Rd	○	○	✓	○	✓	○	○	○	○	○	○	○	✓
Wiggins Pass Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Imperial Golf Course Blvd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Immokalee Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
U.S. 41 (Tamiami Trail/S.R. 90)													
9th St/5th Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
10th St	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Goodlette-Frank Rd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
River Point Dr	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Davis Blvd/Sandpiper St	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Palm St/Commercial Dr	○	✓	✓	○	✓	✓	○	○	✓	○	○	○	✓
Bayshore Dr/Shadowland Dr	○	○	✓	○	✓	○	○	○	○	○	○	○	✓
Airport Pulling Rd	○	○	✓	○	✓	○	○	○	○	○	○	○	✓
Pine Ridge Road													
Tamiami Trl/9th St	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
N Goodlette Frank Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Pine Ridge MS	○	✓	✓	○	✓	○	○	○	✓	○	○	○	✓
Shirley St	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Forest Lakes Blvd	○	✓	✓	○	✓	✓	✓	○	✓	○	○	✓	✓
Naples Blvd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Pine Ridge Crossing	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Airport Pulling Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Immokalee Road (C.R. 846)													
Collier Reserve Dr	○	✓	✓	○	✓	○	○	○	✓	○	○	○	✓
N Goodlette Frank Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Veterans Park Dr	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Palm River Blvd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Airport Pulling Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Lakeland Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Livingston Rd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Juliet Blvd/Strand Blvd	○	✓	✓	○	✓	○	✓	✓	✓	○	○	○	✓
I-75 SB Ramp	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
I-75 NB Ramp	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Northbrooke Dr	○	✓	✓	○	✓	○	✓	✓	✓	○	○	○	✓
Valewood Dr	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Logan Blvd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Preserve Ln	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Preserve Cir	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Collier Blvd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Airport-Pulling Road													
Golden Gate Pkwy	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓
Longboat Dr	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Mercantile Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Progress Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Enterprise Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Radio Rd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
North Rd	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Estey Ave	○	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Davis Blvd	○	○	✓	○	✓	○	✓	○	○	○	○	○	✓

** Transit Signal Priority (TSP) is not listed as a standalone gap item because the proposed C-V2X RSU deployments will provide TSP-ready capability at all priority-corridor intersections. Implementation will require only the addition of onboard units (OBUs) on transit vehicles to communicate with the RSUs.*

*** Remote Power Management Unit (RPMU) recommended for installation but field verification should be conducted to confirm existing conditions and installation needs.*

Legend

✓	Recommended
○	Existing
○	Not applicable

5.3.2 Lee County

Lee County's priority corridors include Daniels Parkway (C.R. 876), Dr. Martin Luther King Jr. Boulevard (S.R. 82), Colonial Boulevard (S.R. 884), and U.S. 41 (Cleveland Avenue/S.R. 45). These arterials support some of the high travel demands in District 1, serving as primary commuter routes and linking major regional destinations including downtown Fort Myers, Gulf Coast Medical Center, Southwest Florida International Airport, and the I-75 corridor. They also function as key emergency evacuation and freight mobility corridors, helping people and goods travel away from the coast during emergencies.

Lee County's priority corridors contain a mix of established ITS infrastructure with several locations where additional upgrades can strengthen operational performance. CCTV coverage is present along many segments, and most intersections operate on ATCs, with some requiring targeted upgrades to support full ATSPM analytics and other advanced operational strategies. Opportunities exist to expand EVP consistency, CV readiness, VRU safety systems, freight priority, and multimodal transit capabilities to improve corridor reliability and overall system readiness.

Lee County Project 454647-1 (S.R. 82 at Benchmark Avenue – Signalization), currently programmed for construction in FY 2027, fall at one intersection within Dr. Martin Luther King Jr. Boulevard (S.R. 82) priority corridor. This one intersection includes a new signal installation, and it is anticipated to be Lee-County managed. However, the specific technology elements or operational features that will be deployed (as referenced in this Master Plan) remain unknown at the time of report preparation. As such, no assumptions regarding installations or technology upgrades associated with these projects have been incorporated into the gap analysis or recommended strategies.

5.3.2.1 Emergency Vehicle Preemption (EVP)

According to stakeholders from District 1, EVP capability is available at all signalized intersections within Lee County through the County's Centracs traffic signal system, which includes an emergency vehicle priority module supporting EVP operations. Because EVP functionality is established countywide and integrated into the existing signal system, no additional EVP deployments or upgrades are identified as part of this gap analysis.

5.3.2.2 Connected Vehicle (CV)

Lee County corridors have not yet been upgraded with CV infrastructure. Deployment of C-V2X RSUs is recommended at all intersections along the priority corridors to establish comprehensive V2I communications. These RSUs will enable exchange of safety and operational messages, improve situational awareness, and provide the foundation for applications such as TSP and other emerging connected-mobility applications.

5.3.2.3 PedSafe/Computer Vision

PedSafe and computer-vision analytics are not yet deployed at intersections on these corridors, despite increasing levels of pedestrian and bicycle activity, especially near hospitals, commercial centers, schools, and key transit stops. Full deployment is considered beneficial to enhance safety protections for VRUs.

FDOT Project 446269-1 (S.R. 82 from Ford Street to Veronica Shoemaker Boulevard – Pedestrian Safety Improvements), with construction initiated in February 2025, may include pedestrian-related technology enhancements. However, due to limited information available at the time of report preparation, the specific types of pedestrian-related technologies proposed under this project could not be confirmed. Therefore, pedestrian-related technology needs along this corridor continue to be accounted for in the gap analysis and recommendations presented in this report.

5.3.2.4 Closed Circuit Television (CCTV)

CCTV coverage is scattered and inconsistent along the priority corridors. Additional cameras are considered necessary at several intersections to achieve full visual coverage for corridor monitoring and incident verification, improving operational awareness and emergency response time.

5.3.2.5 Freight Signal Priority (FSP)

FSP systems are recommended for implementation along corridors identified as supporting goods-movement activity, including Dr. Martin Luther King Jr. Boulevard (S.R. 82) and key connectors to I-75 such as Colonial Boulevard (S.R. 884) and Daniels Parkway (C.R. 876). These systems would improve coordination for heavy-vehicle platoons, reduce stop-and-go impacts for trucks, and enhance the efficiency of industrial access routes.

5.3.2.6 Transit Signal Priority (TSP)

Lee County has emerging multimodal needs, particularly along Dr. Martin Luther King Jr. Boulevard (S.R. 82) and Colonial Boulevard (S.R. 884), where expanding transit service and future BRT opportunities create justification for TSP implementation.

All signalized intersections across the priority corridors are equipped with the Econolite Priority Module through the Centracs platform, providing countywide TSP capability. As a result, no infrastructure gaps were identified related to TSP hardware, communications, or signal controller functionality.

The existing system supports radio-based TSP requests that are compatible with current signal infrastructure and consistent with existing county practices. This countywide capability establishes a strong foundation for implementing or expanding active TSP operations as transit service levels, BRT initiatives, and multimodal priorities continue to evolve, supporting improved schedule reliability and operational efficiency.

5.3.2.7 Automated Traffic Signal Performance Measures (ATSPM)

While Lee County is currently collecting ATSPM data, there are opportunities to improve the data collection through some level of detection enhancement to fully support ATSPM functionality. Even though the county already collects ATSPM data, upgrading existing detection infrastructure and standardizing controller platforms will allow for real-time performance monitoring and data-driven signal optimization.

5.3.2.8 Arterial Dynamic Message Signs (ADMS)

Six ADMS units are recommended for eastbound and westbound approaches along three of the priority corridors, particularly near the I-75 interchange ramps, to improve traveler information during congestion, incidents, and evacuation events.

5.3.2.9 Bluetooth

Bluetooth detection coverage across Lee County's priority corridors is limited and discontinuous, constraining the County's ability to perform consistent corridor-level travel-time data collection and performance evaluation. While a small number of Bluetooth devices are currently deployed, the existing installations are primarily isolated and do not form continuous segments that support robust arterial performance measurement.

To address these gaps, additional Bluetooth detection devices are recommended at signalized intersections where no Bluetooth infrastructure currently exists. Expanding deployments to fill gaps between existing locations will enable the development of consecutive Bluetooth segments along priority corridors, improving the reliability and usefulness of travel time data.

5.3.2.10 Fiber Communications

Fiber optic connectivity is fully established along all corridors. One field switch upgrade and installation is recommended to ensure secure, high-bandwidth Gigabit Ethernet performance and maintain reliable communications.

5.3.2.11 Uninterruptible Power Supply (UPS)

UPS systems are identified for installation at two intersections along Daniels Parkway to close data gaps and reinforce power continuity along crucial corridors during emergency response and evacuation.

5.3.2.12 Remote Power Management Unit (RPMU)

RPMU has been recommended for all intersections as part of the gap analysis since the presence of RPMU could not be verified by agency stakeholders before finalizing this report.

Table 14: Gap Analysis & Recommended Strategy Summary – Lee County

Intersection	EVP **	CV *	PedSafe/ Computer Vision	CCTV	FSP	TSP **	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU ***
							ATC Controller	Detection Upgrade						
Daniels Parkway (C.R. 876)														
Metro Pkwy	○	✓	✓	○	✓	○	○	✓	○	○	○	▲	○	✓
Plantation Rd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Brookshire Lake Blvd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
6 mile Cypress Pkwy	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
American Colony Blvd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	✓	✓
Palomino Ln	○	✓	✓	○	✓	○	○	✓	○	✓	○	○	✓	✓
Danport Blvd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
I-75 SB Ramp	○	✓	✓	○	✓	○	○	✓	✓	○	○	○	○	✓
I-75 NB Ramp	○	✓	✓	✓	✓	○	○	✓	✓	✓	○	○	○	✓
Treeline Ave	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Dr. Martin Luther King Jr. Boulevard (S.R. 82)														
Evans Ave	○	✓	✓	✓	✓	○	✓	✓	○	○	○	○	○	✓
Cranford Ave	○	✓	✓	✓	✓	○	✓	✓	○	✓	○	○	○	✓
Palm Ave	○	✓	✓	○	✓	○	✓	✓	○	✓	○	○	○	✓
Ford St	○	✓	✓	○	✓	○	✓	✓	○	✓	○	○	○	✓
Veronica Shoemaker Blvd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Michigan Ave Link	○	✓	✓	○	✓	○	✓	✓	○	✓	○	○	○	✓
Ortiz Ave	○	✓	✓	○	✓	○	✓	✓	✓	○	○	○	○	✓
I-75 SB Ramp	○	✓	✓	✓	✓	○	✓	✓	○	✓	○	○	○	✓
I-75 NB Ramp	○	✓	✓	✓	✓	○	✓	✓	✓	✓	○	○	○	✓
Colonial Boulevard (S.R. 884)														
Summerlin Rd/Sommerset Dr	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Deleon St	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Cleveland Ave/S Tamiami Trl	○	○	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Solomon Blvd	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Fowler St	○	✓	✓	○	✓	○	○	✓	○	✓	○	○	○	✓
Evans Ave	○	✓	✓	✓	✓	○	○	✓	○	✓	○	▲	○	✓
Metro Pkwy	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
U.S. 41 (Cleveland Avenue/S.R. 45)														
College Pkwy/Woodland Blvd	○	✓	✓	○	✓	○	○	✓	○	○	○	▲	○	✓
Seven Lakes Blvd/Big Pine Wy	○	✓	✓	○	✓	○	○	✓	○	✓	○	○	○	✓
Bell Tower Shops	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Daniels Pkwy	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Cypress Terrace/Sauer Dr	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
Lakeridge Ct/Andrea Ln	○	✓	✓	✓	✓	○	○	✓	○	✓	○	○	○	✓
6 Mile Cypress Pkwy	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Colonial Boulevard (S.R. 884)														
Veronica Shoemaker Blvd	○	✓	✓	✓	✓	○	✓	✓	○	✓	○	○	○	✓
McGregor Baptist Church Dr	○	✓	✓	○	✓	○	○	✓	○	✓	○	○	○	✓
Wrinkler Ave	○	✓	✓	○	✓	○	○	✓	○	○	○	○	○	✓
Ortiz Ave/6 Mile Cypress Pkwy	○	✓	✓	○	✓	○	○	✓	✓	✓	○	○	○	✓
I-75 NB/SB Ramps DDI	○	✓	✓	○	✓	○	○	✓	○	✓	○	○	○	✓
Forum Blvd	○	✓	✓	○	✓	○	○	✓	✓	✓	○	○	○	✓

** CV-RSU are installed, but are not utilized for Transit Signal Priority (TSP).*

*** Emergency Vehicle Preemption (EVP) and Transit Signal Priority (TSP) implemented via radio-based communications (Centracs) based on county preference; CV-RSU not required for EVP or TSP operations.*

**** Remote Power Management Unit (RPMU) recommended for installation but field verification should be conducted to confirm existing conditions and installation needs.*

Legend

✓	Recommended
▲	Recommended to be upgraded
○	Existing
○	Not applicable

5.3.3 Charlotte County

Charlotte County's priority corridors include U.S. 41 (S.R. 45), S.R. 776 (McCall Road), Kings Highway, Veterans Boulevard, and S.R. 776 (El Jobean Road). These corridors play a critical role in connecting regional activity centers such as downtown Punta Gorda and Port Charlotte with the I-75 corridor and major commercial centers. These arterials support daily commuter travel, hurricane evacuation routing, and increasing multimodal demand as development continues to expand. While ITS infrastructure is present along all priority corridors, several key system gaps limit the County's ability to fully employ modern TSM&O capabilities. Existing infrastructure provides a strong foundation, particularly fiber connectivity and ATC at most intersections, but coverage and functionality vary by technology and corridor.

Charlotte County's priority corridors feature several established ITS elements that support basic signal operations and corridor management. However, additional upgrades, such as expanded EVP coverage, enhanced detection to support ATSPM, and the introduction of CV, VRU safety, freight, and transit-supporting technologies, would strengthen operational performance, improve reliability along evacuation routes, and enhance overall system readiness.

While this report was being prepared, Charlotte County had also programmed an ATMS Phase I project (Project ID 457620-1), with design anticipated in FY 2029 and construction in FY 2030. Additionally, Project 451358-1 (U.S. 41 at Midway Boulevard Intersection Improvement and Signal Upgrades) is included in the current District 1 work program, with construction scheduled for FY 2026. The project aims to improve traffic operations and safety through intersection geometry adjustments and turn lane enhancements. While these projects are expected to introduce additional ITS infrastructure and operational enhancements, the specific locations, devices, and scope of improvements were still under development at the time of documentation. As a result, no assumptions regarding new installations, upgrades, or technology deployments associated with this work program have been incorporated into the gap analysis. Consistent with the methodology applied throughout this chapter, only confirmed and defined improvements are reflected in the recommended strategies, while this programmed project is acknowledged separately to avoid duplication or inclusion of anticipated investments.

5.3.3.1 Emergency Vehicle Preemption (EVP)

None of the five priority corridors s EVP coverage. To achieve full deployment, optical EVP systems are identified as necessary at priority-corridor intersections, providing consistent preemption capability and aligning with existing county technology practices. Expanding EVP coverage will improve response times and intersection safety during emergency operations.

5.3.3.2 Connected Vehicle (CV)

CV infrastructure has not yet been deployed within the priority corridors. Installation of C-V2X RSUs is recommended at all intersections to establish a foundation for V2I communication. These RSUs will enable safety and operational message exchange, support CV applications such as TSP, and other emerging connected-mobility applications.

5.3.3.3 PedSafe/Computer Vision

VRU detection capabilities, such as PedSafe/computer-vision systems, are not present at any priority corridor intersection. With the increase of pedestrian and bicycle activity, PedSafe and

computer-vision detection systems are considered beneficial at all intersections within the priority corridors.

5.3.3.4 Closed Circuit Television (CCTV)

CCTV coverage is scattered and inconsistent along the priority corridors. Additional cameras are considered necessary at several intersections to achieve full visual coverage for corridor monitoring and incident verification, improving operational awareness and emergency response time.

5.3.3.5 Freight Signal Priority (FSP)

None of the five priority corridors includes FSP systems. FSP systems are recommended at all intersections along the priority corridors to enhance freight mobility and operational efficiency. Implementing these systems will reduce delays for heavy vehicles, improve coordination at signalized intersections, and support District 1's broader goals for supply-chain reliability and corridor performance.

5.3.3.6 Transit Signal Priority (TSP)

TSPs are considered beneficial across the priority corridors to improve transit reliability and multimodal operations. Because C-V2X RSUs are planned at all intersections, TSP can be supported by transmitting digital priority requests directly from equipped transit vehicles to the signal controller for immediate response. This approach provides efficient signal coordination and prepares the network for future connected and automated transit applications, including potential BRT service.

5.3.3.7 Automated Traffic Signal Performance Measures (ATSPM)

No ATC controller upgrades are needed in Charlotte County; however, several intersections require detection improvements to fully enable ATSPM functionality. Enhancing detection systems will provide higher-quality and more reliable data, allowing operators to monitor signal performance more effectively, identify inefficiencies, and make data-driven adjustments that improve corridor operations.

5.3.3.8 Arterial Dynamic Message Signs (ADMS)

Two ADMS units are recommended to improve driver information and corridor management: one along eastbound S.R. 776 (El Jobean Road) approaching U.S. 41 (S.R. 45), and another along eastbound Kings Highway near the I-75 ramps. These signs will enhance traveler awareness during incidents, congestion, and evacuation events.

5.3.3.9 Bluetooth

Bluetooth readers coverage within Charlotte County's priority corridors is insufficient to support consistent corridor-level performance monitoring, resulting in significant gaps in corridor-wide data availability.

To address these gaps, additional Bluetooth detection devices are recommended at signalized intersections that do not currently have coverage. Priority should be given to deploying Bluetooth readers at adjacent and consecutive intersections along each corridor to enable reliable corridor-level travel time measurement and performance evaluation. Expanding Bluetooth coverage

across all priority corridors would support improved arterial performance monitoring, enhance the effectiveness of operational analyses, and provide a consistent data foundation for ongoing and future TSM&O strategies.

5.3.3.10 Fiber Optic Communications

In terms of communications resiliency, most intersections have fiber connectivity; however, approximately 1,000 feet of fiber expansion remains necessary to close existing gaps and strengthen continuity along Kings Highway. No field switch upgrade to Gigabit-capable hardware is needed since all field switches support continuous and secure Gigabit Ethernet performance.

5.3.3.11 Uninterruptible Power Supply (UPS)

UPS systems are broadly deployed throughout the priority corridors, with seven additional installations identified as appropriate along U.S. 41 (S.R. 45) Kings Highway to ensure signal operation during brief outages.

5.3.3.12 Remote Power Management Unit (RPMU)

RPMU has been recommended for all intersections as part of the gap analysis since the presence of RPMU could not be verified by agency stakeholders before finalizing this report.

Table 15: Gap Analysis & Recommended Strategy Summary – Charlotte County

Intersection	EVP	CV *	PedSafe/ Computer Vision	CCTV	FSP	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU ***
						ATC Controller	Detection Upgrade						
U.S. 41 (S.R. 45)													
Toledo Blade Blvd	✓	✓	✓	○	✓	○	✓	○	○	○	○	○	✓
Enterprise Dr/Paulson Dr	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
El Jobean Rd/Veterans Blvd	✓	✓	✓	○	✓	○	✓	○	○	○	○	✓	✓
Murlock Cir	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Cochran Blvd	✓	✓	✓	○	✓	○	✓	○	○	○	○	✓	✓
Lowes Driveway/Carousel Plaza	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Forrest Nelson Blvd	✓	✓	✓	○	✓	○	○	○	○	○	○	○	✓
Midway Blvd	✓	✓	✓	○	✓	○	○	○	○	○	○	○	✓
W Tarpon Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Port Charlotte Blvd	✓	✓	✓	○	✓	○	○	○	✓	○	○	○	✓
Olean Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Harbor Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Easy St	✓	✓	✓	○	✓	○	○	○	✓	○	○	○	✓
Conway Blvd	✓	✓	✓	✓	✓	○	○	○	✓	○	○	○	✓
Gardner Dr	✓	✓	✓	○	✓	○	○	○	✓	○	○	○	✓
Hancock Ave	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Harborview Rd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Kings Hwy	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
S.R. 776 (McCall Road)													
Placida Rd/Pine St	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
San Casa Dr	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Oriole Blvd	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Winchester Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Gulstream Blvd/Willmington Blvd	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Spinnaker Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Sunnybrook Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Gulstream Blvd/Willmington Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Coliseum Blvd/Pinedale Dr	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Sailors Wy/Gasparilla Rd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Gillot Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Kings Highway													
Harborview Rd	✓	✓	✓	✓	✓	○	✓	○	✓	✓	○	○	✓
Westchester Blvd	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	✓	✓
Elmira Blvd	✓	✓	✓	○	✓	○	○	○	✓	○	○	✓	✓
Olean Blvd	✓	✓	✓	✓	✓	○	○	○	✓	○	○	○	✓
Suncoast Blvd	✓	✓	✓	✓	✓	○	○	○	✓	○	○	✓	✓
Midway Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Rampart Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	✓	✓
Village Dr	✓	✓	✓	○	✓	○	✓	○	✓	○	○	✓	✓
Veterans Blvd	✓	✓	✓	○	✓	○	✓	✓	✓	○	○	○	✓
I-75 SB Ramp	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
I-75 NB Ramp	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Veterans Boulevard													
Murdock Cir/Paulson Dr	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
Cochran Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Atwater St	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Peachland Blvd	✓	✓	✓	✓	✓	○	✓	○	✓	○	○	○	✓
S.R. 776 (El Jobean Road)													
Riverwood Dr	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Flamingo Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Toledo Blade Blvd	✓	✓	✓	○	✓	○	✓	○	✓	○	○	○	✓
Murdock Cir/Enterprise Dr	✓	✓	✓	✓	✓	○	✓	✓	✓	○	○	○	✓

** Transit Signal Priority (TSP) is not listed as a standalone gap item because the proposed C-V2X RSU deployments will provide TSP-ready capability at all priority-corridor intersections. Implementation will require only the addition of onboard units (OBUs) on transit vehicles to communicate with the RSUs.*

**** Remote Power Management Unit (RPMU) recommended for installation but field verification should be conducted to confirm existing conditions and installation needs.*

Legend

✓	Recommended
○	Existing
○	Not applicable

5.3.4 Sarasota County

Sarasota County's priority corridors include U.S. 301 (Washington Boulevard/S.R. 683), Fruitville Road (S.R. 780), University Parkway (C.R. 610), U.S. 41 (Tamiami Trail/S.R. 45), and Clark Road (S.R. 72). These arterials serve as major east–west and north–south mobility routes connecting downtown Sarasota, the University Town Center area, commercial and medical districts, and key interstate access points. They also play a critical role in regional evacuation, commuter travel, and multimodal connectivity across the county.

Sarasota County's priority corridors contain a mix of existing ITS assets with several corridors where system upgrades would strengthen operational performance. While fiber connectivity is fully established and CCTV coverage is present along much of the network, opportunities remain to expand RSUs, EVP, VRU detection, freight priority, and transit-supporting technologies. ATSPM capabilities also require corridor-wide controller and detection upgrades to enable modern performance monitoring and data-driven signal optimization. These conditions highlight where the existing infrastructure provides a strong operational foundation and where targeted enhancements are needed to fully support advanced TSM&O strategies.

5.3.4.1 Emergency Vehicle Preemption (EVP)

EVP is not fully deployed along the priority corridors. Optical EVP systems are identified for installation at remaining intersections to establish consistent emergency response functionality and align with existing county practices. Enhancing EVP coverage will support faster and safer emergency vehicle passage along these high-volume arterial routes.

5.3.4.2 Connected Vehicle (CV)

CV infrastructure is already present at selected intersections along U.S. 301 (Washington Boulevard/S.R. 683) and one intersection at U.S. 41 (Tamiami Trail/S.R. 45) within Sarasota County. These installations demonstrate early investment and an initial foundation in V2I technologies; however, the County does not currently have defined operational plans to utilize these RSUs beyond limited CV-based applications or signal priority, which is currently supported through radio-based communication at select locations. Regardless, there is value to deploy RSUs at all priority corridor intersections to provide the CV functionality.

As part of this gap analysis, several programmed CV projects are planned for future implementation and are coordinated with the I-75 Connected Vehicle Master Plan. These include FDOT project IDs:

- 449122-1 and 447887-1 (construction programmed for FY 2026), and
- 453538-1 and 453539-1 (construction programmed for FY 2028).

These projects are expected to expand RSU coverage at additional intersections over time and improve County readiness for V2I applications as more OBU-equipped vehicles join the fleet.

Sarasota County has expressed a preference to continue supporting TSP and other priority-request functions through its existing radio-based communication, which is already used for TSP operations at a limited number of intersections. However, RSUs provide the opportunity to deploy other CV technologies, now and into the future improving system consistency, supporting future CV-enabled applications, and positioning the County to take advantage of evolving connected and automated vehicle capabilities as supporting vehicle technologies become more

prevalent. For this reason, additional RSU deployment is recommended to fill the gaps where existing RSUs are missing.

5.3.4.3 PedSafe/Computer Vision

PedSafe and computer-vision VRU detection systems are considered beneficial at all intersections along the priority corridors. As pedestrian, bicycle, and transit activity increases across Sarasota's urban and suburban environments, advanced VRU detection will enhance safety and identify potential conflicts. Two intersections along U.S. 301 (Washington Boulevard/S.R. 683) currently operate a pilot PedSafe technology for the City of Sarasota.

5.3.4.4 Closed Circuit Television (CCTV)

CCTV coverage exists along portions of the corridors, but additional installations are required to achieve full corridor coverage. Filling these gaps will improve situational awareness, support incident verification, and enhance operational responsiveness.

5.3.4.5 Freight Signal Priority (FSP)

FSP systems are recommended at all intersections along the priority corridors to support truck movement on key freight connectors. Implementing FSP will improve truck progression, reduce delays, and support regional supply-chain reliability.

5.3.4.6 Transit Signal Priority (TSP)

Although CV infrastructure is present or planned at select locations within the priority corridors, particularly along U.S. 301 (Washington Boulevard/S.R. 683), current TSP operations within Sarasota County continue to rely on the County's established radio-based communication approach. The deployment of CV roadside units (RSUs) along these corridors reflects FDOT's broader connected vehicle initiatives, including projects associated with the I-75 Connected Vehicle Master Plan and other programmed projects, rather than a change in the County's preferred TSP operating strategy.

Consistent with Sarasota County's technology preference, all TSP implementations identified in this gap analysis are recommended to remain radio-based. This approach ensures consistency with existing county practices, minimizes new infrastructure or integration needs, and maintains a consistent communication method for future TSP expansion.

Traffic signal controllers along the priority corridors will support TSP functionality using the County's preferred radio-based system, enabling transit vehicles to request priority in a reliable and operationally consistent manner.

5.3.4.7 Automated Traffic Signal Performance Measures (ATSPM)

ATSPM readiness across Sarasota County's priority corridors is currently developed with deployment of ATCs and varying levels of detection capability. While some intersections are equipped with ATC hardware and supporting stop bar detection, these deployments do not yet provide sufficient coverage to support corridor-wide ATSPM functionality or consistent, system-level performance monitoring.

As part of this gap analysis, none of the intersections are identified as requiring new ATCs. Sarasota County has MPO-funded signal replacement activities (Project ID 456052-1)

anticipated within the FY 2025–FY 2026 timeframe that are expected to replace legacy controllers at multiple signalized intersections throughout the county. While the project includes improvements at locations beyond the priority corridor network, only intersections along part of U.S. 301 (Washington Boulevard/S.R. 683), part of Fruitville Road (S.R. 780), U.S. 41 (Tamiami Trail/S.R. 45), and Clark Road (S.R. 72) fall within the priority corridors evaluated in this study. Additionally, according to D1 stakeholder, FDOT has procured new Cubic Commander ATC controllers for deployment at state road intersections covering intersections along University Parkway (C.R. 610) and some remaining intersections of U.S. 301 (Washington Boulevard/S.R. 683).

Vehicle Detection upgrades are expected to include improvements to stop-bar detection in preference to D5 stakeholders, where necessary. Few intersections are expected to require stop bar detection systems. These improvements will support more reliable performance monitoring and enable proactive signal optimization.

5.3.4.8 Arterial Dynamic Message Signs (ADMS)

Five ADMS units are recommended along the priority corridors near I-75 interchange ramps:

- 2 units: eastbound and westbound along University Parkway (C.R. 610)
- 2 units: eastbound and westbound along Fruitville Road (S.R. 780)
- 1 unit: eastbound along Clark Road (S.R. 72)

These installations will enhance traveler information and incident communication, and support evacuation route management during emergencies.

5.3.4.9 Bluetooth

Bluetooth reader coverage is incomplete along the priority corridors. Additional devices are identified for installation to strengthen travel-time data collection and improve corridor-level performance monitoring.

5.3.4.10 Fiber Optic Communications

Fiber optic connectivity is fully established throughout the priority corridors, and no new fiber installation is required. However, several intersections may require upgrades to Gigabit-capable field switches to maintain high-bandwidth communications performance and ensure compatibility with the increasing number of connected field devices. Field verification is required to confirm field switch capability particularly for intersections within the priority corridors for the City of Sarasota limits since the field switches capabilities could not be verified by agency stakeholders before finalizing this report.

5.3.4.11 Uninterruptible Power Supply (UPS)

UPS coverage is generally strong across the priority corridors, with additional installations identified as appropriate along S.R. 683/U.S. 301 and Fruitville Road to ensure uninterrupted signal operation during brief outages, severe weather, or evacuation events.

5.3.4.12 Remote Power Management Unit (RPMU)

RPMU has been recommended for intersections within the City of Sarasota limits as part of the gap analysis since the presence of RPMU could not be verified by agency stakeholders before finalizing this report.

Table 16: Gap Analysis & Recommended Strategy Summary – Sarasota County

Intersection	EVP	CV *	PedSafe/ Computer Vision	CCTV	FSP	TSP **	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch ***	UPS	RPMU ****
							ATC Controller	Detection Upgrade						
U.S. 301 (Washington Boulevard/S.R. 683)														
Desoto Rd	○	!	✓	○	✓	✓	!	○	○	✓	○	▲	○	○
47th St	○	!	✓	○	✓	✓	!	○	○	✓	○	▲	○	○
Northgate Blvd	○	!	✓	○	✓	✓	!	○	○	✓	○	▲	○	○
Myrtle St	○	!	✓	○	✓	✓	!	○	○	✓	○	▲	○	○
Dr Martin Luther King Jr Way	○	!	✓	○	✓	✓	!	○	○	✓	○	▲	○	○
17th St	○	○	✓	○	✓	✓	○	✓	○	✓	○	▲	✓	✓
12th St	○	○	✓	○	✓	✓	○	✓	○	✓	○	▲	✓	✓
10th St	○	○	✓	○	✓	✓	○	✓	○	✓	○	▲	✓	✓
3rd St/Fruitville Rd	○	○	○	○	✓	✓	○	✓	○	○	○	▲	✓	✓
Main St	○	○	○	○	✓	✓	○	✓	○	✓	○	▲	○	✓
Ringling Blvd	○	○	✓	✓	✓	✓	○	✓	○	✓	○	▲	✓	✓
Oak St	○	○	✓	✓	✓	✓	○	✓	○	✓	○	○	✓	✓
Mound St	○	○	○	○	✓	✓	○	○	○	✓	○	▲	○	✓
Fruitville Road (S.R. 780)														
N School Ave	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
N Lime Ave	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
N Shade Ave	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
N Tuttle Ave	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
N Lockwood Ridge Rd	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
N Beneva Rd	○	!	✓	○	✓	✓	○	○	○	○	○	!	✓	○
Mimosa Dr	○	!	✓	○	✓	✓	○	○	○	✓	○	!	✓	○
Arbor Oaks Dr/McIntosh Rd	○	!	✓	○	✓	✓	○	○	○	○	○	!	○	○
N Honore Ave	○	!	✓	○	✓	✓	!	○	○	○	○	○	○	○
Paramount Dr	○	!	✓	○	✓	✓	!	○	✓	✓	○	○	○	○
Cattlemen Rd	○	!	✓	○	✓	✓	!	○	○	○	○	○	○	○
I-75 SB Ramp	○	!	✓	✓	✓	✓	!	○	○	✓	○	○	○	○
I-75 NB Ramp	○	!	✓	✓	✓	✓	!	○	✓	✓	○	○	○	○
University Parkway (C.R. 610)														
N Washington Blvd	○	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
N Shade Ave	○	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○
N Tuttle Ave	○	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
N Lockwood Ridge Rd	○	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
Conservatory Dr/Country Park Wy	✓	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○
Whitfield Ave	✓	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
Longwood Run Blvd/ The Park Blvd	✓	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○
Medici Ct/Lenox Pl	✓	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○
Honore Ave	○	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
Cattlemen Rd/Cooper Creek Blvd	✓	✓	✓	○	✓	✓	!	○	✓	○	○	○	○	○
I-75 NB/SB Ramps DDI	○	✓	✓	✓	✓	✓	○	○	✓	✓	○	○	○	○
U.S. 41 (Tamiami Trail/S.R. 45)														
Bee Ridge Rd	○	○	✓	○	✓	✓	○	○	○	○	○	!	○	○
Glengary St	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Worrington Rd	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Field Rd	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Proctor Rd	○	!	✓	○	✓	✓	!	○	○	○	○	!	○	○
Phillippi St	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Monte Carlo Dr	○	!	✓	○	✓	✓	!	○	○	✓	○	!	✓	○
Constitution Blvd	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Upper Beechwood Ave/Southwinds Dr	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Clark Rd/SR 72	○	!	✓	○	✓	✓	!	○	○	○	○	○	○	○
Clark Road (S.R. 72)														
Gulf Gate Mall	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Vacaro Dr/Gateway Ave	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Swift Rd	○	!	✓	○	✓	✓	!	○	○	○	○	○	○	○
S Lockwood Ridge Rd	○	!	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Beneva Rd	○	!	✓	○	✓	✓	!	○	○	○	○	!	○	○
Sawyer Rd	○	✓	✓	○	✓	✓	!	○	○	✓	○	!	○	○
McIntosh Rd	○	✓	✓	○	✓	✓	!	○	○	✓	○	!	○	○
Honore Ave	○	✓	✓	○	✓	✓	!	○	○	○	○	○	○	○
Gantt Rd/Approach Rd	○	✓	✓	○	✓	✓	!	○	✓	✓	○	○	○	○
Catamaran Dr/Anise Dr	○	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○
I-75 NB/SB Ramps DDI	✓	✓	✓	○	✓	✓	!	○	○	✓	○	○	○	○

** CV-RSU are installed, but are not utilized for Transit Signal Priority (TSP).*
*** Transit Signal Priority (TSP) implemented via radio-based communications based on county preference; CV-RSU not required for TSP operations.*
**** Field Switches recommended for upgrades, but field verification should be conducted to confirm existing conditions and installation needs.*
**** Remote Power Management Unit (RPMU) recommended for installation, but field verification should be conducted to confirm existing conditions and installation needs.*

Legend

✓	Recommended
▲	Recommended to be upgraded
○	Existing
!	Pending
○	Not applicable

5.3.5 Manatee County

Manatee County's priority corridors include 53rd Avenue (S.R. 70), Cortez Road (S.R. 684), U.S. 41 (8th Avenue/S.R. 45), and U.S. 41 (14th Street/S.R. 45). These arterial routes serve as major east–west and north–south connectors supporting regional travel between Bradenton, the coastal communities, I-75, and key commercial and employment centers. The corridors also play a critical role in evacuation routing, freight activity, and daily commuter travel throughout the county.

The priority corridors contain a variety of existing ITS assets, with several opportunities to expand capabilities and improve operational performance. While fiber connectivity, Bluetooth detection, CCTV coverage, and UPS infrastructure are present at many locations, other system elements, including EVP, CV, advanced detection for VRU applications, and ATC controller functionality, are limited or not widely deployed. All intersections currently operate without ATCs, constraining support for advanced applications such as ATSPM and priority-based operations. There are a few pending projects that will make upgrades to TSM&O devices and infrastructure within several of the priority corridors. Additional targeted upgrades to controllers, detection systems, field switches, and communications infrastructure would strengthen system reliability, enhance data quality, and support future TSM&O strategies across the network.

At the time assessment, FDOT Safety Project 455188-1 FY 2029, falls within the 53rd Avenue (S.R. 70) priority corridor, and FDOT Safety Project 449653-1 FY 2027, falls within the U.S. 41 (14th Street/S.R. 45) priority corridor. However, at the time of report preparation, the specific scope, locations, and technologies associated with these safety projects were not available; therefore, consistent with the study methodology, no assumptions regarding potential improvements or deployments have been incorporated into the gap analysis or recommended strategies.

5.3.5.1 Emergency Vehicle Preemption (EVP)

At the time of this assessment, EVP was not fully deployed along the priority corridors. However, all state-maintained traffic signals are programmed to be equipped with a radio/cellular-based EVP system (through AI's Glance software) by the end of 2026 according to stakeholders from District 1. This planned deployment will result in full EVP coverage across the priority corridors and ensure consistency with the EVP technology currently used countywide. Once implemented, this approach will improve emergency vehicle progression and enhance intersection safety along these critical arterial routes.

5.3.5.2 Connected Vehicle (CV)

C-V2X RSUs are not in use along the priority corridors, and existing signal operations do not depend on CV-based applications. In accordance with the I-75 CV Master Plan, several intersections along Cortez Road will be equipped with RSUs following programmed projects:

- 455925-1 (scheduled for letting in FY 2026), and
- 445044-1 (scheduled for letting in FY 2026).

Project information has been provided by stakeholders from District 1 and is subject to confirmation as these projects advance through final design and construction.

Future CV deployment should be targeted at intersections where RSUs are missing following the Cortez Road improvements, allowing the County to expand CV readiness while maintaining consistency with regional CV planning efforts.

5.3.5.3 PedSafe/Computer Vision

PedSafe and computer-vision VRU detection systems are considered beneficial at all intersections along the priority corridors. As pedestrian, bicycle, and transit activity continues to grow, advanced VRU detection will enhance safety.

5.3.5.4 Closed Circuit Television (CCTV)

CCTV coverage exists along the corridors, but additional installations are required to achieve full visibility. Expanding CCTV coverage will improve situational awareness, support incident verification, and enhance the county's ability to manage corridor operations in real time.

As noted by stakeholders from District 1, a CCTV camera at the Cortez Road and 71st Street intersection is expected to be added as part of FDOT Project 445044-1.

5.3.5.5 Freight Signal Priority (FSP)

FSP systems are recommended at all intersections throughout the priority corridors to support the movement of freight along major north–south and east–west connectors. Implementing FSP will improve truck movement, reduce delay, and strengthen supply-chain reliability across key freight travel routes.

5.3.5.6 Transit Signal Priority (TSP)

Manatee County is implementing a radio/cellular based EVP system that can be utilized to support the operation of TSP. Radio/cellular TSP (Glance AI) is currently operational at several intersections along U.S. 41 (14th Street/S.R. 45) and, according to stakeholders from District 1, the County is working toward the expansion of radio/cellular TSP to additional state signals through a programmed future project.

While CV Roadside Units (RSUs) are planned for deployment as part of the I-75 Connected Vehicle Master Plan and other programmed initiatives, Manatee County intends to maintain consistency with its established radio/cellular-based approach for TSP operations. The deployment of CV roadside units (RSUs) along these corridors reflects FDOT's broader connected vehicle initiatives, rather than a change in the County's preferred TSP operating strategy.

Consistent with Manatee County's technology preference, all TSP implementations identified in this gap analysis are recommended to remain radio based. This approach maintains TSP readiness at the controller level while aligning with Manatee County's preference for radio/cellular-based priority communication.

Traffic signal controllers along the priority corridors will support TSP functionality using the County's preferred radio-based system, enabling transit vehicles to request priority in a reliable and operationally consistent manner. Additionally, CV infrastructure can be reserved for future applications as connected vehicle technologies and fleet adoption continue to evolve.

5.3.5.7 Automated Traffic Signal Performance Measures (ATSPM)

ATSPM deployment across Manatee County's priority corridors will require widespread upgrades even though ATSPM is currently supported at select locations using existing controllers, existing detection infrastructure, and the Miovision ATSPM platform. While this approach enables baseline performance monitoring today, expanded and more consistent ATSPM functionality across the corridor network will require upgrades to both traffic signal controllers and detection systems, for accurate advanced and presence detection to support reliable ATSPM analytics.

Transitioning to ATC, along with targeted detection enhancements and standardization, would improve data resolution, reliability, and interoperability, supporting more robust performance analytics and proactive signal optimization across the corridor network. Several programmed projects are expected to advance these improvements, including FDOT Projects:

- 455925-1 (scheduled for letting in FY 2026), and
- 445044-1 (scheduled for letting in FY 2026).

According to stakeholders from District 1, these programmed projects are anticipated to install ATCs and detection upgrades to support ATSPM functionality at additional intersections along Cortez Road (S.R. 684). Project information should be confirmed as the projects advance.

Additionally, stakeholder coordination with District 1 indicated that Manatee County plans to deploy Cubic Commander ATC controllers at many state road intersections using MPO funds through FDOT Project ID 456052-2 anticipated within the FY 2026 timeframe. While the project includes improvements at locations beyond the priority corridor network, only intersections along part of 53rd Avenue (S.R. 70), Cortez Road (S.R. 684), and U.S. 41 (14th Street/S.R. 45) fall within the priority corridors evaluated in this study. Additionally, according to D1 stakeholders, FDOT has procured new Cubic Commander ATC controllers for deployment at state road intersections covering the rest of the intersections along 53rd Avenue (S.R. 70) and U.S. 41 (8th Avenue/S.R. 45).

5.3.5.8 Arterial Dynamic Message Signs (ADMS)

One ADMS installation is recommended along 53rd Avenue (S.R. 70) near the I-75 interchange and is included in Project ID 442097-1 which is currently under construction (FY 2025). This location will improve traveler information, support incident management, and enhance evacuation messaging.

5.3.5.9 Bluetooth

Bluetooth reader coverage is not fully established along the priority corridors. Additional Bluetooth detection devices are identified for installation at signalized intersections where Bluetooth infrastructure is not currently installed. Future deployments will prioritize filling gaps between existing installations to create longer contiguous monitoring segments rather than isolated point measurements. Additionally, future deployments will expand travel-time monitoring and provide corridor-level performance data to support real-time and planning analyses.

5.3.5.10 Fiber Optic Communications

Fiber connectivity is present throughout the priority corridors, and no additional fiber installation is required. However, several intersections require upgrades to Gigabit-capable field switches to support reliable and high-bandwidth communications across all field devices.

Along Cortez Road (S.R. 684), field switch upgrades are anticipated as part of programmed projects:

› 455925-1 (scheduled for letting in FY 2026)

› 445044-1 (scheduled for letting in FY 2026)

These projects are expected to improve network capacity and support increased data demands from connected field devices. Project information has been provided by personnel from District 1 and should be confirmed as the projects advance.

5.3.5.11 Uninterruptible Power Supply (UPS)

UPS coverage is provided at all signalized intersections across the county's priority corridors. The existing UPS infrastructure supports uninterrupted signal operations during outages, severe weather, and evacuation events.

5.3.5.12 Remote Power Management Unit (RPMU)

Remote Power Management Units are identified for installation at all signalized intersections along Manatee County's priority corridors. While existing UPS infrastructure provides localized backup power, the absence of centralized monitoring and control limits the County's ability to manage power conditions, assess battery health, and respond efficiently to outages or post-storm recovery events.

The recommended RPMU deployment would enable remote visibility and management of signal cabinet power systems, supporting real-time status monitoring, faster fault identification, and improved operational response during power disruptions. Expanding RPMU coverage across all priority-corridor intersections would strengthen system reliability and support more resilient traffic signal operations during severe weather and evacuation events.

Table 17: Gap Analysis & Recommended Strategy Summary – Manatee County

Intersection	EVP **	CV	PedSafe/ Computer Vision	CCTV	FSP	TSP *	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch	UPS	RPMU
							ATC Controller	Detection Upgrade						
53rd Avenue (S.R. 70)														
22nd St	◐	✓	✓	○	✓	◐	◐	○	●	✓	○	○	○	✓
US Hwy 301	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
30th St	◐	✓	✓	○	✓	◐	◐	○	●	✓	○	○	○	✓
33rd St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
37th St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
39th St/42nd St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
Loockwood Ridge Rd/45th St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
Natalie Wy	◐	✓	✓	○	✓	◐	◐	○	●	✓	○	○	○	✓
Caruso Rd	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
Tara Blvd/Creekwood Blvd	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
I-75 SB Ramp	◐	✓	✓	○	✓	◐	◐	○	◐	○	○	○	○	✓
I-75 NB Ramp	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
Cortez Road (S.R. 684)														
75th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
71st St	◐	◐	✓	◐	✓	◐	◐	◐	●	✓	○	◐	○	✓
66th St	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	◐	○	✓
59th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
Cape Vista Dr	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	◐	○	✓
51st St	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	◐	○	✓
43rd St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
37th St	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	◐	○	✓
34th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	◐	○	✓
26th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
20th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
14th St	◐	◐	✓	○	✓	◐	◐	◐	●	○	○	○	○	✓
9th St	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	○	○	✓
5th St	◐	◐	✓	○	✓	◐	◐	◐	●	✓	○	○	○	✓
U.S. 41 (8th Avenue/S.R. 45)														
10th St	◐	✓	✓	○	✓	◐	◐	✓	●	✓	○	○	○	✓
7th St	◐	✓	✓	✓	✓	◐	◐	✓	●	✓	○	○	○	✓
5th St	◐	✓	✓	○	✓	◐	◐	✓	●	○	○	▲	○	✓
U.S. 41 (14th Street/S.R. 45)														
Orlando Ave	◐	✓	✓	○	✓	◐	◐	✓	●	✓	○	○	○	✓
49th Ave Dr	◐	✓	✓	○	✓	◐	◐	✓	●	✓	○	○	○	✓
53rd Ave	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
57th Ave	◐	✓	✓	○	✓	◐	◐	✓	●	✓	○	▲	○	✓
60th Ave	◐	✓	✓	○	✓	◐	◐	✓	●	✓	○	○	○	✓
Bayshore Gardens Pkwy	◐	✓	✓	○	✓	○	○	○	●	○	○	▲	○	✓
Florida Blvd	◐	✓	✓	○	✓	○	◐	✓	●	✓	○	▲	○	✓
69th Ave	◐	✓	✓	○	✓	○	◐	✓	●	✓	○	▲	○	✓
Pearl Ave	◐	✓	✓	○	✓	○	◐	✓	●	✓	○	▲	○	✓
Whitfield Ave	◐	✓	✓	✓	✓	○	○	✓	●	○	○	▲	○	✓
Tallevast Rd/Gaines Ave	◐	✓	✓	○	✓	○	◐	✓	●	○	○	▲	○	✓
Branden Ave	◐	✓	✓	○	✓	○	◐	✓	●	○	○	▲	○	✓
53rd Avenue (S.R. 70)														
5th St	◐	✓	✓	✓	✓	◐	◐	○	●	○	○	○	○	✓
9th St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓
15th St	◐	✓	✓	○	✓	◐	◐	○	●	○	○	○	○	✓

** Transit Signal Priority (TSP) implemented via radio/cellular-based communications based on county preference; CV-RSU not required for TSP operations.*

*** Emergency Vehicle Preemption (EVP) implemented via radio/cellular-based communications based on county preference.*

Legend

✓	Recommended
▲	Recommended to be upgraded
○	Existing
◐	Pending
●	Not applicable

5.3.6 Polk County

Polk County's priority corridors include Bartow Road (U.S. 98/S.R. 35), North Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), Florida Avenue (U.S. 98/S.R. 35), and U.S. 27 (S.R. 25). These arterials serve as major north–south and east–west mobility routes connecting Lakeland, Bartow, Davenport, and the surrounding communities with I-4, key commercial districts, industrial centers, schools, hospitals, and recreational destinations. The corridors also support critical hurricane evacuation routes, regional commuter patterns, and multimodal travel throughout the county.

The priority corridors include a mix of established ITS infrastructure with several opportunities to enhance system performance. While CV infrastructure is present at most intersections and fiber connectivity is well established, targeted upgrades are needed to expand EVP coverage, enhance VRU detection, strengthen transit and freight-supporting capabilities, and improve ATSPM readiness through comprehensive detection enhancements. Additional upgrades to field switches, UPS installations, Bluetooth coverage, and select fiber segments will further improve operational reliability, communications performance, and corridor-level data collection.

At the time of this assessment, Polk County has a programmed ATMS Phase I project (Project ID 442103-1) with design anticipated in FY30 and construction in FY31. The specific intersections, limits, and TSM&O technologies to be implemented as part of this project were still under development. Since most of the intersections within the priority corridors are maintained by the City of Lakeland, only U.S. 27 (S.R. 25) may benefit from funds for this programmed project. However, there is some infrastructure already installed at intersections along U.S. 27 (S.R. 25). While the project may impact one priority corridor, insufficient detail was available to confirm the scope of infrastructure installations, upgrades, or system capabilities. Accordingly, no assumptions regarding improvements, new installations, or upgrades associated with this project have been incorporated into the gap analysis. This project is acknowledged for planning context and will require further coordination as design advances and implementation details are finalized.

5.3.6.1 Emergency Vehicle Preemption (EVP)

EVP is not fully deployed along the priority corridors. Optical EVP systems are considered necessary at 21 remaining intersections to provide consistent preemption capability and align with existing agency practices. Expanding EVP coverage will enhance emergency vehicle progression and improve intersection safety during critical response events.

5.3.6.2 Connected Vehicle (CV)

Polk County is among the most advanced in District 1 with respect to CV readiness, with RSUs already deployed at a majority of priority-corridor intersections. Five additional C-V2X RSUs are recommended to achieve full V2I coverage across all intersections within the priority corridors.

5.3.6.3 PedSafe/Computer Vision

PedSafe and computer-vision VRU detection systems are considered beneficial at all intersections within the priority corridors. As pedestrian, bicycle, and transit activity continues to grow, advanced VRU detection will enhance safety and enable proactive identification of conflicts or near-miss activity.

5.3.6.4 Closed Circuit Television (CCTV)

CCTV coverage is incomplete along the corridors. Some additional cameras are identified for installation to ensure full visibility for incident verification, traffic monitoring, and operational responsiveness throughout the network.

5.3.6.5 Freight Signal Priority (FSP)

FSP systems are recommended at all intersections along the priority corridors. These installations will support truck movements on key freight connectors, reduce delays, and improve progression along high-volume corridors such as U.S. 27 (S.R. 25) and Bartow Road (U.S. 98/S.R. 35), N Florida Avenue (U.S. 98/S.R. 35), and Florida Avenue (U.S. 98/S.R. 35), enhancing regional supply-chain reliability.

5.3.6.6 Transit Signal Priority (TSP)

TSP can be implemented at any intersection along the priority corridors, as all signal controllers are capable of supporting TSP functionality. Because CV infrastructure will be fully deployed after the remaining RSUs are installed, equipped transit vehicles will be able to send digital TSP requests directly to the signal controller for immediate response. This provides a consistent, scalable framework for future multimodal improvements, supporting more reliable transit operations and preparing the corridors for potential BRT or higher-frequency transit service.

5.3.6.7 Automated Traffic Signal Performance Measures (ATSPM)

ATCs are already in place throughout the priority corridors; however, detection enhancements are needed at most locations to fully support ATSPM functionality. Improving detection reliability and adding advanced applications will enable the high-resolution data required for real-time performance monitoring and signal optimization.

5.3.6.8 Arterial Dynamic Message Signs (ADMS)

No ADMS installations are recommended along Polk County's priority corridors.

5.3.6.9 Bluetooth

Gaps remain in Bluetooth detection coverage across Polk County's priority corridors, limiting the availability of consistent corridor-level travel time and performance monitoring. Additional Bluetooth readers are recommended at intersections without existing infrastructure to strengthen travel-time data collection, corridor performance analysis, and integration with real-time traveler information systems.

5.3.6.10 Fiber Optic Communications

Fiber connectivity is present at most intersections along the priority corridors. Approximately 1,700 feet of new fiber installation is anticipated to be needed along N Florida Avenue (U.S. 98/S.R. 35) to close existing communication gaps at Pine Street. Alternatively, it may be possible to add the intersections along this stretch of N Florida Avenue onto the network through a potential partnership with the City-owned electric company that has an existing fiber lease agreement with FDOT.

Field switch capabilities vary and are not fully documented at all locations. Along U.S. 27 (S.R. 25), legacy cabinet switches may be operating at 10/100 Mbps, limiting the ability to fully leverage existing fiber capacity and support higher bandwidth ITS applications. As a result, upgrades to Gigabit- or 10-Gigabit-capable field switches represent a key gap to support future data demands, resiliency, and advanced TSM&O deployments.

Stakeholders from Polk County could not confirm the type and speed of field switches along U.S. 27 (S.R. 25) during the time of assessment. While a field switch upgrade at the intersection of U.S. 27 (S.R. 25) at North Boulevard/Holly Hill Cutoff Road and Bartow Road (U.S. 98/S.R. 35) at Combee Road are programmed as part of the I-4 Frame project, conditions at the remaining intersections along the U.S. 27 (S.R. 25) will require field verification. Because field switch type and capacity cannot be confirmed, these locations have been identified in the gap analysis to account for potential upgrade needs. Field verification will be required to determine whether existing switches meet current and future performance requirements or if replacement with Gigabit-capable equipment is necessary to support reliable, high-bandwidth communications.

5.3.6.11 Uninterruptible Power Supply (UPS)

UPS coverage is mostly complete along the priority corridors, with some additional UPS system installations identified as appropriate along N Florida Avenue (U.S. 98/S.R. 35), Memorial Boulevard (U.S. 92/S.R. 546), and U.S. 27 (S.R. 25). These installations will help maintain uninterrupted signal operation during power outages, severe weather, or evacuation events.

5.3.6.12 Remote Power Management Unit (RPMU)

Remote Power Management Units (RPMUs) are not consistently available across Polk County's priority corridors, limiting the County's ability to remotely monitor and manage power conditions at traffic signal cabinets during outages, equipment faults, or post-storm recovery. As part of the ongoing FDOT I-4 Frame–related project, RPMU installations are being implemented at select locations; however, deployment remains limited and uneven across the broader priority-corridor network.

All signalized intersections along U.S. 27 (S.R. 25) are included within the scope of the FDOT I-4 Frame project for RPMU deployment. At the time of this assessment, the project remains under construction, and RPMU devices at these intersections are not yet fully installed or operational. Therefore, current RPMU deployments within Polk County should be considered planned or in-progress rather than part of the County's fully established ITS infrastructure.

Expanding RPMU deployment to remaining priority-corridor intersections would address these gaps by improving power resiliency, reducing field response times, and supporting faster recovery following power disruptions or severe weather events. Broader RPMU coverage, particularly when paired with existing UPS infrastructure, would enhance Polk County's ability to remotely manage signal cabinet power, prioritize critical equipment, and maintain reliable signal operations along evacuation routes and other high-priority arterials.

Table 18: Gap Analysis & Recommended Strategy Summary – Polk County

Intersection	EVP	CV *	PedSafe/ Computer Vision	CCTV	FSP	ATSPM		ADMS	Bluetooth	Fiber Optic	Field Switch **	UPS	RPMU
						ATC Controller	Detection Upgrade						
Bartow Road (U.S. 98/S.R. 35)													
Lake Parker Ave	✓	✓	✓	○	✓	○	✓	●	○	○	○	○	✓
Lake Bonny Park	✓	✓	✓	✓	✓	○	✓	●	✓	○	○	○	✓
New Jersey Rd	✓	○	✓	○	✓	○	✓	●	○	○	○	○	✓
N Crystal Lake Dr	○	○	✓	○	✓	○	✓	●	○	○	○	○	✓
Fredricksburg Ave/S Crystal Lake Dr	✓	○	✓	○	✓	○	✓	●	○	○	○	○	✓
Commerce Point Dr	✓	○	✓	✓	✓	○	✓	●	○	○	○	○	✓
Edgewood Dr	○	✓	✓	○	✓	○	✓	●	○	○	○	○	✓
S Combee Rd	○	○	✓	○	✓	○	✓	●	✓	○	!	○	!
N Florida Avenue (U.S. 98/S.R. 35)													
I-4 Ramps	○	○	✓	○	✓	○	✓	●	✓	○	○	○	!
Pyramid Lkwy	○	○	✓	✓	✓	○	✓	●	✓	○	○	✓	!
Griffin Rd	○	○	✓	○	✓	○	○	●	✓	○	○	○	!
Bella Vista St	✓	○	✓	○	✓	○	✓	●	✓	○	○	○	!
10th St/Parkview Pl	○	○	✓	○	✓	○	✓	●	✓	○	○	○	!
Memorial Boulevard (U.S. 92/S.R. 546)													
Lincoln Ave	✓	○	✓	○	✓	○	✓	●	✓	○	○	✓	✓
Martin L King Jr Ave	✓	○	✓	○	✓	○	✓	●	✓	○	○	○	✓
N Florida Ave	○	○	✓	○	✓	○	○	●	✓	○	○	○	✓
Lakeland Hills Blvd/Massachusetts Ave	○	○	✓	○	✓	○	✓	●	✓	○	○	○	✓
Lakeshore Dr	✓	○	✓	○	✓	○	✓	●	✓	○	○	○	✓
Ingraham Ave	✓	○	✓	○	✓	○	✓	●	✓	○	○	○	✓
Lake Parker Ave	✓	○	✓	○	✓	○	✓	●	✓	○	○	○	✓
Florida Avenue (U.S. 98/S.R. 35)													
Parker St	○	○	✓	✓	✓	○	✓	●	○	○	○	○	✓
Bartow Rd	○	○	✓	○	✓	○	✓	●	○	○	○	○	✓
Pine St	○	✓	✓	✓	✓	○	○	●	✓	✓	○	✓	✓
Main St	○	✓	✓	○	✓	○	✓	●	✓	○	○	✓	✓
U.S. 27 (S.R. 25)													
I-4 NB Ramp	○	○	✓	○	✓	○	✓	●	○	○	▲	○	!
Home Run Blvd/Posner Blvd	✓	○	✓	○	✓	○	✓	●	○	○	▲	○	!
Deer Creek Blvd	✓	○	✓	○	✓	○	✓	●	✓	○	▲	○	!
Citrus Ridge Dr	✓	○	✓	○	✓	○	✓	●	✓	○	▲	○	!
Cottonwood Dr	○	○	✓	✓	✓	○	✓	●	✓	○	▲	○	!
Ridgewood Lakes Blvd	✓	○	✓	○	✓	○	✓	●	○	○	▲	○	!
Holly Hill Rd/Massee Rd	○	○	✓	○	✓	○	✓	●	✓	○	▲	○	!
North Blvd/Holly Hill Cutoff Rd	✓	○	✓	○	✓	○	○	●	✓	○	!	○	!
Sanders Rd/Davenport Blvd	✓	○	✓	○	✓	○	✓	●	○	○	▲	✓	!
Bates Rd	✓	○	✓	○	✓	○	○	●	✓	○	▲	✓	!
Southern Dunes Blvd	✓	○	✓	✓	✓	○	✓	●	○	○	▲	✓	!
Old Polk City Rd/ Main St	✓	○	✓	✓	✓	○	✓	●	✓	○	▲	✓	!
Commerce Ave	✓	○	✓	○	✓	○	✓	●	○	○	▲	✓	!

** Transit Signal Priority (TSP) is not listed as a standalone gap item because the proposed C-V2X RSU deployments will provide TSP-ready capability at all priority-corridor intersections. Implementation will require only the addition of onboard units (OBUs) on transit vehicles to communicate with the RSUs.*

*** Field Switches recommended for upgrades, but field verification should be conducted to confirm existing conditions and installation needs.*

Legend

✓	Recommended
▲	Recommended to be upgraded
○	Existing
!	Pending
●	Not applicable

6

Stakeholder Engagement

Local agency stakeholders were engaged throughout the development of the District 1 TSM&O Master Plan to ensure their local knowledge, expertise, and feedback were incorporated into the data collection, analyses, and TSM&O strategy recommendations.

During the initial stages of the District 1 TSM&O Master Plan, geospatial data relating to existing infrastructure was requested from local agencies to support the data collection effort. Many agencies were able to provide this critical data to support the TSM&O Master Plan.

Stakeholders from municipalities, counties, and MPOs/TPOs were invited to two rounds of stakeholder meetings to share their feedback on the methodology, prioritization, and recommendations, and to provide additional local context for the District 1 TSM&O Master Plan.

The first round of stakeholder meetings provided stakeholders an overview of the District 1 TSM&O Master Plan, presented the Mission, Vision, and Goals, defined the TSM&O Strategic Roadway Network, and discussed the prioritization process and resulting Top 5 Priority Corridors for each County. Stakeholders had an opportunity to ask questions and provide feedback during the meeting and for a period afterwards.

The second round of stakeholder meetings focused on the gap analysis and the proposed TSM&O technology focused recommendations. Stakeholders had an opportunity to review materials prior and provide feedback during the meeting.

Details from the stakeholder meetings are provided below.

6.1.1 Collier, Lee, and Charlotte Counties

6.1.1.1 First Stakeholder Meeting

A virtual stakeholder meeting was held on September 10, 2025 with staff participation from the following agencies:

- Collier County,
- Lee County,
- Charlotte County,
- Collier MPO,
- Lee County MPO,
- Charlotte County–Punta Gorda MPO,
- Collier Area Transit,
- Collier TMC,
- LeeTran,
- the City of Bonita Springs,
- the City of Estero,

- the City of Punta Gorda,
- the Town of Fort Myers Beach, and
- FDOT District 1 TSM&O staff.

Feedback themes and key takeaways included:

- Stakeholders provided feedback on the TSM&O Strategic Roadway Network selection process. Based on input from Collier County staff, and additional segment of Immokalee Road was added to the TSM&O Strategic Roadway Network and scored accordingly.
- Stakeholders requested to see the Top 7 Corridors and detailed scoring for each metric, which was provided after the meeting to all stakeholders.
- Stakeholders identified recently completed or programmed projects (including interchange and widening projects on I 75, Colonial Boulevard, Daniels Parkway, S.R. 776, and other key corridors) which are recognized as part of this Master Plan.
- Stakeholders stressed funding constraints and highlighted that technology-focused TSM&O projects (signal coordination, connected-vehicle applications, travel-time monitoring, freight priority) may be more feasible than major capacity expansions.
- Stakeholders indicated there were needs related to TMC/TOC staffing standards and 24/7 traffic operations to better manage off-peak congestion, while also underscoring the importance of coordination across state, county, and municipal signals.
- Overall, the session reinforced the need for close coordination between District 1, local governments, and MPOs to refine corridor priorities, integrate safety and operational needs, and position projects for future funding.

6.1.1.2 Second Stakeholder Meeting

[TO BE UPDATED FOLLOWING STAKEHOLDER MEETINGS]

6.1.2 Sarasota and Manatee Counties

6.1.2.1 First Stakeholder Meeting

A virtual stakeholder meeting was held on September 10, 2025 with staff participation from the following agencies:

- Sarasota County,
- Manatee County,
- the City of Sarasota,
- Manatee County Area Transit,
- Sarasota County Breeze Transit, and
- FDOT District 1 TSM&O staff.

Another virtual stakeholder meeting was held on September 24, 2025 with staff participation from the following agencies:

- Sarasota/Manatee MPO, and
- FDOT District 1 TSM&O staff.

Feedback themes and key takeaways from both meetings included:

- Stakeholders emphasized that maintaining adequate communications bandwidth is a critical prerequisite for implementing advanced corridor technologies.
- Stakeholders discussed the related issue of signal controllers and signal software, suggesting that upgrades in these areas should be considered alongside communications and resiliency investments. It was clarified that controller and signal software upgrades are currently being advanced through a separate, MPO-funded initiative.
- Stakeholders had detailed questions on scoring and category weighting, and after discussion generally agreed noting it was a similar approach to past studies. The detailed scoring for each corridor which was provided after the meeting to all stakeholders.
- Stakeholders emphasized that targeted TSM&O investments bolster the entire network, and noted the success of adaptive signals on S.R. 70 and University Parkway.

6.1.2.1 Second Stakeholder Meeting

[TO BE UPDATED FOLLOWING STAKEHOLDER MEETINGS]

6.1.3 Polk County

6.1.3.1 First Stakeholder Meeting

A virtual stakeholder meeting was held on September 17, 2025 with staff participation from the following agencies:

- Polk County,
- the City of Lakeland,
- the City of Winter Haven, and
- FDOT District 1 TSM&O staff.

Another virtual stakeholder meeting was held on September 24, 2025 with staff participation from the following agencies:

- Polk TPO, and
- FDOT District 1 TSM&O staff.

Feedback themes and key takeaways from both meetings included:

- Stakeholders identified studies and programmed projects (transit signal priority study on U.S. 98/Florida Avenue, EVP studies, and Midtown Study) which are recognized as part of this Master Plan.
- Stakeholders generally agreed with the methodology behind corridor selection and the top corridors align with their priorities.
- Stakeholders indicated the TPO would likely want to partner on implementation of recommendations identified.

6.1.3.1 Second Stakeholder Meeting

[TO BE UPDATED FOLLOWING STAKEHOLDER MEETINGS]

7

Recommendations

TSM&O technology focused recommendations were developed based on findings of the existing conditions assessment, gap analysis, and alignment with the Mission, Vision, and Goals established for this Master Plan. These recommendations are organized by corridor and are intended to address the most critical operational needs identified across the Top 5 priority corridors by County. These TSM&O recommendations are summarized in Tables 19 through 24, below. For each corridor, the tables provide a description of corridor limits, the primary recommendation focus, planning level cost estimates (in 2025 dollars), and identification of relevant programmed projects that may present opportunities for coordination or implementation. It should be noted that while District 1 will lead the implementation of these recommendations, continued coordination with the stakeholders, including the Counties, MPOs/TPOs, municipalities, and local transit agencies, are recommended to ensure alignment with existing programmed projects and determine future maintenance and operation responsibilities.

The recommendations presented below are intended to serve as a strategic roadmap to guide future investments and support incremental deployment of TSM&O solutions across District 1's priority corridors.

Table 19: TSM&O Recommendations Summary - Collier County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Estimated Cost [3] Dollars	Potential Alignment with Programmed Projects
1	U.S. 41 (Tamiami Trail/S.R. 45	Lee County Line to Immokalee Rd (C.R. 846)	3.06 miles	1	CV, PedSafe, FSP, ATSPM, RPMU	$	$ 650,000	Project 456239-1 (FY 2029) - US 41, Old 41 Rd to Woods Edge Pkwy – Fiber Gap Collier to Lee County: The project could support integration of the technologies identified in the Primary Recommendation Focus.
2	U.S. 41 (Tamiami Trail/S.R. 90)	9th St to Airport-Pulling Road	2.04 miles	1	CV, PedSafe, FSP, ATSPM, Bluetooth, RPMU	$$	$ 1,410,000	Project 453415-1 (PD&E FY 2027) - U.S. 41 Intersection/Mobility Improvements from 3rd Avenue to S.R. 84: The project could support integration of the technologies identified in the Primary Recommendation Focus.
3	Pine Ridge Road	U.S. 41 (Tamiami Trail) to Airport-Pulling Road	1.98 miles	1	CV, PedSafe, FSP, ATSPM, Bluetooth, UPS, RPMU	$$	$ 1,330,000	None identified
4	Immokalee Road (C.R. 846)	U.S. 41 (Tamiami Trail/S.R. 45) to Collier Blvd	6.97 miles	1	CV, PedSafe, FSP, ATSPM, ADMS Bluetooth, RPMU	$$$	$ 3,200,000	None identified
5	Airport-Pulling Road	Golden Gate Pkwy to Davis Blvd	2.45 miles	1	CV, PedSafe, FSP, ATSPM, Bluetooth, RPMU	$$	$ 1,430,000	None identified

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.
4 RPMU needs field verification to confirm existing conditions and installation needs.

Table 20: TSM&O Recommendations Summary - Lee County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3]		Potential Alignment with Programmed Projects
						Range	Dollars	
1	Daniels Parkway (C.R. 876)	Metro Parkway to Treeline Avenue	3.79 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Field Switch, UPS, RPMU	$$$	$ 2,440,000	None identified
2	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	Evans Avenue to I-75	3.71 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, RPMU	$$$	$ 2,530,000	Project 446269-1 (Construction started October 2025) - SR 82 from Ford St to Veronica Showmaker - Pedestrian Safety Improvement: Since construction started in October 2025, immediate coordination may be needed for the project to support the integration of pedestrian-related technologies identified in the Primary Recommendation Focus. Project 454647-1 and 454647-2 (FY 2027) - SR 82 at Benchmark Ave Traffic Safety Improvements: The project could support integration of the technologies identified in the Primary Recommendation Focus.
3	Colonial Boulevard (S.R. 884)	Summerlin Road to Metro Parkway	2.09 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch, RPMU	$$	$ 1,370,000	None identified
4	U.S. 41 (Cleveland Avenue/S.R. 45)	College Parkway to Gladiolus Drive/Six Mile Cypress Parkway	1.98 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch, RPMU	$$	$ 1,240,000	None identified
5	Colonial Boulevard (S.R. 884)	Metro Parkway to Dynasty Drive	3.96 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Field Switch, RPMU	$$	$ 1,770,000	None identified

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.
4 RPMU needs field verification to confirm existing conditions and installation needs.

Table 21: TSM&O Recommendations Summary - Charlotte County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Estimated Cost [3] Dollars	Potential Alignment with Programmed Projects
1	U.S. 41 (S.R. 45)	Toledo Blade Boulevard to Melbourne Street	7.78 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, UPS, RPMU	$$$	$ 2,770,000	Project 457620-1 (FY 2029-2030) - Charlotte County Arterial Traffic Management System (ATMS): The project could support integration of the technologies identified in the Primary Recommendation Focus. Project 451358-1 (FY 2026) - US 41 at Midway Blvd: The project could support integration of the technologies identified in the Primary Recommendation Focus for the intersection of US 41 (SR 45) at Midway Blvd
2	S.R. 776 (McCall Road)	Pine Street to El Jobean Bridge	9.16 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, RPMU	$$	$ 1,880,000	Project 457620-1 (FY 2029-2030) - Charlotte County Arterial Traffic Management System (ATMS): The project could support integration of the technologies identified in the Primary Recommendation Focus.
3	Kings Highway	U.S. 41 (Tamiami Trail) to I-75	5.29 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, Fiber, UPS, RPMU	$$$	$ 2,160,000	
4	Veterans Boulevard	U.S. 41 (Tamiami Trail) to Kings Highway	6.95 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, RPMU	$	$ 680,000	
5	S.R. 776 (El Jobean Road)	El Jobean Bridge to U.S. 41 (Tamiami Trail)	6.15 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, ADMS, Bluetooth, RPMU	$$	$ 1,010,000	

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.
4 RPMU needs field verification to confirm existing conditions and installation needs.

Table 22: TSM&O Recommendations Summary - Sarasota County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3]		Potential Alignment with Programmed Projects
						Range	Dollars	
1	U.S. 301 (Washington Boulevard/S.R. 683)	University Parkway to Mound Street	4.18 miles	1	PedSafe, CCTV, FSP, TSP, ATSPM, Bluetooth, Field Switch, UPS, RPMU	$$	$ 1,840,000	None identified
2	Fruitville Road (S.R. 780)	N School Avenue to Coburn Road	5.31 miles	1	PedSafe, CCTV, FSP, TSP, ATSPM, ADMS, Bluetooth, UPS, RPMU	$$$	$ 2,250,000	Project 453539-1 (FY 2028) - S.R. 780/Fruitville Rd from US 301 to Honore Ave ATSPM CV Upgrade: The project could support integration of the technologies identified in the Primary Recommendation Focus. Additionally, the I-75 Ramps can be included in the scope of the project.
3	University Parkway (C.R. 610)	U.S. 301 (Washington Boulevard) to I-75	5.21 miles	1	EVP, CV, PedSafe, CCTV, FSP, TSP, ATSPM, ADMS, Bluetooth	$$	$ 1,980,000	None identified
4	U.S. 41 (Tamiami Trail/S.R. 45)	Bee Ridge Road to S.R. 72	2.82 miles	1	PedSafe, FSP, TSP, Bluetooth, UPS	$$	$ 1,110,000	Project 453538-1 (FY 2028) - US 41 Gulf Gate Dr to Bee Ridge Rd ATSPM/CV Upgrade: The project could support integration of the technologies identified in the Primary Recommendation Focus.
5	Clark Road (S.R. 72)	U.S. 41 (Tamiami Trail) to I-75	4.83 miles	1	EVP, CV, PedSafe, FSP, TSP, ATSPM, ADMS, Bluetooth	$$	$ 1,610,000	Project 449122-1 (FY 2026) - Resurfacing SR 72 from SR 45 (US 41) to E of Derek Ave: The project could support integration of the technologies identified in the Primary Recommendation Focus. Project 447887-1 (FY 2026) - Median Modification SR 72 from Swift Rd to Sawyer Rd: The project could support integration of the technologies identified in the Primary Recommendation Focus.

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.
4 RPMU and Field Switches need field verification to confirm existing conditions and installation needs.

Table 23: TSM&O Recommendations Summary - Manatee County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2]	Estimated Cost [3] Range	Estimated Cost [3] Dollars	Potential Alignment with Programmed Projects
1	53rd Avenue (S.R. 70)	15th Street E to I-75	5.44 miles	1	CV, PedSafe, FSP, ATSPM, ADMS, Bluetooth, RPMU	$$	$ 1,390,000	Project 455188-1 (FY 2029) - S.R. 70 (15th Street) Safety Project from SR 45 (US 41) to Tara Blvd: The project could support the integration of safety technologies identified in the Primary Recommendation Focus.
2	Cortez Road (S.R. 684)	75th Street W to 1st Street	4.45 miles	1	PedSafe, FSP, Bluetooth, RPMU	$$	$ 1,510,000	Project 445044-1 (FY 2026) - Resurfacing S.R. 684 (Cortez Rd) From 86th St to W of 30th St Project 455925-1 (FY 2026) - S.R. 684 Cortez Rd From 26th St to 301 Blvd ATSPM/CV Upgrade The projects listed above could support the integration of the technologies identified in the Primary Recommendation Focus at each intersection within the corridor. Bluetooth is recommended at a few intersections only.
3	U.S. 41 (8th Avenue/S.R. 45)	10th Street W to Riverside Drive	0.60 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch Upgrade, RPMU	$	$ 590,000	None identified
4	U.S. 41 (14th Street/S.R. 45)	S.R. 684 to Sarasota County Line	5.26 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch Upgrade, RPMU	$$$	$ 2,180,000	Project 449653-1 (FY 2027) - US 41 Safety Project from Magellan Dr to 63rd Ave: The project could support the integration of safety technologies identified in the Primary Recommendation Focus.
5	53rd Avenue (S.R. 70)	U.S. 41 to 15th Street E	1.76 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, RPMU	$	$ 350,000	None identified

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.

Table 24: TSM&O Recommendations Summary - Polk County

Priority Corridor Ranking [1]	Corridor Name	Corridor Limits	Corridor Length	Signalized Intersections (#)	Primary Recommendation Focus [2, 4]	Estimated Cost [3] Range	Estimated Cost [3] Dollars	Potential Alignment with Programmed Projects
1	Bartow Road (U.S. 98/S.R. 35)	S Combee Road to S Lake Parker Avenue	0.54 miles	1	EVP, CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, RPMU	$$	$ 1,290,000	Project 197562-4 (FY 2026) - Add lanes and reconstruction of SR 35 (US 98) from Edgewood Dr to E Main St: The project could support integration of the technologies identified in the Primary Recommendation Focus.
2	N Florida Avenue (U.S. 98/S.R. 35)	Memorial Boulevard (U.S. 92) to I-4	2.35 miles	1	EVP, PedSafe, CCTV, FSP, ATSPM, Bluetooth, UPS	$	$ 750,000	None identified
3	Memorial Boulevard (U.S. 92/S.R. 546)	Kathleen Road to N Lake Parker Avenue	1.78 miles	1	EVP, PedSafe, FSP, ATSPM, Bluetooth, UPS, RPMU	$$	$ 1,150,000	None identified
4	Florida Avenue (U.S. 98/S.R. 35)	Main Street to Memorial Boulevard (U.S. 92)	0.74 miles	1	CV, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Fiber, UPS, RPMU	$	$ 680,000	Project 453538-1 (FY 2028) U.S. 41 ATSPM/CV Upgrades from Gulf Gate Drive to Glengary Street: The project could support integration of the technologies identified in the Primary Recommendation Focus.
5	U.S. 27 (S.R. 25)	U.S. 17/92 to I-4	8.86 miles	1	EVP, PedSafe, CCTV, FSP, ATSPM, Bluetooth, Field Switch, UPS	$$$	$ 2,370,000	Project 442103-1 (FY 2030-2031) - Polk County Advanced Traffic Management System (ATMS)/Computer Signal System Phase I: The project could support integration of ATSPM technologies identified in the Primary Recommendation Focus; however, existing infrastructure along the corridor may limit additional benefits. Project 449659-1 (FY 2030) - US 27 Safety Project at Airport Road/Patterson Road and S Boulevard: The project could support the integration of safety technologies identified in the Primary Recommendation Focus.

Key

$ <$1 Million
$$ $1 Million to $2 Million
$$$ >$2 Million

Notes

1 Priority Corridor Ranking reflects corridor importance only and does not indicate implementation sequence.
2 Primary recommendation focus summarizes the dominant needs identified through the gap analysis; individual intersections may require different combinations of improvements.
3 Cost estimates are expressed in 2025 dollars, reflect planning-level values, and are not adjusted for future inflation. Costs reflect total cost of all proposed recommendations along the priority corridor.
4 Field Switches need field verification to confirm existing conditions and installation needs.

Appendix A

Prioritization & Grading Scoring Memorandum

To: FDOT District 1
801 N. Broadway Avenue
Bartow, FL 33830

Date: September 2025

From: VHB

Re: TSM&O Strategic Network Prioritization & Grading System
FDOT District 1 – TSM&O Master Plan

Introduction

VHB developed the following system to support to prioritize and grade the identified TSM&O Strategic Roadway Network for the FDOT D1 TSM&O Master Plan. Detail on the overall Master Plan can be found in the body of the main report.

Criteria

Prioritization criteria were developed based on six key data pillars: Safety, Performance, Trucks and Freight, Roadway Characteristics & Design and Geometry, Transit, and Volume and Growth. Weights for each data pillar were then established based on District 1 priorities and to align with the Mission, Vision, and Goals of this Master Plan. The data pillars and assigned weights are shown in Table 1.

Table 1 Data Pillar Weights

Data Pillars	Weight
Safety	30%
Performance	25%
Trucks/Freight	5%
Roadway Characteristics & Design/Geometry	10%
Transit	5%
Volume/Growth	25%
Total	**100%**

Each of the data pillars considered various metrics which are summarized in Table 2. It should be noted that the data used was the most recent set of available data at the time the analysis was completed. Further details on the scoring metrics and ranges are included in the Attachments.

Table 2 Data Pillar Metrics

Metric	Data Source	Notes
Safety		
Bike/Ped Crashes	FDOT; based on a 5-year period (2019-2024)	Analysis considered total number of crashes normalized over roadway segment length.
Fatal/Incapacitating Crash	FDOT; based on a 5-year period (2019-2024)	Analysis considered total number of crashes normalized over roadway segment length.
Crash Rate	FDOT; based on a 5-year period (2019-2024)	Calculated crash rate (for all crash types) for roadway segment.
Transit Risk	Manatee County Area Transit (MCAT)	Transit risk data provided by local transit agencies. Data not provided for Collier, Lee, Charlotte, Sarasota, and Polk counties and therefore not included in those counties' scoring.
Performance		
Planning Time Index (PTI) AM	2024 HERE Travel Time data	Analysis considered average travel times over the roadway segment during the morning period.
Congestion % AM	2024 HERE Free-flow Rating data	Analysis considered free flow ratings over the roadway segment during the morning period.
Planning Time Index (PTI) PM	2024 HERE Travel Time data	Analysis considered average travel times over the roadway segment during the evening period.
Congestion % PM	2024 HERE Free-flow Rating data	Analysis considered free flow ratings over the roadway segment during the evening period.
Truck/Freight		
Annual Average Daily Truck Traffic (AADTT) %	2023 FDOT Roadway Characteristics Inventory (RCI)	Analysis considered average annual daily truck traffic on the roadway segment.
Roadway Characteristics & Design/Geometry		
Number of Lanes (max)	FDOT RCI	Maximum number of lanes along roadway segment.
Medians Present	FDOT RCI	Presence of medians along roadway segment.
Constrained Facility	FDOT RCI	Ability to widen within right-of-way (ROW).

Table 2 Data Pillar Metrics (continued)

Metric	Data Source	Notes
Transit		
Transit Present	Local Transit Agencies	Presence of transit routes along roadway segment.
Volume/Growth		
Historic Growth	FDOT D1 2019 to 2045 Growth Rate	Analysis considered the anticipated vehicular volume growth along the roadway segment.
Annual Average Daily Traffic (AADT)	2023 FDOT RCI	Analysis considered the existing vehicular volume along the roadway segment.
Volume/Capacity	2023 FDOT RCI	Analysis considered the existing volume to capacity ratio along the roadway segment.

Scoring

Each segment of the identified TSM&O Strategic Roadway Network was scored as follows:

- Individual Metric Score: A score for each metric was established for each roadway segment.
- Combined Data Pillar Score: The individual metric scores were summed to establish the total score for each data pillar for each roadway segment.
- Adjustment: The data pillar scores were adjusted based on the previously established data pillar weights, with a maximum possible roadway segment score of 100.
- Overall Roadway Segment Score: The adjusted scores for each data pillar were summed to establish an overall roadway segment score.

Table 3 shows the unadjusted and adjusted maximum scores for each data pillar, and the detailed metric scoring ranges are included in the Attachments.

Table 3 Data Pillar Maximum Scores

Data Pillars	Maximum Score (Unadjusted)	Maximum Score (Adjusted)
Safety	13	30
Performance	14	25
Trucks/Freight	3	5
Roadway Characteristics & Design/Geometry	6	10
Transit	2	5
Volume/Growth	12	25
Total	**50**	**100**

Prioritization

Once each roadway segment of the TSM&O Strategic Roadway Network was scored, all roadway segments were ranked for each of the six counties (Collier, Lee, Charlotte, Sarasota, Manatee, and Polk). The Top 7 corridors were then identified for each county and further reviewed and screened against FDOT programs and active projects to determine if projects are already planned to address deficiencies. Additionally, in some cases, adjacent roadway segments were ranked within the top scoring segments. As part of the review, these adjacent segments were sometimes combined to form one segment if appropriate. After the review, the final Top 5 Priority Corridors were identified and shared for review by stakeholders. The Top 5 Priority Corridors by County are listed below.

Collier County

1. U.S. 41 (Tamiami Trail/S.R. 45) from the Lee County Line to Immokalee Road (C.R. 846)
2. U.S. 41 (Tamiami Trail/S.R. 90) from Airport-Pulling Road to 9th Street S
3. Pine Ridge Road from U.S. 41 (Tamiami Trail) to Airport-Pulling Road
4. Immokalee Road (C.R. 846) from U.S. 41 (Tamiami Trial) to Collier Boulevard
5. Airport-Pulling Road from Davis Boulevard to Golden Gate Parkway

Lee County

1. Daniels Parkway (C.R. 876) from Metro Parkway to Treeline Avenue
2. Dr. Martin Luther King Jr. Boulevard (S.R. 82) from Evans Avenue to I-75
3. Colonial Boulevard (S.R. 884) from Summerlin Road to Metro Parkway
4. U.S. 41 (Cleveland Avenue/S.R. 45) from Gladiolus Drive/Six Mile Cypress Parkway to College Parkway
5. Colonial Boulevard (S.R. 884) from Metro Parkway to Dynasty Drive

Charlotte County

1. U.S. 41 (S.R. 45) from Melbourne Street to Toledo Blade Boulevard
2. S.R. 776 (McCall Road) from Pine Street to El Jobean Bridge
3. Kings Highway from U.S. 41 (Tamiami Trail) to I-75
4. Veterans Boulevard from U.S. 41 (Tamiami Trail) to Kings Highway
5. S.R. 776 (El Jobean Road) from El Jobean Bridge to U.S. 41 (Tamiami Trail)

Sarasota County

1. U.S. 301 (Washington Boulevard/S.R. 683) from University Parkway to Mound Street
2. Fruitville Road (S.R. 780) from N School Avenue to Coburn Road
3. University Parkway (C.R. 610) from U.S. 301 (Washington Boulevard) to I-75
4. U.S. 41 (Tamiami Trail/S.R. 45) from Bee Ridge Road to S.R. 72
5. Clark Road (S.R. 72) from U.S. 41 (Tamiami Trail) to I-75

Manatee County

1. 53rd Avenue (S.R. 70) from 15th Street E to I-75
2. Cortez Road (S.R. 684) from 75th Street W to 1st Street
3. U.S. 41 (8th Avenue/S.R. 45) from 10th Street W to Riverside Drive
4. U.S. 41 (14th Street/S.R. 45) from Sarasota County Line to S.R. 684
5. 53rd Avenue (S.R. 70) from U.S. 41 to 15th Street E

Polk County

1. Bartow Road (U.S. 98/S.R. 35) from S Combee Road to S Lake Parker Avenue
2. N Florida Avenue (U.S. 98/S.R. 35) from Memorial Boulevard (U.S. 92) to I-4
3. Memorial Boulevard (U.S. 92/S.R. 546) from Kathleen Road to N Lake Parker Avenue
4. Florida Avenue (U.S. 98/S.R. 35) from Main Street to Memorial Boulevard (U.S. 92)
5. U.S. 27 (S.R. 25) from U.S. 17/92 to I-4

Attachments

› Metric Scoring Ranges

› Top 5 Priority Corridor Scoring

FDOT D1 TSM&O Master Plan
Metric Scoring

Safety [1]								**Performance** [2]								**Trucks/Freight** [3]		**Roadway Characteristics & Design/Geometry** [4]						**Transit** [5]		**Volume/Growth** [6]					
Number Bike/Ped Crashes (number)		Fatal/Incapacitating Crashes (number)		Crash Rate		Transit Risk		Planning Time Index (PTI) AM		Congestion AM (%)		Planning Time Index (PTI) PM		Congestion PM (%)		Average Annual Daily Truck Traffic (AADTT) %		Number of Lanes (maximum on corridor)		Medians Present (% of corridor with median present)		Constrained Facility (% of corridor with ability to widen within ROW)		Transit Present (% of corridor with transit routes)		Historic Growth (vehicles)		Average Annual Daily Traffic (AADT)		Volume/Capacity (v/c ratio)	
Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score	Range	Score
0	0	0	0	<0.5	0	<7.3	0	<1.14	0	<10%	0	<1.20	0	<13%	0	<7%	0	One-way	0	>=50%	0	<50%	2	>=50%	2	<2300	0	>0 to <15330	0	<0.50	0
>0 to <10	1	>0 to <5	1	>=0.5 to <2.0	1	>=7.3 to <9.0	1	>=1.14 to <1.64	1	>=10% to <25%	1	>=1.20 to <1.55	1	>=13% to <40%	1	>=7% to <10%	1	<=3 lanes	0	<50%	2	>=50%	0	<50%	0	>=2300 to <5000	1	>=15330 to <28359	1	>=0.50 to <0.65	1
>=10	2	>=5 to <15	2	>=2.0 to <6.3	2	>=9.0 to <9.7	2	>=1.64 to <2.15	2	>=25% to <50%	2	>=1.55 to <1.82	2	>=40% to <65%	2	>=10% to <15%	2	4 lanes	1							>=5000 to <10000	2	>=28359 to <41387	2	>=0.65 to <0.80	2
		>=15 to <30	3	>=6.3 to <18.0	3	>=9.7	3	>=2.15 to <2.60	3	>=50%	3	>=1.82 to <2.3	3	>=65%	3	>=15%	3	5 lanes	1							>=10000 to <15000	3	>=41387 to <67444	3	>=0.80 to <1.00	3
		>=30	4	>=18.0	4			>=2.60	4			>=2.3	4					>=6 lanes	2							>=15000	4	>=67444	4	>=1.00	4
Max Score	**2**		**4**		**4**		**3**		**4**		**3**		**4**		**3**		**3**		**2**		**2**		**2**		**2**		**4**		**4**		**4**

1 Based on 2019-2024 crash data. Transit risk data provided by transit agency; not provided for Collier, Lee, Charlotte, Sarasota, and Polk counties.
2 Based on 2024 HERE data.
3 Based on 2023 data.
4 Based on FDOT RCI.
5 Based on local transit agency route information.
6 AADT and v/c ratio based on 2023 data and historic growth based on FDOT D1 model (2019-2045).
General Note: Scoring ranges based on standard deviation of data or geometric interval.

Top 5 Priority Corridor Scores

				Score (Adjusted)						
County	Priority Rank	Corridor Name	Limits	Safety	Performance	Trucks/ Freight	Roadway Characteristics & Design/ Geometry	Transit	Volume/ Growth	Total
Collier	1	U.S. 41 (Tamiami Trail/S.R. 45)	from the Lee County Line to Immokalee Road (C.R. 846)	16.15	16.07	0.00	3.33	5.00	18.75	59.31
Collier	2A	U.S. 41 (Tamiami Trail/S.R. 90)	from Airport-Pulling Road to 9th Street S	18.46	14.29	0.00	3.33	5.00	16.67	57.75
Collier	2B	U.S. 41 (Tamiami Trail/S.R. 90)		16.15	14.29	0.00	3.33	5.00	16.67	55.44
Collier	3	Pine Ridge Road	from U.S. 41 (Tamiami Trail) to Airport-Pulling Road	18.46	17.86	0.00	0.00	5.00	14.58	55.90
Collier	4A	Immokalee Road (C.R. 846)	from U.S. 41 (Tamiami Trial) to Collier Boulevard	18.46	17.86	0.00	0.00	5.00	12.50	53.82
Collier	4B	Immokalee Road (C.R. 846)		20.77	19.64	0.00	0.00	5.00	8.33	53.75
Collier	5	Airport-Pulling Road	from Davis Boulevard to Golden Gate Parkway	18.46	16.07	0.00	0.00	5.00	14.58	54.12
Lee	1	Daniels Parkway (C.R. 876)	from Metro Parkway to Treeline Avenue	20.77	21.43	0.00	0.00	5.00	20.83	68.03
Lee	2	Dr. Martin Luther King Jr. Boulevard (S.R. 82)	from Evans Avenue to I-75	20.77	17.86	1.67	3.33	5.00	20.83	69.46
Lee	3A	Colonial Boulevard (S.R. 884)	from Summerlin Road to Metro Parkway	16.15	21.43	0.00	3.33	5.00	22.92	68.83
Lee	3B	Colonial Boulevard (S.R. 884)		16.15	21.43	0.00	0.00	5.00	20.83	63.42
Lee	4A	U.S. 41 (Cleveland Avenue/S.R. 45)	from Gladiolus Drive/Six Mile Cypress to College Parkway	18.46	17.86	0.00	3.33	5.00	20.83	65.49
Lee	4B	U.S. 41 (Cleveland Avenue/S.R. 45)		20.77	14.29	0.00	3.33	5.00	20.83	64.22
Lee	5A	Colonial Boulevard (S.R. 884)	from Metro Parkway to Dynasty Drive	18.46	19.64	0.00	3.33	5.00	16.67	63.10
Lee	5B	Colonial Boulevard (S.R. 884)		11.54	19.64	0.00	3.33	5.00	22.92	62.43
Charlotte	1	U.S. 41 (S.R. 45)	from Melbourne Street to Toledo Blade Boulevard	20.77	7.14	0.00	3.33	0.00	14.58	45.83
Charlotte	2A	S.R. 776 (McCall Road)	from Pine Street to El Jobean Bridge	18.46	8.93	0.00	3.33	0.00	14.58	45.31
Charlotte	2B	S.R. 776 (McCall Road)		18.46	5.36	1.67	3.33	0.00	14.58	43.40
Charlotte	3	Kings Highway	from U.S. 41 (Tamiami Trail) to I-75	18.46	12.50	1.67	0.00	0.00	10.42	43.04
Charlotte	4	Veterans Boulevard	from U.S. 41 (Tamiami Trail) to Kings Highway	20.77	7.14	3.33	0.00	0.00	10.42	41.66
Charlotte	5	S.R. 776 (El Jobean Road)	from El Jobean Bridge to U.S. 41 (Tamiami Trail)	18.46	3.57	1.67	3.33	0.00	14.58	41.62
Sarasota	1	U.S. 301 (Washington Boulevard/S.R. 683)	from University Parkway to Mound Street	18.46	19.64	0.00	3.33	5.00	16.67	63.10
Sarasota	2	Fruitville Road (S.R. 780)	from N School Avenue to Coburn Road	18.46	16.07	0.00	3.33	5.00	18.75	61.62
Sarasota	3	University Parkway (C.R. 610)	from U.S. 301 (Washington Boulevard) to I-75	20.77	14.29	0.00	3.33	0.00	18.75	57.14
Sarasota	4	U.S. 41 (Tamiami Trail/S.R. 45)	from Bee Ridge Road to S.R. 72	16.15	19.64	0.00	0.00	5.00	16.67	57.46
Sarasota	5	Clark Road (S.R. 72)	from U.S. 41 (Tamiami Trail) to I-75	20.77	12.50	0.00	0.00	5.00	14.58	52.85
Manatee	1A	53rd Avenue (S.R. 70)	from 15th Street E to I-75	25.38	25.00	0.00	3.33	5.00	14.58	73.30
Manatee	1B	53rd Avenue (S.R. 70)		23.08	21.43	0.00	3.33	5.00	18.75	71.59
Manatee	2	Cortez Road (S.R. 684)	from 75th Street W to 44th Ave E	27.69	16.07	0.00	3.33	5.00	18.75	70.85
Manatee	3	U.S. 41 (8th Avenue/S.R. 45)	from 10th Street W to Riverside Drive	20.77	23.21	0.00	5.00	5.00	16.67	70.65
Manatee	4	U.S. 41 (14th Street/S.R. 45)	from Sarasota County Line to S.R. 684	30.00	16.07	0.00	0.00	5.00	16.67	67.74
Manatee	5	53rd Avenue (S.R. 70)	from U.S. 41 to 15th Street E	25.38	17.86	0.00	3.33	5.00	12.50	64.08
Polk	1	Bartow Road (U.S. 98/S.R. 35)	from S Combee Road to S Lake Parker Avenue	20.77	19.64	0.00	0.00	5.00	16.67	62.08
Polk	2	N Florida Avenue (U.S. 98/S.R. 35)	from Memorial Boulevard (U.S. 92) to I-4	18.46	19.64	0.00	3.33	5.00	14.58	61.02
Polk	3A	Memorial Boulevard (U.S. 92/S.R. 546)	from Kathleen Road to N Lake Parker Avenue	20.77	19.64	0.00	0.00	5.00	14.58	60.00
Polk	3B	Memorial Boulevard (U.S. 92/S.R. 546)		18.46	21.43	0.00	0.00	5.00	12.50	57.39
Polk	4	Florida Avenue (U.S. 98/S.R. 35)	from Main Street to Memorial Boulevard (U.S. 92)	18.46	19.64	0.00	3.33	5.00	10.42	56.85
Polk	5	U.S. 27 (S.R. 25)	from U.S. 17/92 to I-4	9.23	16.07	1.67	3.33	5.00	20.83	56.14