Planning Technical Advisory Committee (PTAC) Meeting

REGULAR MEETING AGENDA

Tuesday, November 19, 2013
10:30 a.m.

South Florida Regional Transportation Authority
Human Resources Training Room
800 NW 33rd Street
Pompano Beach, Florida 33064
www.sfrta.fl.gov

FOR FURTHER INFORMATION CALL JOSEPH QUINTY AT (954) 788-7928

Members

Michael Busha, Treasure Coast Regional Planning Council
Monica Cejas, Miami-Dade Transit
William Cross, South Florida Regional Transportation Authority
James Murley, South Florida Regional Planning Council
Irma San Roman, Miami-Dade Metropolitan Planning Organization
Barney McCoy, Broward County Transit
Gustavo Schmidt, Florida Department of Transportation, District IV
Phil Steinmiller, Florida Department of Transportation, District VI
Greg Stuart, Broward Metropolitan Planning Organization
Fred Stubbs, Palm Tran
Nick Uhren, Palm Beach Metropolitan Planning Organization
Jeff Weidner, FDOT, District IV

Directions to SFRTA: I-95 to Copans Road. Go west on Copans to North Andrews Avenue Ext. and turn right. Go straight to Center Port Circle, which is NW 33rd Street, and turn right. SFRTA's offices are in the building to the right. The SFRTA offices are also accessible by taking the train to the Pompano Beach Station. The SFRTA building is southeast of the station. Parking is available across the street from SFRTA's offices, at the Pompano Beach Station.

PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING OF NOVEMBER 19, 2013

The meeting will convene at 10:30 a.m., and will be held in the Human Resources Training Room of the South Florida Regional Transportation Authority, Administrative Offices, 800 NW 33rd Street, Pompano Beach, FL 33064.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

AGENDA APPROVAL – Additions, Deletions, Revisions

DISCUSSION ITEMS –

MATTERS BY THE PUBLIC – Persons wishing to address the Committee are requested to complete an "Appearance Card" and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

CONSENT AGENDA
Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any PTAC Member, however, that item may be removed from the Consent Agenda and considered separately.

C1 – MOTION TO APPROVE: Minutes of PTAC Meeting of September 18, 2013

REGULAR AGENDA
Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.

R1 – MOTION TO ENDORSE: Resolution Supporting Tri-Rail Coastal Link to Enter Into the Project Development Phase

INFORMATION / PRESENTATION ITEMS
Action not required, provided for information purposes only.

I1 – INFORMATION: Railroad Crossing Delay and Truck Volume Monitoring

I2 – INFORMATION: Uptown Link/Cypress Creek Midday Shuttle Service

I3 – INFORMATION: Hollywood/Pines Corridor Project

I4 – INFORMATION: Seven 50 (Southeast Florida Prosperity Plan)

I5 – INFORMATION: Draft 2014 PTAC Meeting Calendar (Continued next page)

OTHER BUSINESS:

PTAC MEMBER COMMENTS

MEETING ATTENDANCE SUMMARY – Enclosed

NEXT MEETING DATE – TBD

ADJOURNMENT

In accordance with the Americans with Disabilities Act and Section 286.26, Florida Statutes, persons with disabilities needing special accommodation to participate in this proceeding, must at least 48 hours prior to the meeting, provide a written request directed to the Executive Office at 800 NW 33rd Street, Pompano Beach, Florida, or telephone (954) 942-RAIL (7245) for assistance; if hearing impaired, telephone (800) 273-7545 (TTY) for assistance.

Any person who decides to appeal any decision made by the Governing Board of the South Florida Regional Transportation with respect to any matter considered at this meeting or hearing, will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

Persons wishing to address the Board are requested to complete an "Appearance Card" and will be limited to three (3) minutes. Please see the Minutes Clerk prior to the meeting.

MINUTES
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC) MEETING
SEPTEMBER 18, 2013

The Planning Technical Advisory Committee (PTAC) meeting was held at 10:30 a.m. on Wednesday, September 18, 2013 in the SFRTA Human Resources Training Room, located at 800 NW 33rd Street, Pompano Beach, FL 33064.

COMMITTEE MEMBERS/ALTERNATES PRESENT:

Ms. Lois Bush, Florida Department of Transportation (FDOT) District 4
Ms. Nilia Cartaya, Miami-Dade Transit (MDT)
Mr. William Cross, South Florida Regional Transportation Authority (SFRTA)
Ms. Kim Delaney, Committee Chair, Treasure Coast Regional Planning Council (RPC)
Mr. Paul Flavien, Broward Metropolitan Planning Organization (MPO)
Ms. Amie Goddeau, FDOT District 4
Ms. Angela Morlok, Palm Beach MPO
Mr. James Murley, South Florida RPC
Mr. Joseph Quinty, SFRTA
Mr. Jonathan Roberson, Broward County Transit (BCT)
Mr. Phil Steinmiller, FDOT District 6
Mr. Fred Stubbs, Palm Tran
Mr. Jeff Weidner, FDOT District 4

ALSO PRESENT:

Mr. Stephen Anderson, SFRTA
Ms. Loraine Cargill, SFRTA
Ms. Laura Everett, Tindale-Oliver
Mr. Greg Kyle, Kimely-Horn
Mr. John Lafferty, Parsons Brickenoff
Mr. Shi-Chiang Li, FDOT D4
Ms. Elaine Magnum, SFRTA
Mr. Ian Rairden, Kimley-Horn
Mr. Stewart Robertson, Kimley-Horn
Mr. Jessie Smiley, FDOT District 6
Ms. Arlene Tanis, FDOT District 4
Ms. Lynda Westin, SFRTA

CALL TO ORDER

The Chair called the meeting to order at 10:42 a.m.

ROLL CALL

The Chair requested the roll call.

DRAFT

PLEDGE OF ALLEGIANCE

AGENDA APPROVAL – Additions, Deletions, Revisions

Mr. Jeff Weidner made a motion to approve the agenda. The motion was seconded by Mr. Paul Flavien. The motion was called to a vote and carried unanimously.

DISCUSSION ITEMS:

MATTERS BY THE PUBLIC – None

CONSENT AGENDA
Those matters included under the Consent Agenda are self-explanatory and are not expected to require review or discussion. Items will be enacted by one motion in the form listed below. If discussion is desired by any Committee Member, however, that item may be removed from the Consent Agenda and considered separately.

C1 – MOTION TO APPROVE: Minutes of Planning Technical Advisory Committee Meeting of July 22, 2013

Mr. Jeff Weidner made a motion to approve the meeting minutes. The motion was seconded by Mr. Jonathan Roberson. The motion was called to a vote and carried unanimously.

REGULAR AGENDA
Those matters included under the Regular Agenda differ from the Consent Agenda in that items will be voted on individually. In addition, presentations will be made on each motion, if so desired.

No items

INFORMATION / PRESENTATION ITEMS
Action not required, provided for information purposes only.

I1. - INFORMATION: Miami River-Miami Intermodal Center Capacity Improvement (MR-MICCI)

Ms. Loraine Cargill of SFRTA introduced this item and gave the first part of the presentation. Ms. Cargill stated that we are in the Phase 2 of the project study, which kicked off in September 2012 and is scheduled to end in late 2014. She noted that the MR-MICCI study area is a 1.25 mile segment of the South Florida Rail Corridor from just north of the Hialeah Market Tri-Rail Station to the Miami Intermodal Center (MIC). Ms. Cargill mentioned that the Miami River is a key issue, as currently a single track historic bridge serves as the SFRC's crossing over the river. She added that MR-MICCI Phase 2 has a PD&E focus but will have 30% design plans at its conclusion. The PD&E work will evaluate multiple alternatives for bridge crossings and the number of tracks. The presentation to PTAC is part of an outreach effort throughout the fall, which includes an update to the SFRTA Governing Board in late September and a public workshop to be held on Nov 6 at the MDX offices.

Project consultants John Lafferty with Parsons Brinckerhoff and Greg Kyle with Kimley-Horn continued the presentation, providing further project details and findings to date. Mr. Kyle explained that the historic rail bridge was constructed in the 1920's and rehabilitated in the 1990's. He noted that the project has gone through the ETDM process and programming screen, adding that an environmental assessment (EA) is the anticipated class of action. Mr. Lafferty stated that river navigation is another key issue for the project. He said that fixed and movable bridge options are under consideration, and that coordination has occurred with the Coast Guard and Army Corps of Engineers. Mr. Lafferty explained that the study team is recommending elimination of the 4 track bridge options. It was also noted that some marine uses remain west of the existing rail bridge, with 33 bridge openings occurring over the past year.

Chair Delaney asked about the best case scenario schedule for the project. Ms. Cargill replied that it would be design beginning in FY 2015 and construction occurring in the FY 2016-18 timeframe. Mr. Steinmiller asked about the clearance above the river for the existing rail bridge. Mr. Lafferty replied that the existing bridge allows 8 feet clearance above the Miami River. Mr. Cargill concluded the item by reminding the committee about the public workshop on November 6 and encouraging everyone to visit the project website at www.mrmicci.com for additional details.

I2. - <u>INFORMATION</u>: SFRTA Shuttle Bus System Update

Mr. Joseph Quinty gave a brief introduction of the item, stating in recent years, various aspects of SFRTA's Shuttle Bus services have been brought to the PTAC for review, guidance, and endorsement. Mr. Quinty explained that today's presentation is a mid-year update of some changes that have occurred since the PTAC adopted the SFRTA Five Year Shuttle Bus Service and Financial Plan in the Spring. Mr. Stephen Anderson then gave a powerpoint presentation on these SFRTA Shuttle Bus system changes and progress.

Mr. Anderson stated that SFRTA shuttle bus ridership continues to grow, as it typically exceeds 100,000 boardings per month and is on pace to reach a highest ever total of 1.5 million boardings in calendar year 2013. He also shared details on various shuttle expansion efforts that have taken place in recent months. These include additional AM peak service on the SFRTA Fort Lauderdale 1 route and new partnerships with public and private sector entities. Some of the public sector partnerships noted by Mr. Anderson include expanded and enhanced service on the Boca Raton/Arvida Park of Commerce routes, the Delray Beach Downtown Roundabout, the Fort Lauderdale TMA Northwest Community and Neighborhood Link routes, and Opa-Locka North route. Mr. Anderson also provided information on new privately operated shuttle services being provided by St. Thomas University and the Miami Dolphins (for home football games). He also some additional shuttle bus initiatives still in the planning stages, including adjustments to the Fort Lauderdale Route 2 to serve the Art Institute of Fort Lauderdale, extension of the Hollywood CRA trolleys to the Hollywood Tri-Rail station, and Barry University's interest in a privately operated shuttle to/from Tri-Rail.

Mr. Weidner commented on the importance and growing success of circulators, which bodes well for increased streetcar services in the future. Chair Delaney agreed, noting that there is growing interest in West Palm Beach in a streetcar system. Mr. Fred Stubbs suggested improved marketing of the shuttle services to increase awareness. Mr. Weidner suggested wrapping the SFRTA shuttle buses to look like the Tri-Rail trains.

I3. - <u>INFORMATION</u>: BCT Connected – The Broward County Transit FY 2014-2023 Transit Development Plan (TDP) Major Update

Mr. Jonathan Roberson of BCT introduced this item and gave the first part of its presentation. Mr. Roberson thanked committee members who had reviewed the final draft BCT TDP document. He noted that the full TDP document was available for review on the BCT website. Ms. Laura Everett of Tindale-Oliver assisted with the presentation, providing a variety of statistics and information.

One key finding that was shared is that BCT's ridership has grown 216% since 1987. An overview of the TDP's outreach activities was given, which noted 58 outreach events were held and that there was a total of 9,000 participants. These included an onboard survey and a 500 person telephone poll. Details of the TDP's contents were shared, as well. Key recommendations are improved bicycle and pedestrian access and accommodations on the system, real-time information, increased service frequencies, and addition of hybrid vehicles. One of the distinctive approaches of the TDP is the inclusion of two plans: a "Status Quo" and "Vision" approach. The Status Quo approach maintains the existing system and adds the Wave Streetcar project, improved Cypress Creek access, Lauderhill Mall facility improvements, bus stop/shelter improvements, and B-Cycle expansion. The Vision approach includes extra elements such as new fixed route services, enhanced bus service on 8 corridors, a new downtown Fort Lauderdale intermodal center, new vehicles, and numerous park-and-ride lots.

Committee questions included clarification of future projected costs and ridership for the Status Quo and Vision approaches. There was also interest expressed in synchronizing the TDP schedules for all four transit providers in the region. Comments included kudos for identifying needs that can be fed into the MPO long range transportation plan (LRTP) process.

I4. - <u>INFORMATION</u>: Railroad Crossing Delay and Truck Volume Monitoring

Due to items I1, I2, and I3 running long, there was committee consensus to postpone this item to a later meeting date. November was identified as the likely timeframe.

<u>OTHER BUSINESS</u>:

Mr. Quinty mentioned that the PTAC meetings will continue to be coordinated with the SEFTC Regional Transportation Technical Advisory Committee (RTTAC) and may involve additional rotation of the meeting location between the three counties. There was committee consensus in support of rotating the PTAC meeting location throughout the region.

<u>PTAC MEMBER COMMENTS</u>

Mr. Flavien announced details for the upcoming Performance Measures Workshop being hosted by the Broward MPO. Mr. Weidner also announced the Air Cargo and Sea Cargo event being held in Miami in early November. Chairperson Delaney mentioned details for the Rail~Volution conference being held in October.

<u>ADJOURNMENT</u>

The meeting was adjourned at 12:20 PM.

Tracking No._____ AGENDA ITEM NO. R1

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

AGENDA ITEM REPORT

☐ Consent ☒ Regular ☐ Public Hearing

SFRTA RESOLUTION #13-03
SUPPORTING TRI-RAIL COASTAL LINK (ON THE FEC CORRIDOR)
TO ENTER INTO THE PROJECT DEVELOPMENT PHASE

REQUESTED ACTION:

MOTION TO ENDORSE: South Florida Regional Transportation Authority (SFRTA) Resolution #13-03 supporting the Florida Department of Transportation's (FDOT) request to the Federal Transit Administration (FTA) for the Tri-Rail Coastal Link (TRCL) Service to enter the "Project Development" phase.

SUMMARY EXPLANATION AND BACKGROUND:

The purpose of this agenda item is to request approval of a resolution of support to move the TRCL project into the Project Development phase, which is consistent with FTA guidelines and the previously executed multi-party Memorandum of Understanding (MOU) for TRCL Service. Specifically, the resolution supports a joint FDOT/SFRTA letter of request to the FTA (on behalf of the Southeast Florida region and the TRCL Partnership) for the TRCL project to enter into the Project Development phase.

The resolution also encourages Metropolitan Planning Organization (MPO) actions to support TRCL's advancement into the Project Development phase. Such MPO action is consistent with FTA guidelines and the previously approved multi-party Memorandum of Understanding (MOU) for TRCL Service. TRCL resolutions seeking concurrence to enter the Project Development phase are being presented to the Broward, Miami-Dade, and Palm Beach MPOs, as well as the SFRTA Governing Board during the months of November and December.

An interagency MOU for the TRCL project was executed in May 2013 between FDOT, SFRTA, the region's three MPOs and the South Florida and Treasure Coast Regional Planning Councils (RPCs). As a result of strong public and stakeholder interest in the project, momentum for the TRCL service continues to grow. Discussions are ongoing with Florida East Coast Industries (FECI), which is the parent company of All Aboard Florida (AAF), regarding access to its rail corridor.

The accompanying resolution requests concurrence from the region's three MPOs and the SFRTA for FDOT to commence a two-year Project Development phase under FTA guidelines. During the Project Development phase, the Locally Preferred Alternative (LPA) will be refined and proposed for inclusion in each MPO's Long Range Transportation Plan (LRTP). A financial plan will also be developed in cooperation with the regional agencies, local governments, and stakeholders.

EXHIBITS ATTACHED: SFRTA Resolution #13-03

PTAC Action:

Approved: _____Yes _____No

Vote: _____ Unanimous

Amended Motion:

Exhibit 1

SFRTA RESOLUTION #13-03

RESOLUTION SUPPORTING THE FLORIDA DEPARTMENT OF TRANSPORTATION'S REQUEST, ON BEHALF OF THE SOUTHEAST FLORIDA REGION, TO THE FEDERAL TRANSIT ADMINISTRATION FOR THE TRI-RAIL COASTAL LINK SERVICE TO ENTER INTO THE PROJECT DEVELOPMENT PHASE

WHEREAS, The South Florida Regional Transportation Authority was created with a vision to provide greater mobility in South Florida, thereby improving the economic viability and quality of life of the community, region and state, and a mission to coordinate, develop and implement a viable regional transportation system in South Florida that endeavors to meet the desires and needs for the movement of people, goods and services; and

WHEREAS, future population growth is expected to outpace highway system expansion, which will dramatically worsen congestion levels and travel times within Southeast Florida; and

WHEREAS, benefits of public transportation include reduced travel time, reduced congestion, enhanced safety, improved access for workers, lower transportation costs, lower business costs, lower cost of living, increased business productivity, and economic growth; and

WHEREAS, investment in public transportation has been found to create more jobs than other commonly recommended economic sectors and strategies; and

WHEREAS, there is a critical need to develop adequate transit services to provide enhanced mobility for South Florida's residents and visitors along a major corridor of regional significance; and

WHEREAS, the South Florida Regional Transportation Authority (SFRTA) operates the Tri-Rail commuter rail service in Miami, Broward, and Palm Beach counties on the South Florida Rail Corridor and wishes to expand commuter rail operations to the Florida East Coast (FEC) right-of-way; and

WHEREAS, the FEC rail corridor represents an important and strategic transportation corridor that currently provides vital freight rail service to and from Southeast Florida; and

WHEREAS, cities and towns along the FEC rail corridor have been updating their land use, zoning, comprehensive plans, and redevelopment plans in support of future transit services and passenger rail stations; and

WHEREAS, since 2005, the Florida Department of Transportation (FDOT) has examined various transit alternatives, alignments, and technologies along an 85-mile portion of the FEC rail corridor from Jupiter to Miami in an effort to establish new rapid transit services; and

WHEREAS, the Florida East Coast Industries, Inc. (FECI) is expected to implement, in 2015, All Aboard Florida (AAF), a new inter-city rail passenger service between Miami and Orlando with intermediate stops in Fort Lauderdale and West Palm Beach; and

WHEREAS, eight parties involved in transportation planning in the Southeast Florida region have entered into the Tri-Rail Coastal Link Memorandum of Understanding (MOU) in May 2013 that establishes the framework for the development and implementation of a Tri-Rail Coastal Link Service operated by SFRTA on the FEC rail corridor; and

WHEREAS, the eight parties to the MOU are FDOT, SFRTA, Miami-Dade MPO, Broward MPO, Palm Beach MPO, Southeast Florida Transportation Council, and the South Florida and Treasure Coast Regional Planning Councils (the "Tri-Rail Coastal Link Partnership"); and

WHEREAS, the MOU delineates the roles and responsibilities of the partners with respect to project development and implementation; and

WHEREAS, negotiations with representatives of the FEC rail corridor have begun in accordance with the MOU to provide access and inclusion of Tri-Rail Coastal Link service within the FEC rail corridor; and

WHEREAS, the Tri-Rail Coastal Link Service MOU requires the project obtain concurrence from the Miami-Dade, Broward, and Palm Beach MPOs at major project milestones; and

WHEREAS, consistent with the Tri-Rail Coastal Link MOU, SFRTA, in conjunction with FDOT and the region's MPOs, will transmit a joint letter to FTA requesting entry into the Project Development phase and indicating that SFRTA will be the future FTA Project Sponsor; and

WHEREAS, through these efforts a fully integrated, coordinated, and complementary system of expanded Tri-Rail services will be provided for existing and future travel markets along the densely developed FEC corridor;

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING TECHNICAL ADVISORY COMMITTEE OF THE SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY THAT:

SECTION 1. RECITALS. The recitals contained in the preamble to this Resolution are incorporated by reference herein.

SECTION 2. SFRTA supports a joint FDOT/SFRTA letter of request to FTA, on behalf of the Southeast Florida region and the Tri-Rail Coastal Link Partnership, for the Tri-Rail Coastal Link to enter into the Project Development phase.

SECTION 3. SFRTA urges the Miami-Dade, Broward, and Palm Beach MPO Governing Boards to support the Tri-Rail Coastal Link's advancement into the Project Development phase.

SECTION 4. FDOT will complete the Project Development effort within two (2) years, consistent with federal guidelines under MAP-21.

SECTION 5. At the conclusion of the Project Development phase, FDOT will obtain concurrence from the Miami-Dade, Broward, and Palm Beach MPO Governing Boards for a Locally Preferred Alternative (LPA), which will include details as to project financing per the MOU.

SECTION 6. SEVERABILITY. If any section, sentence, clause, or phrase of this Resolution is held to be invalid or unconstitutional by any court or competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Resolution.

SECTION 7. EFFECTIVE DATE. This Resolution shall become effective upon its adoption, and any provision of any previous resolutions in conflict with the provisions herein are hereby superseded.

The foregoing resolution was offered by Committee Member_____, who moved its adoption. The motion was seconded by Committee Member _____, and upon being put to vote, the votes were as follows:

Member
Member
Member
Member
Member
Member
Member
Member
Member
Member
Member
Chair

The Chair thereupon declared the resolution duly passed and adopted this _____ day of November, 2013.

ATTEST

BY _____
Joseph Giulietti
Executive Director

South Florida Regional Transportation Authority

BY _____
Kim DeLaney, Ph.D.
PTAC Chair

_____ day of November, 2013

(SFRTA seal)

Approved as to form and legal sufficiency by:

_____
Teresa J. Moore
General Counsel

AGENDA ITEM NO. I1

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

INFORMATION ITEM REPORT

☐ Information Item ☒ Presentation

RAILROAD CROSSING DELAY AND TRUCK VOLUME MONITORING

SUMMARY EXPLANATION AND BACKGROUND:

In anticipation of increased freight activity, Florida Department of Transportation (FDOT) District 4 began to investigate its ability to monitor and track growth in freight movements throughout the region. In 2006, the District established static classification count locations so that Truck Counts could be obtained at the same location on an annual basis. In 2012, the District funded a study to look at all of these locations (197) and analyze growth rates and patterns that will be useful in transportation planning.

At same time, the District was seeking a methodology to monitor rail activity's impacts on cross street delay. A number of detection and information sources were attempted and the District finally went with video data collection. The detection devices were used to collect data at 12 locations along the SFRC and FEC corridors and that was expanded to 20 locations in 2012.

FDOT District 4 staff and consultants will present the information for discussion.

EXHIBITS ATTACHED: 2009 Railroad Crossing Delay Analysis Report
2011 Railroad Crossing Delay Analysis Report
2012 Railroad Crossing Delay Analysis Report
Truck Volume Growth Rate Analysis Memorandum

Railroad Crossing Delay Analysis

South Florida has two primary railroad corridors passing through developed urbanized areas:

- South Florida Rail Corridor (SFRC) / CSX corridor
- Florida East Coast (FEC) railroad

The purpose of the railroad crossing delay analysis is to update a similar analysis conducted in 2006 and to use the results in additional analysis to estimate the potential reduction in delay that would occur if crossing events were reduced or eliminated through improvements such as re-routing freight trains to a new western rail corridor alignment or grade-separated crossing improvements. When comparing the 2006 data with the 2009 data, it is important to recognize (1) the increase in the number of daily Tri-Rail train operations from 40 to 50, and (2) the potential decrease in traffic volumes in 2009 due to economic recession.

Data Collection

Field surveys of each of the fourteen (14) data collection sites within the SFRFP region were conducted during a 12-hour period (6:00 AM to 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday) using video cameras. Information collected from the video data at each crossing included the number of times the cross bar lowered to close automobile traffic; the maximum, median, and minimum total queue lengths in each direction of travel; the maximum, median, and minimum duration of time that the cross bar was lowered; and the maximum, median, and minimum total delay (in vehicle-minutes) experience by motorists in each direction of travel due to the closure.

Results

Results indicate that of the two railroads, the SFRC (CSX) is more heavily utilized, primarily because of the number of Tri-Rail passenger trains that utilize the corridor. However, because FEC trains are primarily long-haul freight trains, the number of train cars per train is generally greater and the speed is typically slower on the FEC. Table 3 presents the median result of the vehicle delay experienced per gate closure in the peak direction. Delay for railroad crossing closures is expressed in vehicle-minutes, which accounts for both the volume of vehicular traffic that is delayed and the duration of the delay. Table 4 demonstrates that the duration of the gate closure is generally twice as long at FEC crossings than CSX crossings. Table 5 demonstrates that Broward County typically experiences greater impact from railroad gate closures than Miami-Dade or Palm Beach Counties.

On average, the median result of the vehicle delay experienced per gate closure is equivalent to a level of service (LOS) F intersection for vehicles that are impacted.

Table 1: Railroad Crossing Median Peak Direction Delay per Gate Closing (vehicle-minutes)

Roadway Crossing Location	County	Railroad	Vehicle Delay 2006	Vehicle Delay 2009
NW 36th Street	Miami-Dade	CSX	(a)	14
NW 27th Avenue	Miami-Dade	FEC	(a)	51
NE 79th Street	Miami-Dade	FEC	(a)	68
NE 125th Street	Miami-Dade	FEC	(a)	48
NW 135th Street	Miami-Dade	CSX	(a)	25
Sunny Isles Boulevard	Miami-Dade	FEC	(a)	70
Hollywood Boulevard	Broward	FEC	41	58
Hollywood Boulevard	Broward	CSX	123	78
Commercial Boulevard	Broward	FEC	145	86
Commercial Boulevard	Broward	CSX	17	40
Atlantic Avenue	Palm Beach	FEC	20	36
Atlantic Avenue	Palm Beach	CSX	10	15
Blue Heron Boulevard	Palm Beach	FEC	74	61
Haverhill Road	Palm Beach	CSX	2	2

Note:
(a) – Data for Miami-Dade County Railroad Crossings were not collected in 2006.

Table 2: Vehicle Delay per Gate Closing by Railroad Corridor (vehicle-minutes)

Railroad Corridor	Vehicle Delay 2006	Vehicle Delay 2009
FEC	70	60
CSX	38	29

Table 3: Vehicle Delay per Gate Closing by County (vehicle-minutes)

County	Vehicle Delay 2006	Vehicle Delay 2009
Miami-Dade	(a)	46
Broward	82	66
Palm Beach	27	29

Note:
(a) – Data for Miami-Dade County Railroad Crossings were not collected in 2006.

Florida Department of Transportation (FDOT) District Four
Railroad Crossing Delay Analysis 2011
Kimley-Horn and Associates, Inc.; Contract No. C-8W35

Introduction

At-grade railroad crossings represent one of the primary issues facing freight rail in the Southeast Florida region. Although freight rail is vital to the movement of goods in Southeast Florida, at-grade railroad crossings create traffic delays on highways and railroads, as well as noise and safety concerns. Florida has one of the largest numbers of at-grade railroad crossings and Southeast Florida is no exception. These rail/roadway bottlenecks create significant delays for passenger and freight traffic.

The Southeast Florida region has two primary railroad corridors passing through developed urbanized areas:

- South Florida Rail Corridor (SFRC) / (CSX) corridor
- Florida East Coast (FEC) railroad

The objective of the railroad crossing delay analysis for the year 2011 is to update the similar analyses conducted in 2006 and 2009. Similar to the traffic count program, as more data points are added to the body of knowledge, a better assessment can be made regarding trends in railroad crossing delay. Furthermore, the results can be used in additional analyses to estimate the potential reduction in delay that would occur if crossing events were reduced or eliminated through improvements such as re-routing freight trains to a new western rail corridor alignment or implementing grade-separated crossing improvements.

Data Collection

In order to allow comparison to prior years' data collection efforts, video camera recordings were collected at the same eighteen (18) railroad crossing locations as in 2009. The railroad crossing locations were spread across Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, and Indian River Counties. It should be noted that twelve (12) railroad crossing locations were collected in 2006 in District Four Counties (Miami-Dade was not added until 2009). Video recordings were made for a 12-hour period (6:00 AM to 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday), which provided accurate information that was reviewed and analyzed regarding the following key aspects:

- Number of times the railroad gate blocked vehicle traffic (gate closing event)

- Duration of time the railroad gate blocked vehicle traffic (including minimum, median and maximum)
- Total queue lengths (number of vehicles stopped during each gate closing event) in each direction of travel (including minimum, median, and maximum)
- Total vehicle delay (measured in vehicle-minutes) experienced by motorists due to each gate closing event (including minimum, median and maximum)

Table 1 presents a summary of the at-grade railroad crossing locations studied.

Table 1. At-Grade Railroad Crossings Studied

Roadway Crossing Location	County	Railroad
NW 36th Street	Miami-Dade	CSX
NW 27th Avenue	Miami-Dade	FEC
NE 79th Street	Miami-Dade	FEC
NE 125th Street	Miami-Dade	FEC
NW 135th Street	Miami-Dade	CSX
Sunny Isles Boulevard	Miami-Dade	FEC
Hollywood Boulevard	Broward	FEC
Hollywood Boulevard	Broward	CSX
Commercial Boulevard	Broward	FEC
Commercial Boulevard	Broward	CSX
Atlantic Avenue	Palm Beach	FEC
Atlantic Avenue	Palm Beach	CSX
Blue Heron Boulevard	Palm Beach	FEC
Haverhill Road	Palm Beach	CSX
SR 708 / SE Bridge Road	Martin	FEC
SR 76 / Kanner Highway (near Indiantown)	Martin	CSX
SR A1A / North Beach Causeway	St. Lucie	FEC
SR 60 / 20th Street	Indian River	FEC

Results

In general, there are two primary factors that lead to greater total delay (vehicle-minutes) – roadways with higher traffic volumes and longer gate closure events. Freight trains tend to be longer than passenger trains; therefore, each gate closure event due to a freight train is more likely to produce greater delay than a gate closure event due to a passenger train.

Five (5) summary tables are presented (Tables 2 – 6) that describe the results of the 2011 Railroad Crossing Delay Analysis.

- Table 2. Duration of Gate Closing Events
- Table 3. Peak Direction Traffic Queue (vehicles)
- Table 4. Peak Direction Traffic Delay (minutes)
- Table 5. Data Summary by Location (6:00 AM – 6:00 PM)
- Table 6. Data Summary by Location (Peak Hour of Delay)

Appendix A presents the data summary sheets for each railroad crossing in each direction of travel. There are 36 data summary tables in Appendix A – two for each of the eighteen (18) railroad crossings studied (one table for each direction of travel at each railroad crossing).

Table 2. Duration of Gate Closing Events

Roadway Crossing Location	County	Railroad	Total Number of Gate Closing Events (6:00 AM – 6:00 PM)	Minimum Duration (min:sec)	Median Duration (min:sec)	Maximum Duration (min:sec)
NW 36th Street	Miami-Dade	CSX	51	00:33	00:53	03:35
NW 27th Avenue	Miami-Dade	FEC	9	00:26	02:53	03:36
NE 79th Street	Miami-Dade	FEC	10	00:52	02:57	03:48
NE 125th Street	Miami-Dade	FEC	8	01:04	02:57	03:29
NW 135th Street	Miami-Dade	CSX	43	00:34	00:55	04:02
Sunny Isles Boulevard	Miami-Dade	FEC	9	00:20	02:36	03:14
Hollywood Boulevard	Broward	FEC	5	00:43	02:04	03:04
Hollywood Boulevard	Broward	CSX	61	00:21	01:16	01:34
Commercial Boulevard	Broward	FEC	6	00:19	01:21	03:32
Commercial Boulevard	Broward	CSX	40	00:40	00:47	01:00
Atlantic Avenue	Palm Beach	FEC	4	01:56	02:25	03:28
Atlantic Avenue	Palm Beach	CSX	40	00:38	01:15	02:01
Blue Heron Boulevard	Palm Beach	FEC	8	00:23	02:36	05:33
Haverhill Road	Palm Beach	CSX	5	00:48	00:49	00:52
SR 708 / SE Bridge Road	Martin	FEC	6	00:45	01:39	03:16
SR 76 / Kanner Highway	Martin	CSX	4	00:51	00:57	01:02
SR A1A / North Beach Causeway	St. Lucie	FEC	2	02:17	02:43	03:08
SR 60 / 20th Street	Indian River	FEC	3	01:47	02:07	02:58

Table 3. Peak Direction Traffic Queue (Vehicles)

Roadway Crossing Location (Peak Direction)	County	Railroad	Total Number of Vehicles Stopped (6:00 AM – 6:00 PM)	Minimum Queue (vehicles)	Median Queue (vehicles)	Maximum Queue (vehicles)
NW 36th Street (WB)	Miami-Dade	CSX	467	0	9	25
NW 27th Avenue (SB)	Miami-Dade	FEC	445	3	50	100
NE 79th Street (EB)	Miami-Dade	FEC	400	10	43	60
NE 125th Street (EB)	Miami-Dade	FEC	355	30	43	80
NW 135th Street (WB)	Miami-Dade	CSX	578	0	14	28
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	339	12	39	57
Hollywood Boulevard (EB)	Broward	FEC	79	13	16	19
Hollywood Boulevard (EB)	Broward	CSX	2148	17	34	73
Commercial Boulevard (WB)	Broward	FEC	146	15	24	36
Commercial Boulevard (EB)	Broward	CSX	821	1	21	40
Atlantic Avenue (EB)	Palm Beach	FEC	40	5	11	14
Atlantic Avenue (EB)	Palm Beach	CSX	439	1	10	30
Blue Heron Boulevard (WB)	Palm Beach	FEC	190	8	24	42
Haverhill Road (NB)	Palm Beach	CSX	14	1	2	6
SR 708 / SE Bridge Road (EB)	Martin	FEC	66	6	11	17
SR 76 / Kanner Highway (EB)	Martin	CSX	7	0	2	4
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	25	10	13	15
SR 60 / 20th Street (WB)	Indian River	FEC	65	16	17	32

Ranking of Top 5 Total Number of Vehicles Stopped.

1. Hollywood Boulevard (EB) @ CSX
2. Commercial Boulevard (EB) @ CSX
3. NW 135th Street (WB) @ CSX
4. NW 36th Street (WB) @ CSX
5. NW 27th Avenue (SB) @ FEC

Table 4. Peak Direction Traffic Delay (Minutes)

Roadway Crossing Location (Peak Direction)	County	Railroad	Total Delay (veh-min) (6:00 AM – 6:00 PM)	Minimum Delay (veh-min)	Median Delay (veh-min)	Maximum Delay (veh-min)
NW 36th Street (WB)	Miami-Dade	CSX	343.47	0.00	4.79	85.83
NW 27th Avenue (SB)	Miami-Dade	FEC	935.14	1.06	96.94	284.17
NE 79th Street (EB)	Miami-Dade	FEC	802.83	3.17	94.35	150.75
NE 125th Street (EB)	Miami-Dade	FEC	680.54	22.00	83.27	200.00
NW 135th Street (WB)	Miami-Dade	CSX	333.56	0.00	6.95	18.20
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	795.52	4.00	83.20	168.15
Hollywood Boulevard (EB)	Broward	FEC	166.20	10.03	39.27	52.13
Hollywood Boulevard (EB)	Broward	CSX	3364.08	6.60	44.20	216.57
Commercial Boulevard (WB)	Broward	FEC	266.40	3.25	28.08	123.00
Commercial Boulevard (EB)	Broward	CSX	394.20	0.03	8.54	26.17
Atlantic Avenue (EB)	Palm Beach	FEC	77.98	8.92	15.98	37.10
Atlantic Avenue (EB)	Palm Beach	CSX	346.56	0.38	7.21	28.61
Blue Heron Boulevard (WB)	Palm Beach	FEC	600.62	3.07	63.03	233.10
Haverhill Road (NB)	Palm Beach	CSX	6.46	0.25	1.23	2.63
SR 708 / SE Bridge Road (EB)	Martin	FEC	107.76	4.70	16.96	40.80
SR 76 / Kanner Highway (EB)	Martin	CSX	3.93	0.00	0.70	2.53
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	33.92	12.25	16.96	21.67
SR 60 / 20th Street (WB)	Indian River	FEC	93.93	14.80	21.53	57.60

Ranking of Top 5 Total Delay.

1. Hollywood Boulevard (EB) @ CSX
2. NW 27th Avenue (SB) @ FEC
3. NE 79th Street (EB) @ FEC
4. Sunny Isles Boulevard (EB) @ FEC
5. NE 125th Street (EB) @ FEC

Table 5. Data Summary by Location (6:00 AM – 6:00 PM)

Roadway Crossing Location	County	Railroad	Total Number of Gate Closing Events by Location	Total Duration of Gate Closures by Location (min:sec)	Total Number of Vehicles Stopped by Location	Total Delay by Location (veh-min)
NW 36th Street	Miami-Dade	CSX	51	49:13	467	343.47
NW 27th Avenue	Miami-Dade	FEC	9	20:27	445	935.14
NE 79th Street	Miami-Dade	FEC	10	25:40	400	802.83
NE 125th Street	Miami-Dade	FEC	8	21:00	355	680.54
NW 135th Street	Miami-Dade	CSX	43	43:13	578	333.56
Sunny Isles Boulevard	Miami-Dade	FEC	9	19:06	339	795.52
Hollywood Boulevard	Broward	FEC	6	10:13	79	166.20
Hollywood Boulevard	Broward	CSX	61	74:12	2148	3364.08
Commercial Boulevard	Broward	FEC	6	10:48	146	266.40
Commercial Boulevard	Broward	CSX	40	31:55	821	394.20
Atlantic Avenue	Palm Beach	FEC	4	10:15	40	77.98
Atlantic Avenue	Palm Beach	CSX	40	47:11	439	346.56
Blue Heron Boulevard	Palm Beach	FEC	8	22:27	190	600.62
Haverhill Road	Palm Beach	CSX	5	04:08	14	6.46
SR 708 / SE Bridge Road	Martin	FEC	8	14:29	66	107.76
SR 76 / Kanner Highway	Martin	CSX	4	03:47	7	3.93
SR A1A / North Beach Causeway	St. Lucie	FEC	2	05:25	25	33.92
SR 60 / 20th Street	Indian River	FEC	3	06:52	65	93.93

Ranking of Top 5 Total Duration of Gate Closings.

1. Hollywood Boulevard @ CSX
2. NW 36th Street @ CSX
3. Atlantic Avenue @ CSX
4. NW 135th Street @ CSX
5. Commercial Boulevard @ CSX

Table 6. Data Summary by Location (Peak Hour of Delay)

Roadway Crossing Location (Peak Direction)	County	Railroad	Peak Hour Period (Time)	Total Number of Peak Hour Closing Events	Total Duration of Gate Closures (min:sec)	Percentage of Hour	Total Number of Vehicles Stopped	Total Delay in the Peak Hour (veh-min)
NW 36th Street (WB)	Miami-Dade	CSX	16:05 - 17:05	9	07:59	13.31%	91	48.01
NW 27th Avenue (SB)	Miami-Dade	FEC	12:30 - 13:30	2	05:10	8.61%	125	191.52
NE 79th Street (EB)	Miami-Dade	FEC	13:20 - 14:20	3	06:47	11.31%	114	202.02
NE 125th Street (EB)	Miami-Dade	FEC	13:15 - 14:15	3	06:56	11.56%	120	209.50
NW 135th Street (WB)	Miami-Dade	CSX	6:56 - 7:56	7	06:15	10.42%	92	44.94
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	13:10 - 14:10	3	06:27	10.75%	145	339.15
Hollywood Boulevard (EB)	Broward	FEC	13:15 - 14:15	2	02:47	4.64%	33	49.30
Hollywood Boulevard (EB)	Broward	CSX	8:00 - 9:00	10	12:05	20.14%	408	699.25
Commercial Boulevard (WB)	Broward	FEC	9:10 - 10:10	2	02:42	4.50%	47	56.15
Commercial Boulevard (EB)	Broward	CSX	7:00 - 8:00	5	04:00	6.67%	101	42.51
Atlantic Avenue (EB)	Palm Beach	FEC	14:30 - 15:30	1	02:50	4.72%	14	37.10
Atlantic Avenue (EB)	Palm Beach	CSX	16:57 - 17:57	7	09:35	15.97%	79	74.33
Blue Heron Boulevard (WB)	Palm Beach	FEC	6:20 - 7:20	3	12:22	20.61%	72	312.35
Haverhill Road (NB)	Palm Beach	CSX	16:00 - 17:00	2	01:39	2.75%	8	3.86
SR 708 / SE Bridge Road (EB)	Martin	FEC	7:20 - 8:20	2	05:18	8.83%	30	61.93
SR 76 / Kanner Highway (EB)	Martin	CSX	16:30 - 17:30	2	02:00	3.33%	7	3.93
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	15:00 - 16:00	1	03:08	5.22%	10	21.67
SR 60 / 20th Street (WB)	Indian River	FEC	15:00 - 16:00	1	02:58	4.94%	32	57.60

Ranking of Top 5 Total Delay (Peak Hour Only).

1. Hollywood Boulevard (EB) @ CSX (8:00 AM – 9:00 PM)
2. Sunny Isles Boulevard (EB) @ FEC (1:10 PM – 2:10 PM)
3. Blue Heron Boulevard (WB) @ FEC (6:20 AM – 7:20 AM)
4. NE 125th Street (EB) @ FEC (1:15 PM – 2:15 PM)
5. NE 79th Street (EB) @ FEC (1:20 PM – 2:20 PM)

Comparison to Prior Years

The data provided n Table 7 refers to the median result of vehicle delay generated by gate closures in the peak direction; the values represent the volume of vehicular traffic and the duration of the delay expressed in vehicle-minutes. Table 7 compares the results from the three different data collection efforts – 2006, 2009, and 2011.

When comparing the 2011 data with prior years' data, it appears that the effects of having a greater percentage of passenger trains as compared to freight trains are noticeable and the relative decrease in motor vehicle traffic volumes (possibly due to economic recession) has caused a slight downward trend in delay, although some locations have experienced delay increases.

Table 7. Summary of Median Peak Direction Vehicle Delay per Gate Closing

Roadway Crossing Location	County	Railroad	Median Vehicle Delay 2006 (veh-mins)	Median Vehicle Delay 2009 (veh-mins)	Median Vehicle Delay 2011 (veh-mins)
NW 36th Street	Miami-Dade	CSX	(a)	14	5
NW 27th Avenue	Miami-Dade	FEC	(a)	51	97
NE 79th Street	Miami-Dade	FEC	(a)	68	94
NE 125th Street	Miami-Dade	FEC	(a)	48	83
NW 135th Street	Miami-Dade	CSX	(a)	25	7
Sunny Isles Boulevard	Miami-Dade	FEC	(a)	70	83
Hollywood Boulevard	Broward	FEC	41	58	39
Hollywood Boulevard	Broward	CSX	123	78	44
Commercial Boulevard	Broward	FEC	145	86	31
Commercial Boulevard	Broward	CSX	17	40	9
Atlantic Avenue	Palm Beach	FEC	20	36	16
Atlantic Avenue	Palm Beach	CSX	10	15	7
Blue Heron Boulevard	Palm Beach	FEC	74	61	69
Haverhill Road	Palm Beach	CSX	2	2	1
SR 708 / SE Bridge Road	Martin	FEC	20	19	17
SR 76 / Kanner Highway	Martin	CSX	2	1	1
SR A1A / North Beach Causeway	St. Lucie	FEC	18	20	17
SR 60 / 20th Street	Indian River	FEC	26	22	22

Note (a) – Data for Miami-Dade County Railroad Crossings were not collected in 2006.

Table 8 shows the difference in vehicle delay between FEC crossings and CSX crossings; the results imply a difference of almost 5 times longer delays per closing for FEC crossings compared to CSX crossings for the year 2011. However, it should be noted that there are far fewer gate closing events per day on FEC crossings.

Table 8. Summary of Vehicle Delay per Gate Closing by Railroad Corridor

Railroad Corridor	Vehicle Delay 2006 (veh-mins)	Vehicle Delay 2009 (veh-mins)	Vehicle Delay 2011 (veh-mins)
FEC	31	49	52
CSX	22	25	11

Values from Table 9 reveal a significant impact from railroad closures in Miami-Dade County as compared to the other five counties consider in this study.

Table 9. Summary of Vehicle Delay per Gate Closing by County

County	Vehicle Delay 2006 (veh-mins)	Vehicle Delay 2009 (veh-mins)	Vehicle Delay 2011 (veh-mins)
Miami-Dade	(a)	46	62
Broward	82	66	31
Palm Beach	27	29	23
Martin	11	10	9
St. Lucie	18	20	17
Indian River	26	22	22

Note (a) – Data for Miami-Dade County Railroad Crossings were not collected in 2006.

Appendix A

Data Summary Tables for Each Railroad Crossing

(available from the Kimley-Horn ShareFile site at the following link…)

https://kimley-horn.securevdr.com/d/s58110c470f34ae39

Florida Department of Transportation (FDOT) District Four
Railroad Crossing Delay Analysis 2012
Kimley-Horn and Associates, Inc.; Contract No. C-8W35

Executive Summary

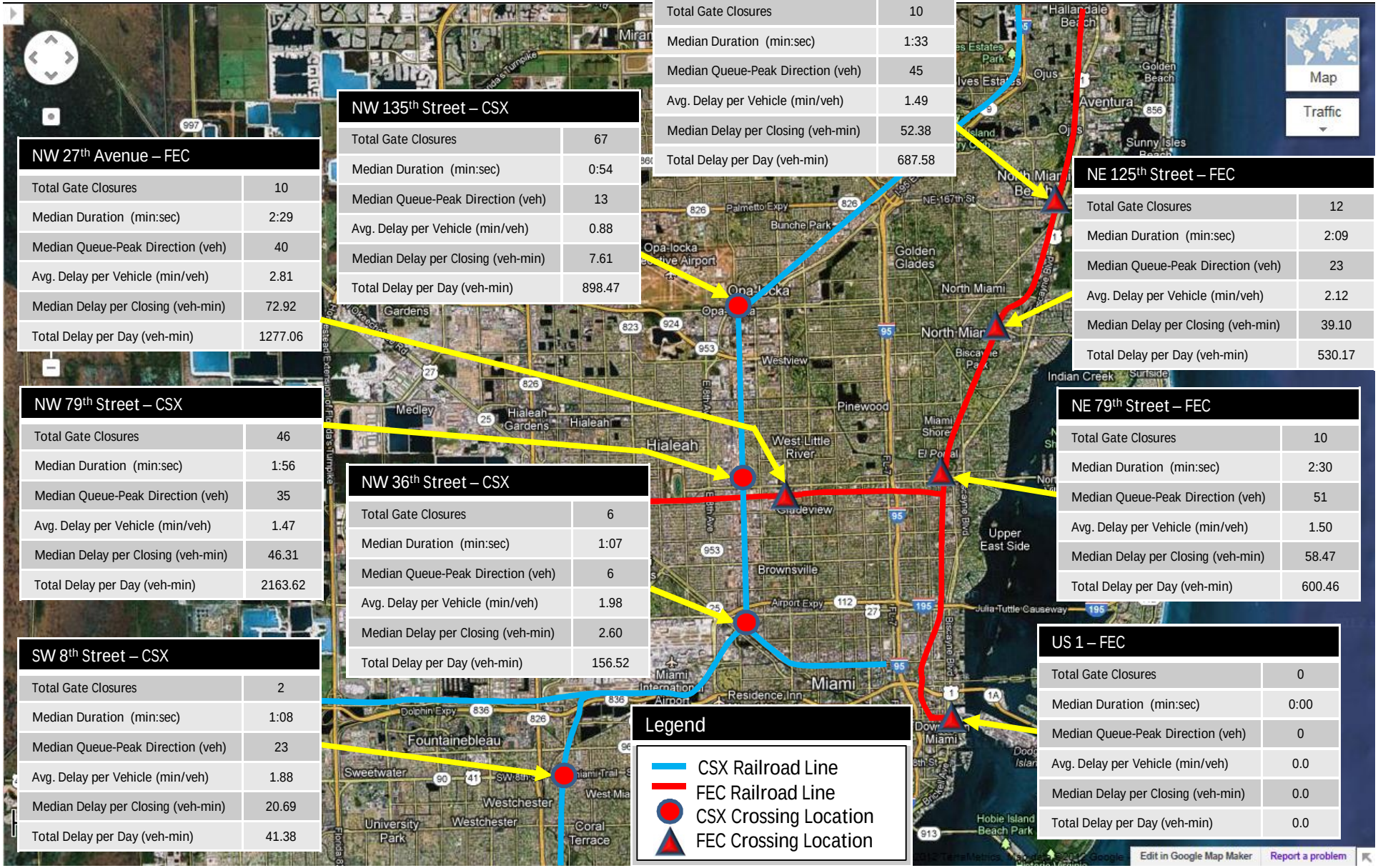
At-grade roadway/railroad crossings create significant delays for both people- and goods-movement. FDOT District Four conducts an annual analysis of vehicle delay associated with railroad grade crossings at key locations around the Southeast Florida region. This report describes the data analysis from the fourth such data collection event in recent years. The results can be used to analyze delay patterns associated with railroad gate closures and to estimate the potential benefit from reduction in delay that would occur if gate closure events were reduced or eliminated. Table ES-1 presents key findings from the 2012 analysis.

Table ES-1. Regional Summary of Key Railroad Crossing Delay Data from 21 Analysis Sites

Data	Least	Average	Most
Number of Gate Closures in a Day	0 (U.S. 1/Bisc. Blvd – FEC)	18	67 (NW 135th St – CSX)
Median Duration of Gate Closure Event (min:sec)	0:00 (U.S. 1/Bisc. Blvd – FEC)	1:42	3:28 (A1A/N Bch Cswy St. Lucie – FEC)
Median Queue in the Peak Direction (vehicles)	0 (U.S. 1/Bisc. Blvd – FEC)	23.2	60 (Commercial Blvd – FEC)
Average Delay Per Vehicle (minutes/vehicle)	0 (U.S. 1/Bisc. Blvd – FEC)	1.56	2.81 (NW 27th Ave – FEC)
Median Delay Per Closing, all vehicles (vehicle-minutes)	0 (U.S. 1/Bisc. Blvd – FEC)	32.92	92.25 (Commercial Blvd – FEC)
Total Delay Per Day, all vehicles, all closings (vehicle-minutes)	0 (U.S. 1/Bisc. Blvd – FEC)	845.91	6950.11 (Hollywood Blvd – CSX)

- NW 36th Street @ CSX/SFRC closures significantly reduced in 2012 due to Tri-Rail service change associated with the Miami Intermodal Center (MIC) construction.
- Slightly fewer gate closure events per hour were observed in 2012 as compared to 2011.
- Gate closure events tend to be trending shorter in duration (3 % shorter than in 2011).
- CSX/SFRC crossings exhibit the most total delay as measured in vehicle-minutes (accounting for the number of closings per day, traffic volume, and minutes of delay).
- FEC crossings remain the longest closure events and exhibit the most delay per vehicle.

Railroad Crossing Delay Analysis 2012
Miami-Dade Locations



NW 27th Avenue – FEC

Total Gate Closures	10
Median Duration (min:sec)	2:29
Median Queue-Peak Direction (veh)	40
Avg. Delay per Vehicle (min/veh)	2.81
Median Delay per Closing (veh-min)	72.92
Total Delay per Day (veh-min)	1277.06

NW 135th Street – CSX

Total Gate Closures	67
Median Duration (min:sec)	0:54
Median Queue-Peak Direction (veh)	13
Avg. Delay per Vehicle (min/veh)	0.88
Median Delay per Closing (veh-min)	7.61
Total Delay per Day (veh-min)	898.47

Sunny Isles Boulevard – FEC

Total Gate Closures	10
Median Duration (min:sec)	1:33
Median Queue-Peak Direction (veh)	45
Avg. Delay per Vehicle (min/veh)	1.49
Median Delay per Closing (veh-min)	52.38
Total Delay per Day (veh-min)	687.58

NE 125th Street – FEC

Total Gate Closures	12
Median Duration (min:sec)	2:09
Median Queue-Peak Direction (veh)	23
Avg. Delay per Vehicle (min/veh)	2.12
Median Delay per Closing (veh-min)	39.10
Total Delay per Day (veh-min)	530.17

NW 79th Street – CSX

Total Gate Closures	46
Median Duration (min:sec)	1:56
Median Queue-Peak Direction (veh)	35
Avg. Delay per Vehicle (min/veh)	1.47
Median Delay per Closing (veh-min)	46.31
Total Delay per Day (veh-min)	2163.62

NW 36th Street – CSX

Total Gate Closures	6
Median Duration (min:sec)	1:07
Median Queue-Peak Direction (veh)	6
Avg. Delay per Vehicle (min/veh)	1.98
Median Delay per Closing (veh-min)	2.60
Total Delay per Day (veh-min)	156.52

NE 79th Street – FEC

Total Gate Closures	10
Median Duration (min:sec)	2:30
Median Queue-Peak Direction (veh)	51
Avg. Delay per Vehicle (min/veh)	1.50
Median Delay per Closing (veh-min)	58.47
Total Delay per Day (veh-min)	600.46

SW 8th Street – CSX

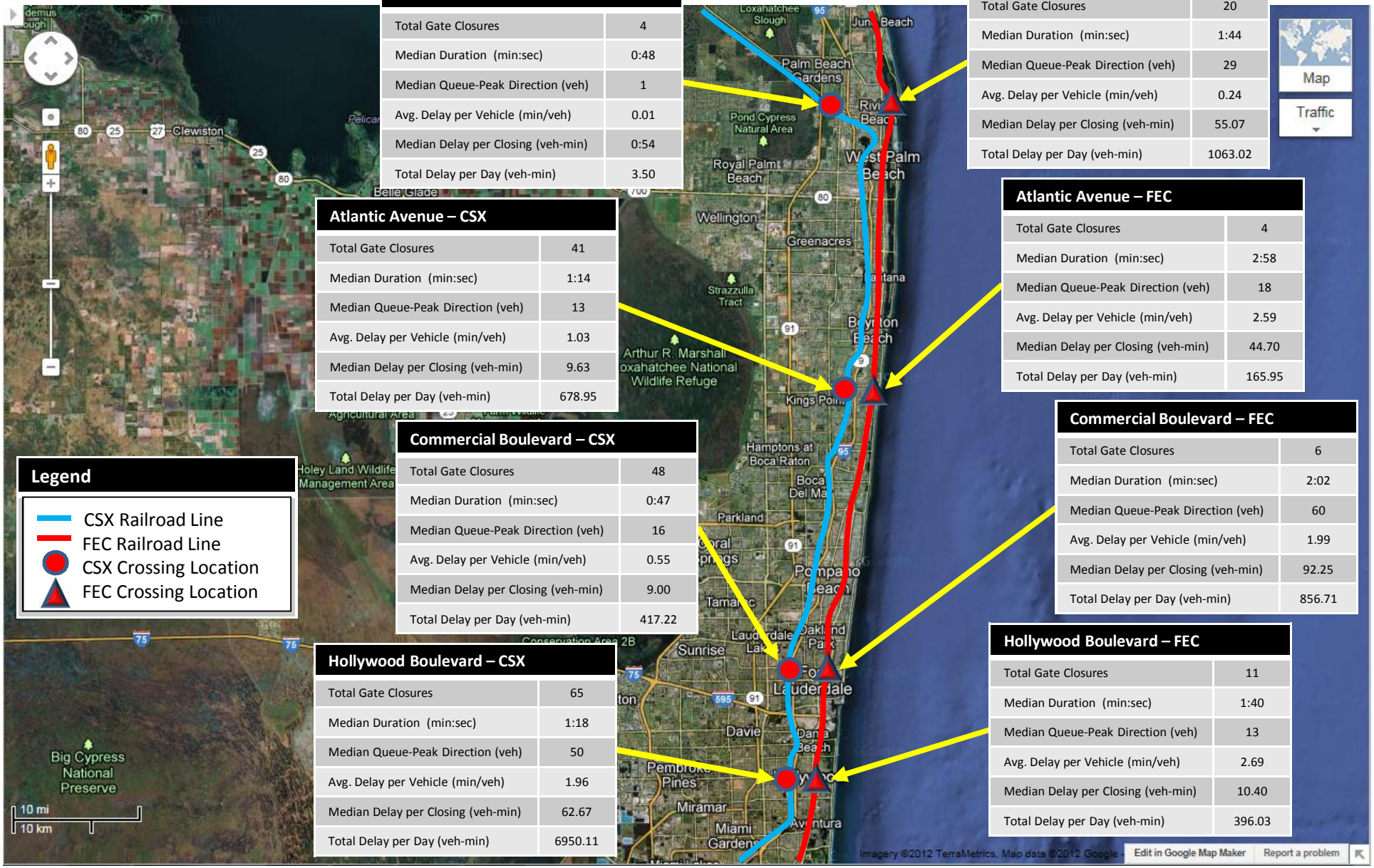
Total Gate Closures	2
Median Duration (min:sec)	1:08
Median Queue-Peak Direction (veh)	23
Avg. Delay per Vehicle (min/veh)	1.88
Median Delay per Closing (veh-min)	20.69
Total Delay per Day (veh-min)	41.38

US 1 – FEC

Total Gate Closures	0
Median Duration (min:sec)	0:00
Median Queue-Peak Direction (veh)	0
Avg. Delay per Vehicle (min/veh)	0.0
Median Delay per Closing (veh-min)	0.0
Total Delay per Day (veh-min)	0.0

Railroad Crossing Delay Analysis 2012

Broward & Palm Beach Locations



Haverhill Road – CSX

Total Gate Closures	4
Median Duration (min:sec)	0:48
Median Queue-Peak Direction (veh)	1
Avg. Delay per Vehicle (min/veh)	0.01
Median Delay per Closing (veh-min)	0:54
Total Delay per Day (veh-min)	3.50

Blue Heron Boulevard – FEC

Total Gate Closures	20
Median Duration (min:sec)	1:44
Median Queue-Peak Direction (veh)	29
Avg. Delay per Vehicle (min/veh)	0.24
Median Delay per Closing (veh-min)	55.07
Total Delay per Day (veh-min)	1063.02

Atlantic Avenue – CSX

Total Gate Closures	41
Median Duration (min:sec)	1:14
Median Queue-Peak Direction (veh)	13
Avg. Delay per Vehicle (min/veh)	1.03
Median Delay per Closing (veh-min)	9.63
Total Delay per Day (veh-min)	678.95

Atlantic Avenue – FEC

Total Gate Closures	4
Median Duration (min:sec)	2:58
Median Queue-Peak Direction (veh)	18
Avg. Delay per Vehicle (min/veh)	2.59
Median Delay per Closing (veh-min)	44.70
Total Delay per Day (veh-min)	165.95

Commercial Boulevard – CSX

Total Gate Closures	48
Median Duration (min:sec)	0:47
Median Queue-Peak Direction (veh)	16
Avg. Delay per Vehicle (min/veh)	0.55
Median Delay per Closing (veh-min)	9.00
Total Delay per Day (veh-min)	417.22

Commercial Boulevard – FEC

Total Gate Closures	6
Median Duration (min:sec)	2:02
Median Queue-Peak Direction (veh)	60
Avg. Delay per Vehicle (min/veh)	1.99
Median Delay per Closing (veh-min)	92.25
Total Delay per Day (veh-min)	856.71

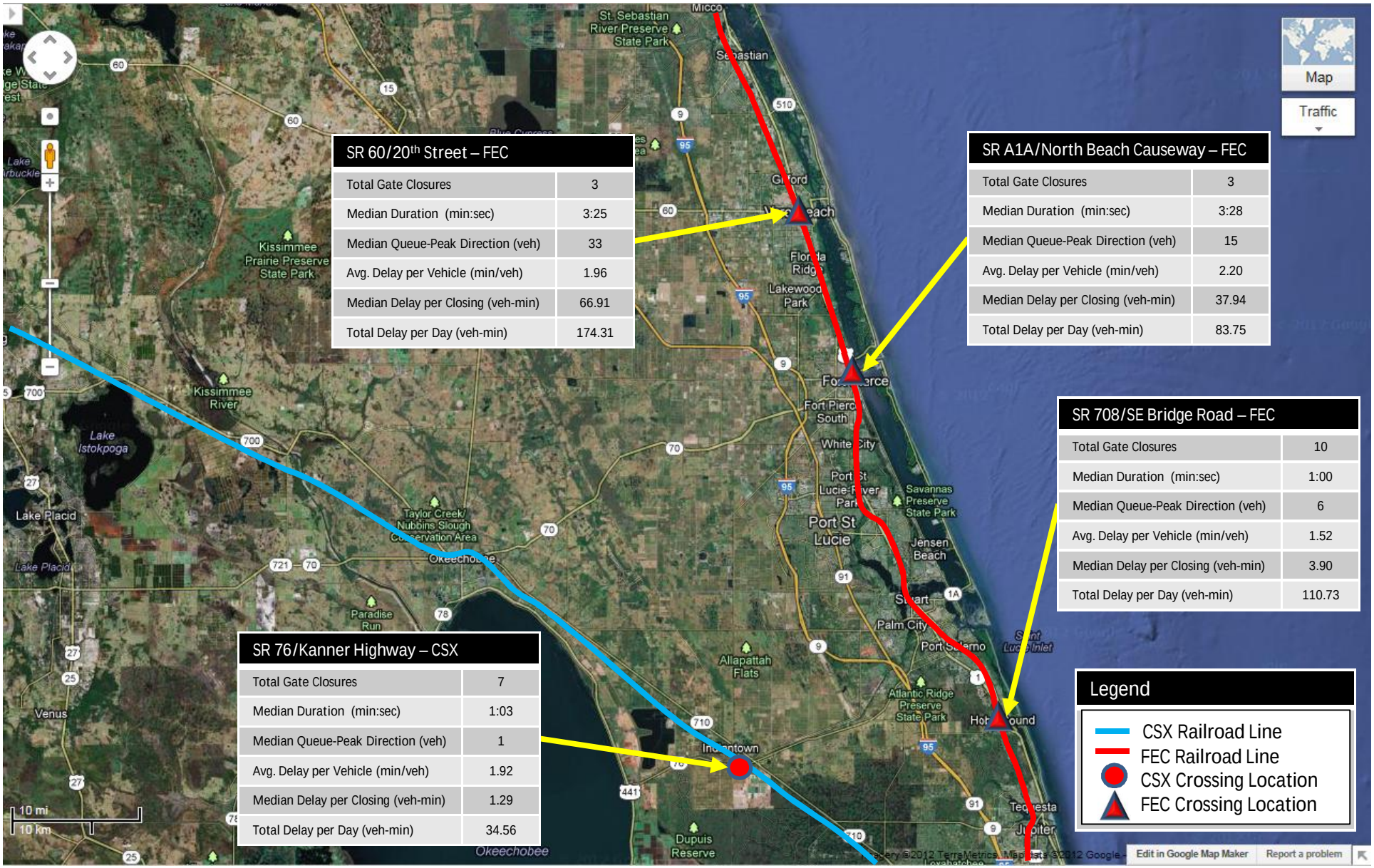
Hollywood Boulevard – CSX

Total Gate Closures	65
Median Duration (min:sec)	1:18
Median Queue-Peak Direction (veh)	50
Avg. Delay per Vehicle (min/veh)	1.96
Median Delay per Closing (veh-min)	62.67
Total Delay per Day (veh-min)	6950.11

Hollywood Boulevard – FEC

Total Gate Closures	11
Median Duration (min:sec)	1:40
Median Queue-Peak Direction (veh)	13
Avg. Delay per Vehicle (min/veh)	2.69
Median Delay per Closing (veh-min)	10.40
Total Delay per Day (veh-min)	396.03

Railroad Crossing Delay Analysis 2012
Treasure Coast Locations



SR 60/20th Street – FEC	
Total Gate Closures	3
Median Duration (min:sec)	3:25
Median Queue-Peak Direction (veh)	33
Avg. Delay per Vehicle (min/veh)	1.96
Median Delay per Closing (veh-min)	66.91
Total Delay per Day (veh-min)	174.31

SR A1A/North Beach Causeway – FEC	
Total Gate Closures	3
Median Duration (min:sec)	3:28
Median Queue-Peak Direction (veh)	15
Avg. Delay per Vehicle (min/veh)	2.20
Median Delay per Closing (veh-min)	37.94
Total Delay per Day (veh-min)	83.75

SR 708/SE Bridge Road – FEC	
Total Gate Closures	10
Median Duration (min:sec)	1:00
Median Queue-Peak Direction (veh)	6
Avg. Delay per Vehicle (min/veh)	1.52
Median Delay per Closing (veh-min)	3.90
Total Delay per Day (veh-min)	110.73

SR 76/Kanner Highway – CSX	
Total Gate Closures	7
Median Duration (min:sec)	1:03
Median Queue-Peak Direction (veh)	1
Avg. Delay per Vehicle (min/veh)	1.92
Median Delay per Closing (veh-min)	1.29
Total Delay per Day (veh-min)	34.56

Legend

- CSX Railroad Line
- FEC Railroad Line
- CSX Crossing Location
- FEC Crossing Location

Introduction

At-grade railroad crossings represent one of the primary issues facing freight rail in the Southeast Florida region. Crossings create significant delays for both people- and goods-movement, as well as safety and noise concerns. FDOT District Four conducts an annual analysis of vehicle delay associated with railroad grade crossings at key locations around the Southeast Florida region. This report describes the data analysis from the fourth such data collection event in recent years. The results can be used to analyze delay patterns associated with railroad gate closures and to estimate the potential benefit from reduction in delay that would occur if gate closure events were reduced or eliminated.

The Southeast Florida region has two primary railroad corridors passing through developed urbanized areas:

- South Florida Rail Corridor (SFRC) / (CSX) corridor
- Florida East Coast (FEC) railroad

The objective of the railroad crossing delay analysis for the year 2012 is to update the similar analyses conducted in 2006, 2009, and 2011. In 2006, FDOT District 4 completed the *Analysis of Railroad Crossing Delay*, which documented the delays at twelve (12) crossing sites. As part of the first *South Florida Regional Freight Plan*, FDOT updated the Railroad Crossing Delay Analysis in 2009 and added six (6) data collection and analysis sites in Miami-Dade County. In 2011, FDOT again conducted the Railroad Crossing Delay Analysis and results began to start showing some definite patterns and trends. The 2011 Railroad Crossing Delay Analysis served as input to several other ongoing FDOT studies.

Similar to the traffic count program, as more data points are added to the body of knowledge, a better assessment can be made regarding trends in railroad crossing delay. Furthermore, the results can be used in additional analyses to estimate the potential reduction in delay that would occur if crossing events were reduced or eliminated through improvements such as re-routing freight trains to a new western rail corridor alignment or implementing grade-separated crossing improvements.

Data Collection

Field data for assessing at-grade rail crossing traffic delay impacts were collected using portable video cameras mounted near select at-grade railroad crossings. In order to allow comparison to prior years' data collection efforts, the data collection locations included all the eighteen (18) 2011 locations. In addition, three (3) sites were added in 2012 in Miami-Dade County through coordination with FDOT District Six staff in part to gather "before" data in advance of the re-

introduction of rail traffic in the FEC Railroad corridor to Port Miami. In total, the twenty-one (21) railroad crossing locations studied were distributed throughout Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, and Indian River Counties. It should be noted that twelve (12) railroad crossing locations were collected in 2006 in District Four Counties (Miami-Dade was not added until 2009).

The Blue Heron Boulevard FEC Crossing in Palm Beach County was studied for a period of five (5) consecutive days (Monday through Friday) instead of one day to measure variability that has been reported by local stakeholders associated with the train switching operations at the Port of Palm Beach.

Video recording durations were increased from 12 hours to 14 hours in 2012 in order to include effects of evening gate closure events between 6:00 PM and 8:00 PM. The video recordings were analyzed for a 14-hour period (6:00 AM to 8:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday), which provided accurate information that was reviewed and analyzed regarding the following key aspects:

- Number of times the railroad gate blocked vehicle traffic (gate closing event)
- Duration of time the railroad gate blocked vehicle traffic (including minimum, median and maximum)
- Total queue lengths (number of vehicles stopped during each gate closing event) in each direction of travel (including minimum, median, and maximum)
- Total vehicle delay (measured in vehicle-minutes) experienced by motorists due to each gate closing event (including minimum, median and maximum)

A summary of the data collection **methodology changes in 2012** is provided below.

- Three (3) new sites added in Miami-Dade County
    - U.S. 1 (Biscayne Boulevard) @ FEC Railroad near Port Miami
    - SW 8th Street @ CSX/Homestead Subdivision south of Miami Int'l Airport
    - NW 79th Street @ CSX/SFRC near Metrorail/Tri-Rail Transfer Station
- Blue Heron Boulevard @ FEC Railroad counted for five (5) consecutive days
- Video data collection recording durations increased from 12 hours to 14 hours

Table 1 presents a summary of the at-grade railroad crossing locations studied.

Table 1. At-Grade Railroad Crossings Studied

Roadway Crossing Location	County	Railroad
SW 8th Street	Miami-Dade	CSX/Homestead (CSX/H)
U.S. 1	Miami-Dade	FEC/Port Miami (FEC/PM)
NW 36th Street	Miami-Dade	CSX/SFRC (CSX/S)
NW 27th Avenue	Miami-Dade	FEC
NW 79th Street	Miami-Dade	CSX/SFRC (CSX/S)
NE 79th Street	Miami-Dade	FEC
NE 125th Street	Miami-Dade	FEC
NW 135th Street	Miami-Dade	CSX/SFRC (CSX/S)
Sunny Isles Boulevard	Miami-Dade	FEC
Hollywood Boulevard	Broward	FEC
Hollywood Boulevard	Broward	CSX/SFRC (CSX/S)
Commercial Boulevard	Broward	FEC
Commercial Boulevard	Broward	CSX/SFRC (CSX/S)
Atlantic Avenue	Palm Beach	FEC
Atlantic Avenue	Palm Beach	CSX/SFRC (CSX/S)
Blue Heron Boulevard	Palm Beach	FEC
Haverhill Road	Palm Beach	CSX
SR 708 / SE Bridge Road	Martin	FEC
SR 76 / Kanner Highway (near Indiantown)	Martin	CSX
SR A1A / North Beach Causeway	St. Lucie	FEC
SR 60 / 20th Street	Indian River	FEC

Results

In general, there are two primary factors that lead to greater total delay (vehicle-minutes) – roadways with higher traffic volumes and longer gate closure events. Freight trains tend to be longer than passenger trains; therefore, each gate closure event due to a freight train is more likely to produce greater delay than a gate closure event due to a passenger train. However, passenger trains operate with greater frequency on the CSX/SFRC Railroad than freight trains; therefore, there are more but shorter gate closure events due to passenger trains on the CSX/SFRC Railroad.

Five (5) summary tables are presented **(Tables 2 – 6)** that describe the results of the 2012 Railroad Crossing Delay Analysis.

- Table 2. Duration of Gate Closing Events
- Table 3. Peak Direction Traffic Queue (vehicles)
- Table 4. Peak Direction Traffic Delay (minutes)
- Table 5. Data Summary by Location (6:00 AM – 6:00 PM)
- Table 6. Data Summary by Location (Peak Hour of Delay)

Appendix A presents the data summary sheets for each railroad crossing in each direction of travel. There are 50 data summary tables in Appendix A – one table for each direction of travel for each day at each railroad crossing.

Table 2. Duration of Gate Closing Events

Roadway Crossing Location	County	Railroad	Total Number of Gate Closing Events (6:00 AM – 8:00 PM)	Minimum Duration (min:sec)	Median Duration (min:sec)	Maximum Duration (min:sec)
SW 8th Street	Miami-Dade	CSX/H	2	00:51	01:08	01:25
U.S. 1	Miami-Dade	FEC/PM	0	00:00	00:00	00:00
NW 36th Street	Miami-Dade	CSX/S	6	00:28	01:07	02:10
NW 27th Avenue	Miami-Dade	FEC	10	00:48	02:29	08:43
NW 79th Street	Miami-Dade	CSX/S	46	00:49	01:56	03:09
NE 79th Street	Miami-Dade	FEC	10	00:43	02:30	04:09
NE 125th Street	Miami-Dade	FEC	12	00:54	02:09	03:40
NW 135th Street	Miami-Dade	CSX/S	68	00:20	00:59	02:48
Sunny Isles Boulevard	Miami-Dade	FEC	10	00:43	01:33	03:59
Hollywood Boulevard	Broward	FEC	11	00:28	01:40	05:57
Hollywood Boulevard	Broward	CSX/S	65	00:20	01:18	05:22
Commercial Boulevard	Broward	FEC	6	00:39	02:02	03:20
Commercial Boulevard	Broward	CSX/S	48	00:40	00:47	01:20
Atlantic Avenue	Palm Beach	FEC	4	01:08	02:58	04:40
Atlantic Avenue	Palm Beach	CSX/S	43	00:12	01:12	02:13
Blue Heron Boulevard	Palm Beach	FEC	20	00:39	01:44	06:57
Haverhill Road	Palm Beach	CSX	4	00:41	00:48	00:53
SR 708 / SE Bridge Road	Martin	FEC	10	00:28	01:00	04:36
SR 76 / Kanner Highway	Martin	CSX	7	00:56	01:03	03:45
SR A1A / N Beach Causeway	St. Lucie	FEC	3	02:49	03:28	03:50
SR 60 / 20th Street	Indian River	FEC	3	02:28	03:25	03:44

Table 3. Peak Direction Traffic Queue (Vehicles)

Roadway Crossing Location (Peak Direction)	County	Railroad	Total Number of Vehicles Stopped (6:00 AM – 8:00 PM)	Minimum Queue (vehicles)	Median Queue (vehicles)	Maximum Queue (vehicles)
SW 8th Street (WB)	Miami-Dade	CSX/H	46	20	23	26
U.S. 1	Miami-Dade	FEC/PM	0	0	0	0
NW 36th Street (WB)	Miami-Dade	CSX/S	79	2	6	50
NW 27th Avenue (SB)	Miami-Dade	FEC	455	15	40	80
NW 79th Street (EB)	Miami-Dade	CSX/S	1475	2	35	62
NE 79th Street (EB)	Miami-Dade	FEC	399	3	51	54
NE 125th Street (EB)	Miami-Dade	FEC	250	10	23	30
NW 135th Street (WB)	Miami-Dade	CSX/S	1021	1	13	50
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	463	31	45	70
Hollywood Boulevard (EB)	Broward	FEC	155	10	12	30
Hollywood Boulevard (EB)	Broward	CSX/S	3547	5	50	150
Commercial Boulevard (WB)	Broward	FEC	430	40	60	120
Commercial Boulevard (EB)	Broward	CSX/S	757	1	16	32
Atlantic Avenue (WB)	Palm Beach	FEC	64	5	18	24
Atlantic Avenue (WB)	Palm Beach	CSX/S	660	0	13	60
Blue Heron Boulevard (WB)	Palm Beach	FEC	628	5	29	80
Haverhill Road (NB)	Palm Beach	CSX	7	1	1	4
SR 708 / SE Bridge Road (WB)	Martin	FEC	73	0	6	17
SR 76 / Kanner Highway (WB)	Martin	CSX	18	0	1	7
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	38	4	15	19
SR 60 / 20th Street (EB)	Indian River	FEC	89	19	33	37

Ranking of Top 5 Total Number of Vehicles Stopped.

1. Hollywood Boulevard (EB) @ CSX/S 3,547
2. NW 79th Street (EB) @ CSX/S 1,475
3. NW 135th Street (WB) @ CSX/S 1,021
4. Commercial Boulevard (EB) @ CSX/S 757
5. Atlantic Avenue (WB) @ CSX/S 660

Table 4. Peak Direction Traffic Delay (Minutes)

Roadway Crossing Location (Peak Direction)	County	Railroad	Total Delay (veh-min) (6:00 AM – 8:00 PM)	Minimum Delay (veh-min)	Median Delay (veh-min)	Maximum Delay (veh-min)
SW 8th Street (WB)	Miami-Dade	CSX/H	41.38	14.38	20.69	26.54
U.S. 1	Miami-Dade	FEC/PM	0.00	0.00	0.00	0.00
NW 36th Street (WB)	Miami-Dade	CSX/S	156.52	0.33	2.60	141.67
NW 27th Avenue (SB)	Miami-Dade	FEC	1277.06	11.00	72.92	480.00
NW 79th Street (EB)	Miami-Dade	CSX/S	2163.62	1.93	46.31	144.67
NE 79th Street (EB)	Miami-Dade	FEC	600.46	1.23	58.47	131.95
NE 125th Street (EB)	Miami-Dade	FEC	530.17	7.21	39.10	92.13
NW 135th Street (WB)	Miami-Dade	CSX/S	333.56	0.33	7.61	134.14
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	687.58	18.47	52.38	194.73
Hollywood Boulevard (EB)	Broward	FEC	366.17	4.67	22.50	121.25
Hollywood Boulevard (EB)	Broward	CSX/S	6950.11	1.31	62.67	805.00
Commercial Boulevard (WB)	Broward	FEC	856.71	24.50	92.25	350.00
Commercial Boulevard (EB)	Broward	CSX/S	417.22	0.25	9.00	19.07
Atlantic Avenue (WB)	Palm Beach	FEC	165.95	4.56	44.70	72.00
Atlantic Avenue (WB)	Palm Beach	CSX/S	678.95	0.00	9.63	108.25
Blue Heron Boulevard (WB)	Palm Beach	FEC	1063.02	6.83	55.07	272.73
Haverhill Road (NB)	Palm Beach	CSX	3.50	0.00	0.18	0.93
SR 708 / SE Bridge Road (WB)	Martin	FEC	110.73	0.00	3.90	49.16
SR 76 / Kanner Highway (WB)	Martin	CSX	34.56	0.00	1.29	19.89
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	83.75	4.48	37.94	41.33
SR 60 / 20th Street (EB)	Indian River	FEC	174.31	28.34	66.91	79.06

Ranking of Top 5 Total Delay.

1. Hollywood Boulevard (EB) @ CSX/S 6950.11
2. NW 79th Street (EB) @ CSX/S 2163.62
3. NW 27th Avenue (SB) @ FEC 1277.06
4. Blue Heron Boulevard (WB) @ FEC 1063.02
5. Commercial Boulevard (WB) @ FEC 856.71

Table 5. Data Summary by Location (6:00 AM – 8:00 PM)

Roadway Crossing Location	County	Railroad	Total Number of Gate Closing Events by Location	Total Duration of Gate Closures by Location (min:sec)	Total Number of Vehicles Stopped by Location	Total Delay by Location (veh-min)
SW 8th Street	Miami-Dade	CSX/H	2	02:16	46	41.38
U.S. 1	Miami-Dade	FEC/PM	0	00:00	0	0.00
NW 36th Street	Miami-Dade	CSX/S	6	06:51	79	156.52
NW 27th Avenue	Miami-Dade	FEC	10	32:41	455	1277.06
NW 79th Street	Miami-Dade	CSX/S	46	82:53	1475	2163.62
NE 79th Street	Miami-Dade	FEC	10	24:42	399	600.46
NE 125th Street	Miami-Dade	FEC	12	26:59	250	530.17
NW 135th Street	Miami-Dade	CSX/S	68	77:18	1021	333.56
Sunny Isles Boulevard	Miami-Dade	FEC	10	18:00	463	687.58
Hollywood Boulevard	Broward	FEC	11	25:57	155	366.17
Hollywood Boulevard	Broward	CSX/S	65	90:18	3547	6950.11
Commercial Boulevard	Broward	FEC	6	12:01	430	856.71
Commercial Boulevard	Broward	CSX/S	48	38:53	757	417.22
Atlantic Avenue	Palm Beach	FEC	4	11:44	64	165.95
Atlantic Avenue	Palm Beach	CSX/S	43	47:53	660	678.95
Blue Heron Boulevard	Palm Beach	FEC	20	38:04	628	1063.02
Haverhill Road	Palm Beach	CSX	4	03:10	7	3.50
SR 708 / SE Bridge Road	Martin	FEC	10	17:22	73	110.73
SR 76 / Kanner Highway	Martin	CSX	7	13:59	18	34.56
SR A1A / North Beach Causeway	St. Lucie	FEC	3	10:07	38	83.75
SR 60 / 20th Street	Indian River	FEC	3	09:37	89	174.31

Ranking of Top 5 Total Duration of Gate Closings.

1. Hollywood Boulevard @ CSX/S 1 hr, 30 min, 18 sec
2. NW 79th Street @ CSX/S 1 hr, 22 min, 53 sec
3. NW 135th Street @ CSX/S 1 hr, 17 min, 18 sec
4. Atlantic Avenue @ CSX/S 47 min, 53 sec
5. Commercial Boulevard @ CSX/S 38 min, 53 sec

Table 6. Data Summary by Location (Peak Hour of Delay)

Roadway Crossing Location (Peak Direction)	County	Railroad	Peak Hour Period (Time)	Total Number of Peak Hour Closing Events	Total Duration of Gate Closures (min:sec)	Percentage of Hour	Total Number of Vehicles Stopped	Total Delay in the Peak Hour (veh-min)
SW 8th Street (WB)	Miami-Dade	CSX/H	16:00 - 17:00	2	02:16	3.77%	46	41.38
U.S. 1	Miami-Dade	FEC/PM	N/A	N/A	N/A	N/A	N/A	N/A
NW 36th Street (WB)	Miami-Dade	CSX/S	6:25 - 7:25	3	02:51	4.75%	14	5.54
NW 27th Avenue (SB)	Miami-Dade	FEC	8:00 - 9:00	2	10:19	17.19%	140	560.00
NW 79th Street (EB)	Miami-Dade	CSX/S	11:52 - 12:52	5	06:59	11.64%	194	376.63
NE 79th Street (EB)	Miami-Dade	FEC	11:57- 12:57	2	06:58	11.61%	81	170.74
NE 125th Street (EB)	Miami-Dade	FEC	18:00 - 19:00	2	05:50	9.72%	50	139.79
NW 135th Street (WB)	Miami-Dade	CSX/S	16:44 - 17:44	9	09:29	15.81%	300	275.80
Sunny Isles Boulevard (EB)	Miami-Dade	FEC	8:00 - 9:00	2	04:48	8.00%	98	217.97
Hollywood Boulevard (WB)	Broward	FEC	16:50 - 17:50	2	06:42	11.17%	43	182.31
Hollywood Boulevard (EB)	Broward	CSX/S	18:20 - 19:20	7	13:00	21.67%	655	1770.00
Commercial Boulevard (WB)	Broward	FEC	7:00 - 8:00	1	03:20	5.55%	120	350.00
Commercial Boulevard (EB)	Broward	CSX/S	17:20 - 18:20	6	04:38	7.72%	152	88.86
Atlantic Avenue (WB)	Palm Beach	FEC	16:00 - 17:00	1	03:22	5.61%	24	72.00
Atlantic Avenue (WB)	Palm Beach	CSX/S	17:00 - 18:00	7	08:52	14.78%	183	227.71
Blue Heron Boulevard (WB)	Palm Beach	FEC	7:47 - 8:47	5	15:42	26.17%	196	958.70
Haverhill Road (NB)	Palm Beach	CSX	10:00 - 11:00	1	00:44	1.22%	4	2.00
SR 708 / SE Bridge Road (EB)	Martin	FEC	15:00 - 16:00	1	04:14	7.05%	20	61.17
SR 76 / Kanner Highway (WB)	Martin	CSX	07:00 - 08:00	2	06:18	10.50%	12	30.06
SR A1A / North Beach Causeway (WB)	St. Lucie	FEC	18:00 - 19:00	1	03:50	6.39%	19	41.33
SR 60 / 20th Street (WB)	Indian River	FEC	16:00 - 17:00	1	03:25	5.69%	46	96.79

Ranking of Top 5 Total Delay (Peak Hour Only).

1. Hollywood Boulevard (EB) @ CSX/S (6:20 PM – 7:20 PM) 1770.00
2. Blue Heron Boulevard (WB) @ FEC (7:47 AM – 8:47 AM) 958.70
3. NW 27th Avenue (SB) @ FEC (8:00 AM – 9:00 AM) 560.00
4. NW 79th Street (EB) @ CSX/S (11:52 AM – 12:52 PM) 376.53
5. Commercial Boulevard (WB) @ FEC (7:00 AM – 8:00 AM) 350.00

Comparison to Prior Years

The data provided in **Table 7** refers to the median result of vehicle delay generated by gate closures in the peak direction; the values represent the volume of vehicular traffic and the duration of the delay expressed in vehicle-minutes. **Table 7** compares the results from the four different data collection efforts – 2006, 2009, 2011, and 2012.

When comparing the 2012 data with prior years' data, it appears that median vehicle delay reduced slightly on the FEC corridor and increased slightly on the CSX corridor. Significant increases were observed on Hollywood Boulevard at the CSX/SFRC crossing and Commercial Boulevard at the FEC crossing.

Table 7. Summary of Median Peak Direction Vehicle Delay per Gate Closing

Roadway Crossing Location	County	Railroad	Median Vehicle Delay 2006 (veh-mins)	Median Vehicle Delay 2009 (veh-mins)	Median Vehicle Delay 2011 (veh-mins)	Median Vehicle Delay 2012 (veh-mins)
SW 8th Street	Miami-Dade	CSX/H	(a)	(b)	(b)	21
U.S. 1	Miami-Dade	FEC/PM	(a)	(b)	(b)	0
NW 36th Street	Miami-Dade	CSX/S	(a)	14	5	3
NW 27th Avenue	Miami-Dade	FEC	(a)	51	97	73
NW 79th Street	Miami-Dade	CSX/S	(a)	(b)	(b)	46
NE 79th Street	Miami-Dade	FEC	(a)	68	94	58
NE 125th Street	Miami-Dade	FEC	(a)	48	83	39
NW 135th Street	Miami-Dade	CSX/S	(a)	25	7	8
Sunny Isles Boulevard	Miami-Dade	FEC	(a)	70	83	52
Hollywood Boulevard	Broward	FEC	41	58	39	23
Hollywood Boulevard	Broward	CSX/S	123	78	44	63
Commercial Boulevard	Broward	FEC	145	86	31	92
Commercial Boulevard	Broward	CSX/S	17	40	9	9
Atlantic Avenue	Palm Beach	FEC	20	36	16	45
Atlantic Avenue	Palm Beach	CSX/S	10	15	7	10
Blue Heron Boulevard	Palm Beach	FEC	74	61	69	21
Haverhill Road	Palm Beach	CSX	2	2	1	1
SR 708 / SE Bridge Road	Martin	FEC	20	19	17	4
SR 76 / Kanner Highway	Martin	CSX	2	1	1	1
SR A1A / North Beach Causeway	St. Lucie	FEC	18	20	17	38
SR 60 / 20th Street	Indian River	FEC	26	22	22	67

Notes (a) – Data for Miami-Dade County crossings were not collected in 2006.
(b) – Data for three sites in Miami-Dade County were added in 2012.

Table 8 shows the difference in median vehicle delay per closing between FEC crossings and CSX crossings; the results imply a difference of almost 2.5 times longer delays per gate closing for FEC crossings compared to CSX crossings for the year 2012. However, it should be noted that there are far fewer gate closing events per day on FEC crossings (average of 8 per day) than CSX crossings (average of 38 per day).

Table 8. Summary of Median Vehicle Delay per Gate Closing by Railroad Corridor

Railroad Corridor	Vehicle Delay 2006 (veh-mins)	Vehicle Delay 2009 (veh-mins)	Vehicle Delay 2011 (veh-mins)	Vehicle Delay 2012 (veh-mins)
FEC	31	49	52	47
CSX	22	25	11	18

Values from **Table 9** reveal less of an impact from railroad gate closures in Miami-Dade County as compared to previous years, possibly due to the inclusion of three new Miami-Dade sites (two of which have infrequent train service) combined with the reduction in delay at NW 36th Street due to the temporary truncation of Tri-Rail service north of the NW 36th Street crossing.

The vehicle delay increase in Broward County is attributed to an increase in delay at the Hollywood Boulevard @ CSX/SFRC crossing, where both the duration of gate closures and number of cars delayed increased.

It should be noted that the increase in vehicle delay for Indian River County is from a small sample size (3 gate closing events at SR 60). By comparison, 163 gate closing events were studied in Miami-Dade County and 130 closings were studied in Broward County.

Table 9. Summary of Median Vehicle Delay per Gate Closing by County

County	Vehicle Delay 2006 (veh-mins)	Vehicle Delay 2009 (veh-mins)	Vehicle Delay 2011 (veh-mins)	Vehicle Delay 2012 (veh-mins)
Miami-Dade	(a)	46	62	38
Broward	82	66	31	41
Palm Beach	27	29	23	19
Martin	11	10	9	3
St. Lucie	18	20	17	38
Indian River	26	22	22	67

Note (a) – Data for Miami-Dade County crossings were not collected in 2006.

Blue Heron Boulevard Variability Analysis

The 2012 Railroad Crossing and Delay Analysis included five (5) consecutive days of data collection for the FEC Railroad crossing at Blue Heron Boulevard in order to assess variability of crossing delay from day-to-day. The findings reported in **Table 10** show that the number of gate closing events ranged from 11 (Friday) to 20 (Thursday). However, the total delay experienced by all stopped vehicles (measured in vehicle-minutes) remained remarkably consistent on each day.

Table 10. Blue Heron Boulevard @ FEC Railroad Crossing – Variation between Days

Day	Total Number of Gate Closing Events	Total Duration of Gate Closing Events (min:sec)	Peak Direction Total Number of Vehicles Stopped (vehicles)	Total Delay (veh-mins)	Median Total Delay per Gate Closing (veh-mins)
Monday, Dec 10	14	36:16	427	1030.57	34.18
Tuesday, Dec 11	14	34:40	492	1055.50	47.55
Wednesday, Dec 12	13	35:21	467	1056.68	55.07
Thursday, Dec 13	20	38:04	628	1063.03	21.31
Friday, Dec 14	11	27:09	422	1033.04	66.67

- Total delay (vehicle-minutes) never deviated more than 3 percent from day-to-day. Total delay is a measure of the total number of minutes of delay experienced by all delayed vehicles throughout the 6:00 AM to 8:00 PM study period. This relative consistency from day-to-day may indicate that total delay (vehicle-minutes) is the most effective metric to compare crossing delay data.

- The highest number of gate closure events occurred on Thursday, December 13. However, the gate closures on this day were also the shortest in duration on average (1:54 on average).

- The median of total delay per gate closing varied widely from day-to-day due to the wide range of total delay per gate closing measurements.

- The impact of the Port of Palm Beach train switching operations can be observed in the videos for this site and is described in the "Notes" column of the data summary tables in Appendix A for this site. For example, on Wednesday December 12, three of the thirteen gate closures involved trains that stopped on the crossing or reversed direction. Another four of the thirteen gate closures were for train engines only. No train crossed for two of the thirteen gate closures.

Appendix A

Data Summary Tables for Each Railroad Crossing

(available from the Kimley-Horn ShareFile site at the following link…)

https://kimley-horn.securevdr.com/d/s0f537d36b014cc38

Truck Volume Growth Rate Analysis

Prepared for:

Florida Department of Transportation
District 4 Office of Modal Development

Prepared by:

Kimley-Horn and Associates, Inc.

Introduction

In an effort to identify important trends in truck traffic data, the Florida Department of Transportation (FDOT) District 4 Office of Modal Development (OMD) tasked Kimley-Horn and Associates, Inc. (KHA) with completing a truck volume database to summarize and analyze the truck growth rate from 2005 to 2010. The database includes truck volume data on Florida's Strategic Intermodal System (SIS) roadways in District 4. The SIS is a network of high-priority transportation facilities, which includes major roadways that in total carry more than 70 percent of all truck traffic on the State Highway System.

FDOT collects vehicle classification counts at static locations on State Highway System facilities each year. KHA coordinated with District 4 TRANSTAT office to obtain all classification count data for District 4 SIS roadways from 2005 to 2010. KHA used this FDOT-provided information, specifically the truck volumes at the individual count stations, to calculate the growth rates of truck traffic volumes on SIS roadways by count station. The goal of this analysis is to understand important trends, such as which facilities are experiencing higher growth rates than others. FDOT and its partner stakeholders can use this information in making strategic decisions regarding the priority of improvements.

Database

A database was developed that identified the truck traffic volume (FHWA Vehicle Classification Types 4 through 13) for count stations on SIS roadways. Key information was summarized into a sortable EXCEL database including the following information.

- Count Station (COSITE)
- County
- Roadway Name
- Count Location Description
- Average Annual Daily Traffic, by Year
- Average Daily Truck Traffic, by Year

The complete database is attached.

Analysis

Using the average daily truck traffic by year, a truck volume growth rate between individual years was calculated (2005 to 2006, 2006 to 2007, etc.). These individual annual growth rates were then used to calculate an average annual growth rate for each roadway. Specifically, the available annual growth rates were averaged to calculate a five-year average annual growth rate. Based on input from District 4 TRANSTAT, a methodology was deployed to account for missing truck count data in individual years by averaging data across multiple years in order to bridge the years with missing data.

Table 1 presents the count locations with the highest five-year average annual growth rates (2006 – 2010). **Table 2** presents the count locations with the lowest five-year average annual growth rate (2006 – 2010). A complete listing of the growth rates for all roadways is included in the attached EXCEL database file.

The average annual truck growth rate on SIS roadways in District 4 was calculated using a weighted truck growth rate from the individual count stations. The five-year average annual growth rate for the individual roadways was weighted based on the 2010 truck volumes. This indicates that count stations with higher truck volumes were given a higher weighting in the calculation relative to the actual truck volume. The average annual truck growth rate on SIS roadways in District 4 between 2005 and 2010 was 0.97 percent, indicating a general small upward trend in truck volumes during the study period.

As indicated in Table 1, two of the top five truck growth rate count stations in District 4 were along SR 60 west of I-95, which was recently widened from two to four lanes between I-95 and Florida's Turnpike during the study period. The additional capacity along SR 60 may be encouraging more truck traffic to utilize this route.

The other three of the top five truck growth rate count stations in District 4 were in the Lake Okeechobee area, including two on SR 15/US 441 in Pahokee and one on SR 25/US 27 in South Bay. However, two of the five most negative declining truck rate count stations were also in the Lake Okeechobee area, indicating that high positive and negative growth rates may be more common in this area due to overall lower total truck volume on these roadways compared to higher volume roads in the urbanized area such as I-95, I-595, and Florida's Turnpike.

As indicated in Table 2, several count stations along SR 869 (Sawgrass Expressway) experienced negative growth rates and appear within the Top 25 Decreases in Truck Volumes. It is possible that recent capacity increases along Florida's Turnpike have shifted some truck traffic away from the Sawgrass Expressway.

Although the average annual truck growth rate for all SIS facilities was 0.97 percent, one of the key findings of the database is the general volatility from site-to-site and from year-to-year within the data. Standard deviation shows how much dispersion exists from the average value within a database; a high standard deviation indicates that the data points tend to be spread out over a large range of values. The standard deviation of annual truck growth rates within the database is 24.69 percent, indicating a high degree of volatility from site-to-site within the data. Most truck volumes within the data are

determined by the T-factors reported for the individual counts. The T-factor is the percent trucks within the overall traffic count. It is not uncommon to have wide ranging T-factors reported from year-to-year for one count station. For example, the count station COSITE 892210 (I-95 north of CR 708/Bridge Road) reported T-factors ranging from 2.9 percent to 16.6 percent during the 2005 – 2010 study period.

Table 1 Five-Year Average Annual Truck Growth Rates, Top 25 Increases in Truck Volumes

Rank	Count Location	Description	Five-Year Average Annual Truck Growth Rate
1	887036	SR 60 – From CR 512 to 98th Avenue	217.25
2	930431	SR 15/US 441 – West of SR 729 Pahokee	125.92
3	930396	SR 15/US 441 – South of SR 729/State Market Road Pahokee	97.84
4	935169	SR 25 – South of SR 80/South Bay	84.36
5	880013	SR 60 – West of SR 9/I-95 – West of Outlet Mall Entrance	74.42
6	935412	SR 704/Okeechobee Boulevard – East of I-95	59.02
7	863500	Gulf Stream Way – East of Anglers Avenue	57.55
8	935418	SR 80/Southern Boulevard – East of Military Trail	53.89
9	892210	SR 9/I-95 – North of CR 708/Bridge Rd	46.64
10	867367	Broward Boulevard – East of SW 7th Avenue	42.75
11	868124	Ravenswood Road – South of Griffin Road	37.48
12	862807	SR 862/I-595 – East of SR 9/I-95	37.42
13	867226	County Line Road – East of University Drive	37.29
14	935017	SR 806/Atlantic Avenue – West of SR 9/I-95	36.83
15	935417	SR 80/Southern Boulevard – East of Jog Road	30.23
16	930046	SR 794/Yamato Road – West of SR 9/I-95	29.28
17	867368	Broward Boulevard – West of SE 3rd Avenue	26.87
18	862800	SR 862/I-595 – East of 136th Avenue	24.46
19	930762	New SR 80 – East of SR 15/US 441/Belle Glade	24.28
20	862801	SR 862/I-595 – East of SR 823/Flamingo Road	19.53
21	860021	SR 842/Broward Boulevard – East of SR 9/I-95	18.56
22	860345	SR 25/US 27 – South of SR 93/I-75	18.03
23	860208	SR 84 – West of SW 4th Avenue	17.61
24	932209	SR 9/I-95 – North of SR 706/Indiantown Road	17.36
25	970403	SR 91 (Turnpike) – North of Pembroke Road	15.00

Table 2 Five-Year Average Annual Truck Growth Rates, Top 25 Decreases in Truck Volumes

Rank	Count Location	Description	Five-Year Average Annual Truck Growth Rate
1	930766	SR 15/US 441 – North of New SR 80/Hooker Highway	-34.31
2	862004	SR 93/I-75 – North of SR 818/Griffin Road	-21.04
3	862503	SR 9/I-95 – South of SR 814/Atlantic Boulevard	-16.66
4	862002	SR 93/I-75 – South of SR 822/Sheridan Street	-15.82
5	935177	SR 80/South Main Street – South of SE Avenue E in Belle Glade	-15.67
6	862506	SR 9/I-95 – South of SR 810/Hillsboro Boulevard	-15.62
7	930011	SR 80/Southern Boulevard – East of Binks Forest Drive/Fort Bend County Road	-15.24
8	930498	CR 702/45th Street – East of SR 9/I-95	-14.86
9	862504	SR 9/I-95 – South of Copans Road	-14.27
10	865336	SR 25/US 27 – South of Stirling Road	-13.86
11	932191	SR 9/I-95 – North of SR 808/Glades Road	-13.83
12	934128	I-95 – Southbound on-ramp from Palm Beach International Airport	-13.76
13	973004	Sawgrass Expressway/SR 869 – North of Atlantic Boulevard	-13.48
14	973003	Sawgrass Expressway/SR 869 – North of Commercial Blvd/SR 870	-13.37
15	973006	Sawgrass Expressway/SR 869 – North of Coral Ridge Drive	-13.35
16	973005	Sawgrass Expressway/SR 869 – South of Canal/C5 Bridge	-13.32
17	860362	SR 93/I-75 – North of Miami-Dade/Broward County Line	-13.13
18	973015	Sawgrass Expressway/SR 869 – South of Oakland Park Boulevard	-12.82
19	971998	SR 821/HEFT South of Miramar Toll Plaza	-12.72
20	865337	SR 25/US 27 – North of Griffin Road	-12.65
21	862458	SR 9/I-95 – South of SR 862/I-595	-12.64
22	973002	Sawgrass Expressway/SR 869 – North of Mile Marker 4	-12.63
23	973007	Sawgrass Expressway/SR 869 – South of Riverside Drive Bridge	-12.61
24	973008	Sawgrass Expressway/SR 869 – North of Mile Marker 19	-12.46
25	973000	Sawgrass Expressway/SR 869 – South of Sunrise Boulevard	-12.45

Summary

The five-year average annual growth rate for the individual count stations on SIS roadways in District 4 was weighted based on the 2010 truck volumes to determine a weighted annual truck growth rate for SIS roadways in District 4. A methodology was deployed to account for missing data. **The average annual truck growth rate on SIS roadways in District 4 between 2005 and 2010 was 0.97 percent, indicating a general small upward trend in truck volumes during the study period**. There was a high degree of volatility within the data. The standard deviation of the average annual truck growth rate was calculated to be 24.69 percent.

AGENDA ITEM NO. I2

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

INFORMATION ITEM REPORT

☒ Information Item ☐ Presentation

UPTOWN LINK / CYPRESS CREEK MIDDAY SHUTTLE SERVICE

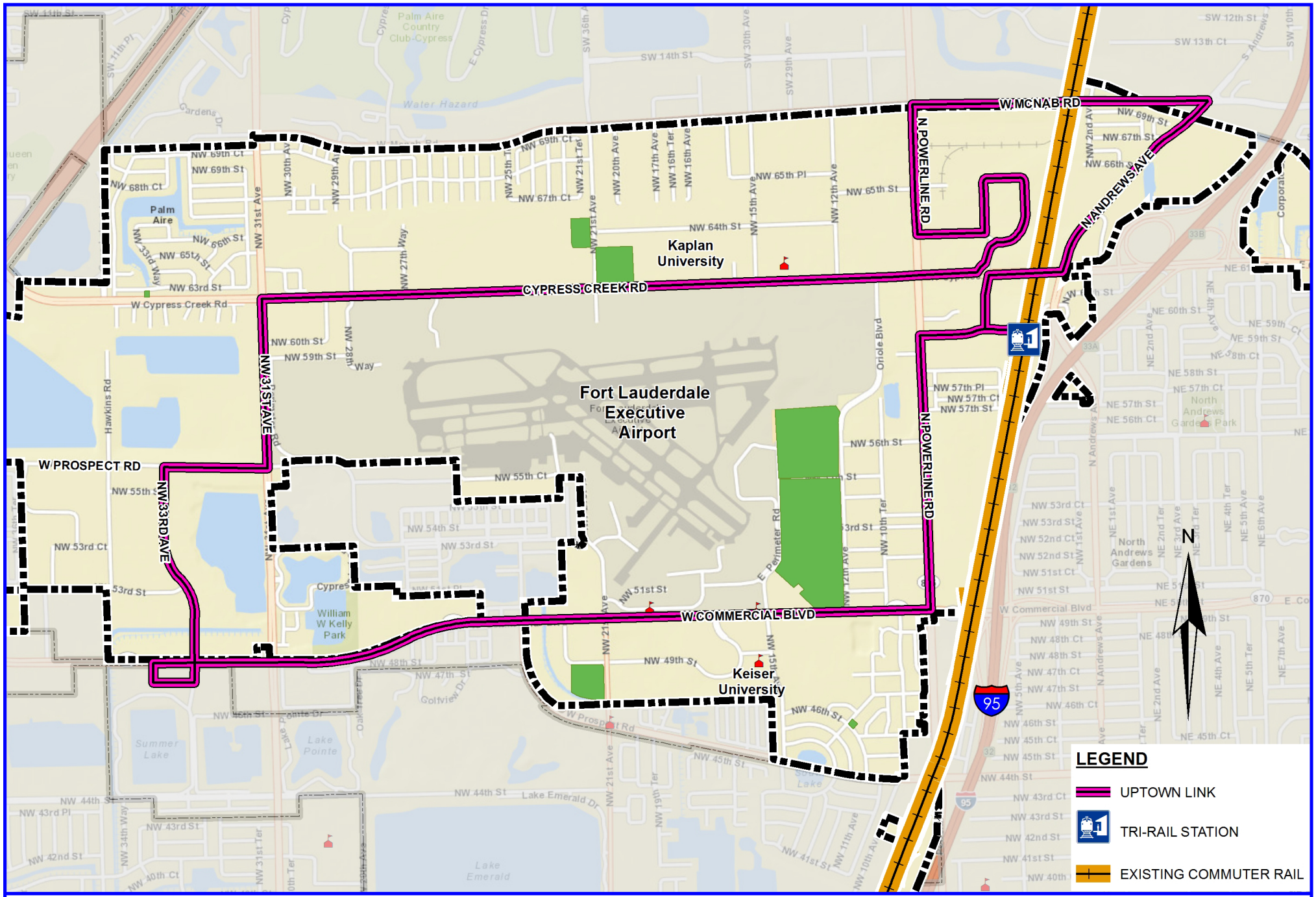
SUMMARY EXPLANATION AND BACKGROUND:

The Downtown Fort Lauderdale Transportation Management Association (DFLTMA) was recently awarded a Florida Department of Transportation (FDOT) Transit Corridor Grant for midday shuttle service originating from the Cypress Creek Tri-Rail Station. According to the latest Tri-Rail onboard survey data, the Cypress Creek Station ranks as the system's fifth busiest station.

The proposed midday shuttle would serve the Cypress Creek Road and Commercial Boulevard corridors as well as the Uptown Business District and the several major employment and educational facilities in these areas. Three SFRTA shuttle bus routes currently operate at the Cypress Creek station and serve this area on weekdays during traditional peak periods. However, no SFRTA shuttles operate during off-peak periods. Broward County Transit (BCT) bus routes operate throughout the day, but serve the station from the park-and-ride lot east of Andrews Avenue and do not function as local circulators.

The City of Fort Lauderdale, FDOT and SFRTA will continue to work collaboratively in planning and community outreach efforts. SFRTA has an existing shuttle bus operations contract that enables the service to be added quickly and efficiently, pending SFRTA Governing Board approval. The grant is projected to cover total costs of approximately two years of service and is scheduled to be operational by February 1, 2014.

EXHIBITS ATTACHED: Draft Cypress Creek Midday Shuttle Alignment Map



City of Fort Lauderdale
Transportation & Mobility Department

CITY of FORT LAUDERDALE
PROPOSED UPTOWN LINK ROUTE

0 1,000 2,000 Feet

1 inch = 2,000 feet

10/22/2013

AGENDA ITEM NO. I3

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

INFORMATION ITEM REPORT

☐ Information Item ☒ Presentation

HOLLYWOOD/PINES CORRIDOR PROJECT

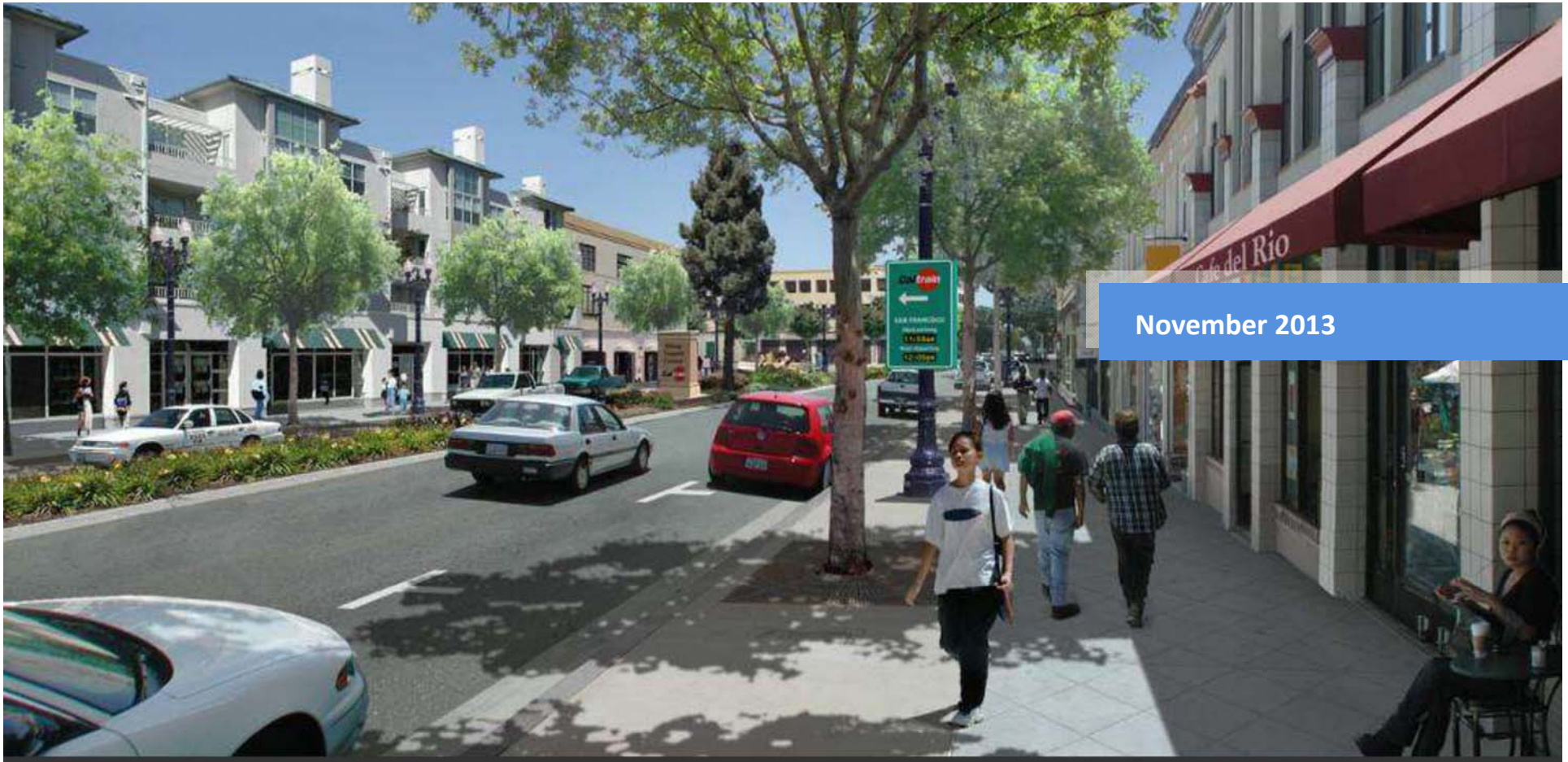
SUMMARY EXPLANATION AND BACKGROUND:

The Hollywood/Pines Corridor Project is the first planning effort from the Broward Metropolitan Planning Organization (MPO) to combine the Congestion Management Process and Livability Planning as a comprehensive approach to implementing the Broward MPO 2035 Long Range Transportation Plan (LRTP). The intent of the Hollywood/Pines Corridor Project is to improve safety and mobility along this corridor resulting in short- and long-term strategies and improvements for land use, transit, biking, and walking.

The Hollywood/Pines Corridor Project has resulted in shorter-term multimodal infrastructure and congestion management project recommendations, as well as longer-term concepts for improvements to the transportation system. Shorter-term congestion management recommendations include:

- Provision of bicycle and pedestrian facilities along Hollywood/Pines Boulevard as well as along supporting parallel and perpendicular roadways.
- Bus stop enhancements and re-positioning of bus stops to provide safer, more convenient access to signalized intersections.
- Implementation of pedestrian-friendly design treatments at major intersections and interchanges.
- Recommendations related to specific, observed traffic safety issues including improvements to street lighting and traffic signal operational modifications.
- Identification of potential traffic operational improvements including additional applications for FDOT District 4's Transportation System Management and Operations projects to provide Arterial Traffic Management Systems.

EXHIBITS ATTACHED: Hollywood/Pines Corridor Project Draft Final Report



November 2013

HOLLYWOOD / PINES BOULEVARD

CONGESTION MANAGEMENT PROCESS/ LIVABILITY PLANNING PROJECT

DRAFT FINAL REPORT

broward MPO
metropolitan planning organization

Hollywood/Pines
Corridor Project
www.hollywoodpinescorridorproject.com

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For complaints, questions or concerns about civil rights or nondiscrimination; or for special requests under the American with Disabilities Act, please contact: Christopher Ryan, Public Information Officer/Title VI Coordinator at (954) 876-0036 or ryanc@browardmpo.org

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Planning and Engineering

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Hollywood/Pines Corridor Project

www.hollywoodpinescorridorproject.com

broward MPO metropolitan planning organization

Executive Summary

BACKGROUND AND PURPOSE:

The Hollywood/Pines Boulevard Corridor Project combines the Broward Metropolitan Planning Organization's (MPO) Congestion Management Process and Livability Planning study approaches. The Congestion Management Process is intended to identify, develop, prioritize, and implement shorter-term multimodal congestion management and mobility enhancement strategies for identified corridors and sub-areas.

The Broward MPO's Livability Planning studies are intended as a first step to implementing the Mobility Hub concept of the Broward MPO's 2035 Long Range Transportation Plan (LRTP). Mobility Hubs are critical points of interaction between people and the transportation system including access to, and transfers between, transit services. Livability Planning studies develop the detailed elements of the Mobility Hubs, including the location of facilities such as stations and transit stops, needed bike and pedestrian infrastructure, and opportunities for connections to local streets. These studies also make recommendations related to the designation of appropriate land use plan categories and policy guidelines to provide an urban fabric that supports transit, walking, and biking.

Combining both approaches within one project allows for the identification of short-term capital projects intended to enhance mobility and safety, provide superior access to existing higher-ridership transit hubs, and plan for longer-term strategies to implement land use and transportation system changes to support transit, walking, and biking.

PROJECT ADVISORY COMMITTEE

To facilitate an effective project process and achieve buy-in for the implementation of project recommendations, the Broward MPO established a Project Advisory Committee (PAC) consisting municipal and implementing agency staff.

Throughout the course of the Project, the PAC met nine times in order to:

- Assist in guiding the overall project effort
- Provide necessary data and technical support
- Give feedback and engage in discussion related to the technical review of interim deliverables and findings

In addition to the contributions described above, PAC members were responsible for vetting project recommendations within their respective agencies and will continue to coordinate with the Broward MPO to implement project findings. Accordingly, the individuals selected to serve on the PAC not only have broad technical expertise in their fields but also positions of authority within their organizations.

PAC membership includes staff from both cities (Hollywood and Pembroke Pines), representatives from Broward County Transit (BCT), Broward County Traffic Engineering Department (BCTED), the Florida Department of Transportation (FDOT), the South Florida Regional Transit Authority (SFRTA), the Broward County Planning Council, and other agencies relevant to the project area and subject matter.

HOLLYWOOD / PINES BOULEVARD CORRIDOR PROJECT AREA

The Hollywood/Pines Boulevard Corridor Project study area extends north-south for ½-mile from Hollywood/Pines Boulevard (SR 820) and from US 27 at the western edge of the Broward County Urban Services Boundary east to SR A1A along the Atlantic coast. Because Broward County has generally been developed from east to west, the corridor traverses a broad range of development history and urban form typologies, each with different land use and transportation opportunities and challenges.

As shown in the map on the following pages, the corridor includes interchanges at I-75, the Florida Turnpike, and I-95 as well as at-grade intersections with principal arterial streets at US 27, Flamingo Road, University Drive, SR 7, and US 1 (at Young Circle). The corridor also intersects the CSXT rail corridor (on which the current SFRTA Tri-Rail service operates) as well as the Florida East Coast Railway (FEC) corridor (where Tri-Rail Coastal Link service is being planned).

The Broward MPO's 2035 LRTP designates ten locations along the corridor as Mobility Hubs. Mobility Hubs may also have the potential to serve as catalysts for infill and redevelopment. In addition to the ten locations designated in the LRTP, an additional Mobility Hub location is suggested as part of this Project to be sited at Hollywood Boulevard and US 1 (Young Circle).

The 2035 LRTP categorizes Mobility Hubs from most intense to least intense as Gateway, Anchor, and Community Mobility Hubs. These designations indicate the level infrastructure investment that should be provided and are based on the existing/planned development patterns, type of planned premium transit services, and forecast transit ridership activity. The following are key attributes of each Hub typology:

- Gateway Hubs:
  - ◊ Forecast transit ridership greater than 2,200 daily boardings and alightings in 2035 LRTP
  - ◊ Surrounded by higher density mixed-use developments including downtown areas, transit oriented corridors and transit oriented developments defined in the Broward County Future Land Use Plan
  - ◊ Provide connections to two or more high capacity transit lines
- Anchor Hubs:
  - ◊ Forecast transit ridership between 1,500 and 2,200 daily boardings and alightings in 2035 LRTP
  - ◊ Located near major institutions, employment cneters, town centers, and regional shopping centers that are similar to local activity centers and/or regional activity centers and may be identified in local plans to accommodate new transit and pedestrian oriented development.
  - ◊ Served by at least one high capacity transit line
- Community Hubs:
  - ◊ Served by premium rapid bus service
  - ◊ More likely to attract local trips than regional trips

Although the High Capacity and Premium Rapid Bus services contemplated in Chapter 3.2 of the 2035 LRTP and some of the intersecting local bus routes shown in the LRTP are not currently in place or shown as cost-feasible in BCT's recent Transit Development Plan update, Limited-stop (Breeze) service along University Drive, SR 7, and US 1 and the Hollywood Tri-Rail station just west of I-95 provide a starting point for transit infrastructure investments along the Hollywood/Pines Boulevard corridor.

HOLLYWOOD/ PINES CORRIDOR PROJECT

Hollywood/Pines Corridor Project

Mobility Hub Designations:

Community Hub | Anchor Hub | Gateway Hub

Map Order (West to East):

A

C

B

D

Mobility Hub Designations:

Community Hub

Anchor Hub

Gateway Hub

Hollywood/Pines Corridor Project

GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Because this Project is one of several initiatives intended to implement the 2035 LRTP, the Goals of the 2035 LRTP were also cast as the goals for the Hollywood/Pines Corridor Project. Based on these goals, the Project Scope of Services, and discussion with the PAC, the following specific Project Objectives were then defined:

- OBJECTIVE 1: Confirm Mobility Hub locations and typologies.
- OBJECTIVE 2: Identify potential sites for Mobility Hub infrastructure placement for each Mobility Hub area.
- OBJECTIVE 3: Recommend potential transit operational improvements at each Mobility Hub.
- OBJECTIVE 4: Identify Mobility Hub area intersection safety improvements for all modes.
- OBJECTIVE 5: Identify Mobility Hub area bicycle and pedestrian connectivity improvements.
- OBJECTIVE 6: Identify traffic management and multimodal enhancement strategies for Johnson Street within the City of Hollywood.
- OBJECTIVE 7: Identify traffic operations/congestion management strategies along Hollywood/Pines Boulevard.
- OBJECTIVE 8: Identify opportunities to develop the multimodal network within the study corridor.
- OBJECTIVE 9: Identify strategies to connect existing and future centers along the project corridor to regional employment centers via mass transit.
- OBJECTIVE 10: Provide a toolbox for urban redevelopment of Mobility Hub areas and adjacent segments of the corridor.
- OBJECTIVE 11: Relate benefits of improved mobility and infill and redevelopment along Hollywood/Pines Boulevard to lower-density neighborhoods along the corridor.
- OBJECTIVE 12: Recommend strategies to enhance bicycle and pedestrian safety throughout the project corridor.
- OBJECTIVE 13: Identify, evaluate, and recommend countermeasures for high-crash locations.
- OBJECTIVE 14: Identify urban design strategies to develop mixed-use, "24 hour" neighborhoods in appropriate locations and implement CPTED (Crime Prevention Through Environmental Design) principles along the corridor.
- OBJECTIVE 15: Provide an "Urban Design Toolbox" that promotes development forms that make efficient use of land, water, and energy resources and promotes alternative travel mode.
- OBJECTIVE 16: Identify cost-effective public engagement approaches (for use in future projects).
- OBJECTIVE 17: Identify "place-making" opportunities through planning of Mobility Hubs and other infrastructure consistent with community character.
- OBJECTIVE 18: Consider longer-term operations and maintenance costs of recommended transportation strategies.

Chapter 1 of the Project Report includes a more thorough discussion of the relationship between these Objectives and the Project Goals and also includes suggested performance and monitoring measures to evaluate the long-term effectiveness of the Project.

DATA COLLECTION AND REVIEW

Data collection for the Hollywood/Pines Boulevard Corridor Project was split into two phases. The first phase involved assembly and review of available transportation and land use data and documents from various stakeholder agencies in order to develop a baseline assessment of conditions along the corridor.

Among other documents, the following were reviewed and incorporated into the Project:

- Broward MPO 2035 Long Range Transportation Plan
- Broward County Transit FY 2012 Transit Development Plan Annual Update
- Broward Complete Streets Guidelines
- Broward County Comprehensive Plan
- Broward County Future Land Use Plan
- City of Hollywood Comprehensive Plan and Citywide Master Plans
- Downtown Hollywood and Hollywood Beach CRA Plans
- City of Pembroke Pines Comprehensive Plan
- City of Pembroke Pines Streetscape Design Guidelines

In addition to these documents, the FDOT 5-Year Work Program and Broward MPO 2035 Cost Feasible Plan were reviewed to identify recent, pending, and planned transportation projects that impact the corridor. To the extent available, roadway design plans were obtained so that these could be referenced as the de-facto existing condition in the event that a project was underway or imminent.

To supplement the document review and transportation project information, over 40 Geographic Information Systems (GIS) data layers were collected and cataloged to support the Project's analysis tasks.

GIS data layers assembled for the Project include:

- Recent, high-quality aerial imagery
- Land use, zoning, and property appraiser parcel data
- Roadway network characteristics and traffic data
- Traffic crash data, including bicycle and pedestrian crashes
- Points of interest such as community and regional parks, colleges, hospitals, libraries, and schools
- Transit routes and transit stop locations, including transit stop daily boardings and alightings (ridership)

These documents and data were supplemented by interviews with stakeholder agencies and other entities along the corridor, including representatives from those stakeholder agencies included on the Project PAC as well as institutions located within the corridor such as Broward College and Memorial Hospital.

The second phase of data collection involved "primary" data collection activities—mostly related to evaluating traffic conditions and evaluating potential Project recommendations. These data collection activities included:

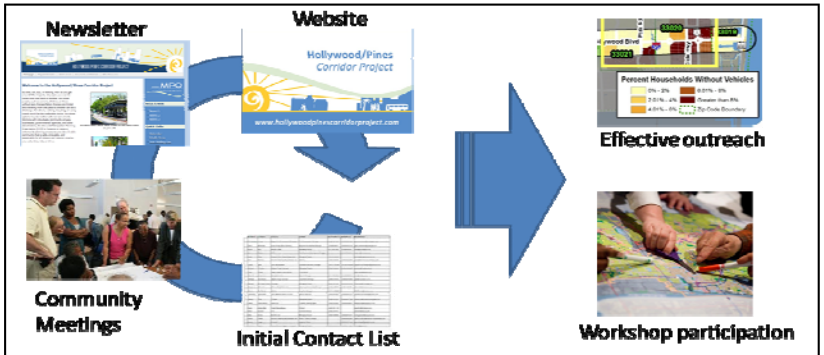
- Intersection traffic turning movement counts
- Intersection and mid-block pedestrian counts
- Traffic queue-length analyses
- Limited intercept surveys of transit patrons
- Field review and photo-inventory of existing conditions

Chapter 2 of the Project Report includes a detailed description of the project document review synthesis, capital project inventory, and GIS database content. Copies of field data inventories are included in related technical appendices.

PUBLIC INVOVLEMENT

Effective public involvement is a critical aspect of the Hollywood/Pines Boulevard Corridor Project. Based on a Public Involvement Plan developed at the outset of the project, the following key elements were used to inform the public about the project and gather their input to help identify issues and develop recommendations.

- Community Meetings – Shortly after initial data gathering and agency stakeholder interviews were completed, members of the project team attended neighborhood association and other community meetings to present a concise (10-minute) overview of the project, distribute project brochures, and obtain contact information in order to broadcast future project information and transmit invitations for future public workshops.
- Project Website – A comprehensive project website was developed in order to distribute information about the project, advertise events, and solicit public comments. Website components include a:
  - ◊ *Home* page with recent project information and links
  - ◊ *Project Information* page with background information, schedule, and contact information
  - ◊ *Get Involved* page to view the Project calendar, sign-up for bulletins, and submit comments
  - ◊ *Documents and Materials* page with links to interim deliverables and PAC agendas/presentations
  - ◊ *Other Resources* page with links to related agencies and similar studies
- Scenario Planning Workshops – Two workshops were held (one in Hollywood and one Pembroke Pines) in order to get public input on the land use and transportation strategies for two Mobility Hubs selected in each city.
- City Commission, MPO Board, and MPO Committee Presentations – To gather input from elected and appointed officials as well as members of the public present, the Project includes interim and final briefings at the following publicly-noticed meetings:
  - ◊ City of Hollywood and City of Pembroke Pines Commissions
  - ◊ Broward MPO Technical Coordinating Committee and Community Involvement Roundtable
  - ◊ Broward MPO Board
- iTownhall Meeting – An iTownhall meeting, was conducted to provide an opportunity for the public to comment on Project recommendations and facilitate public input on issues related to congestion management and livability within the study corridor.



Graphic illustrating use of community meetings and newsletters to guide the public to the website to solicit comments and promote workshops

Throughout the public involvement process, zip code data were captured to evaluate the extent to which the Project effectively engaged vulnerable populations along the corridor including minorities, transit-dependent persons, people living in high-poverty areas, and persons over age 65.

Complete documentation of the Project Public Involvement Plan is provided as Chapter 3 of the Project Report.

TRANSPORTATION ANALYSIS

Analysis of existing transportation conditions builds on information gathered through the Project's data collection, stakeholder interview, and community meeting tasks to identify and evaluate opportunities to reduce congestion and improve modal options throughout the corridor. Key aspects of the Project's Transportation Analysis task include:

- Identification/Evaluation of Congestion Hot-Spots—Information from agency stakeholder interviews and community meetings was combined with an evaluation of roadway daily traffic volume to capacity ratios to identify segments and intersections with likely congestion levels. Priority areas for traffic operational improvements identified through this analysis include:
  - ◊ Pines Boulevard from Dykes Road to 142nd Avenue (including the I-75 interchange area)
  - ◊ Johnson Street from University Drive to Dixie Highway
  - ◊ Young Circle (nominally the intersection of US 1 and Hollywood Boulevard)
  - ◊ The I-95/Hollywood Boulevard interchange area including the CSXT railroad crossing and 28th Avenue
  - ◊ The Florida Turnpike/Hollywood Boulevard interchange area
- Analysis of Traffic Crash History—Traffic crash data from 2007—2011 were obtained from FDOT and evaluated to identify and map high-crash locations. Crash patterns were then reviewed to identify potential mitigation strategies including:
  - ◊ Identification of bicycle and pedestrian safety issues along Hollywood Boulevard from the Florida Turnpike to SR 7 and along US 1 from Young Circle to Johnson Street.
  - ◊ Left turn crash issues at University Drive at Johnson Street, SR 7 at Johnson Street, and Hollywood Boulevard at 28th Avenue.
  - ◊ Rear-end, congestion-related crash issues at many major intersections along the corridor.
- Analysis of Transit Service/Ridership—Route alignments, frequencies, and stop-level ridership were evaluated to understand transit demand and to assist in prioritizing bus stop access and safety improvements. Key findings of this work and limited passenger intercept surveys include:
  - ◊ High activity along Hollywood Boulevard at University Drive, SR 7, and from Park Road to Dixie Highway and along US-1 from Young Circle to Johnson Street.
  - ◊ Potential for modifications to route operations related to the interface of Route 7 (Hollywood/Pines) with Route 4 (SR A1A), the Pembroke Lakes Mall transfer, and the Century Village route deviation.
- Analysis of Multimodal Facilities—All collector and arterial roads within the study area were reviewed to identify opportunities to improve facilities for cyclists and pedestrians. Key links across limited access roadways, canals, and disconnected subdivisions received heightened scrutiny since in these areas, pedestrians and cyclists do not have the option of travelling along lower-volume local streets. Key areas identified for improvement to multimodal facilities include:
  - ◊ Johnson Street, just west of I-95 to US 1
  - ◊ Johnson Street, University Drive to west of I-95
  - ◊ Hollywood Boulevard, Presidential Circle to I-95
  - ◊ Hollywood Boulevard, City Hall Circle to Dixie Highway

Chapter 4 and related appendices of the Project Report provide maps and synthesis of the Hollywood/Pines Boulevard Corridor Project Transportation Analysis.

LAND USE ANALYSIS

To prioritize potential infrastructure investments and understand opportunities to promote transit-supportive infill and redevelopment, the Project incorporates quantitative, qualitative, and land use policy analyses.

Quantitative analyses include:

- Urban Intensity Analysis—Analysis of traffic analysis zone population and employment data from the 2035 LRTP identifies specific areas within the study corridor where the combined population and employment density is high enough to support premium transit service.
- Land Economic Characteristics—Parcel data characteristics such as land value, building-to-land ratio, building age, and other attributes indicate areas that may be suitable for private-sector investment in infill and redevelopment.

Qualitative analyses incorporated in the Project includes fieldwork to assess the Hollywood/Pines corridor from a land use perspective to identify the following three character segments based on existing development patterns:

- Urban Segment—Incorporates traditional land-use characteristics, such as buildings located directly adjacent to the sidewalk, commercial uses organized in storefronts with openings to the street, and a higher density and diversity of uses benefiting from a robust street grid.
- Transitional Segment—Some traditional land-use characteristics mixed with more suburban and auto-oriented forms. To the west of the I-95, commercial and retail uses are typically organized in small, mid-century, auto-oriented shopping centers. Increased roadway width and less substantial pedestrian features result in a less urban character. Street grid is broken in key places diminishing connectivity.
- Suburban Segment—Very few traditional land-use characteristics. Residential uses do not front the corridor and are either hidden behind landscaped hedges or are cloistered in large, master-planned subdivisions. Out-parceled retail do not visually enclosure on the corridor, and pedestrian circulation is minimal, with limited connections between development and the roadway corridor. Major break-downs in the street grid force most thru-traffic onto Pines Boulevard.

In addition to defining the character segments described above, the land use qualitative analysis included a strengths/ weaknesses/opportunities/threats (SWOT) analysis for each of the designated Mobility Hubs. This analysis was relied on by the PAC to select four Mobility Hubs (two in each city) for scenario planning exercises and also influenced the scenario planning process and policy recommendations developed as part of the Project. Based on this analysis, the following Mobility Hubs were selected for scenario planning:

- Pines Boulevard at Flamingo Road
- Pines Boulevard at University Drive
- Hollywood Boulevard at SR 7
- Hollywood Boulevard at Dixie Highway

The final element of the Project Land Use Analysis is the Plan and Policy Analysis. This includes a review/assessment of the existing regulatory framework along the corridor, including the Broward Countywide Plan, local comprehensive plans, land development codes, and redevelopment plans. This analysis also informs the scenario planning and policy recommendation aspects of the Project.

A complete discussion of the Project Land Use Analysis, including map series related to the quantitative analyses discussed above is included as Chapter 5 (and related technical

appendices) of the Project Report.

PROJECT DEVELOPMENT AND PRIORITIZATION

Project development activities include identifying shorter-term multimodal infrastructure/congestion management recommendations as well as longer-term concepts for improvements to the transportation system. Shorter-term congestion management recommendations include:

- Provision of bicycle and pedestrian facilities along Hollywood/Pines Boulevard as well as along supporting parallel and perpendicular roadways.
- Bus stop enhancements and re-positioning of bus stops to provide safer, more convenient access to signalized intersections.
- Implementation of pedestrian-friendly design treatments at major intersections and interchanges.
- Recommendations related to specific, observed traffic safety issues including improvements to street lighting and traffic signal operational modifications.
- identification of potential traffic operational improvements including additional applications for FDOT District 4's Transportation System Management and Operations projects to provide Arterial Traffic Management Systems.

Tables describing the shorter-term congestion management recommendations for the Hollywood/Pines Boulevard Corridor Project are provided on the following pages. The first three tables show linear multimodal facilities projects and include the relative priority of each project recommendation based on points assigned for each of the following factors:

- Traffic Characteristics—Projects along higher volume, higher speed roadways are more essential than projects along lower speed/volume roadways where it is less dangerous to walk or ride a bicycle along the roadside.
- Quality of Existing Multimodal Facilities—Projects to provide sidewalks, marked bike lanes, or multi-use trails along roadways with no pedestrian or bicycle facilities are, all else being equal, prioritized above projects to enhance roadways with partial facilities (e.g. wide outside lanes for cyclists or sidewalk along one side of the street).
- Demand Potential—Projects in higher density areas that provide access to Mobility Hubs or higher-frequency transit routes are more likely to provide a congestion management/livability benefit than projects that serve lower density areas and do not connect to transit.
- Critical Link—Projects that provide for multimodal connectivity or address congestion issues where alternative routes are not available are generally a higher priority than enhancements to facilities that complement adequate existing parallel facilities.
- Safety Benefit— Projects that directly address a documented traffic crash issue are a higher priority for this factor than projects that implement safety best practices or are not relevant to improving safety for all road users
- Environmental Justice—Projects that serve disadvantaged populations are prioritized above projects where environmental justice is not at issue.

The fourth table shows bus stop siting/accessibility, pedestrian/bicycle safety, and traffic operations opportunities that supplement the prioritized "linear" projects.

Longer-term transportation system improvement concepts, discussed in the Implementation Plan Chapter of the Project Report, include development of supporting multimodal circulation networks around Mobility Hubs, implementation of queue-jump lanes to facilitate bus stop placement and provide buses with travel time savings.

On Street	From/At	To	Recommendation	Priority Score	Planning Cost Estimate
Pines Boulevard	US 27	208th Avenue	• Provide sidewalk along the south side of Pines Boulevard and intersection pedestrian features at Pines Boulevard and US 27.	24	$ 144,000
196th Avenue	Pines Boulevard	Sheridan Street	• Widen pavement to provide marked bike lanes. • Provide a marked crosswalk at 4th Street.	17	$ 1,251,000
186th Avenue Taft St.	Pines Boulevard 196th Avenue	NW 20th Street/ Taft Street 186th Ave/NW 20th Street	• Reconstruct/widen sidewalk as a multi-use path • Provide a marked crosswalk across 186th Avenue at Johnson Street.	13	$ 588,000
Johnson St	209th Avenue	W of 203rd Ave	• Provide a multi-use path along the south side of Johnson Street. • Enhance crosswalks to Price Park and connecting existing trail sections at NW 202nd Avenue.	15	$ 274,000
Dykes Road	Pembroke Road	Sheridan Street	• Provide bike lanes by marking existing paved shoulder and providing addition paved, providing right-turn "key-holes, and narrowing travel lane widths. • Alternatively widen/reconstruct the existing sidewalk and transition the bike lanes to multi-use paths on either side of the road.	24	$ 1,858,000
SW 101st/ Palm Avenue	Pembroke Road	Johnson Street	• Provide sidewalk along the west side of 101st/Palm Avenue	27	$ 277,000
Johnson Street	Flamingo Road	Hollywood City Limits	• Widen pavement to provide marked bike lanes • Modify intersection geometry at Flamingo Road and Douglas Road to improve pedestrian safety. • Construct sidewalk along the north side of Johnson Street from Douglas Road to University Drive. • Provide mid-block crosswalks at NW 87th Way, NW 85th Way, NW 83rd Way and entrance to Fletcher Park.	31	$ 3,974,000
72nd Avenue	Pembroke Road	N of Johnson Street	• Widen pavement to provide marked bike lanes	27	$ 1,208,000
Johnson Street	Hollywood City Limits	C-10 Canal	• Widen pavement to provide marked bike lanes • Provide crosswalk markings and enhance lighting at signalized intersections and provide marked, enhanced mid-block crossings at a various locations • Conduct round-about feasibility study at 64th Avenue and 62nd Avenue. • Complete sidewalk along the north side of Johnson Street to the C-10 Canal Bridge.	35	$ 3,812,000

Priority Group 1
> 40 points

Priority Group 2
20—39 points

Priority Group 3
< 20 points

Hollywood/Pines
Corridor Project

On Street	From/At	To	Recommendation	Priority Score	Planning Cost Estimate
NW 64th Ave	Hollywood Boulevard	N of Sheridan Street	• Widen pavement and narrow travel lanes to provide marked bike lanes.	21	$ 1,232,000
Washington Street	SW 62nd Avenue	Park Road	• West of SR 7 and East of SW 56th Avenue, widen pavement and narrow travel lanes to provide marked bike lanes. • Longer-term consider a road diet from SR-7 to SW 56th Avenue.	27	$ 1,323,000
62nd Avenue	Pembroke Road	Johnson Street	• Widen pavement/narrow lanes to provide marked bike lanes	24	$ 1,208,000
58th Avenue, Fillmore Street, Columbus Parkway, and Glen Parkway (area bound by SR 7, Johnson Street, 56th Avenue North, and Hollywood Boulevard)			• Fill sidewalk gaps, provide curb ramps. • Provide shared lane arrow markings.	18	$ 169,000
Johnson Street	C-10 Canal	US 1	• Provide bicycle and pedestrian facilities across canal bridge; update pedestrian features at the intersection at 30th Road; and complete sidewalks east of I-95. • Reconstruct the 2-lane divided roadway to a 2-lane undivided roadway to provide bike lanes and complete sidewalks; consider converting signalized intersections at 24th and 26th Avenues to roundabouts. • Provide bus-stop and pedestrian safety enhancements at US-1.	45	$ 9,964,000
Johnson Street	Federal Highway	N 8th Avenue	• Provide Shared Lane Arrow Markings	16	$ 48,000
56th Avenue	Washington Street	Stirling Road	• Widen pavement/narrow lanes to provide marked bike lanes	24	$ 2,417,000
46th Avenue	Washington Street	Johnson Street	• South of Hollywood widen pavement/narrow lanes to provide marked bike lanes • North of Hollywood Boulevard reduce the width of the grass median to provide space for marked bike lane or mark outside lane with shared lane arrows.	26	$ 827,000
Polk Street North Rainbow Drive	Glenn Parkway Polk St	N Rainbow Drive Johnson Street	• Implement road diet to provide bike lanes or mark outside lane with shared lane arrows.	12	$ 564,000
Van Buren Street South Rainbow Drive	S 56th Avenue Van Buren Street	S Rainbow Drive Washington Street	• Implement road diet to provide bike lanes or mark outside lane with shared lane arrows.	11	$ 448,000
Park Road	Washington Street	Johnson Street	• Provide bike facilties by various means including multi -use path, narrowing lanes, and narrowing medians.	25	$ 1,073,000

Priority Group 1
> 40 points

Priority Group 2
20—39 points

Priority Group 3
< 20 points

Hollywood/Pines Corridor Project

On Street	From/At	To	Recommendation	Priority Score	Planning Cost Estimate
Hollywood Boulevard	Presidential Circle	28th Avenue	• Provide bike facilities by various means including narrowing lanes and narrowing medians. • Provide various pedestrian safety enhancements including enhanced markings, lighting, signing, bus stop relocation, revised curb radii geometry, and north-south crosswalks at I-95 ramps. • Improve lane designation signage at 28th Avenue and address left-turn crash issue.	50	$ 1,987,000
35th Avenue	S Rainbow Drive	Johnson Street	• Widen pavement/narrow lanes to provide marked bike lanes	22	$ 398,000
30th Avenue	Pembroke Road	Hollywood Boulevard	• Provide a multi-use path pending potential redevelopment of city golf course.	23	$ 388,000
30th Road	Hollywood Boulevard	Johnson Street	• Redevelop the City park right-of-way to provide a thru street connection with multimodal facilities.	18	$ 3,975,000
Hollywood Boulevard	City Hall Circle	Dixie Highway	• Complete Streets project to provide median refuge, bike lanes, bus stop enhancements, mid-block crosswalks, and lighting and landscape enhancements.	51	$ 6,857,000
Van Buren Street	28th Avenue	24th Avenue	• Complete Streets project to provide bike facilities and pedestrian safety enhancements.	14	$ 3,431,000
Polk Street	28th Avenue	22nd Avenue	• Complete Streets project to provide bike facilities and pedestrian safety enhancements.	16	$ 4,275,000
24th Avenue	Washington Street	Johnson Street	• Provide shared lane arrows.	19	$ 36,000
Dixie Highway	Pembroke Road	Sheridan Street	• Complete Streets/road diet project to provide bike facilities and pedestrian safety enhancements, complete sidewalk gaps. • Consider turn prohibitions at Dixie Highway and Hollywood Boulevard to reduce congestion.	46	$14,175,000
14th Avenue	Hallandale Beach City Limit	Hollywood Boulevard	• Widen pavement/narrow lanes to provide marked bike lanes; complete sidewalk segments as necessary.	27	$ 811,000
13th Avenue	Washington Street	Johnson Street	• Complete sidewalk segments as necessary.	14	$ 191,000
SR A1A	Hallandale Beach Boulevard	Johnson Street	• South of Hollywood Boulevard, consider a road diet to provide bike lanes and multimodal enhancements. • Provide pedestrian enhancements to intersection/ interchange of Hollywood Boulevard and SR A1A • North of Hollywood Boulevard, provide enhanced crosswalks and intersection lighting at signalized intersections, consider mid-block crossing locations, and relocate bus stops to be to signalized intersections.	25	$13,595,000

Priority Group 1
> 40 points

Priority Group 2
20—39 points

Priority Group 3
< 20 points

Hollywood/Pines Corridor Project

On Street	From/At	Recommendation
Bus Stop Enhancements and Siting Modifications		
Pines Boulevard	US 27 to I-75	• Enhance and modify location of bus stops at 186th Avenue and Westfork Plaza
Pines Boulevard	I-75 to Hollywood City Limit	• Enhance and modify location of bus stops at various locations • Evaluate potential for right-turn queue jump lanes pending completion of FDOT Pilot Project at: 136th Avenue, Hiatus Road, Palm Avenue, and Douglas Road.
Hollywood Boulevard	56th and 58th Avenues	• Modify bus stop locations to improve access to signalized crossings
186th Avenue	Pines Boulevard	• Reconstruct/widen sidewalk as a multi-use path • Provide a marked crosswalk across 186th Avenue at Johnson Street.
Mid-Block Crosswalks and Intersection Pedestrian Feature Enhancements		
City of Pembroke Pines	Various Locations	• Provide (or enhance existing) marked mid-block crosswalks at the following locations: 184th Avenue at 9th Street, 184th Avenue at Johnson Street, 178th Avenue at 9th Street, 10th Street at 129th Avenue, 129th Avenue South of 3rd Street.
Pines Boulevard	Various Intersections	• Improve pedestrian design features and/or enhance crosswalk lighting to improve safety/mobility at the following intersections along Pines Boulevard: 184th Avenue, 172nd Avenue, 136th Avenue, 129th Avenue, 118th Avenue, Palm Avenue, Flamingo Road, Douglas Road, 64th Way.
Pines Boulevard	I-75 Interchange Area	• Provide multi-use path as an alternative to existing bike lane transitions across dual right turn lanes; construct raised right turn islands with pedestrian signals to facilitate pedestrian crossing across ramp termini; provide pedestrian lighting as necessary.
Hollywood Boulevard	Florida Turnpike Area	• Provide enhanced crosswalks and pedestrian-scale lighting across planned southbound-to-westbound off ramp; shift the sidewalk along the south side of Hollywood Boulevard farther from the roadway; construct a raised right turn island to facilitate pedestrians crossing the eastbound right turn into the Turnpike entrance.
Hollywood Boulevard	Various Intersections	• Improve pedestrian design features and/or enhance crosswalk lighting to improve safety/mobility at the following intersections along Hollywood Boulevard: 62nd Avenue, 58th Avenue, 56th Avenue, 52nd Avenue, 46th Avenue, 26th Avenue (both intersections),
Hollywood Boulevard	Various Locations	• Provide (or enhance existing) marked mid-block crosswalks at the following locations: East of 28th Avenue, City Hall Circle (west end and east end), and 8th Avenue.
Traffic Operations		
Pines Boulevard	Dykes Road to 136th Avenue	• Extend TSM&O/ATMS system to improve signal coordination/reduce congestion.
Pines Boulevard	Various Intersections	• Evaluate and, if necessary, extend turn lanes to back-of-queue at the following locations: Grand Palms Drive (EBR), 136th Avenue (EBR and WBR), Walmart Driveway (WBL)
Hollywood Boulevard	Florida Turnpike Area	• Extend eastbound right turn lane to immediate east of 63rd Terrace • Evaluate options to restrict eastbound left turns at 62nd Avenue to provide additional left turn storage onto the Turnpike.
Hollywood Boulevard	US 1/Young Circle	• BCTE is currently evaluating options to improve operations in Young Circle; consider implementing TSM&O/ATMS system to improve signal coordination/reduce congestion. • Provide enhanced (in pavement) way-finding to help tourists navigate the circle
Hollywood Boulevard	14th Avenue/13th Avenue	• Coordinate with the City of Hollywood and FDOT to implement measures to mitigate the impacts of the recent access management project on the Hollywood Lakes neighborhoods.

SCENARIO PLANNING

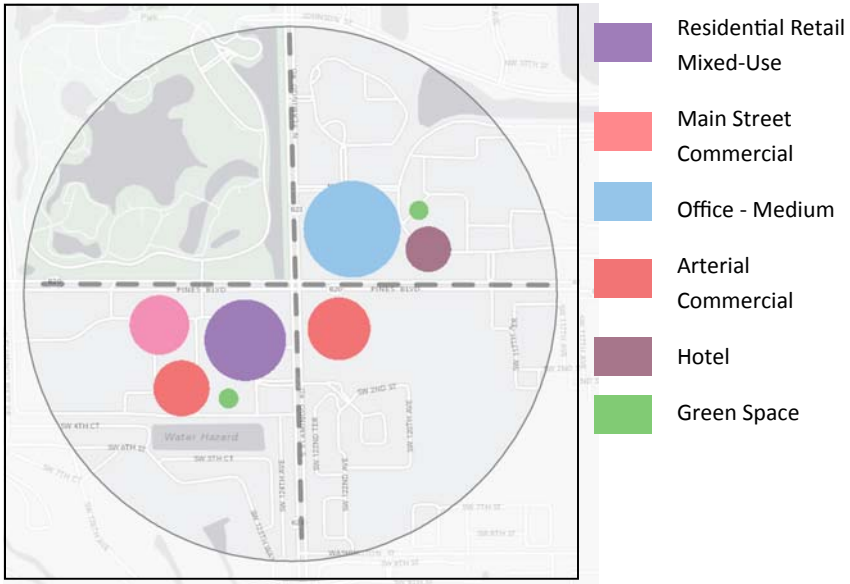
Four Mobility Hubs were selected (from the eleven along the corridor) based on quantitative and qualitative analysis and input from the PAC. For each selected Mobility Hub, three potential scenarios were developed as shown below:

	Policy	Building Types	Forecast Jobs and Population*
Trend	No Change	Typical Existing Building Types	Pro-rata share of 2035 TAZ forecast
Alt. 1	Housing allowed in commercial zones	Encourage mixed-uses	100% of capture of TAZ forecast in Hubs
Alt. 2	Disregard current plans; zoning	Mixed-use + shared parking	Focus 120% of TAZ forecast in Hubs

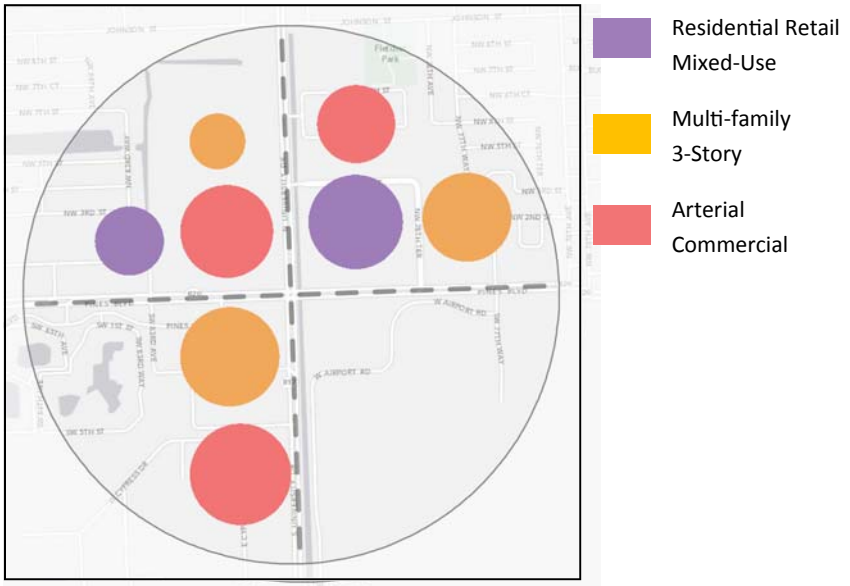
* Population and employment forecasts for the Mobility Hub scenarios were developed using Traffic Analysis Zone (TAZ) data from the 2035 LRTP. In Alternative 2, it is assumed development potential from surrounding TAZs is focused in the Mobility Hubs.

These alternative scenarios were refined to a "preferred" scenario using input from the public workshops, guidance from the PAC, and input from City planning officials. The preferred scenarios were then illustrated for demonstration purposes, analyzed to evaluate their ability to mutually reinforce the transit system, and used as a basis for the development of the Urban Form Toolkit (discussed as part of the Implementation and Monitoring aspects of the Project).

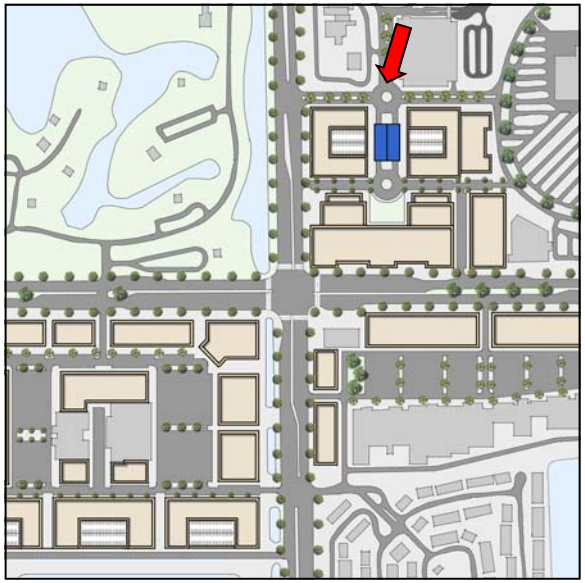
Outcomes of the scenario planning process are shown to the right and on the following pages. A complete description of the scenario planning process is included in Chapter 6 of the Project Report while policy recommendations and implementation activities are discussed in Chapter 7.



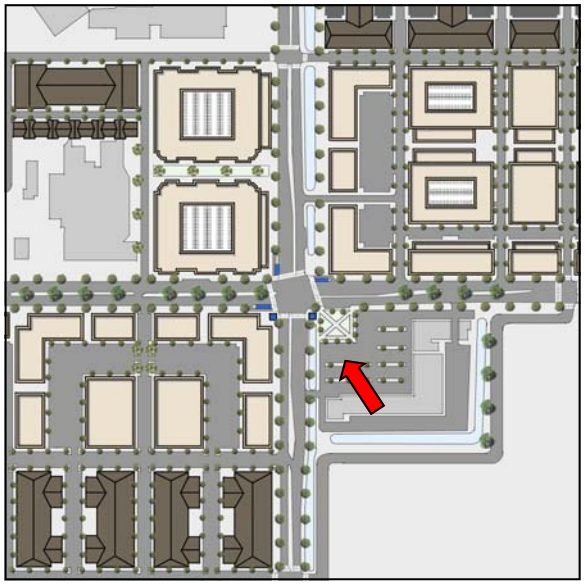
*At the **Flamingo Road** Mobility Hub, existing transfer activity between bus service along Hollywood/Pines Boulevard, local circulator, and community bus routes is shifted from the mall to a new transfer the northeast quadrant of the intersection.*



*The **University Drive** Mobility Hub is a high-volume transit transfer point with several stops placed a great distance from the intersection. The large canal and airport uses along the west side of University Drive limit land use options.*

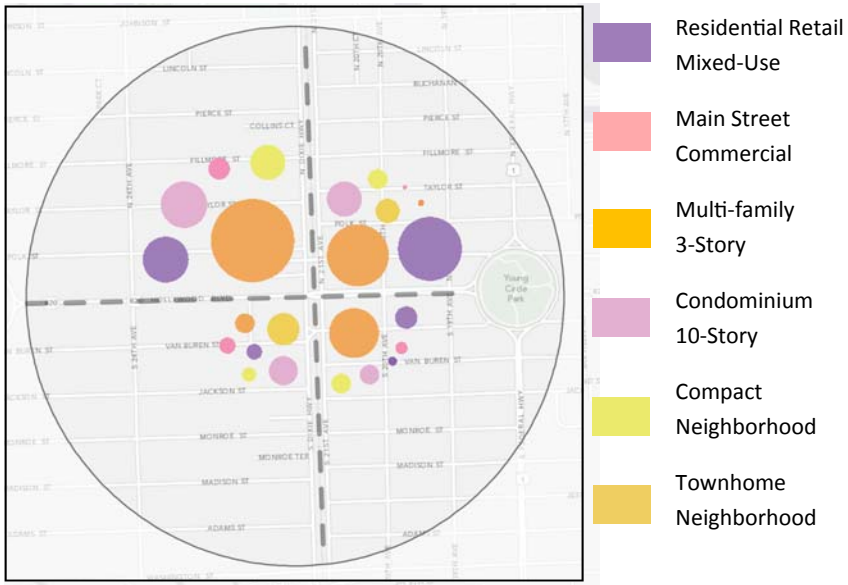


The Preferred Scenario for Flamingo Road and Pines Boulevard reflects a significant increase in office uses and a hotel option to support the regional employment center anchored by Memorial Hospital West. Crossing the large intersection of Pines Boulevard and Flamingo Road will remain a challenge, but arterial commercial development type is used to retrofit healthy existing retail surface parking lots to create a more walkable environment within each quadrant.



The Preferred Scenario for Pines Boulevard and University Drive illustrates substantial redevelopment of three quadrants to retrofit suburban retail in order to provide a mixed-use and walkable environment that better supports transit service. While the development of building types were limited in some quadrants because of flight patterns, substantial residential development was still able to be accommodated including various residential types.

SCENARIO	Flamingo Road	University Drive	SR 7	Dixie Highway
POPULATION				
Trend	0	264	727	3,631
Preferred	1,443	5,766	5,150	9,869
LAND AREA MIX				
TREND				
Mixed Use	0%	0%	2%	4%
Multifamily	0%	11%	7%	58%
Townhome		0%	2%	21%
Single Family			1%	0%
Retail	57%	89%	67%	7%
Office	43%		21%	10%
PREFERRED				
Mixed Use	33%	24%	0%	40%
Multifamily	2%	33%	40%	46%
Townhome		3%	3%	13%
Single Family			0%	1%
Retail	25%	40%	57%	0%
Office	40%		0%	0%
HOUSING MIX				
TREND				
Multifamily	0%	100%	87%	90%
Townhome		0%	9%	9%
Small Lot Single Family			3%	1%
Conventional Single Family			2%	
PREFERRED				
Multifamily	100%	97%	97%	97%
Townhome		3%	1%	2%
Small Lot Single Family			1%	1%
Conventional Single Family			0%	
EMPLOYMENT MIX				
TREND				
Retail	31%	100%	52%	23%
Office	69%	0%	48%	77%
PREFERRED				
Retail	29%	86%	100%	49%
Office	71%	14%	0%	51%



*At the **Dixie Highway** Mobility Hub, sited 2-blocks north of Hollywood Boulevard, the City of Hollywood is planning for a Tri-Rail Coastal Link Commuter Rail station area that will augment and leverage existing downtown infill/redevelopment.*

*The **SR 7** Mobility Hub is already a high-volume transit destinations and transfer point. The Preferred Scenario incorporates the planned widening and reconstruction of SR 7 as well as the construction of a Walmart on the Millennium Mall Site.*

The Preferred Scenario for Hollywood Boulevard & Dixie Highway reflects a significant increase in multifamily housing to achieve the critical mass required of premium transit in this Mobility Hub. Because of the substantial amount of existing, in some cases underutilized main street commercial retail, residential retail mixed-use development was only recommended in areas, mostly around the proposed station, where the public realm needed activation.

The Preferred Scenario for Hollywood Boulevard & SR 7 reflects a significant increase in multi-family housing to achieve the critical mass required of premium transit, as well as an increase in arterial commercial building types in effort to retrofit more suburban retail conditions to create a better pedestrian environment. Multi-family housing is proposed as the primary type of residential development because Hollywood, especially close to major transit routes, lacks newly constructed workforce housing.

URBAN DESIGN AND IMPLEMENTATION TOOLKIT

The purpose of the Urban Design and Implementation Toolkit (The Toolkit) is to guide the application of land use and urban design recommendations made at the four selected Mobility Hubs in such a way to also be applicable along the remainder of the corridor or in other parts of Broward County. This will be instrumental in transforming the Hollywood/Pines Corridor over the long term into a more transit-supportive, multimodal environment.

The Toolkit focuses on five urban design and planning principles, supported by case studies and academic research that meet two development goals: encourage and support multimodal transportation, especially premium transit, and preserve and enhance the character of existing neighborhoods.

Connectivity is a term that refers to the degree to which streets, roads, and pedestrian routes are joined together. The more connected the street/pedestrian network, the more access and circulation options are provided. If an area has a high degree of connectivity, it provides many ways for users to navigate their environment and, in the process, reduces the extent to which all travelers must rely on one route. This can help alleviate automobile congestion by providing more navigational choices, allow the corridors to maintain their current width or be narrowed through a road diet to accommodate multimodal options, and create a physical environment that is conducive to mixed-use development and increased transit ridership. Additionally, increasing the number of multimodal routes that connect with transit-oriented corridors will allow pedestrians who live and work near the transit-oriented corridor to more efficiently access transit stations and supporting land uses.

Public Realm refers to space that is publicly owned, accessible, and maintained and includes streets, pathways, and parks. The term can also refer to privately owned space between the right-of-way and the building frontage. Design enhancements to the public realm along major corridors provide more appropriate facilities for transit, transit-users, and mixed-uses supportive of transit. Routes to these facilities should be safe and comfortable. This can be achieved by providing a physical buffer between high speed traffic and the pedestrian through the provision of parallel parking, a larger sidewalk, or a tree planting strip, which also provides shade to help mitigate Florida's hot, sunny climate.

Site Orientation is how buildings are located on a in relation to the street and sidewalk (the public realm). A building's relationship to the public realm is important because it creates an enclosure along the street, which helps to create a comfortable environment for pedestrians. Site orientation is an essential element in the development of a transit-supportive area because it can increase the efficiency of travel for transit users and pedestrians. When buildings are located directly adjacent to the public realm, as opposed to a parking lot, walking distances between transit stations and destinations are shorter and the pedestrian environment is more pleasant. This situation is more appropriate and friendly for all users, including those who use transit frequently, such as older adults and parents with small children. Additionally, it is common for parking lots located between a sidewalk and a building to provide little or no circulation infrastructure for pedestrians. This can contribute to lack of safety and comfort along the corridor.

Ground Floor Design/Use is critical to the quality of adjacent to pedestrian space and transit facilities can have a significant effect on the safety, comfort, and commercial success of the corridor. To achieve this, the interior space adjacent to the public realm should be inhabited by people for an active use, and a majority of the façade should be transparent to allow maximum interaction between public and private spaces. Additionally, active uses and interaction between interior and exterior spaces along the corridor will contribute to place-making opportunities, and therefore will attract a variety of users. This will create a healthy atmosphere for mixed-uses and premium transit to thrive. If transit is integrated into a place where people naturally want to spend time, ridership can benefit.

Transition to Neighborhoods from designated transit-oriented and mixed-use corridors is important to protect the character of adjacent neighborhoods by regulating the transition from higher densities and more intense land uses to lower-density and single-family residential development. While a positive characteristic of mixed-use zoning is that it allows a wide variety of uses along a corridor, it is important that land directly adjacent to private residential property be protected from unnecessary smell, noise, or light pollution. Additionally, a gradual increase in residential density around and behind mixed-use/non-residential uses along the corridor will buffer the neighborhood edges. While people enjoy living near retail uses, it is common that they want to preserve the existing natural environment that is found in many urban neighborhoods.

LAND USE/LAND DEVELOPMENT CODE RECOMMENDATIONS

The Project also provides specific recommendations related to applicable zoning districts and land development codes necessary to facilitate development of the four selected Mobility Hubs consistent with the preferred scenarios. Key recommendations related to each Mobility Hub include:

- Pines Boulevard & Flamingo Road
  - ◊ Allow residential mixed-use development and consider mixed-use district zoning with a site plan.
  - ◊ More closely evaluate whether the preferred scenario can be accommodated within the current 1.0 floor-area-ratio allowances.
- Pines Boulevard & University Drive
  - ◊ Expand allowances for residential development and consider mixed-use district zoning with a site plan.
  - ◊ Consider prohibition of certain auto-oriented uses and provide opportunities for shared parking.
- Hollywood Boulevard & SR 7
  - ◊ Expand allowances for residential and mixed-use development types .
  - ◊ Modify set-back requirements in the Commercial Corridor Zoning District.
- Hollywood Boulevard & Dixie Highway (north of Hollywood Boulevard)
  - ◊ Modify the zoning code to allow a broader range of uses in certain areas—especially residential.
  - ◊ Increase height limits and the depth of more intense uses along major corridors.

A complete discussion of the Toolkit and land use/land development code policy recommendations are provided in Chapter 7 of the Project Report.

CONGESTION MANGAGEMENT PROJECT IMPLEMENTATION

Several of the high-priority Congestion Management projects emerging from the Hollywood/Pines Boulevard Corridor Project have already been programmed for funding by the Broward MPO. These include:

- Hollywood Boulevard Complete Streets retrofit from City Hall Circle to Dixie Highway
- Johnson Street Complete Streets retrofit from the C-10 Canal (just west of I-95) to US 1
- Sidewalk completion along 13th Avenue North from Hollywood Boulevard to Johnson Street.

Other Project recommendations related to multimodal facilities, safety enhancements, and congestion management solutions will be reviewed by FDOT for constructability issues at a level of detail beyond that provided for in the Hollywood/ Pines Boulevard Corridor Project. These could include underground utility conflicts, right-of-way conflicts (that are not apparent from field review and review of parcel maps), and potential constraints related to drainage and environmental issues.

Once the constructability reviews are complete, more detailed cost estimates will be developed using FDOT's Long Range Estimating (LRE) system. FDOT District 4 is also in the process of finalizing internal review of project recommendations along the State Highway System for consistency with internal standards and practices. The Broward MPO will then coordinate with FDOT and the Cities of Hollywood and Pembroke Pines to package the individual Project recommendations and program funding for design, right-of-way and construction.

Projects along State-maintained roadways, including projects to expand the Districts Arterial Traffic Management System, will be constructed using normal FDOT production processes. Projects along city or county-maintained facilities will be implemented through FDOT's Local Agency Program (LAP). The LAP process provides for local agencies to be reimbursed for design, right-of-way, and construction costs provided that these efforts are executed in a manner consistent with State and Federal standards/criteria. Projects related to site-specific safety issues may be eligible for federal funding/programming through the Highway Safety Improvement Program—a separate funding source from MPO-managed funds.

Short-term project recommendations related to transit stop enhancements and relocations are being reviewed by Broward County Transit. These recommendations are mostly for bus stop facilities along the State-maintained sections of Hollywood/Pines boulevard and will be implemented as cooperative efforts between FDOT and Broward County Transit.

Longer-term project recommendations include concepts related to how transit operations along Hollywood/Pines Boulevard (Route 7) and implementation of Mobility Hub infrastructure along the corridor. FDOT District 4 has programmed a comprehensive transit data collection effort along Hollywood Boulevard that will collect detailed transit usage information including origins and destinations, trip purposes, and transfer activities. This data collection effort has been augmented, based on the findings of the Hollywood/ Pines Corridor Project, to provide data necessary to evaluate potential modifications to the operations of Route 7 and make more specific recommendations related to bus-stop placement at key mobility hubs.

Chapter 7 of the Project Report includes a more complete description of the Hollywood/Pines Boulevard Corridor Project Implementation Plan.

Tindale-Oliver & Associates, Inc.
Planning and Engineering

broward MPO
metropolitan planning organization

Hollywood/Pines
Corridor Project

www.hollywoodpinescorridorproject.com

AGENDA ITEM NO. I4

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

INFORMATION ITEM REPORT

☐ Information Item ☒ Presentation

SEVEN 50
(SOUTHEAST FLORIDA PROSPERITY PLAN)

SUMMARY EXPLANATION AND BACKGROUND:

The first draft of the Seven 50 Southeast Florida Prosperity Plan has been released. The draft report can be found online at http://seven50.org/seven50-se-florida-prosperity-plan-draft-report/.

Presentations on the draft report have been given throughout the region in recent weeks, including a joint meeting of the South Florida and Treasure Coast Regional Planning Councils, the Seven 50 Executive Steering Committee, SEFTC, RTTAC, and RTTAC Modeling Sub-Committee.

The PTAC meeting on November 19 will be another opportunity for the region's transportation partner agencies to provide feedback on the Seven 50 draft report. For the PTAC's reference, Seven 50 comments recently provided by the Florida Department of Transportation (FDOT) Districts 4 and 6 are attached.

EXHIBITS ATTACHED: FDOT District 4 and 6 Review Comments for Seven 50

To: Marcela Camblor, Seven50 Project Director

From: Jim Wolfe, FDOT District Four Secretary
Gus Pego, FDOT District Six Secretary

Date: November 8, 2013

Subject: Draft SE Florida Prosperity Plan - Review Comments as Seven50 Executive Committee Members

Overall Comments

1. A summary document is essential. The Department is willing to assist in preparing one. Also, having information on the plan available in a brochure style format would be helpful.

   The plan needs to be clear and direct regarding what the preferred vision for the future of the region is and what choices need to be made to get there. A clear and direct plan can serve as a rallying point for the partners in the region that decide to participate in its implementation.

2. The plan should fully and accurately tell the transportation story for the region. One size does not fit all, and this is true for transportation. The three most populous counties – Miami-Dade, Broward, and Palm Beach – have transportation issues in common. They are largely done with road building and focused on the need for more transit and a development pattern that will support increased use of transit, bicycle, and pedestrian modes of travel. The three northern counties – Martin, St. Lucie, and Indian River – continue to build roads while also promoting travel by transit, bicycle, and pedestrian modes. Maximizing the capacity of the existing transportation system through implementation of Transportation System Management and Operations (TSM&O) and other strategies is an interest across the region's seven counties. Ensuring access to the transportation system is another one. The Panama Canal expansion and other projects and efforts have raised the visibility and importance of moving freight within and through the region.

3. The plan gives the impression that more premium transit – including FEC commuter rail service – is a given. It is not. Premium transit is so critical that without this, there are no plans 3 and 4; there will only be a possibility for Stay the Course or Suburban Expansion. Failing to articulate this does not rally support for actually making something progressive happen in the region. The important message is that this region needs to invest in premium transit and that this will not happen unless there is new local funding for operating subsidy. There is also a disproportionate focus on walkable communities which is largely a land use issue while the important transportation issues are overlooked or buried.

4. The project to develop commuter rail service on the FEC rail line is not clearly presented as an optional investment required for Plan 2 and Plan 3. The clearest explanation for this is provided in the text on the Plan 2 map on page 51, and this describes the location of population along the corridor but not the level of investment required to provide the transit service. Elsewhere it is implied that this rail service is happening as a foregone conclusion (e.g., the "inching closer to reality" wording in The Livable Region section). It should be made clear that the region needs to elect to support this significant investment as part of Plan 3, if that is the preferred scenario, and the plan should quantify the costs and benefits as well as supportive land use and zoning implications.

5. The plan would benefit from a statement clarifying that the 50 percent increase in population and jobs cannot be accompanied by a similar increase in roadway capacity, and that consequently a

large proportion of the new demand for trips probably will have to be accommodated on public transportation, reinforcing the need for investment in transit.

6. The characterization of counties in the region as "urban" or "rural" in parts of the plan is problematic. Six of the seven counties in the region have MPOs, which are designated for urbanized areas. The agricultural Glades area is in one of the "urban" counties. An alternative would be to focus on comparative scale and lifestyles and where additional people and jobs coming to the region may/will go (e.g., more east than west).

Sequential Comments: Plan Summary

7. The 43 regional priorities (pages 14-15) and 115 related toolkit items represent an extensive, perhaps overwhelming, universe of efforts for Seven50 to focus on. It would seem logical to identify some way to prioritize these and identify a handful of initiatives that should be the ongoing focus of the Southeast Florida Regional Partnership – as opposed to the numerous initiatives which are already the focus of groups and agencies in the region. Also, what are the cross-cutting regional priorities? The level of overlap and interaction between and among the regional priorities and issues in the six topics/areas could be explored and described.

   It is unexpected to see "Leadership" listed last where it might more fittingly be listed first.

8. Seven50 Difference (pages 22-25): The regional transportation model description needs to be refined. This change is suggested (page 22): CREATION OF ~~FIRST~~ SEVEN COUNTY REGIONAL TRANSPORTATION MODEL FOR SCENARIO PLANNING." The M/TPOs and FDOT districts in the region periodically update their regional planning models for long range transportation planning and other purposes (e.g. to SERPM 7.0 and TCRPM 4.0 for the 2040 long range planning cycle). The focus on walkability is not an accurate reflection of regional mobility conditions and needs. Balanced mobility requires a transportation system that addresses all types of trips – from ones involving walking to ones involving the movement of freight. Also, the concept of balanced mobility is not new to the region. This change is suggested (page 22): FOCUSED ON MORE BALANCED MOBILIT~~Y, INCLUDING WALKABILITY~~ AS A ~~NEW~~ REGIONAL GOAL. "Intermodal" is not a widely used or understood term. This change is suggested (page 23, also page 292): A BALANCED, INTERCONNECTED *[or SEAMLESS]* MULTIMODAL TRANSPORTATION SYSTEM." Additional alternative text suggestions to be offered under separate cover.

Public Engagement

9. Scenario planning typically is central to a regional visioning process. It is unexpected to find the description of scenarios is this section as opposed to in the Plan Summary section and/or in The Region in 2060 section.

10. Page 28: The negative presentation of automobiles neglects the importance of this mode for the majority of trips today and in the future – under any scenario.

11. Page 46 Development Patterns: The description of airport and seaport connectivity should be updated/improved. Alternate text suggestions to be offered under separate cover.

12. Page 51: The Plan 2 description provides clearest explanation of the rail alternative relying on compact development around stations. This should be addressed more explicitly and earlier. There is no mention of future investment in highways; at a minimum a discussion of managed lanes could

describe an approach underway to maintain mobility. Alternate text suggestions to be offered under separate cover.

13. Pages 52-53. The metrics describing the scenarios in terms of levels of investment and possible outcomes need further refinement and explanation. The snapshot for Trend and Plan 1 should include some level of walking, biking, and rail as opposed to none. Reference should be made to how the cost assumptions were derived. Costs should be clarified as public versus private. Transit operation (and maintenance) costs should be addressed in the snapshot and table of metrics. Comparative maintenance costs (e.g., with more or less miles of roads) also should be addressed. Changes made to the snapshot and table of metrics should be reflected where applicable elsewhere in the plan (e.g., on pages 16-19).

    There should be some discussion of tracking the indicators over time to identify trends and help assess progress. How will this be done? On what schedule? The footnote on page 53 mentions "indicators measured." Should it say "probable indicator results"? There are a number of metrics which appear to be inaccurate for Plan 1 compared with Trend (e.g. emissions, new roads, new infrastructure).

The Region Today

14. The transportation description (pages 92-94) is somewhat unclear and does not plainly identify the key issues, trends, and needs. It might be helpful here to reference the transportation governance graphic (page 126). Alternate text suggestions to be offered under separate cover.

15. Transportation governance graphic on page 126: Based on urbanized areas drawn following the 2010 U.S. Census, the Vero UA is now the Sebastian-Vero Beach UA. See the graphic below.

The Region in 2060

16. Multimodal Balance: Alternate text suggestions to be offered under separate cover.

17. The Livable Region: There is some repetition in the regional priorities – for example 1 and 4 – and further clarity would be beneficial. The discussions on the regional priorities provide a good background and introduction to the issues but are less focused on the choices and preferred outcomes. The discussion on the first regional priority concludes that multimodal transportation investments "are being made" in the region but fails to identify the regional-scale issues and projects that will require significant and new efforts before they can become a reality. In this section, consider tabulating land use density and employment figures along the FEC corridor and station areas under current and preferred future conditions to illustrate the divergence. Alternate text suggestions to be offered under separate cover.

Implementation

18. Page 288 Indicators & Measures: The indicators and measures that were used to develop the plan and that will be used to assess progress should be covered in some detail in the plan, not left to a website reference. See also Comment 13.

19. Page 292: The Seven50 Difference: Tomorrow section could benefit from "dashboard" graphics including metrics showing improvements in various metrics as a result of Seven50 choices and actions.

Other Comments

20. The plan would benefit from having a brief (1 to 2 page) overview of its contents at the beginning.

21. The plan contains a number of statements that require correction or further substantiation. For example, the statement regarding the seven-county transportation model on page 290 is inaccurate (see Comment 8.).

22. The plan does not do a good job of focusing on what the Seven50 project "delivered." The key solutions to the region's greatest problems are not clearly evident in browsing through the plan.

23. The plan does not contain survey results indicating key values of the region. There appear to be no results from the various ongoing surveys and polls via the electronic voting at meetings or the website.

24. The introduction to the plan on pages 12-13 is more focused on process than outcomes.

25. At a Glance Today/Tomorrow, pages 16-19: These statistics and trends are helpful and illuminating but seem to be somewhat randomly presented. It might be helpful to try to present them in some order relative to the six work groups or the six topics/areas for the regional priorities.

26. Page 49: The description for "Existing Conditions" applies to development under the Trend scenario.

27. Future investments (pages 162-171): These should be clarified as examples of proposed or potential transit investments (apart from Kendall). Bus rapid transit in Fellsmere seems to be a peculiar example. Also, this section should identify the deficits between existing zoning and densities required to support such investments.

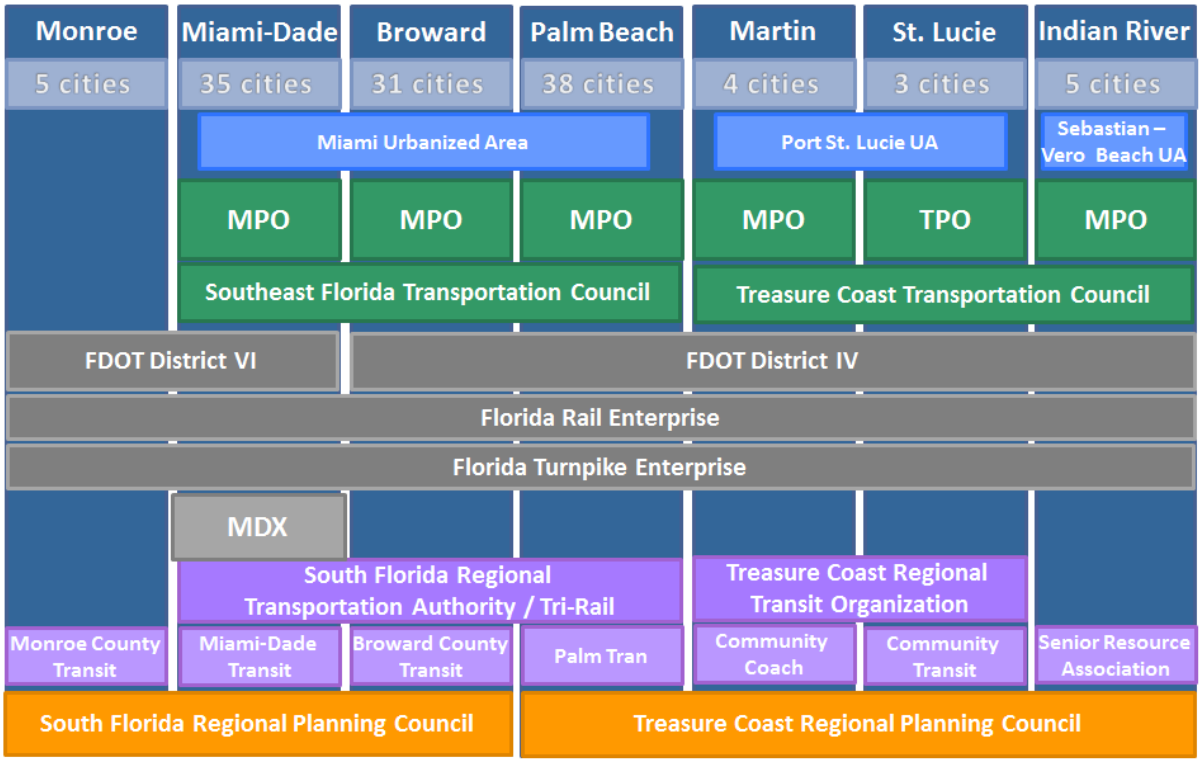
28. The toolkit items introduce and explain issues and opportunities but frequently fail to provide clear guidance on how to achieve regional priorities.

29. Livable Region Toolkit, Transportation: Amtrak service is not commuter rail.

30. Page 216: The quote on building roads along the Everglades is misleading and should probably be removed or better substantiated.

31. Page 268: The explanation on bridge failure and reinforcing is disingenuous given Florida's leading position in the nation with regard to inspecting, maintaining, rehabilitating, and replacing bridges.

Regional Governance: Southeast Florida



AGENDA ITEM NO. I5

SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
PLANNING TECHNICAL ADVISORY COMMITTEE (PTAC)
MEETING: NOVEMBER 19, 2013

INFORMATION ITEM REPORT

☒ Information Item ☐ Presentation

DRAFT 2014 PTAC MEETING SCHEDULE

SUMMARY EXPLANATION AND BACKGROUND:

A draft 2014 PTAC meeting schedule has been developed, with dates listed below. This draft schedule was developed in coordination with the SEFTC Regional Transportation Technical Advisory Committee (RTTAC) Chair and the Tri-Rail Coastal Link committee/sub-committee schedule.

In 2014, the MPOs plan to hold RTTAC meetings on the same date as the quarterly Tri-Rail Coastal Link Steering Committee meetings. Additional RTTAC meetings, whenever necessary, will be coordinated with dates for the PTAC.

This change requires a different scheduling approach for the PTAC in 2014. To minimize travel among committee members, SFRTA staff proposes holding PTAC meetings on the same date as the Tri-Rail Coastal Link Finance Sub-Committee whenever coordination with the RTTAC is not able to occur. Committee member feedback is sought on this new scheduling approach.

The following is a draft 2014 PTAC meeting schedule, along with explanation of other committee meetings to be held that day:

Wednesday, January 8 – Coordinated with RTTAC (One week earlier due to Seven 50 summit)
*****Tuesday, February 18 **(Only if needed)** – Coordinated with TRCL Finance Sub-Committee
Tuesday, March 18 – Coordinated with TRCL Finance Sub-Committee
April – **No Meeting**
Tuesday, May 20 – Coordinated with TRCL Finance Sub-Committee
Wednesday, June 18 – Coordinated with RTTAC
July – **No Meeting**
*****Tuesday, August 19 **(Only if needed)** – Coordinated with TRCL Finance Sub-Committee
Wednesday, September 17 – Coordinated with RTTAC
October – **No Meeting**
Tuesday, November 18 – Coordinated with TRCL Finance Sub-Committee
December – **No Meeting**

EXHIBITS ATTACHED: None

PTAC Attendance, January 2012-Present

	20 13								2012						
	Sep	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Oct	Sep	Jul	May	Apr	Feb
BCT															
Member													x		
Alt	x	x	x	x	x	x	x	x	x	x	x			x	x
Other									x	x					
Broward MPO															
Member			x		x			x			x		x	x	x
Alt	x		x	x		x	x		x	x		x	x	x	x
Other															
FDOT D4 OMD															
Member	x	x	x			x		x				x			x
Alt	x	x	x	x	x	x	x	x	x	x	x			x	
Other		x													
FDOT D4 PLEM															
Member	x								x		x	x		x	x
Alt	x				x		x								
Other												x			
FDOT D6															
Member	x		x	x	x	x	x	x		x	x	x	x	x	x
Alt									x						
Other	x					x				x					
Miami-Dade MPO															
Member			x				x	x			x	x			
Alt			x	x	x	x	x	x	x	x	x	x	x	x	x
Other									x		x	x			
MDT															
Member					x	x	x					x	x	x	x
Alt	x	x	x	x				x	x		x	x		x	x
Other					x										
Palm Beach MPO															
Member		x	x		x	x	x	x	x	x	x	x	x	x	x
Alt	x						x	x	x						x
Other															
Palm Tran															
Member	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Alt															
Other															
South Florida RPC															
Member	x	x	x	x		x			x	x	x	x			
Alt							x								
Other															
South Florida RTA															
Member	x		x		x	x	x	x	x	x	x	x	x	x	x
Alt	x	x	x	x	x	x	x	x	x	x	x		x	x	x
Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Treasure Coast RPC															
Member															
Alt	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Other													x		x