Overview

ETDM # 14235, SR 869 (Sawgrass Expressway) from South of Sunrise Boulevard to South of US 441 / SR 7

District: Florida's Turnpike Enterprise
County: Broward
Planning Organization: Florida's Turnpike Enterprise
Plan ID: Not Available
Phase: Programming Screen
From: S. of Sunrise Blvd.
To: S. of US-441 / SR 7
Financial Management No.: 435763-1-22-01
Federal Involvement: Federal Permits Only – State Funded Project

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a. Purpose and Need

The primary purpose of this project is to add capacity to meet future transportation demand, improve travel time reliability and to provide long term mobility options along the portion of SR 869 known as the "Sawgrass Expressway." This includes operational capacity and safety enhancements at the interchanges of Sunrise Boulevard (SR 838); Pat Salerno Drive; Oakland Park Boulevard; Commercial Boulevard (SR 870); Atlantic Boulevard (SR 814); Sample Road (SR 834); Coral Ridge Drive; and University Drive (SR 817).

The need for the project is based on the following factors:

Capacity

SR 869 (Sawgrass Expressway) within the project limits currently operates at Level of Service (LOS) C and LOS D for the majority of the corridor. Congestion exists along the mainline in the southbound direction between Oakland Park Boulevard and Commercial Boulevard as well as in the northbound direction between University Drive and US-441 / SR 7; both operating at LOS E. At critical interchanges such as Oakland Park Boulevard, Commercial Boulevard and US-441 / SR 7, existing ramp operations are experiencing LOS E. Other interchanges such as Atlantic Boulevard, Sample Road, Coral Ridge Drive and University Drive, all experience LOS D along some of the ramp merge/diverge areas. Additionally, several intersections approaching the SR 869 (Sawgrass Expressway) such as the SR 869 (Sawgrass Expressway) West Ramps at Sunrise Boulevard and Commercial Boulevard operate at LOS F. The SR 869 (Sawgrass Expressway) Ramps at Coral Ridge, the intersection of University Drive at Westview Drive and the intersection at US-441 / SR 7 with Winston Park Boulevard all operate at a LOS E. Without improvements, the driving conditions will continue to deteriorate well below acceptable LOS standards for those locations currently meeting LOS standards and worsen with those that are currently congested. {*The Sawgrass Expressway Level of Service and Ramp Capacity Lane Requirements were prepared as part of the preliminary traffic forecast conducted for this PD&E Study (See Draft Project Traffic Forecast Memorandum dated June 2015 attached to the ETDM Screening). This analysis provides a summary of the preliminary peak period traffic forecasts for the years 2014 through 2040 reflecting a steady growth in traffic.*}

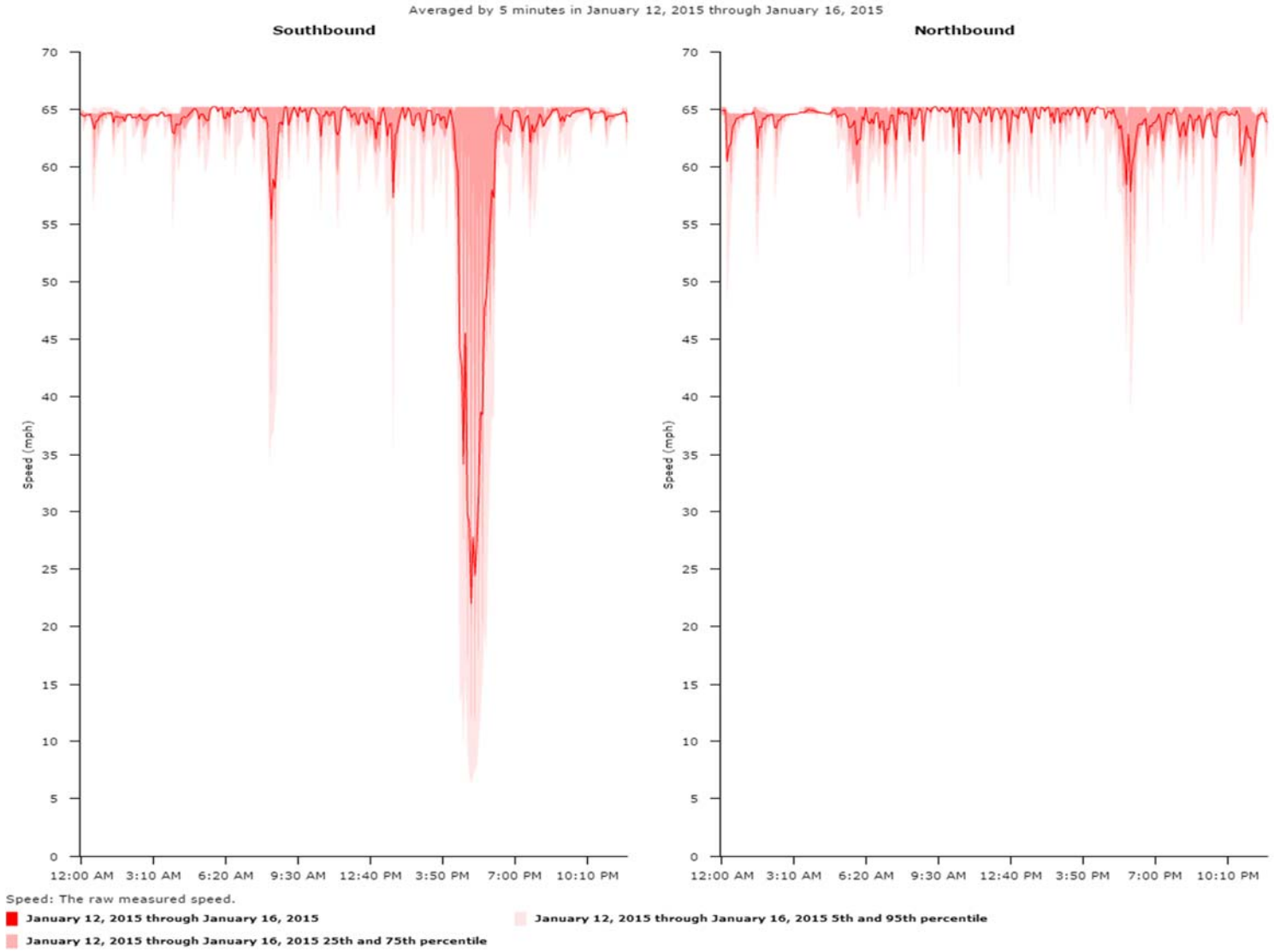
Travel Time Reliability

In urban areas, many motorists have accepted traffic congestion as a fact of life and adjusted their schedules or allowed extra time for work, school and other time-sensitive trips. But they are less tolerant of unexpected delays which cause them to be late for work or important meetings, miss appointments, or lose money due to disruption of shipping and just-in-time deliveries.

Travel time reliability measures the extent of this unexpected delay and is defined as the consistency or dependability in travel times, as measured from day-to-day and/or across different times of day.

The following chart shows the average travel speeds on SR 869 (Sawgrass Expressway) north of W. Oakland Park Blvd. for a 5 day period (January 12, 2015 through Jan 16, 2015). The data was obtained from Regional Integrated Transportation Information System (RITIS), an automated data sharing system (created by University of Maryland) which stores and standardizes data from multiple agencies including Florida Department of Transportation. As shown on the chart, the average travel speeds in the southbound direction are dropping to below 45 MPH during the morning peak period and below 30 MPH during the afternoon peak period.

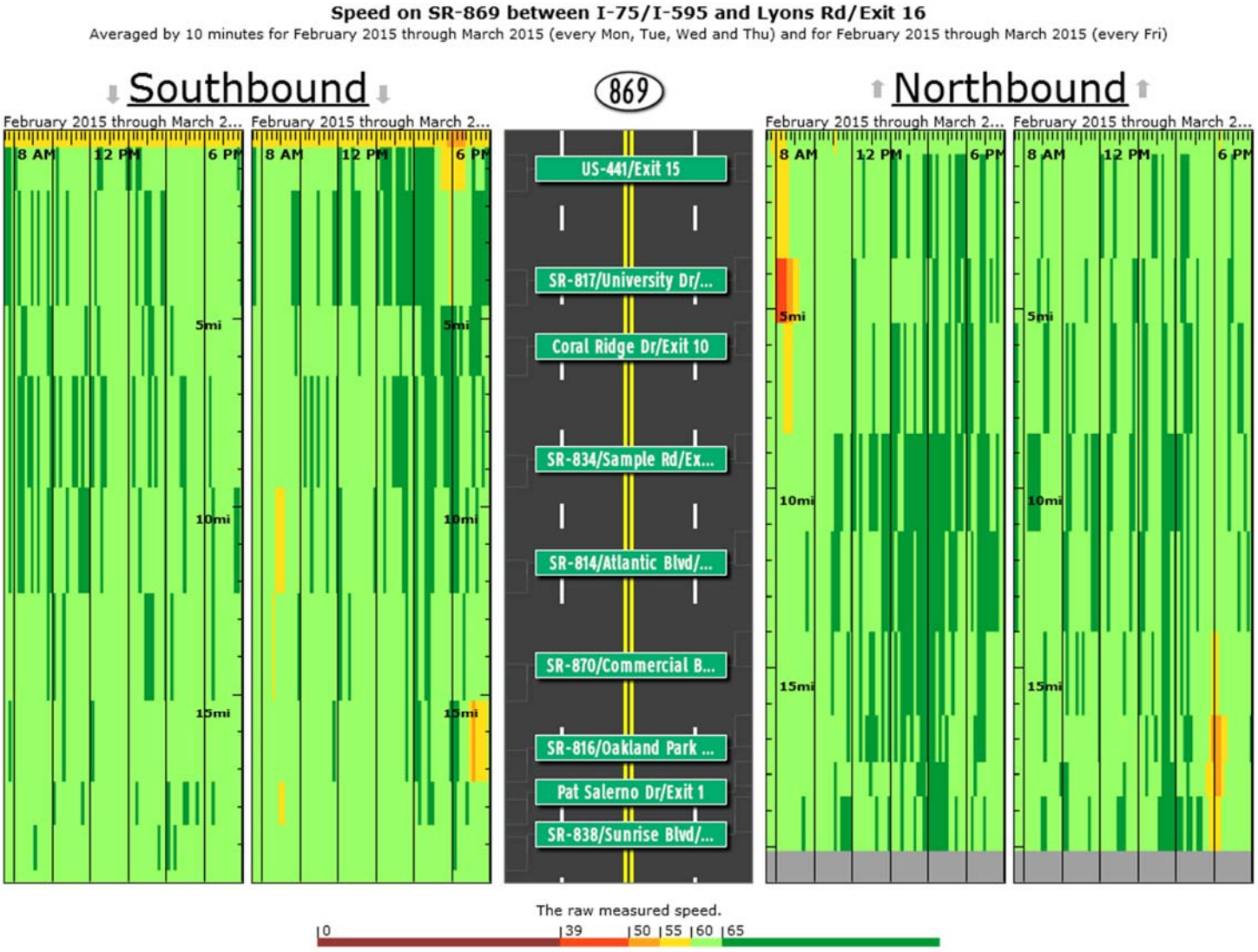
Average Travel Speed along SR 869 (Sawgrass Expressway) north of W. Oakland Park Blvd.



The second chart is a "Congestion Scan" of SR 869 (Sawgrass Expressway) from Sunrise Blvd (SR 838) to US 441/SR 7. The chart shows average speeds on SR 869 (Sawgrass Expressway) between 8 AM to 6 PM every weekday during the month of February and March in 2015. The chart shows heavy congestion in the northbound direction between Coral Ridge Drive and University Drive (SR 817) during the morning peak period and congestion, in both the northbound and southbound direction, between Pat Salerno Drive and Commercial Drive (SR 870) during the afternoon peak period.

The project traffic in these segments is expected to further increase from 37 % to 42 % between 2014 and 2040. The traffic on the segment between Coral Ridge Drive to University Drive (SR 817) is projected to increase from 71,400 to 101,300 (an increase of 42 %) while the traffic on the segment from Pat Salerno Drive to Commercial Drive (SR 870) is projected to increase from 89,000 to 121,800 (an increase of 37%) from 2014 to 2040. This increase in traffic will lower average travel speeds to below 40 miles per hour.

Without any improvements, the increasing traffic congestion will further deteriorate travel reliability on SR 869 (Sawgrass Expressway). Residents/workers would avoid destination along SR 869 (Sawgrass Expressway) negatively impacting the economic vitality of the area.



System Linkage

SR 869 (Sawgrass Expressway) is part of the state's Strategic Intermodal System (SIS), and the National Highway System (NHS). This tolled expressway provides limited access connectivity to other major arterials such as I-595, I-75, Florida's Turnpike and to I-95 further to the east through the arterial extension of SR 869 known as SW 10th Street. It also serves the local multi-modal transportation network by providing access to the Sunrise Park and Ride at the BB&T Center, connecting to existing Express Bus service along I-595 to Downtown Ft. Lauderdale and Downtown Miami as well as future planned express bus service along I-75 to southern Broward and Miami-Dade Counties.

Proposed improvements to the interchanges within the project limits will help improve connectivity within the roadway network in the area. The enhanced mobility on SR 869 (Sawgrass Expressway) will also improve the flow of traffic of the surrounding arterials.

Modal Interrelationships

Public transit operations will benefit as a result of this project due to the proximity of the Sunrise Park and Ride at the BB&T Center. The BB&T Center is one of the largest sports complexes in Broward County, and home to the Florida Panthers Hockey Team and adjacent to the Sawgrass Mills Mall. The proposed design will be coordinated with Broward County's transit mobility plans for the area and will support ingress/egress for multimodal travel to and from the area.

Capacity improvements along the SR 869 (Sawgrass Expressway) project corridor will enhance the mobility of goods by alleviating current and future congestion along the corridor and surrounding freight and transit networks. Reduced congestion will serve to maintain and improve viable access to the major transportation facilities and businesses in the area.

Transportation Demand

The continued growth within Broward County, particularly by the number of Developments of Regional Impact that have been approved in western Broward County, will drive the need for further infrastructure improvements including the Widening of SR 869 (Sawgrass Expressway). The existing 2014 two-way traffic volumes measured along the corridor range from as low as 61,000 AADT between Sample Road and Coral Ridge Drive to as high as 95,900 AADT at the Sunrise mainline toll plaza. The 2040 Forecasts show this traffic will grow to 88,900 AADT between Sample Road and Coral Ridge Drive to as high as 130,700 AADT at the Sunrise mainline toll plaza. This increase in demand reflects a 47% to a 57% increase in future traffic necessitating capacity and operational improvement strategies to address this need.

Social Demands and Economic Development

SR 869 (Sawgrass Expressway) connects the cities of Coral Springs, Sunrise, Tamarac, Parkland and Coconut Creek to I-75, I-595 and Florida's Turnpike. Traffic demand on SR 869 (Sawgrass Expressway) is directly related to population and employment changes within Broward County and the cities of Coral Springs, Sunrise, Tamarac, Parkland and Coconut Creek.

Population Increase						
Year	**Broward County**	**City of Coral Springs**	**City of Sunrise**	**City of Tamarac**	**City of Parkland**	**City of Coconut Creek**
2000	1,623,018	117,549	85,787	55,588	13,835	43,566
2010	1,748,066	121,096	84,439	60,427	23,962	52,909
2040	1,962,322[1]	139,491	102,332	70,756	29,068	59,367
2010-2040 Change	12.3%	15.2%	21.2%	17.1%	21.3%	12.2%

[1] – Broward MPO 2040 Long Range Transportation Plan

The population of Broward County, taking into the account the impact of the 2007-2009 recession, is expected to increase by 12% from 2010 to 2040 while the cities directly adjacent to the SR 869 (Sawgrass Expressway) are projected to grow between 12% and 21%.

Emergency Evacuation

SR 869 (Sawgrass Expressway) serves as part of the emergency evacuation route network designated by the Florida Division of Emergency Management and by Broward County. This corridor is critical in facilitating traffic during emergency evacuation periods as it connects to other major arterials and highways of the state evacuation route network (i.e., I-595, I-75, Florida's Turnpike and to I-95 via the arterial portion of SR 869 known as SW 10th Street to the east). Increasing the capacity of SR 869 (Sawgrass Expressway) will reduce evacuation times needed for residents of Broward County during emergency and hurricane evacuations.

Long Term Mobility Option

SR 869 (Sawgrass Expressway), within the project limits, is currently operating at LOS C and D with several interchanges operating at LOS E. The 2040 traffic forecasts, based on population and employment projections, show an increase of 47% to 57% in future traffic volumes. However, continual widening of this facility to accommodate every increasing travel demand is not practical and therefore, a long term mobility option is needed that will not only serve current traffic volumes, but will accommodate future projected growth. Without this option, the residents/workers in the surrounding area will face severe congestion leading to decreasing productivity that would affect the economic viability of cities surrounding SR 869 (Sawgrass Expressway).

b. Project Description

This project is proposing improvements to the portion of SR 869 known as the "Sawgrass Expressway" from the junction of Interstate 75 (SR 93) just south of Sunrise Boulevard (SR 838) to South of US-441 / SR 7, a distance of approximately eighteen (18) miles in Broward County, Florida.

SR 869 (Sawgrass Expressway) is a tolled 21-mile limited access facility located in northern Broward County. The majority of the facility is located on the western fringe of the Broward urban area. SR 869 (Sawgrass Expressway) has a north/south orientation from the junction of Interstate 75 (SR 93) / Interstate 595 (SR 862) in the City of Sunrise on the south end to the Coral Springs area to the north. The alignment changes to an east/west orientation prior to the interchange with Coral Ridge Drive on the west and continues east to the Florida's Turnpike Mainline. The Sawgrass Expressway is part of Florida's Strategic Intermodal System (SIS), and the National Highway System (NHS). In addition, SR 869 (Sawgrass Expressway) is designated as an evacuation route providing connectivity to other evacuation routes such as I-75, Florida's Turnpike Mainline (SR 91) and I-95. The right of way width is generally 290 feet; however, it expands up to approximately 500 feet in the vicinity of the Sunrise mainline toll plaza and reduces to 176 feet near Wiles Road. The right of way width also varies at the numerous interchanges along the corridor with an approximate maximum width of 800 feet at the interchange with Atlantic Avenue.

SR 869 (Sawgrass Expressway), within the project limits, currently has six general purpose lanes (three in each direction). This segment of SR 869 (Sawgrass Expressway) is functionally classified as a Divided Urban Principal Arterial Expressway and has a posted speed limit of 65 miles per hour. The access management classification for this corridor is Class 1 (Freeway in an existing urbanized area with limited access). There are eight interchanges within the project limits located at: Sunrise Boulevard (SR 838), Pat Salerno Drive, Oakland Park Boulevard, Commercial Boulevard (SR 870), Atlantic Boulevard (SR 814), Sample Road (SR 834), Coral Ridge Drive, and University Drive (SR 817). The northern project limits end at MP 18 just west of the US 441 / SR 7 interchange.

The improvements proposed as part of this project will address capacity needs along SR 869 (Sawgrass Expressway) mainline through the incorporation of tolled express lanes in both the northbound and southbound directions.

The construction of auxiliary lanes at key strategic locations between interchanges will also be evaluated and incorporated as needed to provide additional capacity. This would help alleviate congestion for commuters travelling in the general purpose lanes of this facility. Further operational and capacity improvements will be evaluated and incorporated at the various interchanges referenced above in order to address operational needs for ingress and egress to the mainline, and/or express lanes to address the overall corridor operational needs of the system. The evaluation of the Interchange at Coral Ridge Drive will include the development of a concept to reconstruct the interchange as a Diverging Diamond Interchange amongst others in order to address operational needs.

This project will also evaluate the widening and/or replacement of various bridges along the corridor including the

following bridge structures to facilitate the widening of SR 869 (Sawgrass Expressway) and the various interchange improvements:

- Bridge No(s): 860520 / 860514 / 860513 NB/SB SR 869 (Sawgrass Expressway)over NW 8th Street
- Bridge No(s): 860482/860483 Northbound (NB)/Southbound (SB) SR 869 (Sawgrass Expressway)over Sunrise Boulevard (Blvd)
- Bridge No(s): 861000 SB Flyover Panther Drive over Sawgrass
- Bridge No(s): 860484/860485 NB/SB SR 869 (Sawgrass Expressway)over Oakland Park Blvd
- Bridge No(s): 860544 Bridge Culvert
- Bridge No(s): 860486/860487 SB/NB SR 869 (Sawgrass Expressway) over Commercial Blvd.
- Bridge No(s): 860545 Bridge Culvert
- Bridge No(s): 860488/860489 NB/SB SR 869 (Sawgrass Expressway) over Atlantic Blvd.
- Bridge No(s): 860490/860491 NB/SB SR 869 (Sawgrass Expressway) over Sample Road.
- Bridge No(s): 860492 SR 869 (Sawgrass Expressway)over Canal C-5
- Bridge No(s): 860494/860495 NB/SB SR 869 (Sawgrass Expressway)over Coral Ridge Drive
- Bridge No(s): 860496/860497 NB/SB SR 869 (Sawgrass Expressway)over Coral Springs Drive
- Bridge No(s): 860498/860499 NB/SB SR 869 (Sawgrass Expressway)over University Drive
- Bridge No(s): 860500/860501 NB/SB SR 869 (Sawgrass Expressway)over Riverside Drive

Logical Termini

The logical termini for the proposed improvements along SR 869 (Sawgrass Expressway) extends from south of Sunrise Boulevard (approximate MP 0) to south of US-441 /SR 7 (MP 18). This project would connect to an adjacent Project Development and Environment Study FPID No. 437153-1 Widening of the Sawgrass Expressway (SR 869) from South of US-441 / SR 7 (MP18) to Powerline Road.