

**SECTION I**  
**AMENDMENT REPORT**  
**BROWARD COUNTY LAND USE PLAN**  
**PROPOSED AMENDMENT PCT 15-1**  
**(FORT LAUDERDALE)**

**RECOMMENDATIONS/ACTIONS**

**DATE**

*I. Planning Council Staff Transmittal Recommendation*

*January 13, 2015*

**(Please see Page I-4 for Planning Council Staff Final Recommendation)**

It is recommended that the proposed text amendment to the Broward County Land Use Plan (BCLUP) be approved for transmittal to the State of Florida review agencies, subject to the following:

- Recognizing that the City has engaged in an on-going effort to provide documentation and analysis to address the complex issue of mobility within a major downtown district, it is noted that the information to date may not demonstrate that **regional roadway network capacity and multi-modal facilities** will be available at the long-range planning horizon. Therefore, Planning Council staff would not object to the transmittal of the proposed amendment to the State of Florida review agencies, including the request for specific input from the Florida Department of Transportation. The City of Fort Lauderdale's commitment and plans for transportation improvements in and around the Downtown Fort Lauderdale Regional Activity Center boundaries are outlined in Attachments 11 through 15;
- The City of Fort Lauderdale's commitment to **set aside 15% of the additional 5,000 dwelling units (i.e. 750 dwelling units) as affordable housing** and that the previous voluntary commitment regarding the provision of affordable housing as part of BCLUP amendment PCT 05-3 remain in effect. See Attachments 1, 6 and 23; and
- The City of Fort Lauderdale's commitment to **amend the existing Educational Mitigation Agreement** between Broward County, the City of Fort Lauderdale and the School Board of Broward County, Florida, as accepted and conditioned by School Board staff. See Attachments 6 and 17.

Further, Planning Council staff's recommendation is pending the following issues to be addressed and resolved to the satisfaction of Planning Council and County review staff prior to the second Planning Council public hearing:

- Demonstration, in consultation and coordination with Broward County "Complete Streets" staff and the Florida Department of Transportation, that sufficient regional transportation network capacity and multi-modal facilities will be available to serve the proposed additional dwelling units; and

**RECOMMENDATIONS/ACTIONS (continued)**

**DATE**

**I. Planning Council Staff Transmittal Recommendation (continued)** **January 13, 2015**

- Resolution of a phasing plan or City policy solution that will ensure the implementation of the commitment to set aside 15% of the additional 5,000 dwelling units (i.e. 750 dwelling units) as affordable housing, and that will prevent the construction of the 4,250 market rate dwelling units without any of the 750 affordable dwelling units being constructed.

It is also recommended that any approval be conditioned on the execution, to the satisfaction of Broward County, of a legally enforceable mechanism regarding the voluntary commitments offered by the applicant.

**Update: January 22, 2015:** Correspondence has been received from the City of Fort Lauderdale. See Attachment 28.

**II. Planning Council Transmittal Recommendation** **January 22, 2015**

Approval per Planning Council staff transmittal recommendation. (Vote of the board; Unanimous: 15-0; Blattner, Castillo, Gomez, Good, Graham, Hobby, Kaplan, Kiar, Long, Mack, McCartney, Ryan, Steffens, Stermer and Castro.)

**III. County Commission Transmittal Recommendation** **February 10, 2015**

Approval per Planning Council transmittal recommendation.

**IV. Summary of State of Florida Review Agency Comments** **March 20, 2015**

The South Florida Water Management District (SFWMD) and the Florida Department of Transportation (FDOT) have commented on the proposed amendment:

**Comment:** The SFWMD notes that the potable water analysis is not based on the City's current Water Use Permit. The potable water analysis projects that 2.14 MGD will be needed to serve the new development. The analysis includes an allocation from the Floridan Aquifer in the amount of 6.0 MGD. The city's current Water Use Permit does not include a Floridan Aquifer allocation and only includes an allocation of water from the Biscayne Aquifer. Should the City need water from the Floridan Aquifer, a Water Use Permit modification would be required. Further, the SFWMD recommends that the potable water analysis be based on the City's current 5-Year Community Investment Plan, not the FY 2009-2013 Capital Improvement Program. The SFWMD also recommends that the City clarify the status of the Reverse Osmosis (RO) facility expansion at the Peele-Dixie Water Treatment Plant.

**IV. Summary of State of Florida Review Agency Comments (continued)** **March 20, 2015**

**Response:** The City of Fort Lauderdale submitted a revised potable water analysis based on its updated 10-year Water Supply Facilities Work Plan, which indicates annual allocations from both the Biscayne and the Floridan Aquifers. However, based on revised projected demands and reuse projects, the Floridan Aquifer will not be required to meet demand over the planning period from 2015-2035. Further, there are no current plans to proceed with the RO facilities expansion at the Peele-Dixie Water Treatment Plant. The City also notes that once the 5,000 dwelling units are approved, the City will annually review and incorporate the capital needs to accommodate future growth into the evaluation of water and sewer capital improvements. See Attachment 33.

**Update: October 22, 2015:** The SFWMD has indicated that the City of Fort Lauderdale has adequately resolved the issues raised by the SFWMD during the review and update of the City's 10-year Water Supply Facilities Work Plan. See Attachment 36.

**Comment:** The FDOT reviewed the proposed amendment pursuant to Florida Statutes, and, as requested by the County Commission, for impacts to the Strategic Intermodal System (SIS) and other transportation resources and facilities of state importance. The FDOT understands and supports the intentions of the proposed amendment to create a livable and dynamic urban center, however, it is unclear to what extent the mitigation strategies proposed by the City will address the adverse impacts to SIS and other regionally significant facilities (I-95, Broward Boulevard, State Road 84 and U.S. 1).

Further, FDOT is prepared to participate in a coordinated agency effort to pursue mobility solutions and offers the following areas to focus on during this effort. The City should:

- Participate in and contribute funding to the Broward County Active Arterial Management (AAM) program. The AAM is focused on the effective use of the traffic signal system to safely and efficiently move multi-modal traffic within the City. Funding would support development and implementation of traffic signal control strategies for transit, pedestrians/bicyclists, parking facilities and emerging modes of transportation, such as the WAVE Streetcar.
- Submit a traffic analysis and mitigation plan for a larger impact area and demonstrate how the City will coordinate the implementation of transit service enhancements and accessibility to local and regional connections which addresses adverse impacts to SIS facilities.
- Adopt a phasing plan for the additional dwelling units based on achieving targets for multi-modal performance measures.

**RECOMMENDATIONS/ACTIONS (continued)**

**DATE**

**IV. Summary of State of Florida Review Agency Comments (continued)** **March 20, 2015**

- Consider implementing strategies to utilize the street grid to provide a variety of route options within the Downtown RAC, including a comprehensive parking strategy and parking facilities with access to the WAVE and Sun Trolley.
- Consider adopting a Transportation Demand Management (TDM) ordinance to require business and residential developments over a certain size to implement TDM strategies.
- Develop strategies that incentivize the diversification and distribution of land uses within the RAC to achieve increased mode split and reduced vehicle miles traveled.

**Response:** The City of Fort Lauderdale has provided a response to FDOT. See Attachment 34. Further, the City submitted an alternative traffic analysis and multi-modal mitigation strategies based on the urban character of the Downtown RAC. See Attachment 29.A. and Section III, Pages III-5 through III-6 of this staff report.

**V. Planning Council Staff Final Recommendation** **October 13, 2015**

It is recommended that the proposed text amendment to the Broward County Land Use Plan (BCLUP) be approved, subject to the following conditions regarding **regional transportation network impacts, affordable housing and public school impacts**:

- The City shall monitor and collect data of transportation patterns and use of multi-modal options as new Regional Activity Center (RAC) development is established;
- Prior to any future land use amendments for additional dwelling units, the City must demonstrate consistency with the ITE “urban infill area” definition based on the actual development pattern within the RAC and provide data and analysis demonstrating that the existing and committed multi-modal system ~~fully~~ mitigates impacts to the transportation network;
- The City of Fort Lauderdale’s commitment to set aside 15% of the additional 5,000 dwelling units (i.e. 750 dwelling units) as affordable housing and that the previous voluntary commitment regarding the provision of affordable housing as part of BCLUP amendment PCT 05-3 remain in effect;
- Prior to the issuance of building permit 2,501 of the 5,000 dwelling units, the City shall demonstrate that at least 15% (375 dwelling units) of the permitted or built units are affordable (up to 120% of the median income limits adjusted for family size for the households). If the City is unable to demonstrate that at least 15% of the permitted or built dwelling units meet that criteria, no additional market rate units



**RECOMMENDATIONS/ACTIONS (continued)**

**DATE**

V. Planning Council Staff Final Recommendation (continued)

October 13, 2015

shall be permitted or built until such time that the City provides an implementation action plan or program that is reviewed and approved by the County Commission; and

- The City of Fort Lauderdale's commitment to amend the existing Educational Mitigation Agreement between Broward County, the City of Fort Lauderdale and the School Board of Broward County, Florida, as accepted and conditioned by School Board staff. See Attachments 6, 17, 29 and 29.C.

Further, Planning Council staff supports the following incentive density bonus provision:

- In addition and separate from the 5,000 dwelling units (at least 750 affordable), the City will be granted three (3) additional, density bonus market rate units for every one (1) "very low" (up to 50% of the median income limits adjusted for family size for the households) or "low" (up to 80% of the median income limits adjusted for family size for the households) affordable dwelling unit that is constructed for a maximum of an additional 750 market rate dwelling units; and
- These potential additional, bonus market rate dwelling units are separate from the pool of 5,000 dwelling units and bring the potential total of new dwelling units to a maximum of 5,750 new dwelling units.

Effectiveness of the approval shall not occur until after the recordation in the public records of Broward County, Florida, to the satisfaction of Broward County, of a legally enforceable mechanism as proffered by and executed by the City, regarding the voluntary commitments offered by the applicant as an inducement for Broward County to favorably consider its application.

Further, if the Broward County Land Use Plan amendment is adopted by the County Commission, this action by the Planning Council shall be considered the "conditional" recertification of the municipal land use plan amendment which directly correlates to the referenced Broward County Land Use Plan amendment. The recertification will not be deemed effective until such time as the Planning Council Executive Director and Attorney determine that the municipality has fulfilled all application requirements for recertification of local land use plans, as outlined in Appendix 3 of the Administrative Rules Document: Broward County Land Use Plan. The Planning Council Executive Director will issue a written letter of effectiveness to the municipality upon satisfaction of the same.

**RECOMMENDATIONS/ACTIONS (continued)**

**DATE**

VI. Planning Council Final Recommendation

October 22, 2015

Approval per Planning Council staff final recommendation, excluding the word “fully” as struck-through in the above Planning Council staff final recommendation. (Vote of the board; Unanimous: 18-0; Castillo, de Jesus, DiGiorgio, Friedel, Ganz, Gomez, Good, Graham, Grosso, Kiar, Long, Mack, McCartney, McColgan, Parness, Ryan, Stermer and Castro)

***PROPOSED AMENDMENT PCT 15-1***

## **INTRODUCTION AND APPLICANT'S RATIONALE**

- |      |                                                                            |                                                                                                                                                                                                                                                                                                                |
|------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I.   | <u>Municipality:</u>                                                       | Fort Lauderdale                                                                                                                                                                                                                                                                                                |
| II.  | <u>County Commission District:</u>                                         | District 7                                                                                                                                                                                                                                                                                                     |
| III. | <u>Site Characteristics</u>                                                |                                                                                                                                                                                                                                                                                                                |
| A.   | Size:                                                                      | Approximately 710 acres                                                                                                                                                                                                                                                                                        |
| B.   | Location:                                                                  | In Sections 2, 3, 10 and 11, Township 50 South, Range 42 East; generally located south of Sunrise Boulevard, north of Davie Boulevard, between U.S. 1/Federal Highway and Northwest 7 Avenue.                                                                                                                  |
| C.   | Existing Uses:                                                             | Commercial, office, industrial, transportation, recreation and open space, single- and multi-family residential and vacant.                                                                                                                                                                                    |
| IV.  | <u>Broward County Land Use Plan (BCLUP) Designations</u>                   |                                                                                                                                                                                                                                                                                                                |
| A.   | Current Designation:                                                       | Regional Activity Center                                                                                                                                                                                                                                                                                       |
| B.   | Proposed Designation:                                                      | Regional Activity Center                                                                                                                                                                                                                                                                                       |
| C.   | Estimated Net Effect:                                                      | <b>Addition of 5,000 dwelling units</b> [8,100 dwelling units currently permitted by the BCLUP]                                                                                                                                                                                                                |
| V.   | <u>Existing Uses and BCLUP Designations Adjacent to the Amendment Site</u> |                                                                                                                                                                                                                                                                                                                |
| A.   | Existing Uses:                                                             | <i>North:</i> Retail and multi-family residential<br><i>East:</i> Retail, single-family residential and multi-family residential<br><i>South:</i> Single-family residential, multi-family residential and government facilities<br><i>West:</i> Single-family residential, multi-family residential and retail |

## **INTRODUCTION AND APPLICANT'S RATIONALE (continued)**

### **V. Existing Uses and BCLUP Designations Adjacent to the Amendment Site (continued)**

<b>B. Planned Uses:</b>	<b>North:</b>	Commercial, Medium-High (25) Residential and Regional Activity Center (Northwest Fort Lauderdale)
	<b>East:</b>	Commercial, Recreation and Open Space, Medium-High (25) Residential and Medium (16) Residential
	<b>South:</b>	Low (5) Residential, Medium-High (25) Residential, Regional Activity Center (South Fort Lauderdale), Medium (16) Residential and Recreation and Open Space
	<b>West:</b>	Medium (16) Residential, Recreation and Open Space, Medium-High (25) Residential, Commercial and Regional Activity Center (Northwest Fort Lauderdale)

### **VI. Applicant/Petitioner**

<b>A. Applicant/Agent:</b>	City of Fort Lauderdale
<b>B. Property Owners:</b>	There are numerous property owners within the subject area.

### **VII. Recommendation of Local Governing Body:**

The City of Fort Lauderdale recommends approval of the proposed amendment. The City anticipates adoption of the corresponding local amendment in June of 2015.

### **VIII. Applicant's Rationale**

"The City of Fort Lauderdale City Commission adopted the Downtown Master Plan in 2003 and updated it in 2007 to include comprehensive design guidelines. These efforts were the culmination of over two years of research, review and plan development by the City, its consultants, the public and other stakeholders. The intent of the Downtown Master Plan is to create a livable and dynamic urban center with diverse, healthy residential neighborhoods and to develop an urban fabric with a walkable pattern of streets, distinct public spaces and high quality buildings. The Master Plan also envisions an expansion of mass transit as a critical component.

## **INTRODUCTION AND APPLICANT'S RATIONALE (continued)**

### **VIII. Applicant's Rationale (continued)**

In order to facilitate the continued evolution of the downtown into an urban center, the Downtown Master Plan outlines a need for additional residential units. In 2006, a land use plan amendment providing 3,000 dwelling units in the Downtown Regional Activity Center (RAC) was approved as a result of the Downtown Master Plan's Goals, Objectives and Policies.

As per the City of Fort Lauderdale's 2008 Comprehensive Plan, the Downtown RAC has a maximum allowable density of 11,060 dwelling units, which includes 3,000 dwelling units from a 2006 land use plan amendment to the City and County Land Use Plans (LUPA PCT 05-3), as well as 2,960 dwelling units from a 2003 land use plan amendment to the City's Land Use Plan (PCR 03-51). As the economy continues to improve, the City of Fort Lauderdale has experienced an influx of new residential and mixed-use development projects in the downtown. These projects have nearly exhausted the supply of dwelling units in the Downtown RAC. This amendment proposes to increase the allowable number of residential units in the Downtown RAC by an additional 5,000 dwelling units, which would bring the total number of allowable units to 16,060 in the City's Land Use Plan and 13,100 in the County's Land Use Plan. Of these, 750 dwelling units are proposed to be set aside for affordable housing, which represents 15% of the total number of units requested.

The proposed amendment would help satisfy current and anticipated mid-term demand for housing. It will help achieve the desired residential density of the Downtown Master Plan while enhancing the downtown as a vibrant live, work and play environment with street level activity that will support local businesses and future transit initiatives, such as the Wave Streetcar. The proposed amendment will also help guide future residential growth to the Downtown in a responsible manner, utilizing the Downtown RAC's existing and planned infrastructure, while preserving surrounding residential neighborhoods. New development will be guided by the Downtown Master Plan design guidelines and Character Areas, which limit height and density and provide transitional zones between the Downtown RAC and adjacent established neighborhoods to protect against incompatible uses.

Furthermore, 2014 Broward County municipal forecasts, based on Bureau of Economic and Business Research (BEBR) county forecasts, estimates an increase of approximately 20,000 additional dwelling units in the City of Fort Lauderdale between 2010 and 2030. It is anticipated that a large number of these units will be located in the Downtown RAC, which aligns with the goals, objectives, and policies of the Broward County Land Use Plan, including locating mixed land uses within proximity to mass transit facilities."

**SECTION III**  
**AMENDMENT REPORT**  
**PROPOSED AMENDMENT PCT 15-1**

**REVIEW OF PUBLIC FACILITIES AND SERVICES**

*I. Potable Water/Sanitary Sewer/Solid Waste/Drainage/Parks & Open Space*

Adequate potable water facility capacity and supply, sanitary sewer facility capacity, solid waste services, drainage, and park and open space acreage will be available to serve the proposed land use. See Attachment 3.

Regarding the long-range planning horizon for potable water supply, it is noted that the City of Fort Lauderdale adopted its 10-year Water Supply Facilities Work Plan in January, 2009.

**Update: October 13, 2015:** The SFWMD notes that the potable water analysis is not based on the City's current Water Use Permit. The potable water analysis projects that 2.14 MGD will be needed to serve the new development. The analysis includes an allocation from the Floridan Aquifer in the amount of 6.0 MGD. The city's current Water Use Permit does not include a Floridan Aquifer allocation and only includes an allocation of water from the Biscayne Aquifer. Should the City need water from the Floridan Aquifer, a Water Use Permit modification would be required. Further, the SFWMD recommends that the potable water analysis be based on the City's current 5-Year Community Investment Plan, not the FY 2009-2013 Capital Improvement Program. The SFWMD also recommends that the City clarify the status of the Reverse Osmosis (RO) facility expansion at the Peele-Dixie Water Treatment Plant.

The City of Fort Lauderdale submitted a revised potable water analysis based on its updated 10-year Water Supply Facilities Work Plan, which indicates annual allocations from both the Biscayne and the Floridan Aquifers. However, based on revised projected demands and reuse projects, the Floridan Aquifer will not be required to meet demand over the planning period from 2015-2035. Further, there are no current plans to proceed with the RO facilities expansion at the Peele-Dixie Water Treatment Plant. The City also notes that once the 5,000 dwelling units are approved, the City will annually review and incorporate the capital needs to accommodate future growth into the evaluation of water and sewer capital improvements. See Attachment 33.

In addition, Planning Council staff updated the potable water facility capacity and supply analysis based on the revised information submitted by the City of Fort Lauderdale. See Attachment 3.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **I. Potable Water/Sanitary Sewer/Solid Waste/Drainage/Parks & Open Space (continued)**

**Update: October 22, 2015:** The SFWMD has indicated that the City of Fort Lauderdale has adequately resolved the issues raised by the SFWMD during the review and update of the City's 10-year Water Supply Facilities Work Plan. See Attachment 36.

The Broward County Parks and Recreation Division (PRD) reviewed the proposed amendment for park land required to support the additional 5,000 dwelling units. The PRD report states that regional park impact fees will be required at the time of platting, replatting or a note on the face of plat. In addition, the PRD report states that the City has enough park land to meet its land use plan requirements; however, it recommends an increase in the specific amount of park and open space acreage required for this Regional Activity Center (RAC). See Attachment 4. The City of Fort Lauderdale has provided additional information regarding its inventory and investment in open space and recreational facilities in and around the Downtown Fort Lauderdale RAC, including the development of a 10-year Parks and Recreation System Master Plan. See Attachments 5 and 6.

### **II. Transportation and Mobility**

In addition, Planning Council staff has prepared a graphic depicting the open space and recreation uses within the boundaries of the RAC, as well as nearby. See Attachment 7.

The text amendment proposes an additional 5,000 dwelling units to be included in the Fort Lauderdale Downtown Regional Activity Center (RAC) which is currently permitted 8,100 dwelling units by the Broward County Land Use Plan.

Planning Council staff's standard traffic analysis, which includes a 7% internal capture trip reduction (standard for all mixed-use designations) indicates that the proposed amendment is projected to increase the number of p.m. peak hour vehicle trips on the regional transportation network at the long-term planning horizon (Year 2035) by approximately 2,454 p.m. peak hour trips. See Attachment 8.A.

Distribution of the projected additional p.m. peak hour trips (which includes a 7% internal capture reduction) indicates that the proposed amendment is projected to adversely impact the operating conditions of the regional transportation network. The MPO Year 2035 Long Range Transportation Plan model analysis indicates adverse impacts to Sunrise Boulevard, Sistrunk Boulevard, Broward Boulevard, Northwest 7/9 Avenue Connector, Andrews Avenue and Federal Highway. The proposed amendment would exacerbate impacts on 13 affected roadway links which are projected to operate at an unacceptable level of service (LOS) "F," with the amendment.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **II. Transportation and Mobility (continued)**

In addition, Broward Boulevard, between the FEC Railroad and Federal Highway, denigrates from an acceptable LOS “D” to an unacceptable LOS “F,” with the addition of the trips generated by the proposed amendment. See Attachment 8.B.

Planning Council staff utilizes a significance threshold for several reasons, including a) per Policy 12.01.11 of the Broward County Land Use Plan, a “significance” threshold corresponding to additional p.m. peak hour trips in excess of three-percent (3%) of such capacity of a regional roadway link at the long-range planning horizon, b) the threshold is also considered a margin of error to recognize that there is a range of potential permitted uses and development scenarios for any given land use plan designation, and c) recognition that all new development, independent of any land use plan amendment traffic analysis, is required to comply with Broward County traffic concurrency mitigation provisions, which are assessed at the plat/site planning stage.

The City of Fort Lauderdale submitted information stating that an overall trip reduction credit of 47% should be applied to the traffic analysis performed by the Planning Council staff to determine the number of trips generated by the proposed amendment. This proposed reduction includes credits for internal capture (15%), non-auto commutes (pedestrian, bicycle, carpool and transit - 17%) and developing around transit centers (15%). See Attachment 9.

The Broward County Planning and Redevelopment Division (PRD) staff reviewed the traffic analysis and information submitted by the City and issued comments regarding the proposed trip reduction rate of 47%. The PRD staff notes that the proposed trip reduction rate is not adequately justified and that although they are supportive of the concept of internal capture, the City needs to demonstrate via data and analysis how the internal capture, multi-modal credits and transit trips result in a vehicle trip reduction. See Attachment 10.

The City of Fort Lauderdale staff submitted additional information and analysis in response to the PRD staff’s concern’s with the proposed trip reduction rates. Specifically, the City provided an updated methodology to outline the approach used to determine the overall trip reduction rate, which has been revised to 21%. This reduced overall trip reduction rate consists of a reduction of 13% for internal capture, 4% for non-auto commutes, and 4% for transit within the downtown core as a result of The Wave. In addition, the City of Fort Lauderdale staff provided a summary of the multi-modal infrastructure projects the City has programmed within the subject area. See Attachment 11.

The Broward County Planning and Redevelopment Division staff has reviewed the City’s response and updated trip reduction methodology and concur with the proposed 21% trip reduction rate. See Attachment 12.



## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **II. Transportation and Mobility (continued)**

Based upon the agreed to 21% trip reduction credit, Planning Council staff has prepared an alternative traffic analysis, which indicates that the proposed amendment is projected to increase the number of p.m. peak hour vehicle trips on the regional transportation network at the long-term planning horizon by approximately 1,789 p.m. peak hour trips. See Attachment 13.A.

This distribution of the projected additional p.m. peak hour trips on the MPO Year 2035 Long Range Transportation Plan model indicates that adverse impacts to Sistrunk Boulevard, Broward Boulevard, Northwest 7/9 Avenue Connector, Andrews Avenue and Federal Highway remain, although at lesser impact than the standard analysis. The proposed amendment would exacerbate impacts on 12 affected roadway links which are projected to operate at an unacceptable level of service (LOS) "F," with the amendment. In addition, Broward Boulevard, between the FEC Railroad and Federal Highway, denigrates from an acceptable LOS "D" to an unacceptable LOS "F," with the addition of the trips generated by the proposed amendment. See Attachment 13.B.

Planning Council staff notes that Policy 3.4.3 of the Broward County Comprehensive Plan Transportation Element regarding the regional transportation network adopts the level of service (LOS) standard for the subject "Eastern Core District" as LOS "E," with the exception of Strategic Intermodal System (SIS) Facilities. Broward Boulevard is an SIS Facility and subject to LOS "D" standard. However, all adversely impacted links depicted in Attachment 13.B. are projected to operate at an unacceptable LOS "F" and therefore are subject to BCLUP Policies 12.01.02 and 12.01.11 regarding transportation impacts.

To address the estimated negative impacts to the regional transportation network, the City of Fort Lauderdale has submitted mitigation plans for each of the adversely impacted corridors, including capital improvement projects, ongoing projects and initiatives in the Downtown area and surrounding network, transit investments, multi-modal plans and implementation efforts, and projects specific to and relevant to the significantly impacted corridors. See Attachment 14.

The Broward County Environmental Protection and Growth Management Department (EPGMD) staff has reviewed the City's mitigation plans for adversely impacted corridors and is unable to find that the information adequately addresses the estimated significant impacts to the transportation network. The EPGMD staff suggests that the City work with the County's "Complete Streets Team" and the Florida Department of Transportation to identify an adequate and financially feasible mobility mitigation strategy. The EPGMD staff does not object to the amendment being transmitted to State of Florida review agencies and will provide updated comments regarding transportation impacts prior to Planning Council's second public hearing. See Attachment 15.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **II. Transportation and Mobility (continued)**

**Update: October 13, 2015:** The City of Fort Lauderdale has coordinated with the Broward County Planning Council staff, the Broward County “Complete Streets Team,” the Broward Metropolitan Planning Organization and the Florida Department of Transportation in order to identify an adequate and financially feasible mobility mitigation strategy. In this regard, the City of Fort Lauderdale has submitted additional information regarding transportation. The City has:

- Submitted an alternative traffic analysis utilizing an adjusted peak hour K factor and a person-trip rather than vehicle-trip methodology to better reflect the urban downtown character of the RAC. This analysis reduces the number of adversely impacted links from 13 to six (6), specifically on Broward Boulevard and Federal Highway.
- Outlined specific funded multi-modal improvement projects which serve to help mitigate impacts on all of the 13 original affected links (i.e. Sistrunk Boulevard, Broward Boulevard, Northwest 7-9 Avenue Connector, Andrews Avenue and Federal Highway).
- Included regional and local transit projects that will provide options for multi-modal transportation (i.e. The Wave Streetcar, Tri-Rail Coastal Link, All Aboard Florida, Central Broward East-West Transit project, additional service on BCT routes and enhanced service levels for the Sun Trolley) as well as several area-wide transportation studies.
- Reiterated its effort to include policy changes into land use, zoning and code amendments that will help to facilitate multi-modal transportation and walkable livable places with complete streets.
- Committed funds for bicycle facility improvements, which will represent approximately 24 miles of bike lanes city-wide.
- Improved system parking efficiencies with the Smart Parking program.

See Attachment 29.A.

The Broward County “Complete Streets Team” has reviewed the City’s updated transportation analysis and is generally agreeable to the City’s approach to utilize an alternative methodology which reflects the RAC as an “urban infill area.” Based on this approach, six (6) links on Broward Boulevard and Federal Highway will continue to be adversely impacted by the proposed amendment. Although the City was not able to provide a quantitative analysis acceptable by County staff which demonstrates that the committed multi-modal investments will fully mitigate all estimated peak hour trips on Broward Boulevard and Federal Highway, the “Complete Streets Team” finds that the multi-modal investments proposed by the City will serve to encourage the use of mobility options in the area and will mitigate a significant portion of the additional trips.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **II. Transportation and Mobility (continued)**

Therefore, the “Complete Streets Team” does support an increment of permitted dwelling units within the Downtown RAC, recognizing that existing and committed multi-modal options are consistent with the emerging and planned, but not yet fully established, intense and compact pattern of development within the RAC. In addition, any approval of all or a portion of the City’s requested 5,000 dwelling units should be conditioned on the following:

- The City shall monitor and collect data of transportation patterns and use of multi-modal options as new RAC development is established; and
- Prior to any future land use amendments for additional dwelling units, the City must demonstrate consistency with the ITE “urban infill area” definition based on the actual development pattern within the RAC and provide data and analysis demonstrating that the existing and committed multi-modal system fully mitigates impacts to the transportation network.

See Attachment 30.

In addition, per BCLUP Policy 12.01.02, Broward County must utilize the highway capacity methodology endorsed by the Broward Metropolitan Planning Organization (MPO). In this regard, Planning Council staff received correspondence from the MPO in support of the City’s alternative traffic analysis. The MPO finds that the analysis addresses the limitations of the regional traffic distribution model and provides a more realistic representation of the urban character of the Downtown RAC area. Further, the MPO acknowledges that the City’s proposed mitigation measures are in line and consistent with the goals and visions of the region, including enhancing the safety and adequacy of multi-modal transportation options. See Attachment 31.

It is noted that the Broward Metropolitan Planning Organization adopted an updated Year 2040 Long Range Transportation Plan on December 9, 2014. However, the related model has not yet been implemented. If the Year 2040 Long Range Transportation Plan model becomes available during the transmittal phase of this proposed amendment, it is suggested that the analysis be updated to reflect the same.

**Update: October 13, 2015:** The Year 2040 Long Range Transportation Plan model is not available as of this date.

With regard to public transit, the Broward County Transit Division (BCT) staff report states that current and future fixed-route county bus service is currently provided to the proposed amendment area, as well as the Fort Lauderdale Sun Trolley community bus service.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **II. Transportation and Mobility (continued)**

The BCT staff recommends that the proposed development be designed in a manner that will provide safe movement of pedestrians and bicycles within the area and provide connectivity to the local bus stops and pedestrian and bicycle network. See Attachment 16.

### **III. Public Schools**

The School Board of Broward County staff report states that the amendment would generate 230 additional students into Broward County Public Schools, consisting of 135 elementary school students, 55 middle school students and 40 high school students. The report further states that Croissant Park Elementary, North Fork Elementary, North Side Elementary, Walker Elementary, New River Middle, Sunrise Middle, Parkway Middle and Stranahan High schools are all under-enrolled in the 2013/2014 school year, and are anticipated to operate below the adopted level of service (LOS) of 100% of gross capacity through the 2015/2016 school year.

In addition, the School Board report indicates that Fort Lauderdale High school is operating above the LOS in the 2013/2014 school year (103.6%) and is anticipated to operate above the LOS through the 2014/2015 school year (101.3%). The School Board report indicates that there are 8 charter schools located within a two-mile radius of the proposed amendment area. See Attachment 17.

Further, the School Board report indicates that a previously budgeted construction of two 3-story buildings at Fort Lauderdale High School is planned and funded in the currently adopted in the 5-year School Board District Educational Facilities Plan. Regarding the long-term (6-10 years), there are no planned improvements in the adopted District Educational Facilities Plan for the affected elementary, middle and high schools. See Attachment 17.

Based on the School District's Seven Long Range Planning Areas, the proposed amendment area is located within School District Planning Area "E," which is anticipated to have sufficient excess capacity to support the students generated by the residential units proposed in the Planning Area. See Attachment 17.

In addition, School Board staff notes that the approval of this amendment should be conditioned upon the amendment of the existing Educational Mitigation Agreement previously approved as part of PCT 05-3 to recognize the incorporation of the additional residential units and reflect the students anticipated from the proposed additional units. See Attachment 17.

## **REVIEW OF PUBLIC FACILITIES AND SERVICES (continued)**

### **III. Public Schools (continued)**

Planning Council staff has received correspondence from the City agreeing to amend the Educational Mitigation Agreement with the School Board and Broward County to reflect the additional residential units. See Attachment 6. Further, the additional residential dwelling units will be subject to a public school concurrency review at the plat or site plan phase of development review, whichever comes first.

**Update: October 13, 2015:** The City of Fort Lauderdale submitted a draft Educational Mitigation Agreement. See Attachments 29 and 29.C.

For informational purposes only, Planning Council staff notes that new student generation rates were adopted by the Board of County Commissioners on October 28, 2014, and will be effective January 26, 2015. Based on the new student generation rates, the proposed amendment would generate 311 additional students, consisting of 142 elementary school students, 66 middle school students and 103 high school students.

**SECTION IV**  
**AMENDMENT REPORT**  
**PROPOSED AMENDMENT PCT 15-1**

**REVIEW OF NATURAL RESOURCES**

*I. Designated Protected/Regulated Areas*

The Broward County Environmental Protection and Growth Management Department (EPGMD) report indicates that Natural Resource Areas, Local Areas of Particular Concern, or Urban Wilderness Inventory sites do not exist within the boundaries of the proposed amendment area. See Attachment 18.

*II. Wetlands*

The EPGMD report indicates that there may be wetlands within the amendment boundaries. In addition, the properties adjacent to the New River and Tarpon Canals may contain mangroves and other wetland vegetation. Therefore, any work in, on, over or under waters or wetlands, or any impacts to mangroves will require a license. See Attachment 18.

*III. Sea Level Rise*

The EPGMD report states that the proposed amendment site does contain, fall within, or overlap with an area for planning consideration, as indicated on the Priority Planning Areas for Sea Level Rise Map. Therefore, Policies A.03.05, 9.07.02, 9.09.04 and 12.01.13 apply to the review of this project. See Attachment 18.

The applicant has provided information stating that the City of Fort Lauderdale has enacted several measures to address sea level rise and flood protection, including an updated flood plain management ordinance which sets a higher standard above the base flood elevation to provide an extra margin of protection and a text amendment to the City's Comprehensive Plan that will include the development and advancement of adaptation policy options to increase the City's resiliency to the impacts of climate change and rising sea levels by developing and implementing adaptation strategies and measures to protect human life. See Attachment 5. Planning Council staff has confirmed that the information provided by the City is satisfactory to the EPGMD.

*IV. Other Natural Resources*

The EPGMD report states that the subject site contains mature tree canopy. Development of the site must comply with the Tree Preservation regulations of the City of Fort Lauderdale.

## **REVIEW OF NATURAL RESOURCES (continued)**

### **IV. Other Natural Resources (continued)**

The applicant is required to minimize the number of trees to be removed by incorporating suitable existing trees in the site plan design. If trees cannot be incorporated into the site plan in their current location, the applicant is required to relocate suitable trees. Any removed trees must be replaced. If the above recommendations are adhered to, the proposed land use designation is not expected to have a negative impact on upland resources. See Attachment 18.

It is further noted that development of the proposed amendment area should be coordinated with the NatureScape Broward Program for guidance in development of any related landscaping plans. See Attachment 18.

The EPGMD report indicates that the subject area contains 18 known contaminated sites on, adjacent or within 0.25 miles of the proposed amendment boundaries. See Attachment 19.

Regarding air quality, the EPGMD report states that the proposed amendment can reasonably be assumed to have a moderate impact on air quality. The Air Quality Program recommends that the plan for development includes air quality measures or provisions that will support alternative methods of transportation. The program also recommends pro-active long term planning methods to prevent further deterioration of air quality. See Attachment 18. The City has provided additional information regarding alternative methods and modes of transportation. See Attachment 14.

### **V. Historical/Cultural Resources**

The Broward County Historical Commission (BCHC) report states that the proposed amendment has the potential to impact a large number of historic resources: in excess of 500 buildings, ten (10) archaeological sites and two (2) archaeologically significant zones located within or adjacent to (500 feet or less) the amendment area, as well as over 500 structures contained within the three (3) historic districts which are included in the amendment area. Many of these sites are included in the National Register of Historic Places and other resources have been determined to be eligible for historic designation or are yet to be evaluated for inclusion in the National Register of Historic Places or local historic designation. See Attachment 20.

## **REVIEW OF NATURAL RESOURCES (continued)**

### **V. Historical/Cultural Resources (continued)**

The BCHC report recommends that 1) the City obtain an official Florida Master Site File record search of the proposed amendment area, 2) the City initiate local designation, as well as National Register nomination, of City-owned historic resources eligible for such designations as identified in this amendment, 3) the City include a list of Historic Resources, as defined in the City of Fort Lauderdale Comprehensive Plan and 4) the amendment should include language as it pertains to the discovery of historic and/or archaeological resources or of any unmarked human burial remains within the amendment area. See Attachment 20.

The City of Fort Lauderdale staff has provided information addressing the historical and archaeological comments and outlining its local historical and archaeological policies. See Attachment 6. The County Archaeologist has stated that the information provided by the City captures the recommendations of the former Historical Commission and that the City's response as outlined in Attachment 6 is acceptable. See Attachment 21.

### **VI. Emergency Management**

The Broward County Emergency Management Division (EMD) and Planning and Redevelopment Division (PRD) reviewed the proposed amendment for impacts to hurricane evacuation times, as a small portion of the overall Regional Activity Center is located east of Federal Highway/U.S. 1 in a mandatory hurricane evacuation zone for a Category 3 or higher storm. The EMD report states that the amendment proposal is not anticipated to have a negative impact on the capacity of Broward County's shelters nor on the level of service for hurricane evacuation zone routes. However, EMD and PRD both recommend that all new residential development in the RAC develop hurricane contingency plans. See Attachments 22 and 23.

In response to the County staff comments, the City of Fort Lauderdale has verified that it will add a standard note in its review comments of all new residential projects in the Downtown RAC that will advise applicants to develop hurricane contingency/preparedness plans for use by prospective owners or tenants. See Attachment 5. Planning Council staff has confirmed that the information provided by the City is satisfactory to the EMD.

In addition, the City of Fort Lauderdale has enacted several measures to address sea level rise and flood protection, including an updated flood plain management ordinance and a text amendment to the City's Comprehensive Plan that will include the development and advancement of adaptation policy options. See Attachment 5.



**SECTION V**  
**AMENDMENT REPORT**  
**PROPOSED AMENDMENT PCT 15-1**

**OTHER PLANNING CONSIDERATIONS/INFORMATION**

*I. Affordable Housing*

The proposed land use plan amendment is subject to Broward County Land Use Plan (BCLUP) Policy 1.07.07, as it proposes 5,000 additional dwelling units to be permitted by the BCLUP in the Downtown Fort Lauderdale Regional Activity Center (RAC). The City of Fort Lauderdale has committed to set aside 15% (i.e. 750 dwelling units) of the 5,000 additional dwelling units as affordable. The Broward County Planning and Redevelopment Division (PRD) has reviewed the 15% set aside commitment for affordable housing and finds it supportable. However, PRD has requested that the City submit a phasing plan to ensure that build out of the 4,250 market rate dwelling units does not occur prior to any affordable dwelling units being constructed. See Attachment 23.

The City of Fort Lauderdale staff has provided additional information in response to the PRD request regarding a phasing plan for the affordable dwelling units and has provided the following comments (See Attachment 6):

- At least 489 affordable dwelling units have been approved or developed within the boundaries of the RAC since the adoption of BCLUP amendment PCT 05-3, which set aside 450 dwelling units for affordable housing (Note: The City's comments state 656 affordable units, but the County comments clarify that 167 of the units do not yet have a developer for the property specified and is not currently being marketed. See Attachment 24.);
- It is anticipated that the completion of the Wave Streetcar will create a demand for affordable housing as the area will be pedestrian friendly and supportive of transit; and
- An affordable housing phasing plan may result in an unintended consequence that will have a negative impact on both market rate and affordable housing construction.

The PRD staff has reviewed the additional information submitted by the City of Fort Lauderdale staff, and continues to recommend a phasing plan to ensure that affordable units are available on a consistent basis as units are built within the RAC. See Attachment 24.

## **OTHER PLANNING CONSIDERATIONS/INFORMATION (continued)**

### **I. Affordable Housing (continued)**

**Update: October 13, 2015:** The City of Fort Lauderdale has submitted additional information regarding affordable housing. The City has:

- Adopted an Affordable Housing Policy on October 6, 2015, including the establishment of an Affordable Housing Trust Fund, incentives for infill and affordable developments and the continued use of existing affordable housing programs and policies;
- Submitted an Affordable Housing and Economic Analysis prepared by the Florida International University Metropolitan Center which provides a current market perspective on the key demand and supply factors impacting the production and availability of affordable housing; and
- Reiterated its commitment to set aside 15% (i.e. 750 dwelling units) of the 5,000 additional dwelling units as affordable units and committed to a phasing plan in which five percent (5%) of the first 2,500 allocated dwelling units (or 125 dwelling units) will be set aside as affordable units. Further, the City would enter into an interlocal agreement with Broward County to monitor the allocation of affordable units in relation to the overall units in the Downtown RAC.

See Attachments 29 and 29.B.

The Broward County Environmental Protection and Growth Management Department (EPGMD) staff has reviewed the City's additional affordable housing information. Although the EPGMD commends the City's commitment to set aside 15% of the dwelling units as affordable housing, they offer the following comments:

- The City's proposed phasing plan (5% of the first 2,500 allocated units (or 125 units) will be affordable housing units), lacks an effective enforcement mechanism and is an inadequate goal for the first 2,500 units.
- The City's Affordable Housing Policy is not clear as to the anticipated results and impact from the programs outlined, such as the Affordable Housing Trust Fund, as well as the implementation timetables included in the policy. Further, it is unknown whether the City will consider adopting an inclusionary affordable housing program as recommended by its Affordable Housing Advisory Committee.
- The "Affordable Housing and Economic Analysis" reports (Phases I and II) indicate significant concerns about the affordability of both owner-occupied and rental housing throughout the City, which is exacerbated by the City's Housing and Transportation Affordability Index (H+T) of 66%, far above the 45% benchmark. In addition, these reports do not address projected housing supply, as required by BCLUP Policy 1.07.07.

## **OTHER PLANNING CONSIDERATIONS/INFORMATION (continued)**

### **I. Affordable Housing (continued)**

Based on the above concerns, the EPGMD staff finds that the proposed amendment is not in compliance with BCLUP Policy 1.07.07. However, the EPGMD recognizes the 15% set aside and recommends that any approval of all or a portion of the City's requested 5,000 dwelling units be conditioned on the implementation of a suitable phasing plan, such as requiring that 150 of each 1,000 units be affordable units. The EPGMD staff notes that the provision of housing for a variety of income levels is critical to the economic and social health of the Downtown RAC and will also contribute to the success of multi-modal transportation options in the area. See Attachment 32.

**Update: October 22, 2015:** The EPGMD staff provided supplemental comments and continues to recommend that 150 of each 1,000 units be affordable units. See Attachment 37.

The City of Fort Lauderdale concurs with the phasing plan as outlined in the Broward County Planning Council staff's final recommendation dated October 13, 2015, that at least 15% (375 dwelling units) of the permitted or built units are affordable before the issuance of building permit 2,501 of the 5,000 dwelling units and with the bonus density incentive as recommended by Planning Council staff. See Attachment 38 and Planning Council staff's final recommendation on Pages I-4 and I-5 of this amendment report.

### **II. Broward County Land Use Plan Goals, Objectives and Policies**

It is noted the existing "Regional Activity Center (RAC)" designation was adopted as part of the original 1989 Broward County Land Use Plan inclusion plan and process. As the proposed amendment directs increased residential density to the Downtown Fort Lauderdale core, it is felt that the RAC as it exists and is proposed furthers and promotes the following objectives and policies of the Broward County Land Use Plan:

<b><u>Policy A.01.01</u></b>	Provide a range of housing opportunities and choices, including those in the "medium" to "high" densities where compatible with the physical location and services needs of residents in all age and income groups.
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<b><u>Objective 8.03.00</u></b>	Discourage urban sprawl and encourage a separation of urban and rural land uses by directing new development into areas where necessary regional and community facilities and services exist.
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**OTHER PLANNING CONSIDERATIONS/INFORMATION (continued)**

**II. Broward County Land Use Plan Goals, Objectives and Policies (continued)**

Policy 8.03.06 Downtown redevelopment and inner-city revitalization should be facilitated through the Broward County Land Use Plan and the plans of local governments.

Objective 10.01.00 Encourage the use of innovative land development regulations and techniques, for both residential and non-residential development in order to promote planned communities and activity centers designed for efficient use of public services and facilities.

Policy 10.02.06 Local land use plans should provide for substantial housing opportunities within Regional Activity Centers to allow people to both live and work within such areas.

Further, it is found that the RAC criteria outlined in Section IV of the BCLUP, Plan Implementation Requirements, has generally been met, including the 'broad public participation process' to include property owners within and surrounding the RAC amendment area. See Attachment 25.

Based on the information available at that time of this writing, the proposed amendment may not be considered consistent with the following objective of the BCLUP:

Objective 12.01.00 Coordinate transportation and land use planning activities of Broward County and its local governments to ensure that regional transportation levels of service standards established within the Broward County Comprehensive Plan are met.

**Update: October 13, 2015:** Based on the additional information and updated transportation analysis submitted by the City of Fort Lauderdale, it is felt that Objective 12.01.00 has been met. See Attachment 29.A.

However, based on the Planning Council staff transportation analysis, information provided by the City and the comments of Broward County staff included in Attachments 11 through 16, it appears that the proposed amendment furthers and promotes the following policy of the BCLUP regarding alternative transportation:

POLICY 12.01.08 Multi-modal transportation facilities and services that accommodate pedestrians, bicycles and transit should be recognized and encouraged by Broward County and its local governments when making land use planning decisions.

## **OTHER PLANNING CONSIDERATIONS/INFORMATION (continued)**

### **III. Other Pertinent Information**

The applicant notes that community outreach meetings were held to present the current and future plans for the RAC to the community. According to the applicant, the City of Fort Lauderdale held community meetings on October 10 and December 4, 2013, and January 29 and March 5, 2014. In addition, City public hearings were held on July 17 and October 1, 2013. See Attachment 25.

In addition, the approximate northern one-third (1/3) of the amendment area is within the Northwest-Progresso-Flagler Heights Community Redevelopment Area (CRA) boundaries and much of the remaining southern two-thirds (2/3) is within the Downtown Development Authority (DDA) boundaries.

The CRA “directs redevelopment activity targeted toward infrastructure improvements, assisting the private sector in property development and providing business incentives to redevelop blighted commercial properties.” An excerpt from the mission statement of the DDA is: “To focus on growing the residential community and the amenities that service it, highlighting the regional activity center as the downtown of Broward County, and facilitating its physical and economic development. The DDA was formed to provide for the rehabilitation, redevelopment, and revitalization of slum and blighted areas in the Downtown.”

**Update: January 22, 2015:** Correspondence has been received from an interested party. See Attachment 27.

**SECTION VI**  
**AMENDMENT REPORT**  
**PROPOSED AMENDMENT PCT 15-1**

**PLANNING ANALYSIS**

The Broward County Land Use Plan (BCLUP) “Regional Activity Center” (RAC) designation is intended to encourage attractive and functional mixed living, working, shopping, education and recreational activities within a specified area. RACs should promote and facilitate development and redevelopment activities through substantial housing and employment opportunities with access to various modes of transportation, including pedestrian, bicycle and transit.

The subject **Downtown Fort Lauderdale RAC** was initially adopted as part of the 1989 BCLUP inclusion plan and was permitted a total of 5,100 dwelling units, along with no specified limit to commercial and industrial uses, which includes office uses; the BCLUP was subsequently amended in 2005 to add 3,000 dwelling units for a total of 8,100 dwelling units permitted by the BCLUP. This text amendment proposes an additional 5,000 dwelling units to be permitted in the Fort Lauderdale Downtown Fort Lauderdale RAC, for a total of 13,100 BCLUP dwelling units.

The City of Fort Lauderdale’s certified future land use plan, through an allocation of “flexibility units” and “reserve units,” permits an additional 2,197 dwelling units north of Broward Boulevard and 763 dwelling units south of Broward Boulevard, for a total of 2,960 additional dwelling units permitted within the RAC. It is Planning Council staff’s understanding that all 2,960 of the local “flexibility units” and “reserve units” have been allocated to residential projects within the downtown area. In addition, the City has established a process within its Unified Land Development Regulations that allows for the allocation of additional available local “flexibility units,” within the appropriate flexibility zone boundaries, on a project/site plan review basis.

The Downtown Fort Lauderdale RAC touts several characteristics of an “urban area” per the definition in the Broward County Land Use Plan as it is an area utilized intensively for residential and non-residential uses. The potential increase in the number of dwelling units could promote the synergy of the live-work relationship and increase the demand for alternative transportation options, including bicycle, pedestrian and transit. Further, regarding density, it is noted that in most cases the BCLUP policies and permitted uses limit the development of residential density to a maximum of 50 dwelling units per acre on single development parcels. However, within mixed use areas, such as the Downtown Fort Lauderdale RAC designation, maximum residential density is determined by the local government and can be much greater, further promoting the urban characteristic of the area.

Planning Council staff notes that the City of Fort Lauderdale has been a leader among Broward’s municipalities with regard to promoting multi-modal transportation options and Complete Streets implementation.

### **PLANNING ANALYSIS (continued)**

Fort Lauderdale has completed several projects to improve walkability in the downtown, as well as provide safe bicycle facilities. Further, the City has been instrumental in promoting transit and has been involved in the development and implementation plan of The Wave project since its inception.

Planning Council staff also notes that the City of Fort Lauderdale has initiated several transportation and mobility programs for the downtown area, including the “Connecting the Blocks” Plan for short-term improvements in the RAC, funded at approximately \$16.5 million and the City’s “Community Investment Program,” which is funded at approximately \$13 million for allocations to the Downtown Walkability Program, Downtown Transit Oriented Developments and other initiatives.

Planning Council staff review of the proposed amendment finds the following factors support the amendment request:

1. Our analysis indicates that adequate **potable water plant capacity and supply, sanitary sewer and solid waste capacity, drainage and park acreage** will be available to serve the proposed land use. Further, no adverse impacts to **natural resources** were identified. The City has provided expanded information regarding adaptation strategies to address sea level rise and flood risks, the protection of historic resources and development review committee criteria for new residential development regarding hurricane evacuation. See Attachments 5 and 6.
2. It is felt that the proposal to increase the residential component within the Downtown Fort Lauderdale Regional Activity Center may **further the goals, objectives and policies of the BCLUP which speak to encouraging adequate housing opportunities, promoting multi-modal transportation options and Complete Streets implementation.**
3. It is also felt that the proposal to increase the residential component within the subject Regional Activity Center is **supported by the City’s Downtown Master Plan** which addresses compatibility criteria for the variety of neighborhood areas within the RAC, urban design guidelines, preservation of historic structures, and establishment of additional park and open space areas.

Planning Council staff review raises the following issues:

1. The alternate transportation analysis, based upon a 21% trip reduction credit, indicates that the amendment will increase peak hour demand on the **regional transportation network** by approximately 1,789 p.m. peak hour trips. See Attachment 13.A.

### **PLANNING ANALYSIS (continued)**

Distribution of the projected additional p.m. peak hour trips indicates that adverse impacts to Sistrunk Boulevard, Broward Boulevard, Northwest 7/9 Avenue Connector, Andrews Avenue and Federal Highway remain, although at lesser impact than the standard analysis.

The proposed amendment would exacerbate impacts on 12 affected roadway links which are projected to operate at an unacceptable level of service (LOS) "F," with the amendment. In addition, Broward Boulevard, between the FEC Railroad and Federal Highway, denigrates from an acceptable LOS "D" to an unacceptable LOS "F," with the addition of the trips generated by the proposed amendment. See Attachment 13.B.

To address the estimated negative impacts to the regional transportation network, the City of Fort Lauderdale has submitted mitigation plans for each of the adversely impacted corridors, including capital improvement projects, ongoing projects and initiatives in the Downtown area and surrounding network, transit investments, multi-modal plans and implementation efforts, and projects specific to and relevant to the significantly impacted corridors. See Attachment 14.

The Broward County Environmental Protection and Growth Management Department (EPGMD) staff has reviewed the City's mitigation plans for adversely impacted corridors and is unable to find that the information adequately addresses the estimated significant impacts to the transportation network. The EPGMD staff suggests that the City work with the County's "Complete Streets Team" and the Florida Department of Transportation to identify an adequate and financially feasible mobility mitigation strategy. The EPGMD staff does not object to the amendment being transmitted to State of Florida review agencies and will provide updated comments regarding transportation impacts prior to Planning Council's second public hearing. See Attachment 15.

**(Please see Section III, Transportation and Mobility, for updated information and analyses.)**

2. Concerning impacts to **public schools**, the School Board of Broward County staff report indicates that the proposed amendment would generate 230 additional students into Broward County Public Schools, consisting of 135 elementary school students, 55 middle school students and 40 high school students. However, the report states that Planning Area "E" is anticipated to have sufficient excess capacity to support the students generated by the residential units proposed in the Planning Area. See Attachment 17.

In addition, the existing Educational Mitigation Agreement previously approved as part of PCT 05-3 must be amended to recognize the incorporation of the additional residential units and reflect the students anticipated from the proposed additional units. See Attachments 6 and 17.



**PLANNING ANALYSIS (continued)**

**Update: October 13, 2015:** The City of Fort Lauderdale submitted a draft of the Education Mitigation Agreement. See Attachments 29 and 29.C.

3. Regarding **affordable housing, the City has committed to set aside 15% of the 5,000 additional dwelling units as affordable** (i.e. 750 dwelling units). Planning Council staff finds that the City's commitment to set aside 15% of the 5,000 dwelling units as affordable is positive and supportable for transmittal to the State of Florida review agencies and should be reflected in the text of the BCLUP. See Attachment 1. Further, Planning Council staff concurs with the County staff's recommendation regarding phasing and/or assurances for the construction of the 750 affordable dwelling units. See Attachment 24. If the amendment is transmitted to the State of Florida review agencies, the City and County staffs should continue to work together to identify a solution that will maintain a balance between market forces and affordable housing as development occurs.

**(Please see Section V, Affordable Housing, for updated information and analyses.)**

In summary, Planning Council staff finds that the proposed amendment will support and promote the intent of the Downtown Fort Lauderdale "Regional Activity Center" designation promoting housing and employment activities in a compact area. Recognizing that the City has engaged in an ongoing effort to provide information and data, as well as the complexity of the proposal, Planning Council staff would support the transmittal of the proposed amendment, with the recommendation that the City address the following prior to the Planning Council's second public hearing:

1. Demonstrate, in consultation and coordination with Broward County "Complete Streets" staff and the Florida Department of Transportation, that sufficient regional transportation network capacity and multi-modal facilities will be available to serve the proposed additional dwelling units; and
2. Provide a phasing plan or other policy resolution that will ensure the implementation and construction of the City's commitment to provide that 15% of the additional 5,000 dwelling units are affordable.

**Update: October 13, 2015:** Planning Council staff recognizes the significant work and coordination between the City and County staffs that has been accomplished since the transmittal of the proposed amendment to the State review agencies.

Further, it is noted that transportation and housing costs are two of the biggest household expenses in Broward County. As such, Planning Council staff supports directing growth and redevelopment to mixed use areas such as the Downtown

**PLANNING ANALYSIS (continued)**

RAC that include significant transportation corridors and options which offer multi-modal connections and cost effective infrastructure investments to accommodate full access to housing, employment opportunities, local businesses and community services.

**Planning Council staff recommends approval of the amendment in consideration of the following analysis and associated conditions, as outlined below.**

1. Regarding **regional transportation impacts**, the City of Fort Lauderdale has coordinated with the Broward County Planning Council staff, the Broward County “Complete Streets Team,” the Broward Metropolitan Planning Organization and the Florida Department of Transportation in order to identify an adequate and financially feasible mobility mitigation strategy, and has submitted an updated transportation analysis. See Attachment 29.A.

The Broward County “Complete Streets Team” reviewed the City’s updated transportation analysis and is generally agreeable to the City’s approach to utilize an alternative methodology which reflects the RAC as an “urban infill area.”

Therefore, the “Complete Streets Team” is supportable of an increment of permitted dwelling units within the Downtown RAC, recognizing that existing and committed multi-modal options are consistent with the emerging and planned, but not yet fully established, intense and compact pattern of development within the RAC. In addition, any approval of all or a portion of the City’s requested 5,000 dwelling units should be conditioned on the following:

- The City shall monitor and collect data of transportation patterns and use of multi-modal options as new RAC development is established; and
- Prior to any future land use amendments for additional dwelling units, the City must demonstrate confirmation with the ITE “urban infill area” definition based on the actual development pattern within the RAC and provide data and analysis demonstrating that the existing and committed multi-modal system fully mitigates impacts to the transportation network.

See Attachment 30.

2. Regarding **affordable housing**, the City of Fort Lauderdale submitted additional information and reiterated its commitment to set aside 15% (i.e. 750 dwelling units) of the 5,000 additional dwelling units as affordable units.

### **PLANNING ANALYSIS (continued)**

The City further committed to a phasing plan in which five percent (5%) of the first 2,500 allocated dwelling units (or 125 dwelling units) will be set aside as affordable units. In addition, the City would enter into an interlocal agreement with Broward County to monitor the allocation of affordable units in relation to the overall units in the Downtown RAC. See Attachments 29 and 29.B.

The EPGMD staff reviewed the additional information submitted by the City and determined that it does not demonstrate compliance with BCLUP Policy 1.07.07. **However, the EPGMD recognizes the 15% set aside and recommends that any approval of all or a portion of the City's requested 5,000 dwelling units be conditioned on the implementation of a suitable phasing plan**, such as requiring that 150 of each 1,000 units be affordable units. The EPGMD staff notes that the provision of housing for a variety of income levels is critical to the economic and social health of the Downtown RAC and will also contribute to the success of multi-modal transportation options in the area. See Attachment 32.

Planning Council staff continues to find the City's commitment to set aside 15% of the dwelling units commendable. However, a review of the City's proposed phasing plan finds that the monitoring component does not provide an enforceable mechanism. Therefore, Planning Council staff recommends the following alternative phasing plan:

- Prior to the issuance of building permit 2,501 of the 5,000 dwelling units, the City shall demonstrate that at least 15% (375 dwelling units) of the permitted or built units are affordable (up to 120% of the median income limits adjusted for family size for the households). If the City is unable to demonstrate that at least 15% of the permitted or built dwelling units meet that criteria, no additional market rate units shall be permitted or built until such time that the City provides an implementation action plan or program that is reviewed and approved by the County Commission.

Further, to support the intent of the implementation of the Downtown Fort Lauderdale "Regional Activity Center" designation promoting housing and employment activities in a compact area, as well as the transportation and housing connection, Planning Council staff analysis and review of the proposed amendment finds that a density bonus system to promote "very low" and "low" affordable housing opportunities is supportable as an implementation strategy. Planning Council staff recommends the following:

**PLANNING ANALYSIS (continued)**

- In addition and separate from the 5,000 dwelling units (at least 750 affordable), the City will be granted three (3) additional, density bonus market rate units for every one (1) “very low” (up to 50% of the median income limits adjusted for family size for the households) or “low” (up to 80% of the median income limits adjusted for family size for the households) affordable dwelling unit that is constructed for a maximum of an additional 750 market rate dwelling units; and
  - These potential additional, bonus market rate dwelling units are separate from the pool of 5,000 dwelling units and bring the potential total of new dwelling units to a maximum of 5,750 new dwelling units. Planning Council staff has prepared a public facilities and services analysis to ensure the availability of the same. See Attachment 35.
3. The City of Fort Lauderdale’s commitment to **amend the existing Educational Mitigation Agreement** between Broward County, the City of Fort Lauderdale and the School Board of Broward County, Florida, as accepted and conditioned by School Board staff. See Attachments 6, 17, 29 and 29.C.

**Update: October 22, 2015:** The City of Fort Lauderdale has stated that it concurs with the transportation, affordable housing and educational mitigation conditions as outlined above and in the Broward County Planning Council staff’s final recommendation dated October 13, 2015. See Attachment 38.

**SECTION VII**  
**AMENDMENT REPORT**  
**PROPOSED AMENDMENT PCT 15-1**

**ATTACHMENTS**

1. Proposed Text Amendment PCT 15-1
2.
  - A. Aerial Photograph
  - B. Broward County Land Use Plan Future Land Use Designations
3. Broward County Planning Council Supplemental Report of December 2014, updated October 2015
4. Broward County Parks and Recreation Division Report of August 14, 2014
5. Correspondence from Todd Okolichany, Principal Planner, Fort Lauderdale Department of Sustainable Development, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 10, 2014
6. Correspondence from Todd Okolichany, Principal Planner, Fort Lauderdale Department of Sustainable Development, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated November 3, 2014
7. Planning Council staff graphic depicting Downtown Fort Lauderdale RAC and Surrounding Parks
8.
  - A. Broward County Planning Council Traffic Analysis of September 8, 2014
  - B. Broward County Planning Council Affected Regional Transportation Network Links
9. Correspondence from Diana Alarcon, Director, Fort Lauderdale Transportation and Mobility Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 10, 2014
10. Correspondence from Martin Berger, Planning Section Manager, Broward County Planning and Redevelopment Division, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 31, 2014
11. E-correspondence from Todd Okolichany, Principal Planner, Fort Lauderdale Department of Sustainable Development, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated December 17, 2014

**ATTACHMENTS (continued)**

12. E-correspondence from Henry Snizek, Director, Broward County Planning and Redevelopment Division, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated December 18, 2014
13. A. Broward County Planning Council Alternative Traffic Analysis of December 18, 2014  
  
B. Broward County Planning Council Affected Regional Transportation Network Links (based on Alternative Traffic Analysis)
14. E-correspondence from Alia Awaad, Senior Mobility Engineer, Fort Lauderdale Transportation and Mobility Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated December 19, 2014
15. Correspondence from Henry A. Snizek, Deputy Director, Broward County Environmental Protection and Growth Management Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated January 8, 2015
16. Broward County Transit Division Report of October 14, 2014
17. School Board of Broward County Consistency Review Report of September 22, 2014
18. Broward County Environmental Protection and Growth Management Department Report of September 18, 2014
19. Planning Council staff graphic and table depicting contaminated sites within the Downtown Fort Lauderdale RAC
20. Broward County Historical Commission Report of August 29, 2014
21. Correspondence from Matthew DeFelice, Coastal Archaeology & History Research Inc., on behalf of Broward County Planning and Redevelopment Division, dated December 8, 2014
22. Broward County Emergency Management Division Report of September 10, 2014
23. Broward County Planning and Redevelopment Division Report of September 18, 2014
24. Updated Broward County Planning and Redevelopment Division Report of December 3, 2014

**ATTACHMENTS (continued)**

- 25. E-correspondence from Todd Okolichany, Principal Planner, Fort Lauderdale Department of Sustainable Development, to Ivan Cabrera, Assistant Planner, Broward County Planning Council, dated December 15, 2014
- 26. Broward County Water Management Division Report of August 15, 2014

**Update: January 22, 2015:**

- 27. Correspondence from Linda M. Ortiz to the Broward County Planning Council, dated January 12, 2015
- 28. Correspondence from Jenni Morejon, Director, Fort Lauderdale Department of Sustainable Development, to Anne Castro, Chair, Broward County Planning Council, dated January 22, 2015

**Update: October 13, 2015:**

- 29. Correspondence from Jenni Morejon, Director, Fort Lauderdale Department of Sustainable Development, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated September 21, 2015
  - A. Transportation Analysis
  - B. Affordable Housing (including correspondence from Jenni Morejon, Director, Fort Lauderdale Department of Sustainable Development, to Henry Sniezek, Deputy Director, Broward County Environmental Protection and Growth Management Department, dated September 21, 2015
  - C. Educational Mitigation Agreement
- 30. Correspondence from Henry A. Sniezek, Deputy Director, Broward County Environmental Protection and Growth Management Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 7, 2015, on behalf of the Broward County "Complete Streets Team"
- 31. Correspondence from Greg Stuart, AICP, Executive Director, Broward Metropolitan Planning Organization to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated September 22, 2015
- 32. Correspondence from Henry A. Sniezek, Deputy Director, Broward County Environmental Protection and Growth Management Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 7, 2015

**ATTACHMENTS (continued)**

- 33. Correspondence from Jenni Morejon, Director, Department of Sustainable Development, City of Fort Lauderdale, to Dean Powell, Water Supply Bureau Chief, South Florida Water Management District, dated September 30, 2015
- 34. Correspondence from Lee R. Feldman, ICMA-CM, City Manager, City of Fort Lauderdale, to Gerry O'Reilly, PE, District Secretary, District 4, Florida Department of Transportation, dated September 28, 2015
- 35. Broward County Planning Council Supplemental Report of October 2015

**Update: October 22, 2015:**

- 36. E-correspondence from Terry Manning, Policy and Planning Analyst, South Florida Water Management District, to Jenni Morejon, Director, Department of Sustainable Development, City of Fort Lauderdale, dated October 15, 2015
- 37. Correspondence from Henry A. Snizek, Deputy Director, Broward County Environmental Protection and Growth Management Department, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 19, 2015
- 38. Correspondence from Jenni Morejon, Director, Department of Sustainable Development, City of Fort Lauderdale, to Barbara Blake Boy, Executive Director, Broward County Planning Council, dated October 21, 2015
- 39. City of Fort Lauderdale Resolution Number 15-207 (Affordable Housing Policy) adopted by the Fort Lauderdale City Commission on October 6, 2015 (received October 21, 2015)



# ATTACHMENT 1

## BROWARD COUNTY LAND USE PLAN TEXT AMENDMENT PCT 15-1

### BROWARD COUNTY LAND USE PLAN

Downtown Fort Lauderdale Regional Activity Center

Acreage: Approximately 710 acres

General Location: South of Sunrise Boulevard, north of Davie Boulevard, between U.S. 1/Federal Highway and Northwest 7 Avenue.

Density and Intensity  
of Land Uses: Residential Land Uses 8,100 13,100 dwelling units<sup>1,2</sup>

(~~450~~ 1,200 of the ~~3,000~~ 8,000 additional dwelling units permitted by Broward County Land Use Plan (BCLUP) amendment PCT 05-3 (450 dwelling units) and PCT 15-1 (750 dwelling units) are restricted to “affordable housing” as defined by the BCLUP)

Commercial Land Uses	no specified limit
Industrial Land Uses	no specified limit
Transportation Uses	no specified limit
Recreation and Open Space	8.5 acres minimum (exclusive of easement areas and rights-of-way, Flagler Heights Park, Florence Hardy Park and Southside School sites are restricted to Recreation/Open Space use.)

<sup>1</sup> ~~450 of the 3,000 additional dwelling units permitted by Broward County Land Use Plan (BCLUP) amendment PCT 05-3 are restricted to “affordable housing” as defined by the BCLUP. The City will be granted three (3) additional, density bonus market rate units for every one (1) “very low” (up to 50% of the median income limits adjusted for family size for the households) or “low” (up to 80% of the median income limits adjusted for family size for the households) affordable dwelling unit that is constructed for a maximum of an additional 750 market rate dwelling units as defined and restricted by Article 8 of Administrative Rules Document: Broward County Land Use Plan.~~

<sup>2</sup> ~~750 of the 5,000 additional dwelling units permitted by Broward County Land Use Plan (BCLUP) amendment PCT 15-1 are restricted to “affordable housing” as defined by the BCLUP.~~

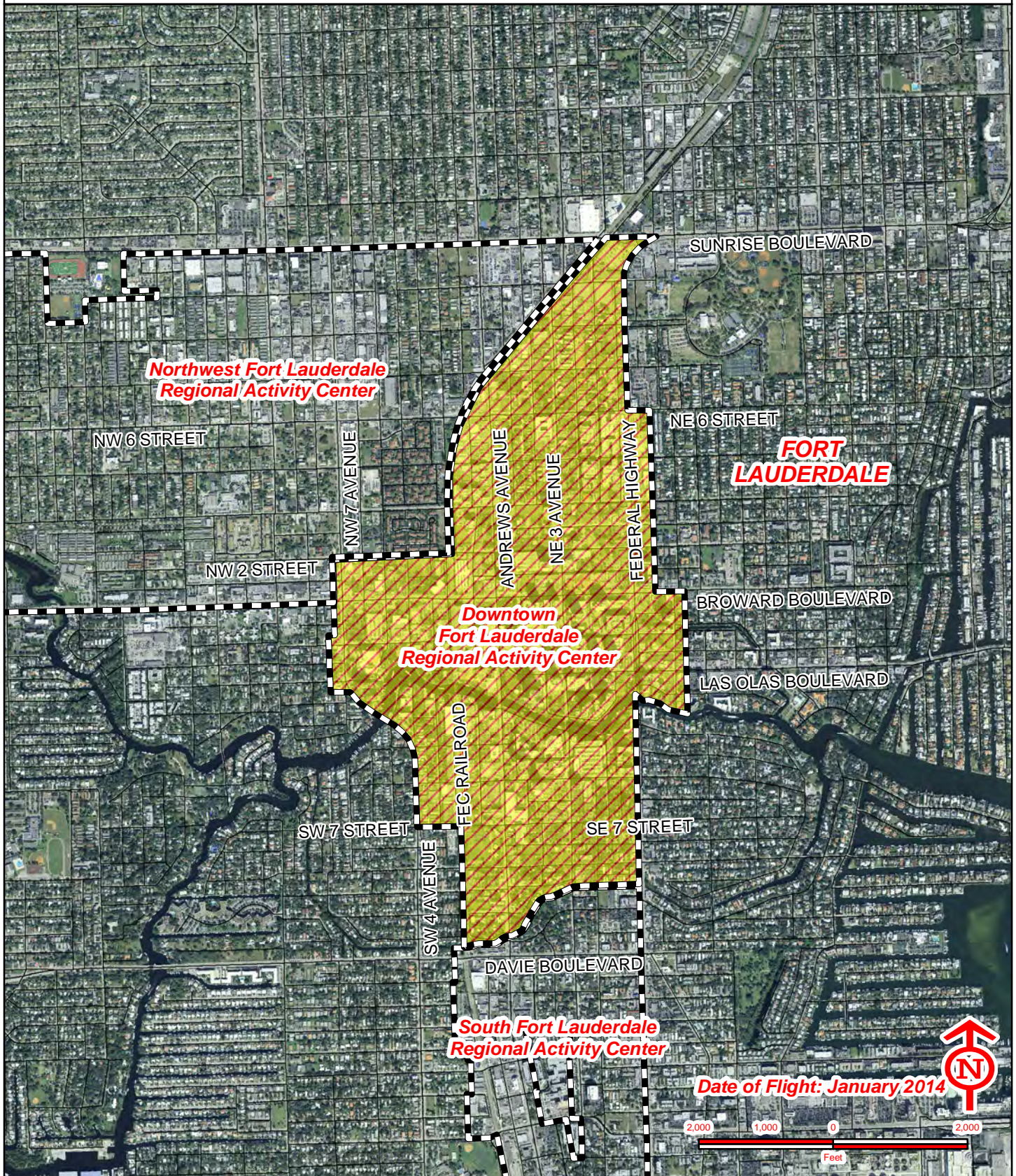
Remarks: Site has direct access to a Tri-County Commuter Rail Station and a Broward County Mass Transit Station.

NOTE: ~~Struck through~~ text are deletions. Underlined text was transmitted by the City of Fort Lauderdale. Double underlined text is recommended for approval by the Broward County Planning Council, consistent with the City’s commitments.



# ATTACHMENT 2.A.

## DOWNTOWN FORT LAUDERDALE REGIONAL ACTIVITY CENTER AERIAL PHOTOGRAPH AMENDMENT PCT 15-1



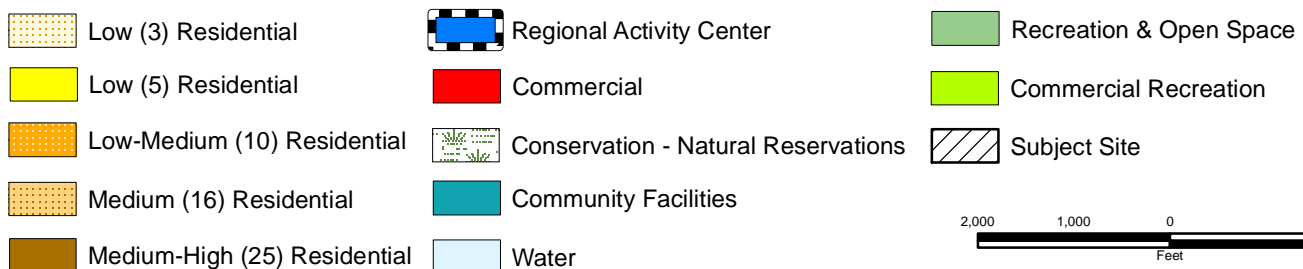
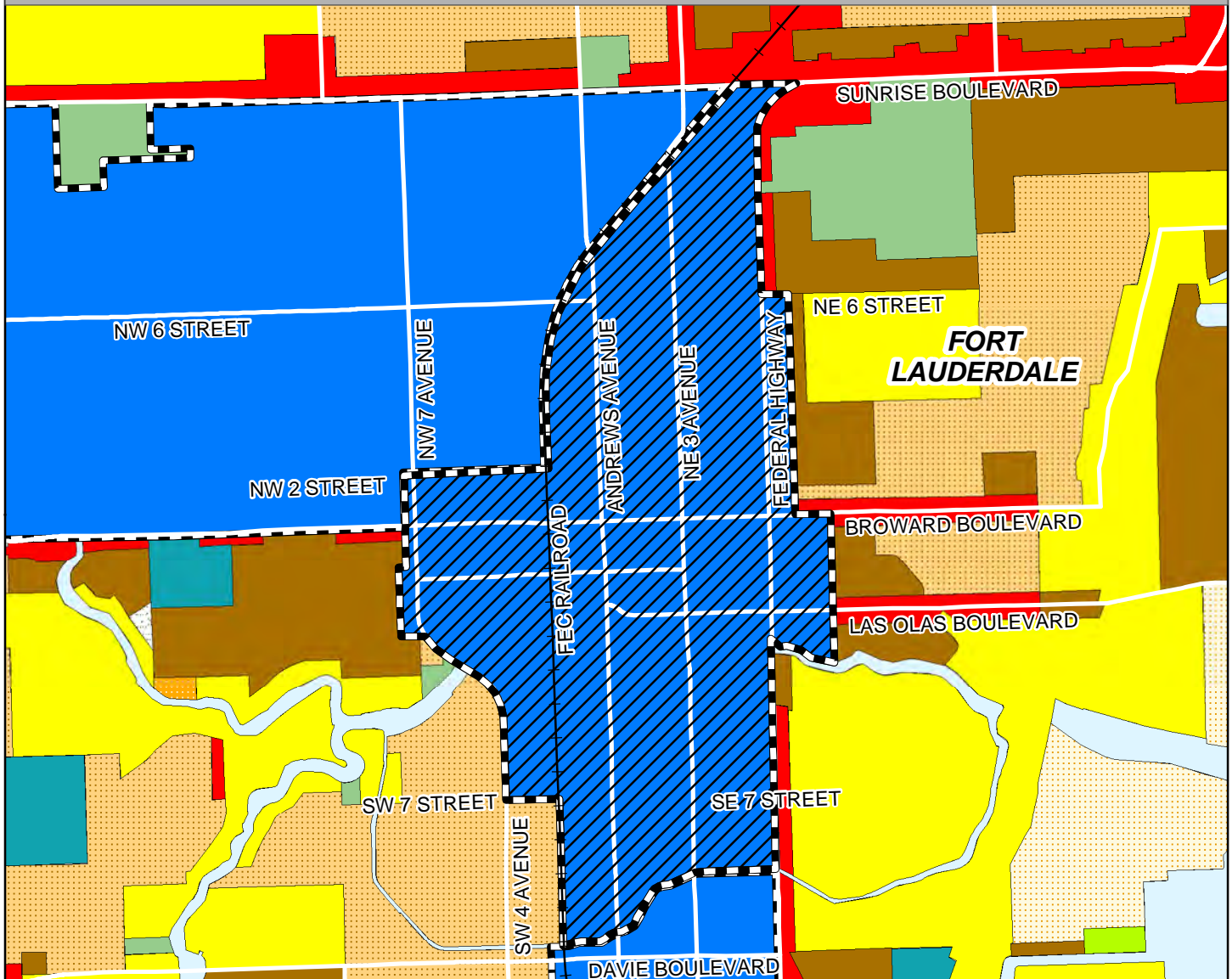


**ATTACHMENT 2.B.**  
**DOWNTOWN FORT LAUDERDALE REGIONAL ACTIVITY CENTER**  
**BROWARD COUNTY LAND USE PLAN**  
**FUTURE LAND USE DESIGNATIONS**  
**AMENDMENT PCT 15-1**

**Current Land Use:** REGIONAL ACTIVITY CENTER

**Proposed Land Use:** REGIONAL ACTIVITY CENTER: ADDITION OF 5,000 DWELLING UNITS

**Acreage:** Approximately 710.0 acres



# ATTACHMENT 3

## BROWARD COUNTY PLANNING COUNCIL SUPPLEMENTAL REPORT PUBLIC SERVICES AND FACILITIES

### BROWARD COUNTY LAND USE PLAN AMENDMENT NUMBER PCT 15-1

Prepared: December 2014  
Updated: October 2015

#### **POTABLE WATER**

The proposed amendment area will be served by the Fiveash and Peele-Dixie Water Treatment Plants, which have a combined current capacity of 82 million gallons per day (mgd). The current and committed demand on the treatment plants is ~~44.38~~ 42.7 mgd, with ~~37.62~~ 39.3 mgd available. The wellfields serving the amendment area have a permitted withdrawal of 52.55 mgd, with ~~8.17~~ 9.85 mgd available for water withdrawal, which expires on September 11, 2028. The amendment will result in a net increase in demand of 2.14 mgd. Planning Council staff utilized level of service of 197 gallons per capita (2.17 persons per household (pph)) per day for residential uses. Sufficient potable water supply and treatment capacity will be available to serve the proposed amendment area.

#### **SANITARY SEWER**

The proposed amendment area will be served by sanitary sewer facilities, with the exception of a small area near Broward Boulevard and Southwest 7 Avenue, which is served by septic tanks. This area is eligible to connect to the City's sewer system when infrastructure is expanded under the City's *Water Works 2011 Plan*. The George T. Lohmeyer Wastewater Treatment Plant has a current capacity of 56.6 mgd. The current and committed demand on the treatment plant is 43 mgd, with 13.6 mgd available. The proposed amendment will result in a net increase in demand of 1.25 mgd. Planning Council staff utilized level of service of 250 gallons per day per dwelling unit for residential uses. Sufficient sanitary sewer capacity is available to serve the proposed amendment area.

#### **SOLID WASTE**

The proposed amendment area will be served by Waste Management, Inc. for solid waste disposal service. Waste Management, Inc. collects and transports the City's solid waste to the North and South Broward County Wheelabrator Facilities for processing, which have a combined capacity of 1.6 million tons per year and a demand of 1.1 million tons per year. In addition, the Broward Interim Contingency (BIC) Landfill has a capacity of 4,500,000 cubic yards and a third resource recovery facility location is reserved at the BIC.

Note: Underlined words are proposed additions. ~~Strike-through~~ words are proposed deletions.

***SOLID WASTE (continued)***

The current demand is 80,000-100,000 tons per year at the BIC. The proposed amendment will result in a net increase in demand of 78,120 pounds per day, or 39.06 tons per day. Planning Council staff utilized level of service of 7.2 pounds per capita (2.17 pph) per day for residential uses. Sufficient solid waste capacity will be available to serve the proposed amendment area.

***DRAINAGE***

The proposed amendment area is located within the jurisdiction of the Broward County Environmental Protection and Growth Management Department (EPGMD). A surface water management license from EPGMD will be required prior to any construction.

***PARKS AND OPEN SPACE***

The City of Fort Lauderdale has 1,028.73 acres in the City's parks and open space inventory. The projected population requires approximately 620.84 acres to meet the Broward County Land Use Plan (BCLUP) community parks acreage requirement of 3 acres per one thousand persons population. The proposed amendment will result in an increase of 32.55 acres on the projected demand for local parks. The City of Fort Lauderdale continues to meet the community parks acreage requirement of the Broward County Land Use Plan of 3 acres per one thousand persons population.



## ATTACHMENT 4

**PARKS AND RECREATION DIVISION** • Administrative Offices  
950 N.W. 38<sup>th</sup> St. • Oakland Park, FL 33309-5982 • 954-357-8100 • TTY 954-537-2844 • FAX 954-357-5991

*Winner of the National Gold Medal Award for Excellence in Park and Recreation Management  
Accredited by the Commission for Accreditation of Parks and Recreation Agencies (CAPRA)*

### MEMORANDUM

**RECEIVED**

August 14, 2014

AUG 15 2014

To: Barbara Blake Boy, Executive Director  
Broward County Planning Council

**BROWARD COUNTY  
PLANNING COUNCIL**

Thru: ~~DAN~~ Dan West, Director  
Parks and Recreation Division

From: John R. Fiore, Associate Planner  
Parks and Recreation Division

Re: **Land Use Plan Text Amendment Comments  
October 23, 2014 Meeting**

The Broward County Parks and Recreation Division has reviewed the proposed text amendment to the Broward County Land Use Plan scheduled for the Planning Council's first public hearing at their October 2014 meeting. Our Comments are as follows:

**PCT 15-1** No objections. However, regional park impact fees will be required at the time of platting, replatting, or a note on the face of the plats, to reflect the regional park impact fees to be paid for the additional 5,000 residential units proposed by this text amendment.

Currently this Regional Activity Center is approved for 8,100 residential units with a minimum of 8.5 acres of recreation and open space. The text amendment increases the total number of residential units to 13,100 while still retaining only a minimum of 8.5 acres of recreation an open space. Based on the City of Fort Lauderdale's land use plan requirement of 3 acres per 1,000 people, this text amendment increases the amount of park land required to support the additional 5,000 residential units from 43.74 acres to 70.74 acres. This calculation is based on the formula that Broward County uses, which is 1.8 persons per unit based on the density of 18.45 units per acre which is proposed by this text amendment. The City is using only 1.5 persons per unit, which lowers the number of recreation and open space acres required.

While the City has enough park land to meet its land use plan requirements, we would recommend an increase in the specific amount of park and open space acreage required for this Regional Activity Center. The increase acreage amount should be included in the proposed text use amendment before it is approved.

If you or your staff has any question about our comments, please call me at 954-357-8133.



**ATTACHMENT 5**  
CITY OF  
**FORT LAUDERDALE**  
FLORIDA

October 10, 2014

**RECEIVED**

OCT 10 2014

Barbara Blake Boy, Executive Director  
Broward County Planning Council  
115 South Andrews Avenue, Room 307  
Fort Lauderdale, FL 33301

BROWARD COUNTY  
PLANNING COUNCIL

**RE: Comprehensive Plan Amendment Application Completeness – City of Fort Lauderdale Land Use Plan Text Amendment for Downtown Regional Activity Center (BCLUP #PCT 15-1)**

Dear Ms. Boy:

This letter responds to comments from Broward County Planning Council staff's letter, dated August 12, 2014, regarding the additional information needed for a complete application for the City's proposed land use plan amendment for the Downtown Regional Activity Center (RAC) (Broward County Land Use Plan #PCT 15-1). PCT 15-1 is related to the proposed text amendments to the City of Fort Lauderdale and Broward County Comprehensive Plans to increase the number of allowable residential dwelling units by 5,000 units in the Downtown RAC. Broward County Planning Council comments regarding the transportation analysis section of the amendment report will be addressed in a separate response.

**Item #1. 6. (Public Facilities and Services Analysis) Correspondence from applicable providers verifying the sanitary sewer, potable water, drainage and solid waste information.**

Please see attached for letters confirming the sanitary sewer, potable water, drainage and solid waste information.

**Item #2. 6.E.5. (Recreation and Open Space Analysis) For amendments which will result in an increased demand for "community parks" acreage, as required by the Broward County Land Use Plan, an up-to-date inventory of municipal community parks inventory must be submitted.**

Please see attached inventory, which was recently submitted to Broward County staff for the City's recertifications of Riverbend Marketplace, Coral Ridge Golf Course (3850 Federal) and Fort Lauderdale Executive Airport.

**Item #3. 7.E. (Analysis of Natural and Historic Resources) Priority Planning Area map Broward County Land Use Plan Policy A.03.05 regarding sea level rise.**

Broward County Land Use Plan POLICY A.03.05 states that "Broward County shall evaluate plan amendments within Priority Planning Areas for Sea Level Rise and strongly discourage those amendments which would place additional residential and non-residential development at risk of flooding from sea level rise. In review of such amendments, the County shall consider:

- a. Sea level rise/flood protection mitigation strategies and requirements included within local comprehensive plans and/or development regulations; or

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- b. Flood protection improvements committed to by amendment applicants, which would mitigate or enhance flood protection and adaptation from rising sea levels.”

There are a number of individual properties identified as Priority Planning Areas that lie within the Downtown RAC. The City of Fort Lauderdale has recently enacted several measures to address sea level rise and flood protection, including an updated flood plain management ordinance into the City's United Land Development Regulations (ULDR), an amendment to the Coastal Management Element of the City's Comprehensive Plan to include a goal, objective and policies regarding Adaptation Actions Areas, and an update to the City's Downtown Master Plan that encourages green buildings, green site design and green infrastructure. These initiatives are summarized below:

**Flood Plain Management Ordinance.** In June 2014, the City adopted revised floodplain management regulations that are coordinated with the National Flood Insurance Program and the Florida Building Code. Previously, the lowest floor could be located no lower than the base flood elevation. The proposed ordinance increases the elevation requirement, limits the use of fill in flood hazard areas, and updates specific methods of construction for new development and substantial improvements. Specific requirement of the ordinance include:

- All new buildings and substantial improvements of buildings shall have the lowest floor, including basement, elevated to or above the elevation required in the Florida Building Code, or the base flood elevation plus one (1) foot, whichever is higher.
- Limitations on enclosed areas below elevated buildings and requiring a non-conversion agreement for enclosures greater than four feet in height.
- No fill can be used to support buildings and structures. (Fill may be used for landscaping, drainage, and support for parking, patios, and walkways.)

This higher standard adds height above the base flood elevation to provide an extra margin of protection to account for waves, debris, miscalculations, or lack of data. A freeboard requirement of one foot means that mechanical, plumbing, and electrical systems must also be above the design flood elevation except minimum electric service for life safety and electric code requirements. The ordinance will also discourage property owners from finishing the area below the base flood elevation and storing valuable or hazardous items in that area that may cause contamination to environmental sources. Also, fill reduces floodplain storage capacity (the ability to maintain storm water on-site) and it has an adverse impact on native vegetation, wetlands, drainage, and water quality.

**Adaptation Action Areas.** The City of Fort Lauderdale executed an Interlocal Agreement (ILA) with the South Florida Regional Planning Council (SFRPC) in 2013 commencing a pilot project of special merit to explore the options available to local governments that wish to incorporate Adaptation Action Areas (AAAs) into their local comprehensive plans. According to the Florida Department of Economic Opportunity, an adaptation action area is “an optional comprehensive plan designation for areas that experience coastal flooding and are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning. Local governments that adopt an adaptation action area may consider policies within the coastal management element to improve resilience to coastal flooding.”

The City of Fort Lauderdale, in collaboration with the SFRPC and Broward County, is serving as the pilot community to test the development and advancement of adaptation policy options, including its integration into the City's Comprehensive Plan as a text amendment. On June 17, 2014, the City



Commission passed the proposed amendment on first reading and authorized staff to transmit the amendment to the FDEO and other applicable reviewing agencies. A second reading of the amendment is anticipated in October 2014. The intent of this amendment is to increase the City's resiliency to the impacts of climate change and rising sea levels by developing and implementing adaptation strategies and measures to protect human life, natural systems and resources and adapt public infrastructure, services, and public and private property. The fourteen proposed policies address identification of vulnerable infrastructure, development of adaptation strategies and optional mechanisms for AAAs designation. Also, revisions are proposed to add five new definitions in the Administration and Implementation Element Section VII. Definitions, including the following terms: Priority Planning Areas for Sea Level Rise Map, Broward County; Protection; Accommodation; Managed Retreat; and Avoidance.

Downtown Master Plan Update to Include TOD Guidelines and Green Infrastructure Policy. The City of Fort Lauderdale adopted an update to the City's Downtown Master Plan on February 4, 2014 to include transit oriented development (TOD) guidelines. The adopted TOD guidelines aim to create pedestrian-friendly, vibrant station areas to support the continued growth of the Downtown as a live, work, and play environment. They also included green building, green site design and green infrastructure guidelines that would apply to new residential development in the Downtown Regional Activity Center (RAC). The TOD guidelines recommend that new residential projects should comply with the County's Comprehensive Plan – Climate Change Element, and recommend that projects incorporate green infrastructure and green landscaping into site design, such as the use of porous pavement, bioswales, raingardens, green roofs, drip irrigation and drought tolerant and native and Florida-Friendly Landscaping™.

**Item #4. 10. (Hurricane Evacuation Analysis).** Provide a hurricane evacuation analysis based on the proposed amendment, considering the number of permanent and seasonal residential dwelling units (including special residential facilities) requiring evacuation, availability of hurricane shelter spaces, and evacuation routes and clearance times. The hurricane evacuation analysis shall be based on the best data/modeling techniques as identified by the Broward County Emergency Management Division.

As noted in the attached letter from the Broward County Emergency Management Division, the northeast and southeast quadrants within the Downtown RAC contain parcels of property east of US 1. A portion of those two quadrants east of US 1 are located in a Broward County mandatory hurricane evacuation zone for a Category 3 or higher storm. A significant amount so those two quadrants are not part of the County's mandatory hurricane evacuation zone.

Broward County Emergency Management Division's letter also addresses evacuation and shelters for those parcels in the Downtown RAC that are located east of US 1 in the Broward County mandatory hurricane evacuation zone, and concludes that the proposed land use plan amendment will not have a negative impact on the capacity of Broward County's shelters nor on the level of service for the hurricane evacuation zone routes for a hurricane evacuation.

In addition, the correspondence from Broward County Emergency Management Division strongly recommends that all new residential development in the Downtown RAC develop a hurricane contingency plan. As a result of this comment, the City of Fort Lauderdale Development Review Committee (DRC), which reviews all multifamily residential development applications located in the Downtown RAC, will add a standard note in its review comments of all new residential projects in the Downtown RAC that will advise applicants to develop hurricane contingency/preparedness plans for use by prospective owners or tenants. A new DRC review comment will also added that will direct these applicants to available online resources

Barbara Blake Boy  
PCT 15-1  
Page 4 of 4

that include hurricane evacuation zone routes, emergency shelter locations and other pertinent information related to hurricane evacuation and preparedness.

It should also be noted that the City of Fort Lauderdale's adopted Continuity of Operations (COOP) Plan addresses the sustainability of the City's operations in order to address emergency management issues, including storm surge. The COOP Plan is maintained by City of Fort Lauderdale emergency managers in the Fire Rescue Department.

Thank you for the opportunity to clarify a number of questions and comments regarding the amendment to the City of Fort Lauderdale Comprehensive Plan. Please feel free to contact me at (954) 828-5256 or [tokolichany@fortlauderdale.com](mailto:tokolichany@fortlauderdale.com) if you have any questions or require additional information.

Yours truly,



Todd Okolichany, AICP, LEED Green Assoc.  
Principal Planner

**Attachments:**

Utility letters

City of Fort Lauderdale Parks and Facilities Inventory

Broward County Land Use Plan Priority Planning Areas for Sea Level Rise Map

Letter from Broward County Emergency Management

cc: Jenni Morejon, Director Designee, City of Fort Lauderdale Department of Sustainable Development  
Ella Parker, AICP, Urban Design & Planning Manager, City of Fort Lauderdale Department of Sustainable Development  
Deanne Von Stetina, AICP, Director of Planning, Broward County Planning Council



CITY OF

FORT LAUDERDALE

FLORIDA

October 9, 2014

Todd Okolichany, AICP, LEED Green Assoc., Principal Planner  
Department of Sustainable Development  
City of Fort Lauderdale  
700 NW 19th Avenue  
Fort Lauderdale FL 33311

RE: Drainage Analysis for City of Fort Lauderdale Land Use Plan Amendment – Downtown Fort Lauderdale Housing (Broward County Amendment #PCT 15-1; Fort Lauderdale Case #2T13)

Dear Todd:

Thank you for sharing the above referenced land use plan amendment application, which would increase the number of available dwelling units in the Downtown Regional Activity Center (RAC) by 5,000 units. Please accept this letter as verification of the following information submitted as part of the application.

The adopted level of service standard in the City of Fort Lauderdale Comprehensive Plan for drainage is provided below:

**Road Protection:**

Residential streets with rights-of-way less than fifty feet wide to have crown elevations no lower than the elevation for the respective area depicted on the ten year "Flood Criteria Map."

Streets in rights-of-way greater than fifty feet wide to have an ultimate edge of pavement no lower than the elevation for the respective area depicted on the ten year "Flood Criteria Map."

**Buildings:**

To have the lowest floor elevation no lower than the elevation for the respective area depicted on the 100 Year Flood Elevation or FEMA Map. Retain the first inch of storm water runoff on-site.

**Off Site Discharge:**

Residential projects less than 1 acre: After retaining the first inch of runoff not to exceed the inflow limit of SFWMD primary receiving canal or the local conveyance system, whichever is less.

Residential projects greater than 1 acre and nonresidential projects: Retain the greater of one inch over the site area or 2.5 inches over the percentage of impervious area.

**Storm Sewers:**

Design frequency minimum to be three-year rainfall intensity if the State Department of Transportation Zone 10 rainfall curves.

**DEPARTMENT OF SUSTAINABLE DEVELOPMENT**

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EQUAL OPPORTUNITY EMPLOYER

CAM # 16-0016

Exhibit 1

Page 47 of 259

**Flood Plain:**

Calculated flood elevations based on the ten year and one hundred year return frequency rainfall of three day duration shall not exceed the corresponding elevations of the ten year Flood Criteria and the 100 Year Flood Elevation Map.

**On Site Storage:**

Per South Florida Water Management District Permit Review Manual, Volume 4.

**Best Management Practices:**

Prior to discharge to surface or ground water, Best Management Practices will be used to reduce pollutant discharge.

Regulations for roads and parking lots shall be consistent with the criteria established by the South Florida Water Management District for such uses.

**Source:** City Comprehensive Plan Policy 4.1.3.

In addition to the level of service standard prescribed by the Comprehensive Plan, the City of Fort Lauderdale adopted an update to its Flood Plain Ordinance in June 2014, with revised floodplain management regulations that are coordinated with the National Flood Insurance Program and the Florida Building Code. The adopted ordinance increased the elevation requirement so that buildings shall have the lowest floor elevated a minimum of one foot above the base flood elevation required in the Florida Building Code, or eighteen inches (18") above the nearest crown of road, whichever is higher. In addition, the ordinance contains limitations on enclosed areas below elevated buildings, requiring a non-conversion agreement for enclosures greater than four feet in height, as well as a "no fill" requirement to support buildings and structures to limit the reduction in floodplain storage capacity, as well as the potential adverse impact on native vegetation, wetlands, drainage, and water quality.

The City of Fort Lauderdale is not located in a drainage or flood control district. The Downtown RAC is served primarily by the New River, which flows through the center of the Downtown RAC. There are also positive gravity flow storm drain systems that collect storm water at a number of locations and feed through outfalls into water bodies.

All improvements required to meet the adopted level of service will be installed by individual development applicants in conjunction with new development. In addition, Water Works 2011, the City's water and wastewater master plan included drainage improvements.

In February 2014, the City also adopted an update to the City's Downtown Master Plan, which incorporated transit oriented development (TOD) guidelines for the Downtown RAC. The purpose of the TOD guidelines is to guide and encourage future development and redevelopment within proximity to premium transit stations in Downtown Fort Lauderdale. As part of this effort, sustainable stormwater design practices are encouraged for all new developments in the Downtown RAC, including the use of green infrastructure and green landscaping into site design, such as the use of porous pavement, bioswales, raingardens, green roofs, drip irrigation and drought tolerant and Florida-friendly/native landscaping.

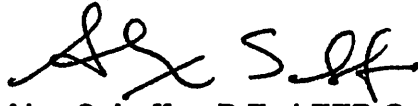
New development within the Downtown RAC will be required to meet the adopted drainage level of service standards of the City, Broward County Department of Planning and Environmental Protection, and the South Florida Water Management District.

**DEPARTMENT OF SUSTAINABLE DEVELOPMENT**  
700 N.W. 19TH AVENUE, FORT LAUDERDALE, FLORIDA 33311 | (954) 828-6520  
[www.fortlauderdale.gov](http://www.fortlauderdale.gov)

In order to meet and exceed the current level of service standards, strategic upgrades to stormwater infrastructure is required. To achieve this, the City has embarked on a City-wide comprehensive multi-year Stormwater Plan, which would increase the stormwater level of service for the downtown area. City staff presented this comprehensive multi-year Stormwater Plan to the City Commission on January 22, 2014. The Plan consists of three (3) phases. Phase I (1-3 year Plan) includes improvements to various locations with known storm or tidal flooding, and repetitive losses. Phase II (3-5 year Plan) focuses on neighborhoods with insufficient infrastructure. Phase III (10 year Plan) covers long-term solutions to sea level rise and will provide infrastructure upgrades to accommodate a higher level of service for the City, including the downtown area.

Please feel free to contact me if there are additional questions regarding drainage for proposed development in the Downtown RAC and meeting level of service standards.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alex Scheffer', written in a cursive style.

**Alex Scheffer, P.E., LEED Green Associate**  
Urban Design Engineer



Luigi Pace  
GOVERNMENT AFFAIRS  
WASTE MANAGEMENT  
2700 WILES ROAD  
POMPANO BEACH, FL 33073  
954.984.2080  
954.984.2071 FAX

September 24, 2014

Todd Okolichany, AICP, LEED Green Assoc., Principal Planner  
Department of Sustainable Development  
City of Fort Lauderdale  
700 NW 19th Avenue  
Fort Lauderdale FL 33311

RE: Solid Waste Analysis for City of Fort Lauderdale Land Use Plan Amendment – Downtown  
Fort Lauderdale Housing (Broward County Amendment #PCT 15-1; Fort Lauderdale  
Case #2T13)

Dear Todd:

Thank you for sharing the above referenced land use plan amendment application, which would increase the number of available dwelling units in the Downtown Regional Activity Center (RAC) by 5,000 units. Please accept this letter as verification of the following information submitted as part of the application.

The adopted level of service standard in the City of Fort Lauderdale Comprehensive Plan for solid waste is 7.2 pounds per capita per day. The City collects solid waste from single family and small multi-family housing units within the City. Larger multi-family units and commercial and industrial land uses are required to contract with private hauling firms to collect solid waste.

The City of Fort Lauderdale has entered into an agreement with Wheelabrator Technologies, Inc. (a Waste Management Company) for solid waste disposal service. The current capacity at the resource recovery facilities is 1.6 million tons per year. In addition, the Broward Interim Contingency (BIC) Landfill has a capacity of 4,500,000 cubic yards. Each resource recovery facility is expandable by 33%. A third resource recovery facility location is reserved at the BIC Landfill. The current demand is 1.095 million tons per year at the resource recovery facilities and 80,000 – 100,000 tons per year at BIC. There are no current plans for expansion. There are no plans through the year 2020 for expansion of existing facilities.

<b>Landfill/plant capacity:</b> <ul style="list-style-type: none"> <li>• 1.6 million tons/year (2 waste to energy facilities @ 2,250 tons/day/facility)</li> <li>• 4,500,000 cubic yards at BIC Landfill</li> <li>• CDSL back up capacity, as needed</li> </ul>
<b>Current Demand:</b> <ul style="list-style-type: none"> <li>• 1.095 million tons / year at Wheelabrator facilities</li> <li>• 80,000-100,000 tons / year at BIC Landfill</li> </ul>
<b>Committed Capacity:</b> <ul style="list-style-type: none"> <li>• 1.095 mil. tons / year at Wheelabrator; none at BIC; none at CDSL</li> </ul>
Source: Broward County Solid Waste

The net impact on solid waste demand resulting from the proposed amendment is provided in the following table.

SOLID WASTE IMPACT			
	Use	Calculation	Total
Proposed	RAC: +5,000 Multi-Family d.u.s	7,500 people <sup>(1)</sup> X 7.2 lbs per capita/day <sup>(2)</sup>	= 54,000 lbs/c/day
(1) 5,000 d.u. x 1.5 persons/d.u. = 7,500 people.  (2) Source: City Comp. Plan Infrast. Element Policy 5.2.1.			<b>change</b>  <b>+ 54,000 lbs/c/day</b>

Please let me know if additional information is needed regarding the capacity of solid waste facilities or the ability to provide additional solid waste services for residential development in the Downtown Regional Activity Center.

Sincerely,



Luigi Pace  
Government Affairs Mgr.

## City of Fort Lauderdale Parks and Facilities Inventory

### Urban Open Space Parks (0.1 Acre Minimum)

Park	Acres	Location
Bayview Drive Canal Ends	0.53	Bayview Drive at NE 15,16,17 &18 Street
Earl Lifshey Park (Ocean Access)	0.40	3054 North Ocean Boulevard
Hector Park	1.96	100 Ponce de Leon Boulevard
Himmarshee Canals	0.75	SE 2 Street/SE 8 Avenue & SE 10 Terrace
Idlewyld Park	0.70	East Las Olas Boulevard & Idlewyld Drive
Imperial Point Entranceway	1.00	5900 North Federal Highway
Jack Kaye Park (Little George)	1.50	1200 Bayview Drive
Landings Entranceway	1.00	5400 North Federal Highway
Lauderdale Villas Entranceway	0.40	1400 NW 9 Avenue
Lauderdale Manors Park (Old FS 46)	0.83	1121 NW 9 Avenue
North Fork Riverwalk Park	1.97	200 NW 18 Avenue
Purple Pickle Park	0.25	638 Middle River Drive
Sweeting Park	0.30	480 NW 23 Avenue
Tarpon Cove Park	0.25	1100 SW 8 Terrace
Tarpon River Park	1.50	50 SW 11 Court
Townsend Park	1.80	200 SW 14 Avenue
Twin Lakes North park	0.20	4600 Twin Lakes Boulevard
Welcome Park	1.77	2402 South Federal Highway
Westwood Heights Triangle Park	1.00	800 SW 28 Avenue
Willingham Park (N. Beach Triangle)	1.00	2100 North Atlantic Boulevard
<b>Total Acreage</b>	<b>19.11</b>	

### Neighborhood Parks (1 - 10 Acres)

Park	Acres	Location
Ann Herman Park	0.95	1750 SW 29 Avenue
Annie Beck Park	1.60	100 NE Victoria Park Road
Bayview Park	7.01	4400 Bayview Drive
Benenson Park	1.15	1400 SW 33 Terrace
Bill Keith Preserve	3.40	1720 SW 17 Street
Bryant Peney Park (Lauderdale Park)	1.00	2200 SW 4 Avenue
Civic Peoples Park	3.50	3781 SW Riverland Road
Cliff Lake Park	3.54	1400 SE 12 Way
Colee Hammock Park	4.38	1500 Brickell Drive
Coontie Hatchee Park	2.60	1116 SW 15 Avenue
Coral Ridge Bayview Park	0.29	2401 NE 27 Terrace
DC Alexander Park (5 Street Park)	1.80	500 Seabreeze Boulevard
Dolphin Isles park	0.22	2125 NE 33 Avenue
Estere Davis Wright Park	1.00	1624 SW 23 Street
Flamingo Park	2.39	1600 SW 21 Way
Francis L. Abreau Place (Rio Vista)	1.40	901 North Rio Vista Boulevard
Gore Park	1.82	1611 SW 9 Ave.
Greenfield Park (8 Street Park)	1.80	2400 NE 8 Street
Guthrie Blake Park	1.00	204 SW 28 Way
Harbordale Park	1.00	1817 Miami Road



Hortt Park	5.91	1700 SW 14 Court
Imperial Point Park	1.00	6400 NE 22 Avenue
Lewis Landing Park	1.33	630 SW 9 Avenue
Lincoln Park	2.61	600 NW 19 Street
Maj.WM. Lauderdale Park	1.80	400 SW 11 Avenue
Melrose Park	9.00	3400 Davie Boulevard
Merle Fogg Park	3.00	East Las Olas & Idlewyld Drive
Middle River Terrace Park	3.27	1330 NE 5 Terrace
Palm Aire Park	1.00	3350 NW 63 Street
Palm Aire Village Park	5.00	6401 NW 21 Avenue
Peter Feldman Park	1.00	310 NE 6 Street
Poinciana Park	2.00	400 SE 21 Street
Provident Park	2.00	1400 NW 6 Street
Riverland Woods Park	4.92	3950 Riverland Road
Riverside Park	2.10	500 SW 11 Avenue
Sailboat Bend Park	1.27	1401 SW 2 Court
Sistrunk Park	2.00	200 NW 6 Street
South Middle River	0.78	1718 NW 6 Ave.
Stranahan Park	2.81	100 East Broward Boulevard
Victoria Park	3.51	2 North Victoria Park Road
Virginia Young Park (10 Street)	2.00	1000 SE 9 Street
Vista Park	2.00	2800 North Atlantic Boulevard
Warfield Park	3.70	1000 North Andrews Avenue
<b>Total Acreage</b>	<b>105.86</b>	

### Community Parks (10 - 50 Acres)

Park	Acres	Location
Bass Park	8.50	2750 NW 19 Street
Beach Community Center	0.75	3351 NE 33 Avenue
Croissant/Davis Park (Elementary School)	13.90	245 West Park Drive
Cypress Creek Sand Pine Preserve	8.27	6200 NW 21 Avenue
Florence Hardy Park	4.07	25 SW 9 Street
Southside Cultural Center	3.60	25 SW 9 Street
Floyd Hull Stadium	9.70	2800 SW 8 Avenue
George English Park	19.70	1101 Bayview Drive
J.C. Carter Park (Sunland)	19.00	1450 West Sunrise Boulevard
Mizell Center	1.30	1409 NW 6 Street
Osswald Park	30.87	2220 NW 21 Avenue
Riverland Park	9.80	950 SW 27 Avenue
Warbler Environmentally Sensitive Land	6.10	2100 NW 49 Street
<b>Total Acreage</b>	<b>135.56</b>	

### School-Park Sites

Park	Acres	Location
Bennett (Elementary School)	6.20	1755 NE 14 Street
Dillard High School	20.40	2501 NW 11 Street
Floranada Park (Elementary School)	9.20	5251 NE 14 Way
Fort Lauderdale High School (Pool Only)	1.00	1600 NE 4 Avenue
Harbordale (Elementary School)	4.00	900 SE 15 Street

Lauderdale Manors (Elementary School)	8.60	1340 Chateau Park Drive
New River Middle School	17.21	3400 Riverland Road
North Fork Park (Elementary School)	1.59	101 SW 15 Avenue
Riverland School (Elementary School)	2.00	2601 SW 11 Court
Riverland Middle School	0.50	2600 Middle River Drive
Rogers Middle School	13.60	700 SW 26 Street
Stranahan High School	32.70	1800 SW 4 Avenue
Sunrise Middle School (Pool Only)	1.00	1750 NE 14 Street
Sunset School	5.50	3775 SW 16 Street
Virginia S. Young (Elementary School)	5.00	101 NE 11 Avenue
Walker Park (Elementary School)	1.00	1001 NW 4 Street
Westwood Heights Park (Elementary School)	0.80	700 SW 28 Avenue
<b>Total Acreage</b>	<b>130.30</b>	

### Large Urban Parks (50+ Acres)

Park	Acres	Location
Holiday Park	92.00	1300 East Sunrise Blvd
Mills Pond Park	154.42	2201 NW 9 Avenue
Snyder Park	92.30	3299 SW 4 Avenue
<b>Total Acreage</b>	<b>338.72</b>	

### Special Use Parks/Facilities

Special Use Facility	Acres	Location
Beach, Public	166.50	South Beach Park to Oakland Park Boulevard
Birch Las Olas Anchorage	5.40	East Las Olas Boulevard & South Birch Road
Boat Basin (15 Street)	0.25	1784 SE 15 Street
Boat Ramps (George English Park)	1.50	1101 Bayview Drive
Bubier Park	0.50	32 East Las Olas Boulevard
Cooley's Landing (7 Avenue Boat Basin)	3.00	420 SW 7 Avenue
Dockage- Birch Las Olas	2.00	Las Olas Circle and Birch Road
Dockage - New River	0.50	14 South New River Drive East
Esplanade Park	1.60	400 SW 2 Street
Fort Lauderdale Stadium	25.50	1301 NW 55 Street
Fort Lauderdale Aquatic Complex	5.00	500 Seabreeze Boulevard
Lockhart Stadium	45.60	5301 NW 12 Avenue
Riverwalk Linear Park	14.33	20 North New River Drive
South Beach Park	27.50	600 South A1A
<b>Total Acreage</b>	<b>299.18</b>	

### Total Parks and Facilities Space by Classification

Park Classification	Acreage	Number of Parks/Facilities
Urban Open Space	19.11	20
Neighborhood Parks	105.86	43
Community Parks	135.56	13
School-Park Sites	130.30	18
Large Urban Parks	338.72	3

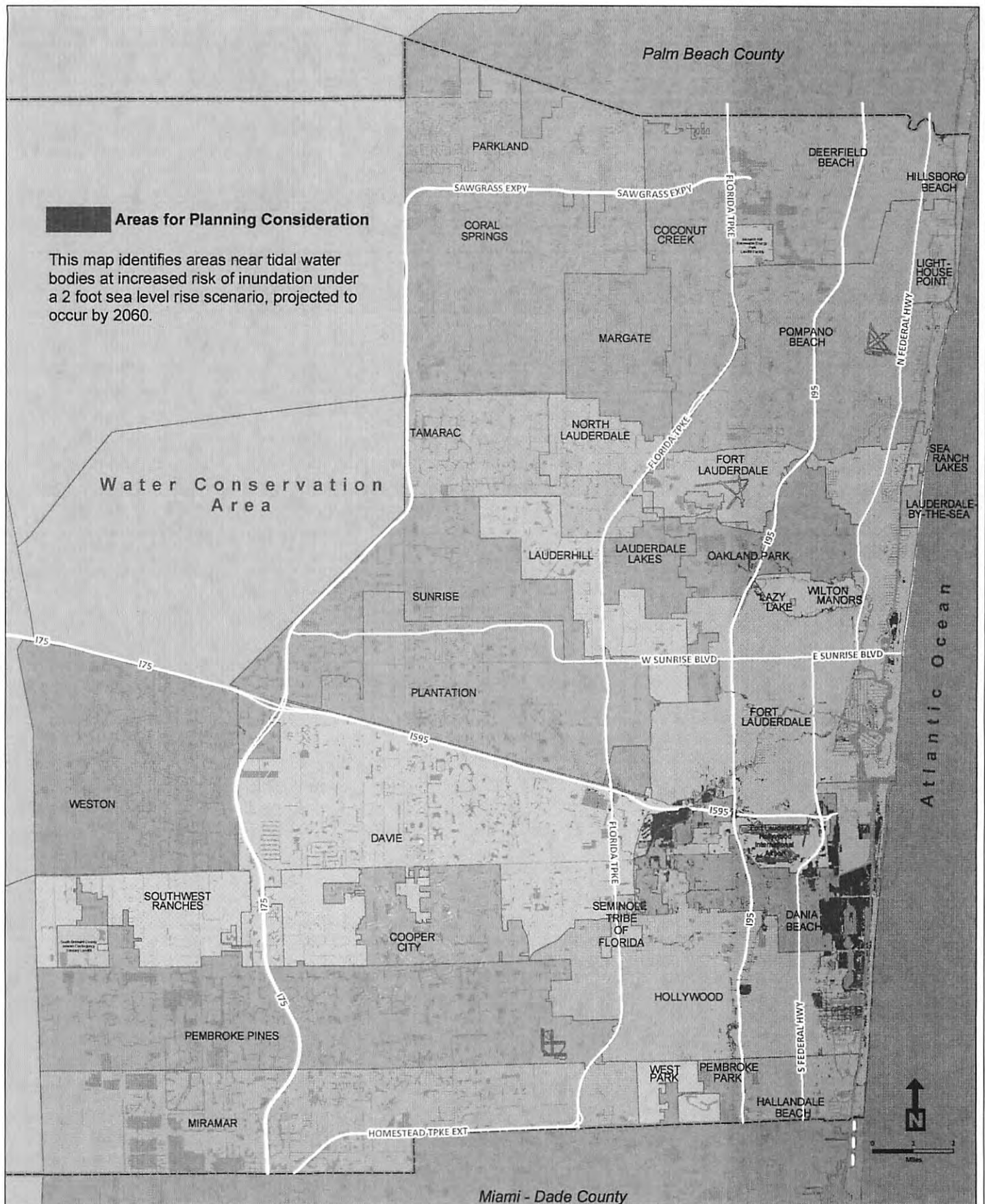
Special Use Parsk/Facilities	299.18	14
<b>Total Acreage</b>	<b>1,028.73</b>	<b>111</b>

<b>Level of Service (LOS) Requirements</b>	<b>2015</b>	<b>2025</b>
Population <sup>1</sup>	172,046	191,642
LOS Requirements (3 acres/per 1,000 persons)	516.14	574.93
City Park Totals (acres)	1,028.73	1,028.73
<b>Difference/Surplus<sup>2</sup></b>	<b>512.59</b>	<b>453.80</b>

**Notes:**

1. Population is based on the 2012 Broward County population forecasts based on University of Florida Bureau of Economic & Business Research (BEBR) 2012 county forecasts, provided by the Broward County Planning and Environmental Regulation Division.
2. The City of Fort Lauderdale meets both current and future park needs.

# PRIORITY PLANNING AREAS FOR SEA LEVEL RISE





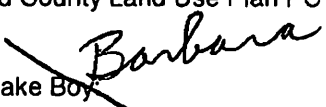
Environmental Protection and Growth Management Department  
**EMERGENCY MANAGEMENT DIVISION**  
201 N.W. 84<sup>th</sup> Avenue • Plantation, Florida 33324-1895 • 954-831-3900 • FAX 954-382-5805

September 10, 2014

14.105

Ms. Barbara Blake Boy  
Executive Director  
Broward County Planning Council  
115 South Andres Avenue, Room 307  
Fort Lauderdale, FL 33301

RE: Broward County Land Use Plan PCT 15-1

Dear Ms. Blake Boy 

Broward County Emergency Management Division has reviewed the proposed Land Use Amendment PCT 15 -1 located in the City of Fort Lauderdale. The proposed site is currently designated as a Regional Activity Center (RAC) consisting of 8,100 dwelling units as designated in the Broward County Land Use Plan. The proposal is to increase the dwelling units to 13,100 within the Regional Activity Center. The net increase would then be an additional 5,000 dwelling units for the Regional Activity Center.

The City of Fort Lauderdale has provided information regarding the build out analysis performed that splits the Regional Activity Center into four quadrants. The NE and SE quadrants contain parcels of property east of US 1. A portion of those two quadrants east of US 1 are located in a Broward County mandatory hurricane evacuation zone for a Category 3 or higher storm. A significant amount of those two quadrants are not part of Broward County's mandatory hurricane evacuation zone. The provided traffic calculations show that of the new proposed 5,000 dwelling units as part of this amendment, approximately 1,214 dwelling units are anticipated in to be built in the NE quadrant and 1,345 dwelling units are anticipated in the SE quadrant. The total area for the quadrants represents a larger geographic area beyond the designated mandatory hurricane evacuation zone.

An original analysis was provided for Land Use Plan Amendment PCT-05-3 for an increase to 13,000 dwelling units for the RAC back in 2005. Additionally, a review for this Land Use Plan Amendment PCT 15-1 was conducted to achieve up to near the same request with increase to 13,100 dwelling units. A small component of the overall Regional Activity Center is located east of US 1 in a mandatory hurricane evacuation zone for a Category 3 of higher storm. At this current time, this proposed revision is not anticipated to have a negative impact on the capacity of Broward County's shelters nor on the level of service for the hurricane evacuation zone routes for a hurricane evacuation. However, we strongly recommend that all new residential development in the RAC (due to the influx of 5,000 more dwelling units) develop hurricane contingency plans.

Sincerely,



Miguel Ascarrunz, FPEM  
Director





**ATTACHMENT 6**  
CITY OF  
**FORT LAUDERDALE**  
FLORIDA

November 3, 2014

**RECEIVED**

NOV - 4 2014

Barbara Blake Boy, Executive Director  
Broward County Planning Council  
115 South Andrews Avenue, Room 307  
Fort Lauderdale, Florida 33301

**BROWARD COUNTY  
PLANNING COUNCIL**

**RE: Comprehensive Plan Amendment Application – City of Fort Lauderdale Land Use Plan Text Amendment for Downtown Regional Activity Center (BCLUP #PCT 15-1)**

Dear Ms. Boy:

This letter responds to the remaining comments from various Broward County departments that reviewed the City's proposed land use plan amendment (PCT 15-1) to increase the number of allowable dwelling units in the Downtown Regional Activity Center (RAC) by 5,000 units. City staff responses organized by each respective County department, including Broward County Planning Council staff, are as follows:

**Broward County Planning Council**

Please see attached for a letter from Hardeep Anand, P.E., Director, City of Fort Lauderdale Public Works Department (dated October 17, 2014) confirming the sanitary sewer and potable water information of the land use plan amendment application (Item #1.6., Public Facilities and Services Analysis).

**Broward County School Board**

Per the Broward County School Board, the Downtown RAC is anticipated to have sufficient excess capacity to support the students generated by the residential units proposed. The City agrees that the approval of LUPA PCT-15-1 can be conditioned upon amendment of the Educational Mitigation Agreement.

**Broward County Emergency Management**

Please see City response in letter to Barbara Blake Boy, dated October 10, 2014.

**Broward County Environmental Protection and Growth Management Department**

City staff acknowledges comments and recommendations provided by this department. Please see City responses to County staff comments pertaining to Priority Planning Areas for Sea Level Rise in letter to Barbara Blake Boy, dated October 10, 2014.

**Broward County Historical Commission**

The letter dated August 29, 2014 from the Broward County Historical Commission Review reviews the comprehensive plan text amendment application related to the Downtown RAC. The Historical Commission's review of the land use plan amendment lists historic resources located within and adjacent to the Downtown RAC. The letter defines adjacent as 500 feet or less. It should be noted that there are no references to a distance requirement when considering adjacency for historic resources in the Broward County Comprehensive Plan or the Fort Lauderdale Comprehensive Plan.

**DEPARTMENT OF SUSTAINABLE DEVELOPMENT**  
700 NW 19TH AVENUE, FORT LAUDERDALE, FLORIDA 33311 | (954) 828-6520  
[www.fortlauderdale.gov](http://www.fortlauderdale.gov)

The City of Fort Lauderdale is a Certified Local Government through the Florida Department of State Division of Historic Resources. Certified Local Governments are municipal and county governments that have made historic preservation a public policy through the passage of a historic preservation ordinance. The City of Fort Lauderdale has designated fifty-eight (58) resources. Fifteen (15) of the city-designated historic resources are located in and adjacent to the Downtown RAC. The City has also created two zoning designations that promote the protection of historic resources.

City staff has updated the inventory of historic and archaeological resources within and adjacent to the Downtown Regional Activity Center based upon City, County and national historic designations. Historic resources within or adjacent to the Downtown RAC include the following:

**Historic Resources on the National Register of Historic Places**

1. Stranahan House
2. New River Inn
3. Bryan Building
4. South Side School
5. Williams House (adjacent to Downtown RAC)

**Broward County Local Areas of Particular Concern: Historic Sites**

1. New River Inn\*
2. Stranahan House
3. Sailboat Bend Historic District (a portion of the easternmost section)
4. Progresso Plaza (adjacent to Downtown RAC)
5. Philemon Bryan House
6. King-Cromartie House
7. Tom M. Bryan House
8. Reed Bryan House
9. Retail Stores/Apartments (South of SW 2<sup>nd</sup> Avenue)
10. Tibbets
11. Colonial Hotel
12. Shepherd Hotel
13. Maxwell Arcade
14. Woman's Club
15. Old Fort Lauderdale High School Site
16. Himmarshee Court
17. Coca Cola Bottling Plant
18. Fire Station No. 2
19. South Side School

Locally Designated Resources (Designated by the City of Fort Lauderdale)

1. Bryan Homes
2. South Side School\*
3. Old Bus Station/Tibbets Building
4. Pace Furniture
5. Bivens Hotel/Colonial Hotel
6. Himmarshee Court Apartments
7. Smoker Park
8. Bryan Building\*/Sheppard Building
9. Stranahan House\*/Campsite
10. New River Inn\*
11. Progresso Plaza (adjacent to Downtown RAC)
12. Southern Bell Telephone/Exchange Building
13. Southside Fire Station
14. Coca Cola Building
15. Broward Co. Main Library
16. Sailboat Bend Historic District
17. H-1 Historic Preservation Districts

*\*Also listed on the National Register of Historic Places.*

A number of the above designated properties are also City of Fort Lauderdale-owned property. They are as follows:

City of Fort Lauderdale-Owned Historic Sites

1. South Side School
2. Philemon Bryan House
3. King-Cromartie House
4. Tom M. Bryan House
5. Reed Bryan House
6. Bryan Building/Shephard Building
7. South Side School
8. Smoker Park

***Historic Districts***

In addition, the City has designated the Sailboat Bend neighborhood as a historic district in the United Land Development Regulations. A small portion of the Sailboat Bend Historic District (SBHD) lies within the Downtown Regional Activity Center. All new construction, building alternations and demolitions are required to have a Certificate of Appropriateness. The Certificate of Appropriateness for any application in the SBHD will be reviewed according to SBHD guidelines. The purpose of the guidelines is to identify a range of material and design options which will encourage development compatible with the historic character of the SBHD and discourage introduction of incompatible features.



The City's two H-1 Historic Preservation Districts lie completely within the Downtown RAC. Per Section 47-16 of the City of Fort Lauderdale United Land Development Regulations, the H-1 Historic Preservation Districts are intended to promote the cultural, economic, educational and general welfare of the people of the city and of the public generally, through the preservation and protection of historically worthy structures. These regulations are intended to insure a harmonious outward appearance of structures and premises, to encourage uses which will lead to their continuance, conservation and improvement in a manner appropriate to the preservation of the cultural and historic heritage of the city, and to protect against destruction of or encroachment upon such area, structure or premise. As required by Section 47-16 of the Fort Lauderdale United Land Development Regulations, any alteration of an archaeological site, new construction, demolition, relocation, or ordinary repairs in the two H-1 Historic Districts are required to have a Certificate of Appropriateness.

#### ***Archaeological Resources***

All properties adjacent to the New River are located in the City of Fort Lauderdale's designated Archaeological Significant Zone. Additionally, all proposed development located on properties with archaeological features or artifacts are identified in the City's Development Review process. Development applicants are notified of archaeological features and their obligation to coordinate with County according to County ordinances and Florida statutes.

The following is an updated list of archaeological resources noted in the Florida Master Site File located within or adjacent to the Downtown Regional Activity Center.

#### **Florida Master Site File Archaeological Resources**

1. Fort Lauderdale #2	BD00103
2. New River Midden	BD00196
3. Stranahan N1	BD00259
4. East Annex Site	BD02589
5. Tarpon Site	BD2909
6. Brickell Block	BD02916
7. Symphony Site	BD03943
8. Knowlton Sand Mound	BD04218
9. New River, S.W. 4 <sup>th</sup> Street	BD04406
10. Marina Lofts Site	BD04878
11. Block 10 NW 4 <sup>th</sup> Avenue Historic Refuse	BD05013

#### ***Broward County Historical Commission Recommendations***

Broward County Historical Commission recommendations are addressed as follows:

- 1) *The letter from the Broward County Historic Commission shall be included as an exhibit.*  
The letter is attached.

- 2) *The results of the official record search from the Florida Master Site File, Florida Division of Historical Resources will be included as an exhibit to the amendment.*

Attached is an inventory of the sites within and adjacent to the RAC from the Florida Master Site File. The Florida Department of State Division of Historic Resources official records search is also attached.

- 3) *The City will initiate local (City) designation as well as National Register nomination of City-owned historic resources eligible for such designations as identified in this amendment.*

There are several City-owned historic resources that are listed as Broward County Local Areas of Particular Concern: Historic Sites. All of these sites are locally designated resources. The Bryan Building and South Side School are also on the National Register of Historic Places. Historic designation and criteria for designation is promulgated by Section 47-24.11 of the City's Unified Land Development Regulations. In addition, historic and archeological resources are evaluated during the development review process.

- 4) *The City will include a list of Historic Resources, as defined in the City of Fort Lauderdale Comprehensive Plan, Volume I – Administrative and Implementation Element (p.g. 1-20), as exhibit to the proposed amendment.*

A list of historic resources, as defined by the City's Comprehensive Plan, is provided as follows:

- a. National Register of Historic Places (listed above).
- b. Locally designated sites (listed above).
- c. Florida Master Site File areas districts or sites (attached).

#### **Broward County Parks and Recreation**

The County Parks and Recreation Division provided no objections to the proposed text amendment. County staff comments pertaining to regional park impact fees being required at the time of platting, replatting, etc. are acknowledged. In addition, County staff recognized that the City has enough current park land to meet its land use plan requirements for the additional 5,000 dwelling units proposed by the text amendment; however, County staff recommended an increase in the specific amount of park and open space acreage in the Downtown RAC.

The City of Fort Lauderdale continues to invest in park space and park improvement in the Downtown RAC. As part of continuing park development in the Downtown RAC, Peter Feldman Park (East of NE 3 Avenue and south of NE 6th Street) was developed and funded as a collaborative effort between Broward County, the City of Fort Lauderdale and the City of Fort Lauderdale Community Redevelopment Authority. One of the City's largest parks, the 92-acre Holiday Park, is also located directly adjacent to the Downtown RAC, providing an abundance of park and recreation opportunities for current and future Downtown residents.

The FY 2015-2019 Community Investment Plan includes three Downtown park improvement projects in support of the Riverwalk District Plan. Improvements to Esplanade Park (SW 2 Street and SW 5 Avenue) will focus on providing for a more flexible public park design to open up to the New River and Broward Center for the Performing Arts, and will install the infrastructure necessary to host a variety of outdoor events and performances. Renovations to the Andrews Avenue Bridge include redesigned access ramps and stairs to encourage a more comfortable pedestrian environment in Huizenga Plaza. Smoker Park (South New River

Drive East) improvements to compliment the linear Riverwalk include safety improvements and power upgrades/connections to accommodate future events.

In 2015 the City will also be developing a comprehensive 10-year Parks and Recreation System Master Plan. The principal rationale for this plan is to provide an optimal delivery system for park and recreation services and define present and future recreation needs for the community consistent with the socioeconomic, demographic and development trends within the city. The Master Plan will provide recommendations for provision of facilities, programs and services; parkland acquisition and development; maintenance and operations; as well as administration and management. Recommendations for the Downtown RAC will be included as part of this effort.

### **Broward County Planning and Redevelopment**

#### ***Item 8 – Affordable Housing***

County staff supports the City's proposed 15% affordable housing set-aside (or 750 affordable units) but recommends a phasing plan that would require that affordable housing units are allocated incrementally at the same time that market rate units are allocated in order to avoid a scenario where only market rates units are built. City staff respectfully disagrees with this recommendation due to the following reasons:

1. Given the development trends over the past decade and the current market demand for affordable housing, it is anticipated that these trends will continue in the near future. Therefore, an affordable housing phasing plan is not needed.

The Broward County Affordable Housing Needs Assessment (dated June 20, 2014) provides a market perspective on the demand for affordable housing in the County, including municipal profiles that quantify the level of affordable housing need within each Broward County municipality. While the exact level of demand is debatable, the study clearly indicates that there is a market demand for affordable housing in Broward County. In Fort Lauderdale, this demand is evidenced by the market driven supply of affordable housing over the past few years.

As shown in the following table, 656 affordable housing units have been submitted to the City for review since 2005, of which 551 affordable units have been approved, thereby satisfying the 15% affordable housing set-aside requirement of the previous land use plan amendment that increased the number of available dwelling units in the Downtown RAC by 3,000 units (LUPA PCT 05-3.). Most recently in October 2014, an applicant submitted a site plan consisting of 105 affordable housing units (called Wisdom Village) in the Downtown RAC. This application is currently under review.

<b>DOWNTOWN RAC LIST OF APPROVED AND PENDING AFFORDABLE HOUSING PROJECTS</b>			
<i>Development Name</i>	<i>Address</i>	<i>Date Approved by City</i>	<i># of Affordable Housing Units</i>
Brickell Hts (The Eclipse)	307 NW 1 <sup>st</sup> Ave	4/19/05	96
Pinnacle at Flagler Pointe (Reliance) <sup>1, 2</sup>	600 N Andrews Ave	6/20/06	167
Pinnacle at Tarpon River <sup>1</sup>	805 SE 3 <sup>rd</sup> Ave	5/7/13	100
Progresso Point <sup>1</sup>	619 N Andrews Ave	8/17/10	76
Village Place (formerly Flagler Village I) <sup>1</sup>	720 NE 4 <sup>th</sup> Ave	7/10/12	112
Wisdom Village	615 N Andrews Ave	Pending review/approval	105
<b>Total</b>	-	-	<b>656</b>
<b>Source:</b> City of Fort Lauderdale			
<b>Notes:</b>			
1. Projects that contribute toward the 15% affordable housing set-aside requirement as per LUPA PCT 05-3.			
2. The Pinnacle at Flagler Pointe property (600 N Andrews Ave) is now county-owned and has not been developed.			

2. Once completed the Wave Streetcar will further create a demand for affordable housing. Developers of affordable housing projects often built them in areas that are pedestrian friendly and supportive of transit. It is anticipated that the Wave Streetcar will create a demand for both market rate and affordable housing as it will offer a desirable amenity to people that either choose not to own a car or do not have the means to own a vehicle.
3. An affordable housing phasing plan may result in unintended consequences that will have a negative impact on both market rate and affordable housing construction in the Downtown RAC.

County staff states that as an example of a potential phasing commitment, the City could require that 75 units of every 500 units be affordable. This type of phasing commitment would function similarly as mandatory inclusionary legislation, which may negatively impact the continued growth of Downtown Fort Lauderdale. If Fort Lauderdale is the only municipality in the County with such a requirement, developers may choose to build elsewhere. This would be counterintuitive to the intent of the City's Downtown Master Plan to create a livable and dynamic urban center, and to support the expansion of mass transit, such as the Wave Streetcar.

#### **Item 10 – Hurricane Evacuation Analysis**

Please see City responses to Item 10 – Hurricane Evacuation Analysis in letter to Barbara Blake Boy, dated October 10, 2014.

#### **DEPARTMENT OF SUSTAINABLE DEVELOPMENT**

700 NW 19TH AVENUE, FORT LAUDERDALE, FLORIDA 33311 | (954) 828-6520  
[www.fortlauderdale.gov](http://www.fortlauderdale.gov)

Barbara Blake Boy  
PCT 15-1  
Page 8 of 8

**Broward County Transit Division**

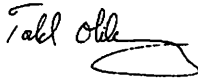
Comments on current service and future improvement in transit are acknowledged.

**Broward County Water Management Division**

The County indicated no objections to the land use plan amendment.

Thank you for the opportunity to clarify a number of questions and comments regarding the proposed amendment to the City of Fort Lauderdale Comprehensive Plan. At this time, we respectfully request to be placed on the December 4, 2014 Broward County Planning Council agenda.

Yours truly,



Todd Okolichany, AICP, LEED Green Associate  
Principal Planner

**Attachments:**

Sanitary sewer and potable water confirmation letter  
Letter from the Broward County Historic Commission  
Florida Department of State - Division of Historic Resources official records search  
City of Fort Lauderdale Florida Master Site File inventory

cc: Jenni Morejon, Director Designee, City of Fort Lauderdale Department of Sustainable Development  
Ella Parker, AICP, Urban Design & Planning Manager, City of Fort Lauderdale Department of Sustainable Development  
Deanne Von Stetina, AICP, Director of Planning, Broward County Planning Council

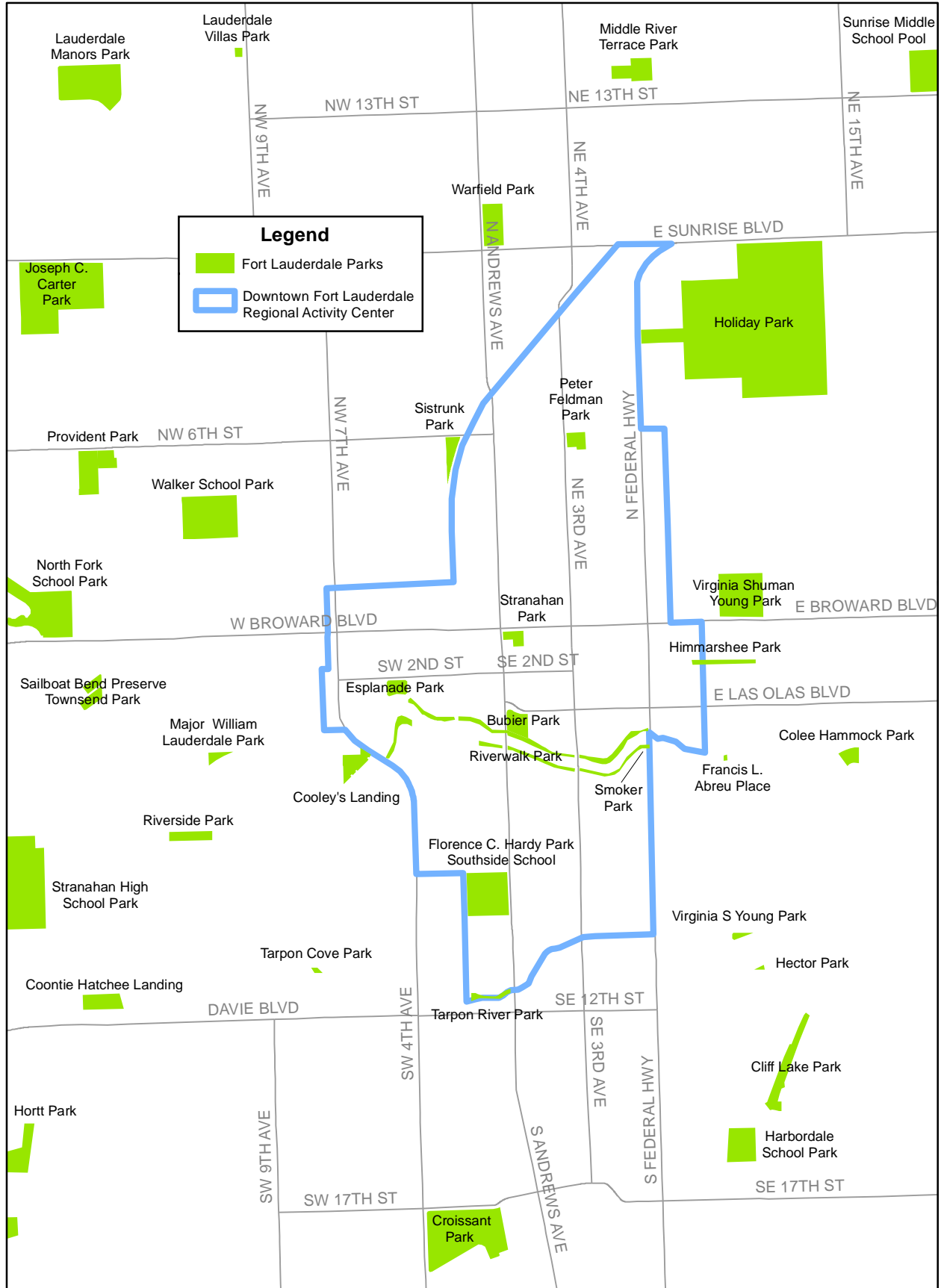
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**DEPARTMENT OF SUSTAINABLE DEVELOPMENT**

700 NW 19TH AVENUE, FORT LAUDERDALE, FLORIDA 33311 | (954) 828-6520  
**[www.fortlauderdale.gov](http://www.fortlauderdale.gov)**

# ATTACHMENT 7

## Downtown Fort Lauderdale RAC and Surrounding Parks



## ATTACHMENT 8.A.

### TRAFFIC ANALYSIS PCT 15-1

September 8, 2014

#### **INTRODUCTORY INFORMATION**

Jurisdiction: Fort Lauderdale

Size: Approximately 710.0 acres

#### **TRIPS ANALYSIS**

##### **Potential Trips - Proposed Land Use Designation**

Proposed Designation:	Fort Lauderdale Downtown Regional Activity Center (RAC)
Potential Development:	Addition of 5,000 dwelling units
Trip Generation Rate:	"ITE Equation (223) Mid-Rise Apartment"*
Total P.M. Peak Hour Trips:	2,639 p.m. peak hour trips
<b>Total P.M. Peak Hour Trips with 7% internal capture rate:</b>	<b><u>2,454 p.m. peak hour trips</u></b>

#### **PLANNING COMMENTS**

The proposed amendment is projected to increase traffic on the regional transportation network by approximately 2,454 p.m. peak hour trips at the long-term planning horizon. Distribution of the projected additional p.m. peak hour trips indicate that the proposed amendment would exacerbate impacts on 13 affected roadway links consisting of Sunrise Boulevard/Federal Highway between Searstown and Gateway, Sistrunk Boulevard between Northwest 27 Avenue and Andrews Avenue, Broward Boulevard between I-95 and the FEC Railroad (3 links), Northwest 7/9 Avenue Connector between Sistrunk Boulevard and Sunrise Boulevard, Andrews Avenue between State Road 84 and Southeast 17 Street, Andrews Avenue between Davie Boulevard and Broward Boulevard (2 links), Andrews Avenue between Sunrise Boulevard and Prospect Road (2 links), and Federal Highway between Southeast 7 Street and Sistrunk Boulevard (2 links), all of which are projected to operate at an unacceptable level of service (LOS) "E" or "F," with or without the proposed amendment. In addition, Broward Boulevard, between the FEC Railroad and Federal Highway, denigrates from an acceptable LOS "D" to an unacceptable LOS "F," with the addition of the trips generated by the proposed amendment.

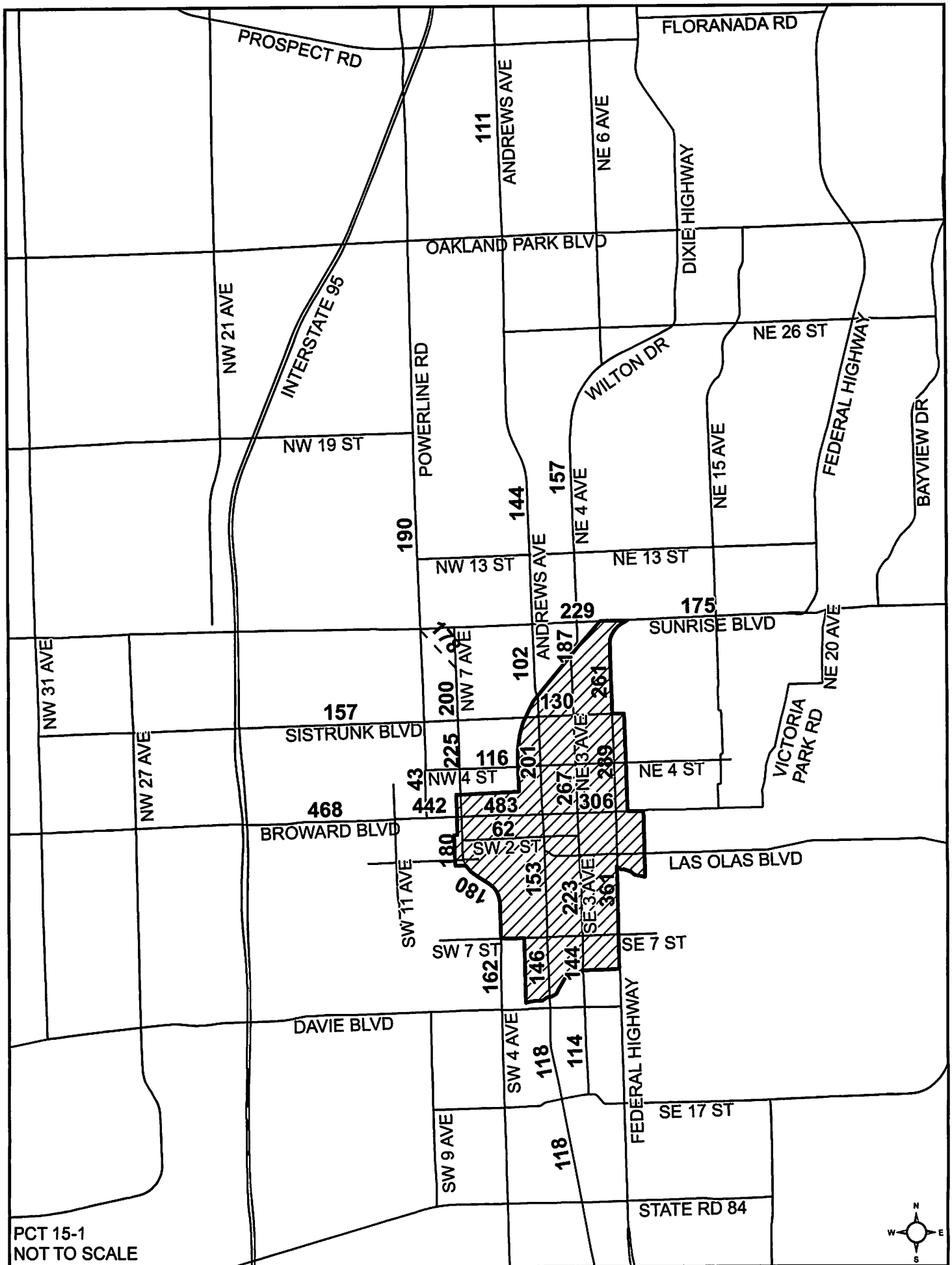
\*Institute of Transportation Engineers (ITE) traffic generation equations from "Trip Generation - Ninth Edition," the professionally accepted methodology for estimating the number of vehicle trips likely to be generated by a particular land use.

## ATTACHMENT 8.B.

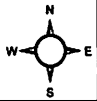
<b>Trafficway</b>	<b>Section</b>	<b>2035 CAPACITY</b>	<b>Without Amendment VOLUME</b>	<b>Without Amendment LOS</b>	<b>With Amendment VOLUME</b>	<b>With Amendment LOS</b>
Sunrise Boulevard	Andrews Avenue to Searstown	5,390	4,175	C	4,404	C
	Searstown to Gateway	4,500	6,230	F	6,405	F
Sistrunk Boulevard	NW 27 Avenue to Andrews Avenue	2,628	2,866	F	3,023	F
	Andrews Avenue to Federal Highway	1,197	599	D	729	D
NW/NE 4 Street	NW 9 Avenue to NE 15 Avenue	1,197	398	C	514	C
Broward Boulevard	I-95 to SW 11 Avenue	5,390	7,374	F	7,842	F
	SW 11 Avenue to SW 7 Avenue	5,390	5,392	F	5,834	F
	SW 7 Avenue to FEC Railroad	4,500	5,157	F	5,640	F
	FEC Railroad to Federal Highway	4,500	4,489	D	4,795	F
SW 2 Street	SW 7 Avenue to SE 3 Avenue	1,197	749	D	811	D
NW 9 Avenue	Broward Boulevard to Sistrunk Boulevard	1,197	469	C	512	C
Powerline Road	Sunrise Boulevard to NW 19 Street	5,390	2,660	C	2,850	C
NW 7/9 Avenue Connector	Sistrunk Boulevard to Sunrise Boulevard	2,920	3,490	F	3,668	F
SW 4 Avenue	Davie Boulevard to SW 7 Street	2,628	1,812	D	1,974	D
	SW 7 Street to Las Olas Boulevard	2,628	2,148	D	2,328	D
NW 7 Avenue	Las Olas Boulevard to Broward Boulevard	2,628	2,270	D	2,450	D
	Broward Boulevard to Sistrunk Boulevard	2,628	2,074	D	2,299	D
	Sistrunk Boulevard to Sunrise Boulevard	2,628	1,005	C	1,205	C
	SR 84 to SE 17 Street	2,628	2,646	E	2,764	F
Andrews Avenue	SE 17 Street to Davie Boulevard	2,628	2,302	D	2,420	D
	Davie Boulevard to SW 7 Street	2,628	2,630	E	2,776	F
	SW 7 Street to Broward Boulevard	2,628	2,704	E	2,857	F
	Broward Boulevard to Sistrunk Boulevard	2,628	2,183	D	2,384	D
	Sistrunk Boulevard to Sunrise Boulevard	2,628	2,076	D	2,178	D
	Sunrise Boulevard to Oakland Park Boulevard	2,628	3,570	F	3,714	F
	Oakland Park Boulevard to Prospect Road	2,628	3,384	F	3,495	F
	SE 17 Street to Davie Boulevard	2,920	1,508	D	1,622	D
SE 3 Avenue	Davie Boulevard to Southeast 7 Street	2,920	2,095	D	2,239	D
	SE 7 Street to Broward Boulevard	2,920	2,757	D	2,980	D
	Broward Boulevard to Sistrunk Boulevard	2,920	2,203	D	2,470	D
NE 3 Avenue	Sistrunk Boulevard to Sunrise Boulevard	2,920	2,385	D	2,572	D
NE 4 Avenue/Wilton Drive	Sunrise Boulevard to Oakland Park Boulevard	2,920	2,681	D	2,838	D
Federal Highway	SE 7 Street to Broward Boulevard	4,500	5,703	F	6,064	F
	Broward Boulevard to Sistrunk Boulevard	4,500	4,593	F	4,882	F
	Sistrunk Boulevard to Searstown	4,500	4,190	D	4,451	D

Includes 7% Internal Capture Reduction





PCT 15-1  
NOT TO SCALE





*Venice of America*

**ATTACHMENT 9**  
CITY OF  
**FORT LAUDERDALE**

Transportation and Mobility Department

October 10, 2014

**RECEIVED**

OCT 10 2014

Barbara Blake Boy, Executive Director  
Broward County Planning Council  
115 South Andrews Avenue, Room 307  
Fort Lauderdale, FL 33301

**BROWARD COUNTY  
PLANNING COUNCIL**

**RE: Comprehensive Plan Amendment Application Completeness – City of Fort Lauderdale Land Use Plan Text Amendment for Downtown Regional Activity Center (BCLUP #PCT 15-1)**

Dear Ms. Boy:

Please accept this letter as the response to Broward County Planning Council (BCPC) staff's letter, dated August 29, 2014, regarding the additional information and documentation needed for the transportation analysis section of the City's proposed land use plan amendment for the Downtown Regional Activity Center (RAC) (Broward County Land Use Plan #PCT 15-1). PCT 15-1 is related to the proposed text amendment to the City of Fort Lauderdale Comprehensive Plan to increase the number of allowable residential dwelling units by 5,000 units in the Downtown RAC. The attached revised transportation analysis section addresses the comments in detail. Please find below our responses to the comments provided.

- **Documentation and/or technical analysis of the following proposed reductions and/or credits:**
  - **The internalization of external trips;**
  - **The reduction of external trips to account for pedestrian activity;**
  - **The reduction of external trips to account for transit usage; and**
  - **The reduction of external trips to account for reduced impacts for residential use as opposed to permitted non-residential office and commercial uses.**

The above trip reduction assumptions were based on the Downtown LUPA submitted to the BCPC in 2004. To provide a more conservative approach, the trip reductions were revised based on the following assumptions:

- A trip internal capture rate of 15 percent was assumed for the Downtown RAC based on the trip internalization rates for mixed-use developments in Florida analyzed in a study in 2014, and also based on the Downtown Walkability score of 89 (Walkscore.com), where both elements speak to the land use

Transportation and Mobility Department  
290 N.E. 3<sup>rd</sup> Avenue, Fort Lauderdale, Florida 33301  
Telephone (954) 828-3700, FAX (954) 828-3704

**Ms. Barbara Blake Boy**

**October 10, 2014**

**Comprehensive Plan Amendment for Downtown Regional Activity Center (BCLUP  
#PCT 15-1)**

intensity and diversity in Downtown. The density, mixed-use aspect of Downtown would allow for localizing vehicular trips as well as completing both commute and non-commute trips via alternative modes of transportation.

- The walkable nature of the Downtown RAC setting, as well as the intensity of existing bicycle, pedestrian, and transit facilities, provides alternative commute options. The American Communities Survey (2012 US Census) estimates approximately 17 percent of all commuters in the Downtown RAC walk, bicycle, carpool, or take transit to work.
  - Research has proven that premium transit options significantly increase transit ridership. Accordingly, and based on the Institute of Transportation Engineer's Trip Generation Manual 9<sup>th</sup> edition, a 15 percent trip reduction rate was applied to account for the trip impact factor of developing around transit centers. The City is currently designing the Wave Streetcar, a fully-funded premium transit fixed guideway streetcar system, which will operate in the Downtown beginning in late 2017.
  - In addition to these quantitative trip reduction factors, the analysis provides documentation on the various transit and multimodal improvements that are currently planned, designed, and being implemented in the Downtown RAC, including All Aboard Florida, Tri Coastal Link, Central Broward East-West Transit Study, Connecting the Blocks Plan, Context Sensitive Corridors, and the Urban Land Development Code. These projects and plans are focused on meeting the City's vision of becoming a fully connected City and providing alternative modes of transportation, thereby reducing vehicular trips. It is worth noting that all of the impacted corridors in the analysis are identified in the Connecting the Blocks Plan for bicycle and pedestrian improvements, which would enhance multimodal Level of Service (LOS).
- **Copies of the pertinent sections of the following referenced studies:**
    - **Wave Downtown Transit Circulator Project Transportation Study;**
    - **Tri Rail Coastal Link Station Area Opportunities Study;**
    - **Central Broward East West Transit Travel Demand Technical Memorandum; and**
    - **City of Fort Lauderdale Downtown Walkability Study.**

Please see attached the above requested documentation.

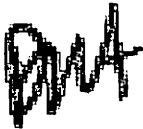
CITY OF  
**FORT LAUDERDALE**

- **Documentation and/or technical analysis for projected level of service impacts to regional transportation network roadways that are planned for 'Complete Streets' and/or 'Context Sensitive Corridor' treatments within the 'Downtown Regional Activity Center'.**

Please see the attached revised traffic analysis section of the LUPA, which outlines the complete streets projects based on the City's "Connecting the Blocks" Plan, as well as the status of Context Sensitive Corridors within the Downtown RAC. In summary, there are \$11,285,560 committed bicycle and pedestrian improvements programmed within the Downtown RAC, in addition to another \$39,600,000 in planned projects. Staff is preparing Context Sensitive Corridor designation applications for NE 3<sup>rd</sup> Avenue and Andrews Avenue. These improvements are aimed at improving multimodal LOS, thereby reducing vehicular trips.

Please feel free to contact me at (954) 828-3793 or [dalarcon@fortlauderdale.gov](mailto:dalarcon@fortlauderdale.gov) if you have any questions or need additional information. Thank you for your time and consideration.

Sincerely,



Diana Alarcon  
Director, Transportation and Mobility Department

cc: Debora Griner, Transportation Manager  
Alia Awwad, PE, Transportation Planner

**Attachments:**

Downtown RAC LUPA, Transportation Analysis Section  
Wave Downtown Transit Circulator Project Transportation Study  
Tri Rail Coastal Link Station Area Opportunities Study  
Central Broward East West Transit Travel Demand Technical Memorandum  
City of Fort Lauderdale Downtown Walkability Study





# DOWNTOWN FORT LAUDERDALE TRANSIT CIRCULATOR PROJECT ALTERNATIVES ANALYSIS/ENVIRONMENTAL ASSESSMENT

## VOLUME 1

PARTNERSHIP OF:

BROWARD COUNTY  
BROWARD COUNTY TRANSIT  
BROWARD COUNTY METROPOLITAN PLANNING ORGANIZATION  
CITY OF FORT LAUDERDALE  
DOWNTOWN DEVELOPMENT AUTHORITY OF FORT LAUDERDALE  
FEDERAL TRANSIT ADMINISTRATION  
FLORIDA DEPARTMENT OF TRANSPORTATION – DISTRICT IV  
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY

APRIL 2012





## Summary





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## S.0 SUMMARY

### S.1 Proposed Project

Broward County and the South Florida Regional Transportation Authority (SFRTA), in cooperation with the Fort Lauderdale Downtown Development Authority (DDA), the City of Fort Lauderdale, the Florida Department of Transportation (FDOT), the Broward Metropolitan Planning Organization (MPO), and the Fort Lauderdale Northwest-Progresso-Flagler Heights Community Redevelopment Agency (NPF-CRA), are submitting an Alternatives Analysis (AA) and Environmental Assessment (EA) report in anticipation of advancing the **Downtown Transit Circulator (DTC) Project** into the Project Development (PD) phase as a Small Starts project.

The DTC Project involves constructing a new fixed guideway streetcar transit service within Downtown Fort Lauderdale in Broward County, Florida. Key project information is presented below.

- Project Name: Downtown Transit Circulator (DTC) Project
- Project Location: Fort Lauderdale, Broward County, Florida
- Transit Technology: Streetcar
- Project Length: 2.7 miles
- Anticipated Project Opening Year: 2016
- Projected Daily Ridership: 3,211 (in 2016 – opening year)
- Estimated Capital Cost: \$142.59 million (year of expenditure dollars)
- Funding Sources for Capital Cost: FTA Small Starts, State, and Local
- Operating and Maintenance Costs: \$2.6 million annually (2011 dollars)
- Environmental Impacts: Minimal

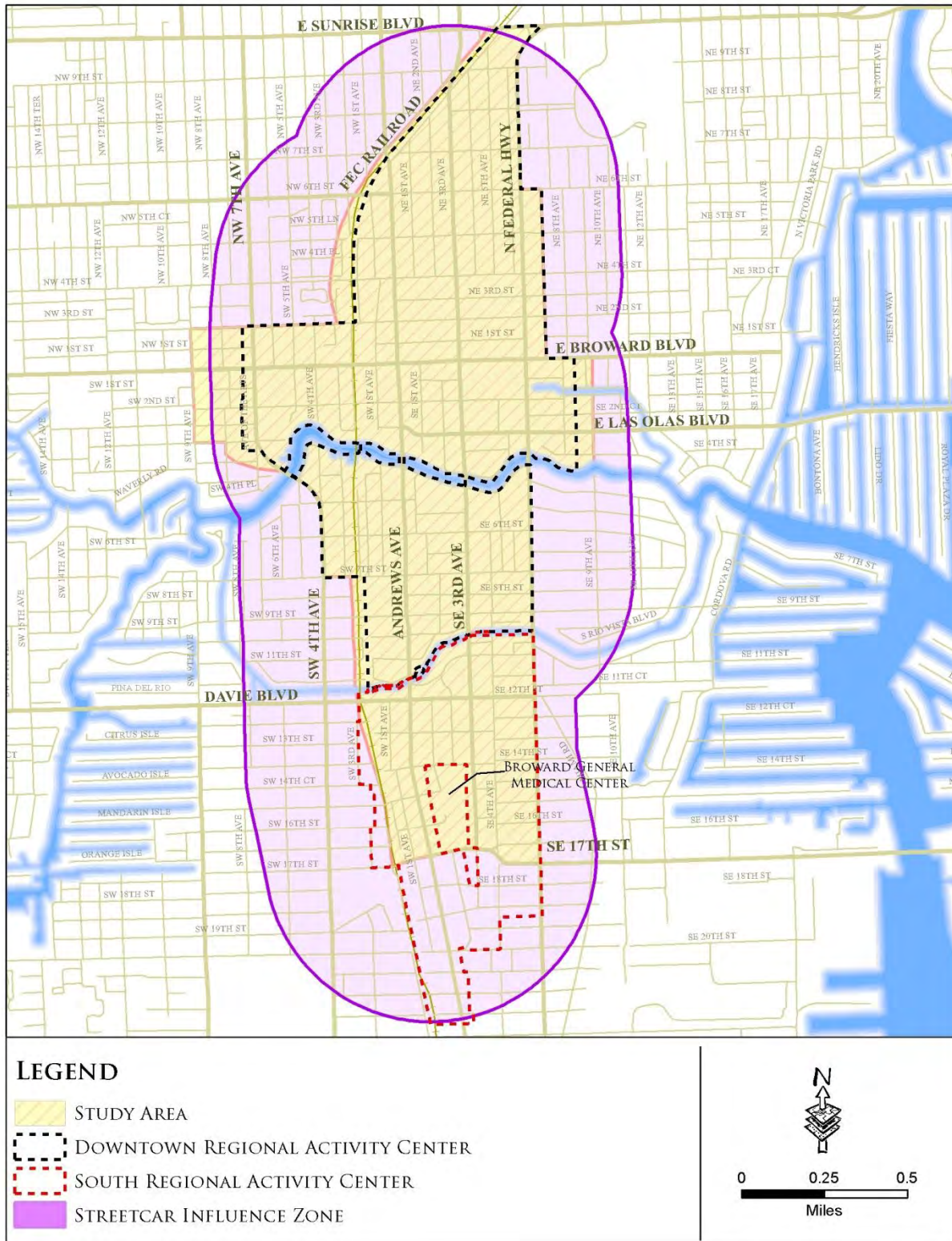
### S.2 Study Area

The DTC Project study area is located in Downtown Fort Lauderdale in Broward County, Florida. Downtown Fort Lauderdale is the regional governmental center within Broward County with federal, state, and county administrative and judicial complexes located within close proximity to each other. Downtown Fort Lauderdale is also home to cultural and entertainment facilities including the Main Broward County Library, the Museum of Art, the Broward Performing Arts Center, and the Las Olas Boulevard/Riverfront shopping and entertainment district. The DTC Project will serve this area of dense development and will act as a spine running through the highest concentration of activity-generating uses.

The study area is generally bound by Federal Highway (US 1) on the east, SE 17th Street on the south, the Florida East Coast Railroad (FEC Railroad)/W 7th Avenue on the west, and the FEC Railroad/Sunrise Boulevard on the north, as shown in Figure S-1.



Figure S-1. Project Study Area





This area is approximately 2.5 miles long (north to south) and 1.0 mile wide (east to west). These study area boundaries encompass the designated Downtown Fort Lauderdale Regional Activity Center (RAC), DDA, NPF-CRA, and a portion of the South RAC, including the hospital district surrounding the Broward General Medical Center facility.

### S.3 Purpose of the Project

The purpose of the DTC Project is to facilitate the economic growth and development patterns prescribed in the Broward County and City of Fort Lauderdale adopted land use plans. The project is also intended to support sustainable development in Downtown Fort Lauderdale by improving mobility and regional connectivity while providing transportation alternatives and reducing automobile dependency. The future growth of Downtown Fort Lauderdale will be constrained without the implementation of a major transit investment that provides a high level of mobility to residents and commuters.

The DTC Project will provide a sustainable and permanent transportation investment that will anchor the future growth, implement a major transportation component of the adopted comprehensive plans of the City of Fort Lauderdale and Broward County, and spur economic development by enhancing mobility options for the current and future population. The DTC Project will provide a permanent transit service that supports mixed-use development with a pedestrian orientation envisioned for the downtown.

The DTC Project will provide a mobility option to distribute trips from new regional transit services proposed to serve the study area and from bus routes connecting to the Broward Central Terminal. Proposed premium transit service in the FEC Railroad corridor and east-west premium transit service along Broward Boulevard will converge in the vicinity of the Broward Central Terminal. The DTC Project will provide the efficient connections required to distribute trips from these regional transit services throughout the downtown area.

### S.4 Need for the Project

The City of Fort Lauderdale's concerted efforts over the past 15 years to develop its downtown through transit-supportive, high-density, mixed-use land use plans and policies and zoning regulations has increasingly helped shape the area as a destination for people, businesses, and events. Key indicators of current land use and economic development (2008 estimates) and the future development potential of the streetcar influence zone are presented below.

- Over 15,000 existing residential units and over 5,000,000 existing square feet of commercial/retail space.
- Unlimited height for new commercial buildings in the Regional Activity Center-City Center (RAC-CC) zoning district.
- No parking requirements in the RAC-CC zoning district.
- Current rental residential occupancy of 98 percent.
- Future capacity to absorb an additional 18,000 residential units and 10,000,000 square feet of non-residential development.

However, traffic congestion and mobility constraints are presenting obstacles for the growth potential of Downtown Fort Lauderdale. Some of the congestion indicators are summarized below.

- Many of the roadways that connect downtown to I-95 operate at level of service (LOS) F during peak periods.





- By 2030, most major streets in the downtown are expected to operate at LOS E or F.

Key issues contributing to traffic congestion in Downtown Fort Lauderdale include:

- Limited north/south through streets.
- No grade separated crossings across the FEC Railroad corridor which accommodates up to 16 freight trains through downtown each day.
- Raising of the drawbridges on SW 4th Avenue, S Andrews Avenue, and SE 3rd Avenue to accommodate boat traffic on the New River.

Two new regional transit services are proposed to serve the study area: the South Florida East Coast Corridor and the Central Broward East-West Transit corridor. These new transit services will connect at a proposed mobility hub near the existing Broward Central Terminal. The South Florida East Coast Corridor proposes the reintroduction of passenger service on the FEC Railroad between Downtown Miami and Jupiter, connecting the hearts of downtowns and improving mobility between Miami-Dade, Broward, and Palm Beach Counties. The Central Broward East-West Transit corridor project is considering transit options, including premium bus and modern streetcar, to link activity centers from Sunrise to Fort Lauderdale, including Sawgrass Mills, the South Florida Education Center, Fort Lauderdale-Hollywood International Airport, and Downtown Fort Lauderdale. The Central Broward East-West Transit corridor project would also provide connectivity to the existing Tri-Rail regional commuter system. Efficient connections will be required to distribute trips from these new regional transit services throughout the downtown area.

## S.5 Alternatives Considered

A two-tiered approach was adopted for evaluation of alternatives. The No-Build Alternative, Transportation System Management (TSM) Alternative, and 11 Transit Circulator (Build) Alternatives were considered during the Tier I analysis for the DTC Project.

The No-Build Alternative included transit services, transit facilities, and roadways that are expected to exist in 2030 without the DTC Project. Improvements would include all those currently listed in the adopted Broward MPO's 2030 Long-Range Transportation Plan.

The TSM Alternative included all the existing transit services and planned transit improvements in the No-Build Alternative plus a circulator bus system operating in mixed traffic in Downtown Fort Lauderdale. The TSM Alternative is defined as the best that can be done to address transportation needs and other goals in Downtown Fort Lauderdale short of a new fixed-guideway streetcar transit system. The TSM Alternative incorporates new buses that would be equipped with ITS equipment to provide vehicle schedule information at stations and prioritize traffic signals.

The Transit Circulator (Build) Alternatives were grouped into four service concepts.

- Group A (A1, A2, A3) included variations of a large loop on Andrews Avenue and 3rd Avenue.
- Group B (B1, B2) included variations with double-track service on Andrews Avenue, 3rd Avenue, or some combination of the two.
- The Group C (C1, C2) included variations that were intended to explore the possibility of a north loop, a south loop, and central loop serving the judicial complex.
- Group D (D1, D2, D3, D4) included variations that used the Henry E. Kinney Tunnel/Federal Highway (US 1) to cross under the New River instead of the Andrews Avenue and 3rd Avenue Bridges to cross over the New River.



### S.5.1 Tier I Screening of Alternatives

A conceptual evaluation was performed on the Transit Circulator (Build) Alternatives and the TSM Alternative using quantitative criteria addressing physical characteristics, operational considerations, and engineering constraints. Other criteria included environmental constraints, cost, and transportation effectiveness. The Tier I screening and results are discussed in Chapter 2. Based on the Tier I screening, Alternative A2, Alternative B2, and Alternative D3 were advanced to the Tier II evaluation. As required by the Federal Transit Administration's (FTA) AA process, the No-Build and TSM Alternatives were also advanced to the Tier II screening of Alternatives.

### S.5.2 Tier II Screening of Alternatives

Based on the feedback from stakeholders, several refinements were made to the Tier II Transit Circulator (Build) Alternatives. These refinements focus on providing the service best able to meet travel demands and project goals and objectives, balanced against cost considerations. In addition, input received during the scoping process and public outreach resulted in the preparation of a new alternative, Alternative E1.

Tier II alternatives were examined in accordance with the evaluation methodology and the results were presented to the Broward County Commission on September 9, 2008. The County Commission adopted Alternative E1 with modern streetcar technology as the Locally Preferred Alternative (LPA).

### S.5.3 Locally Preferred Alternative (LPA)

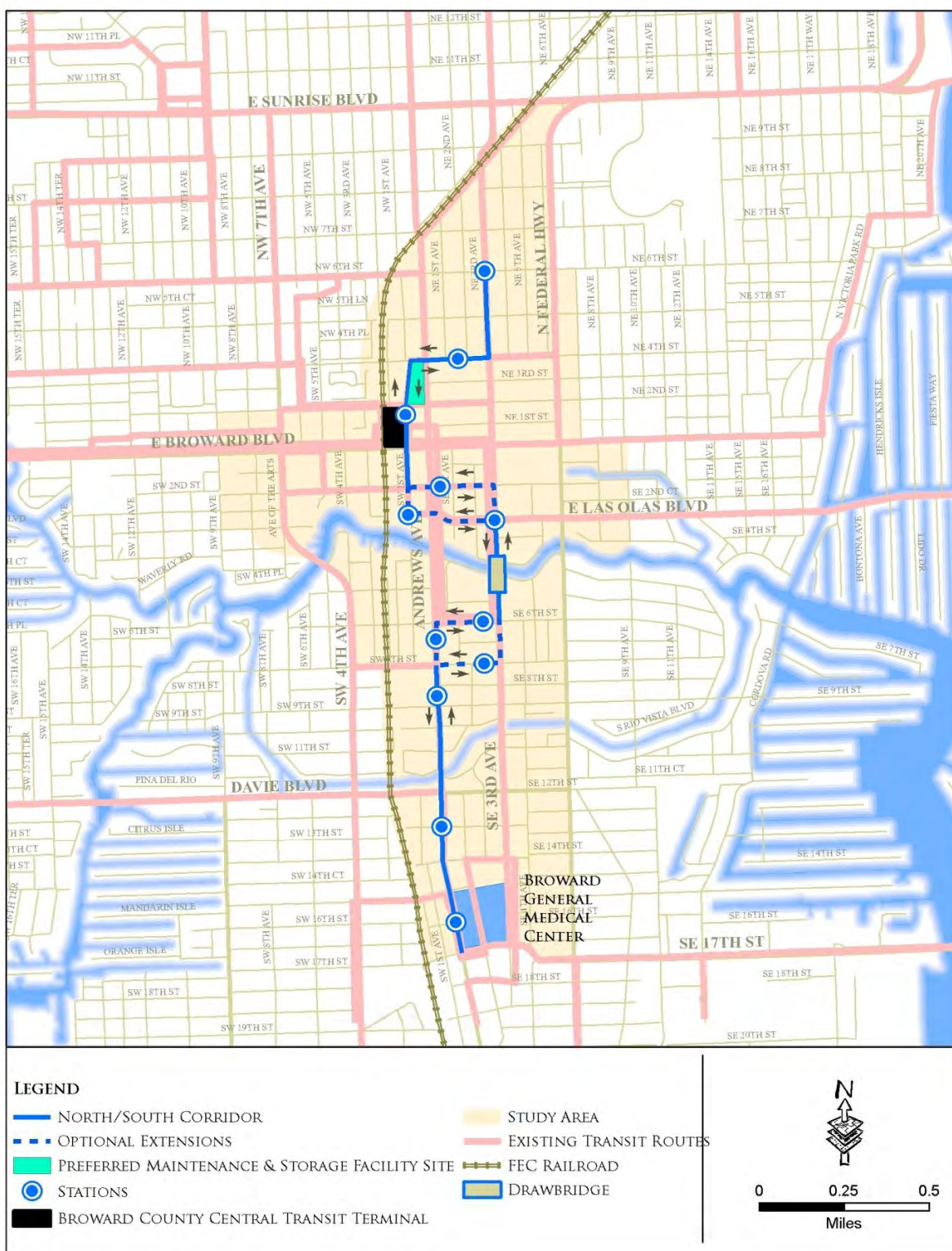
Alternative E1 (LPA) proposes the operation of fixed-rail streetcar service that would operate at-grade on the existing roadway right-of-way within Downtown Fort Lauderdale. This alternative would be a double-track route alignment as shown in Figure S-2. The proposed LPA's alignment extends from SE 17th Street and Andrews Avenue to NE 6th Street and NE 3rd Avenue, primarily utilizing Andrews Avenue, Brickell Avenue and E 3rd Avenue for north/south movement. The length of the LPA's alignment is approximately 2.7 miles. Ten streetcar stations will be provided approximately every two to four city blocks. The station locations support future transit-oriented development (TOD) sites envisioned by the City of Fort Lauderdale and Broward County. A streetcar Maintenance and Storage Facility (M&SF) would be located adjacent to the transit route. Project construction is anticipated to start in 2014 and extend to 2016. Operation is anticipated to begin in July 2016.

The LPA would provide service headways of 7.5 minutes throughout the day. The streetcar would use a traffic signal prioritization system to facilitate movements during peak periods. The average travel time between the north and south ends of the route would be approximately 14 minutes during the peak period and 12 minutes during the off-peak period. Four streetcar vehicles would be needed for peak period operations with one spare vehicle. The initial proposed fare is \$1.00, and payment would be made upon entering the vehicle by electronic media (fare cards), with ticket vending machines provided at the stations.

The streetcar would have a seating capacity of 40 passengers with an additional standing capacity of 115 passengers for a total capacity of approximately 155 passengers. In contrast, an appropriate bus to operate within Downtown Fort Lauderdale would be a smaller shuttle-type bus due to the tight turning radii at several intersections along the alignment and stop-and-go traffic associated with heavy traffic volumes, closely spaced intersections, and frequent transit stops. These shuttle-type buses have reduced capacities, seating approximately 28 passengers with additional standing space for 12 passengers, for a total capacity of 40 passengers. A streetcar would have a much higher practical passenger capacity than a bus within the proposed alignment and would achieve operational efficiencies.



Figure S-2. Locally Preferred Alternative





## S.6 Environmental Assessment

Table S-1 provides a summary of the environmental impacts of the No-Build Alternative, the TSM Alternatives, and the LPA for the DTC Project. Overall, adverse environmental impacts associated with the DTC Project are expected to be minimal or temporary in nature, such as temporary detours and access restrictions during construction. The DTC Project will provide a number of benefits to the community including spurring increased economic activity along the alignment, enhancing mobility for transportation disadvantaged, and increasing accessibility to employment opportunities.

**Table S-1. Summary of Environmental Benefits/Impacts**

Description	Alternatives		
	No-Build	TSM	LPA
Acquisition & Displacement	No impact	No Impact	Minimal impact dependent upon confirmation of preferred site for M&SF
Land Use Affected	No Impact	No Impact	Residential, Commercial, Industrial
Population & Employment (estimate number affected)	No Impact	No Impact	No impact
Population/Demographics	No Impact	No Impact	No impact
Economic Impacts (Estimated Lost Tax Revenue)	No Impact	No Impact	No impact dependent upon confirmation of preferred site for M&SF
Neighborhoods and Community (adversely affected areas)	No Impact	No Impact	No Impact
Environmental Justice (low income/minority population)	No Impact	No Impact	No Impact
Visual Quality	No Impact	No Impact	Low Impact
Air Quality	No Impact	No Impact	No violations of National Ambient Air Quality Standards are predicted.
Noise & Vibration (Operation Effect/ M&SF Effect)	No impact/ No impact	No Impact	No impact/ No impact
Ecosystems	No impact	No Impact	No net negative effect
Water Resources (possible adverse effect)	No impact	No Impact	Minimal potential increased runoff
Historic & Archaeological Resources	No impact	No Impact	No impact
Parklands	No impact	No Impact	No significant adverse effect
Geology & Soils	No impact	No Impact	Minimal to zero adverse effect
Contamination Sites Identified Adjacent to Alignment/Sites for M&SF location <sup>(1)</sup>	No Impact	No Impact	Alignment: Low (51); Medium (6); High (4) M&SF: Low (1); Medium (1)
Safety & Security	No Impact	No Impact	Slight increase of risk due to mode, station locations, and protection of passengers
Construction Impacts	No Impact	Moderate	High <sup>(2)</sup>
Indirect/Cumulative Impacts	Minimal	Moderately Positive	Positive <sup>(3)</sup>

Source: Locally Preferred Alternative Report, Parsons Brinkerhoff 2009

Notes:

- (1) Includes contamination site ratings (low, medium and high).
- (2) Retrofit of 3rd Avenue Bridge will require a temporary closure of the bridge and detour of traffic over the Andrews Avenue Bridge; this is a temporary impact that can be mitigated.
- (3) The net effect of the streetcar alternative would be very positive; greatest effects would occur along the alignment and at proposed stations.



## S.7 Transportation Impacts

The transportation impacts associated with implementing the LPA were assessed for the 2015 opening year (for purpose of transit ridership forecasts) and the 2030 forecast year. Traffic impacts were evaluated at a planning level based on average weekday conditions and at an operational level based on a micro-simulation analysis. The transit analysis included evaluating the quality of transit service measured by geographic coverage, frequency of service, travel times, transfers required, reliability, and ridership forecasts.

### Roadway System Impacts

Overall, the projected daily traffic volumes and levels of service at a planning level are similar for the roadway segments within the study area between the No-Build Alternative, TSM Alternative, and LPA, with variations in projected daily traffic volumes between 1 and 4 percent (increase or decrease) depending upon location. The proposed station locations, connections to other transit routes, and the overall circulator alignment result in slight changes in the study area roadway traffic volumes. Some traffic volume reassignment occurs for the TSM Alternative and the LPA as a result of pedestrian, vehicular and transit access to the stations.

### Transit Ridership

The LPA is estimated to carry approximately 3,211 riders per day in 2015 (opening year for purpose of ridership forecasts) and 4,423 in 2030, as shown in Table S-2 below.

**Table S-2. Average Daily Boardings**

Station	Daily Boardings 2015	Daily Boardings 2030
NE 3rd Avenue south of NE 6th Street	251	381
NE 4th Street and NE 2nd Avenue	150	274
NW 1st Avenue south of NW 2nd Street (Broward County Transfer Station)	994	1,331
SE 2nd Street and SE 1st Avenue or SW 1st Avenue and W Las Olas Boulevard	320	420
SE 3rd Avenue and E Las Olas Boulevard	451	610
SE 6th Street west of SE 3rd Avenue	307	547
S Andrews Avenue south of S 6th Street or SE 7th Street east of SE 3rd Avenue	278	263
S Andrews Avenue north of S 8th Street	53	75
S Andrews Avenue and S 13th Street	113	153
S Andrews Avenue and S 17th Street	294	369
<b>Estimated Total Boardings</b>	<b>3,211</b>	<b>4,420</b>

## S.8 Financial Feasibility

The financial plan for the DTC Project was prepared in a manner consistent with the FTA's *Guidance for Transit Financial Plans*. The major project sponsors for the DTC project are Broward County, SFRTA, the DDA, the City of Fort Lauderdale, and FDOT, in addition to the FTA.

### S.8.1 Capital Cost

The capital cost estimate for the LPA is \$142.59 million in year of expenditure (YOE) dollars, as shown in Table S-3.



**Table S-3. Capital Cost Estimates for the LPA (in millions of dollars)**

Description	Cost (\$)
Total Capital Costs (YOE)	142.59
Total Capital Costs (2011)	128.92

Federal, State, regional, local and private sector funding sources have been identified and programmed to meet the capital requirements of the DTC Project. Project sponsors are seeking \$71.31 million from the Federal Section 5309 Small Starts Program and are requesting FTA approval to initiate the Small Starts Project Development phase. Table S-4 provides a breakdown of capital funding sources.

**Table S-4. DTC Project Capital Funding Sources (in millions of dollars)**

Grant Sources	Status	Total
FTA Small Starts Funding	Anticipated	\$ 71.31
State of Florida New Starts Program	Committed	\$ 35.65
<b>Local Sources</b>		
City of Ft Lauderdale Contribution	Committed	\$ 10.50
Special Assessment District	Pending	\$ 20.59
Broward MPO Local Contribution	Committed	\$ 4.54
<b>Total (All Sources)</b>		<b>\$ 142.59</b>

### S.8.2 Operations and Maintenance Cost

Annual Operations and Maintenance (O&M) costs were estimated based on an operating plan for DTC Project's LPA's streetcar service at 7.5 minute frequencies (headway) with four service vehicles. These O&M cost estimates include operators, management, administration, vehicle and facilities maintenance, fuel, energy and other expenses. The annual O&M costs are estimated to total \$2.6 million (in 2011 dollars). Table S-5 reflects the anticipated funding sources for O&M.

**Table S-5. DTC Project O&M Revenue Sources**

Source	Annual Operating Funds in 2011 Dollars
Broward County O&M Contribution	\$1,490,809
Farebox Revenues	\$970,000
Advertising and Sponsorships	\$130,000
Solar Power Savings Options	\$10,000
<b>Total</b>	<b>\$2,600,809</b>

Broward County has committed to funding O&M costs for the DTC Project for a period of at least 20 years. The O&M costs could be offset by additional revenue sources considered in the Financial Plan for the LPA to the extent that those additional sources generate revenue which is available for DTC Project O&M costs in any given year.



## S.9 Evaluation of Alternatives

A comparative summary evaluation was performed for the No-Build Alternative, the TSM Alternative, and the LPA. The evaluation criteria are based on the project goals defined in Chapter 1. Only those measures, where discernible and significant differences can be detected between alternatives, are listed in Table S-6.

**Table S-6. Comparative Summary of Evaluation**

No-Build Alternative	TSM Alternative	LPA
<b>Coordination of Transportation and Land Use</b>		
<ul style="list-style-type: none"> <li>Does not support compact development or encourage increased growth.</li> <li>Alternative transportation choices to the automobile are not provided to support and anchor growth.</li> </ul>	<ul style="list-style-type: none"> <li>Does not provide the anchor necessary to encourage more compact development necessary to support continued growth.</li> <li>Bus transit service is not viewed as a premium service by the potential users or as a permanent transit investment compatible with the land use plans.</li> </ul>	<ul style="list-style-type: none"> <li>Supports the comprehensive land use plan by encouraging more compact development.</li> <li>Consistent with the expectations of providing adequate capacity to support growth and anchor the conversion of the RAC into a transit- and pedestrian-oriented, mixed-use environment.</li> </ul>
<b>Improve Mobility and Accessibility</b>		
<ul style="list-style-type: none"> <li>Does not support the goal of increased mobility and accessibility effectively, and congestion in the RACs will continue to increase.</li> <li>Activity centers will not be able to develop fully in absence of alternative travel modes and lack of improvements to circulation within the RACs.</li> </ul>	<ul style="list-style-type: none"> <li>Improves access to and connectivity among the existing and future transit services and improves circulation within the RACs.</li> </ul>	<ul style="list-style-type: none"> <li>Improves access to and connectivity among the existing and future transit services and improves circulation within the RACs.</li> <li>Offers higher quality of transit service, such as increased seating capacity, comfort, and a smoother ride.</li> </ul>
<b>Provide Cost-Effective and Affordable Transportation Improvements</b>		
<ul style="list-style-type: none"> <li>Does not provide any significant new transit service.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed transit service is affordable.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed transit service is affordable.</li> </ul>
<b>Minimize Environmental Impacts</b>		
<ul style="list-style-type: none"> <li>Does not result in significant environmental benefit or impacts.</li> <li>Buses are powered by diesel fuels and may result in some increase in air pollutants.</li> </ul>	<ul style="list-style-type: none"> <li>Cumulative increase in particulate pollutants of diesel buses is extremely small in comparison to the total emissions in the study area.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental impacts are minimal.</li> <li>Temporary construction impacts of 3rd Avenue bridge retrofit could be minimized through detour routes.</li> </ul>
<b>Provide Equitable Transportation</b>		
<ul style="list-style-type: none"> <li>Does not provide new transit service which could offer transportation disadvantaged persons improved circulation within the downtown area and enhanced access to major employment centers.</li> </ul>	<ul style="list-style-type: none"> <li>Provides new transit service which could offer transportation disadvantaged persons improved circulation within the downtown area and enhanced access to major employment centers.</li> </ul>	<ul style="list-style-type: none"> <li>Provides new transit service which could offer transportation disadvantaged persons improved circulation within the downtown area and enhanced access to major employment centers.</li> <li>Costs and benefits will be distributed equitably.</li> <li>Benefits to the transit dependent will exceed the costs by a substantial margin.</li> </ul>

The evaluation indicates that the LPA meets the project goals better than the No-Build and the TSM Alternatives.



## S.10 Community Consultation

The DTC Project has been developed within the framework of a comprehensive public involvement and interagency coordination program. Public involvement strategies included:

- Public Scoping meetings
- A Study Advisory Committee (SAC) and agency coordination with regular participation throughout the course of project development
- Community and stakeholder participation opportunities at key milestones
- Communications including direct mailings, newsletters and the project website ([www.wavestreetcar.com](http://www.wavestreetcar.com))

Public and community support for the project has been strong, and comments received at public meetings were used to refine project alternatives including the LPA and to determine the locations of the DTC Project's stations.

## S.11 Issues to be Finalized in Project Development

There are several issues to be finalized in the next phase of project development, including:

- Refining the Project Management Plan which addresses the technical ability for the operating agency to undertake the proposed project;
- Further analyzing and making a final recommendation on the location of the maintenance and storage facility (M&SF);
- Finalizing the plan for local share of capital funding based upon voter approval for the implementation of a special assessment district for Downtown Fort Lauderdale property owners; and
- Identifying the need for relocation of existing utilities on the basis of additional engineering design activities.





## Chapter 4 Transportation Impacts





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## 4.0 TRANSPORTATION IMPACTS

This chapter summarizes transportation impacts associated with the Downtown Transit Circulator (DTC) Project's No-Build Alternative, Transportation System Management (TSM) Alternative, and Locally Preferred Alternative (LPA), as required under the National Environmental Policy Act (NEPA). Traffic impacts are evaluated at a planning level based on average weekday conditions and at an operational level based on a micro-simulation analysis. The transit analysis includes evaluating the quality of transit service measured by geographic coverage, frequency of service, travel times, transfers required, reliability, and ridership forecasts.

### 4.1 Transportation Network

Major highways that provide regional access to Downtown Fort Lauderdale include I-95, I-595, Federal Highway (US 1), and Florida's Turnpike. The eastern boundary of the DTC Project's study area is defined by the four- to six-lane Federal Highway. The two main north-south roadways within the core of the study area, Andrews Avenue and S 3rd Avenue, both have four lanes and are designated as urban minor arterials. The major east-west roadway within the study area is Broward Boulevard, which is a six-lane roadway designated as an urban principal arterial. To the south of the downtown core, Davie Boulevard and S 17th Street are both four-lane urban minor arterials. The other study area roadways are primarily two- and four-lane streets.

Broward County Transit (BCT) operates buses within Downtown Fort Lauderdale that connect to the regional Tri-Rail commuter rail system, Miami-Dade Transit and Palm Tran. The Sun Trolley transit system operates within the City of Fort Lauderdale.

Figure 4-1 illustrates the existing roadway and transit network within the study area

### 4.2 Existing Roadway System Performance

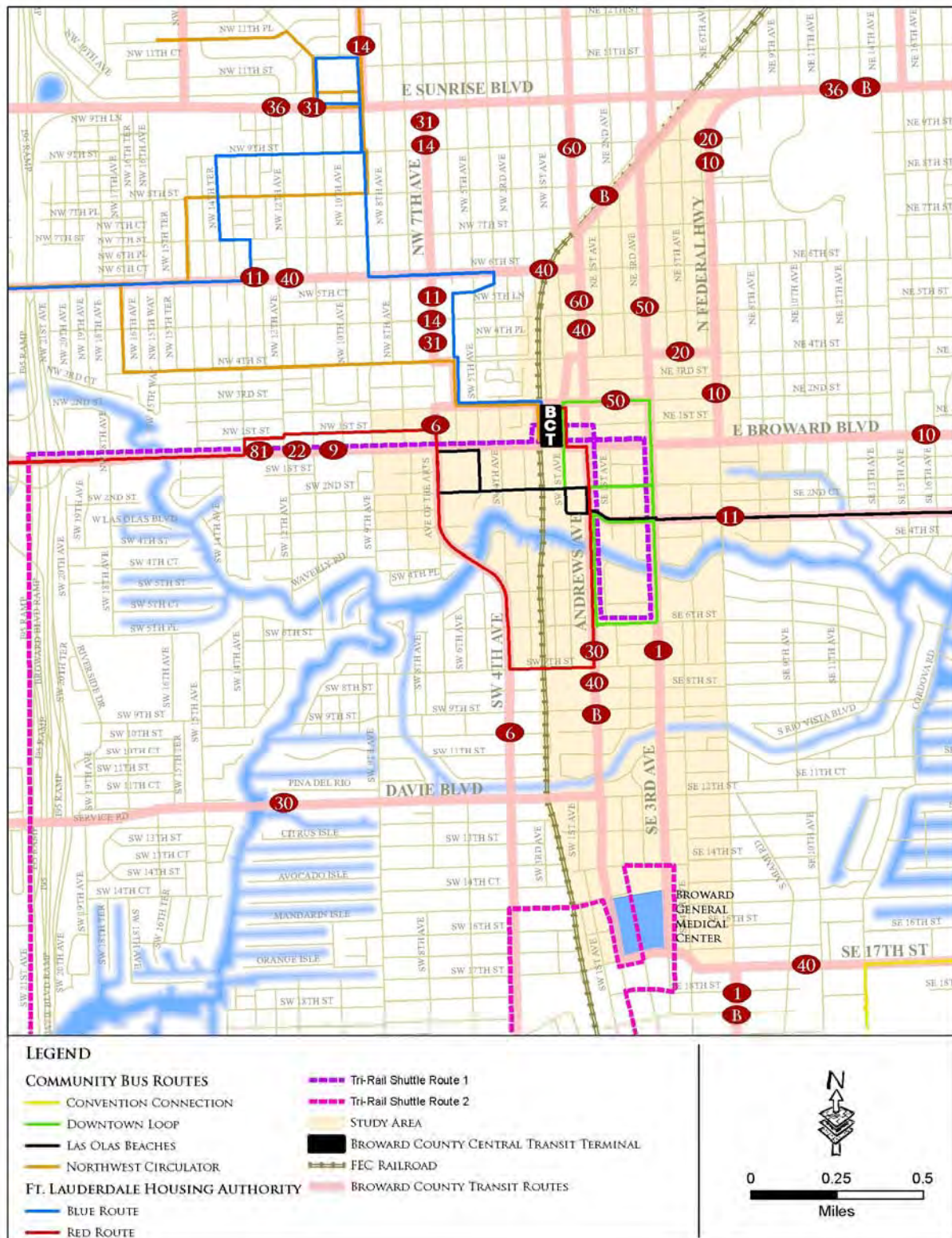
Traffic congestion exists throughout the study area, with three study intersections (W 7<sup>th</sup> Avenue and Broward Boulevard, E 3<sup>rd</sup> Avenue and Broward Boulevard, and Federal Highway and Davie Boulevard) experiencing level of service (LOS) F conditions during at least one peak period of the day. In addition, another eight intersections experience LOS F conditions on at least one approach (*Fort Lauderdale Downtown Transit Circulator Study, Traffic Analysis Report*, Parsons Brinkerhoff 2007).

Analysis of traffic counts shows heavy volumes entering downtown from the west, north and south during the A.M. peak period. The counts also show heavy traffic volumes in the southbound direction on the north-south roadways north of Las Olas Boulevard, while south of Las Olas Boulevard, traffic is heavier in the northbound direction. On the major east-west streets, the heavier traffic occurs in the eastbound direction, which is reflective of drivers entering the downtown area.

The midday peak period is characterized by lower traffic volumes than during the A.M. and P.M. peak periods. Traffic congestion at intersections during the midday is usually not as severe as during the A.M. and P.M. peak periods. However, segments of Broward Boulevard, Davie Boulevard and SW 2<sup>nd</sup> Street experience traffic volumes during the midday peak periods that are as high as during the A.M. and P.M. peak hours. Traffic volumes during the midday peak period are evenly split in both directions of travel on most study area roadways. During the midday peak period, bridge openings are more frequent to allow for boats on the New River to cross below SE 3rd Avenue and S Andrews Avenue. Southbound traffic queues along SE 3rd Avenue resulting from bridge openings sometimes extend to north of Las Olas Boulevard, and traffic traveling along SE Second Street is also affected by the bridge openings.



Figure 4-1. Existing Roadway and Transit Service Network





The P.M. peak period peak traffic direction is the reverse of the A.M. peak period, but with higher levels of congestion than during the A.M. peak period. On average, P.M. peak period delays are approximately 35 percent higher than A.M. peak period delays, with vehicles traveling at an average speed of approximately 11 miles per hour (mph). The increase in delays is partly due to bridge openings during the P.M. peak period, along with heavy traffic on the approaches to Broward Boulevard.

The westbound traffic queue on Broward Boulevard gradually builds from I-95 to the west into the downtown core during the P.M. peak period. At its worst, the westbound queue extends on Broward Boulevard from I-95 all the way east to Andrews Avenue. The duration of this backup, however, is often short and the queue dissipates by the end of the P.M. peak period.

The roadway segments with the highest volumes and congested intersections during peak travel periods are located in the core of the study area between Broward Boulevard to the north, SE 6th Street to the south, Andrews Avenue to the west and Federal Highway to the east.

### 4.3 Future Roadway System Impacts

Traffic operations along the roadway system were initially evaluated for the No-Build Alternative, TSM Alternative, and the DTC Project's LPA at a planning level. The planning level analysis results are based on average weekday conditions forecast for 2030.

Future traffic projections were developed using the South East Regional Planning Model (SERPM). The model, which encompasses the tri-county region of South Florida, includes the cost feasible highway and transit improvements documented in the Long Range Transportation Plans (LRTP) for the three counties (Miami-Dade, Broward and Palm Beach) comprising the South Florida region. In addition to the improvements documented in the LRTPs, the DTC Project was incorporated into the model to develop future traffic volumes within the study area for the TSM Alternative and the LPA. Please note that for the purpose of forecasting traffic projections, the TSM Alternative and the LPA were modeled identically in SERPM, which is consistent with Federal Transit Administration (FTA) guidance, which require that streetcar circulators should not be modeled as operationally different than a bus operating along the same route. Therefore, the traffic forecasts and expected operations at a planning level are expected to be identical for the TSM Alternative and the LPA.

Overall, the projected daily traffic volumes and levels of service at a planning level are similar for the roadway segments within the study area between the No-Build Alternative and the TSM Alternative and LPA, with variations in projected daily traffic volumes between 1 and 4 percent (increase or decrease) depending upon location. The proposed station locations, connections to other transit routes, and the overall circulator alignment result in slight changes in the study area roadway traffic volumes. Some traffic volume reassignment occurs for the TSM Alternative and LPA as a result of pedestrian, vehicular and transit access to the stations.

The 2030 projected daily traffic volumes and associated levels of service at a planning level for study area roadways are shown in Appendix H.

### 4.4 Operational Micro-simulation Analysis

In addition to the planning level analysis of traffic operations, an operational micro-simulation analysis was performed for the DTC Project. The objective of the operational micro-simulation analysis was to further analyze the impact that the DTC Project will have on the traffic patterns within Downtown Fort Lauderdale. While the planning level analysis described in the previous section provides a broad view of changes in traffic volumes and level of service in Downtown Fort Lauderdale, the micro-simulation analysis examines individual elements of the transportation





network and their impact on each other. The micro-simulation model accounts for traffic movements at the intersections and the implications of having the proposed transit service running in mixed-traffic. The detailed results of the micro-simulation analysis can be found in the *Future Conditions (Year 2030) Traffic Analysis Report* (Parsons Brinckerhoff 2008).

#### 4.4.1 Micro-simulation Model Development

The following process was used to develop the traffic operation micro-simulation (VISSIM) model:

- Implementation of the DTC Project's LPA alignment and stops.
- Elimination of left turns at some intersections and implementation of additional traffic signals to reflect LPA requirements.
- Update of the existing traffic signal timing and phasing in order to optimize the traffic flow.
- Implementation of transit signal priority technology to facilitate operation of the DTC Project through the roadway network.
- Update of the traffic volumes and turning movements at intersections to reflect future traffic patterns.

A VISSIM model developed for analysis of existing conditions was used as a base to evaluate traffic operation for the No-Build Alternative and the TSM Alternative and LPA for 2030 conditions. The afternoon peak hour (P.M. peak period) was selected for the analysis based on the results of the existing conditions planning level analysis, which identified the P.M. peak period as the most congested time of day.

#### 4.4.2 Future Network

The micro-simulation model was modified to incorporate roadways that will be used by the DTC Project. Left-turn prohibitions were added at certain locations where required to accommodate changes to traffic movements upon implementation of the DTC Project.

#### 4.4.3 Signal Optimization

*Synchro Version 7.0* was used to develop and optimize future signal phasing and timings for the intersections within Downtown Fort Lauderdale based on projected traffic volumes and roadway and intersection geometry. The three main north-south facilities (Andrews Avenue, East 3<sup>rd</sup> Avenue and Federal Highway) within the study area were coded to ensure optimization and coordination of signal timings. Signal coordination was also maintained on the major east-west facility, Broward Boulevard. The maximum cycle length was set to 160 seconds at intersections with major cross-streets and 80 seconds at intersections with minor cross-streets in order to facilitate coordination between signals. Because the DTC Project will operate in mixed-traffic, special provisions were not required in the *Synchro* model. Optimized traffic signal phasings and timings obtained from the *Synchro* model were then input into the *VISSIM* micro-simulation model to evaluate the operations of the No-Build Alternative and the TSM Alternative and LPA. Subsequent modifications were made to the traffic signal phasings and timings in the *VISSIM* micro-simulation model based on observations of the traffic simulation.

#### 4.4.4 Transit Signal Priority System

Transit Signal Priority (TSP) was included in the *VISSIM* micro-simulation model for the DTC Project in order to facilitate the circulation of transit vehicles along the roadways under study. One of the advantages of using transit signal priority is that it improves the quality of the transit service while minimizing impacts to the vehicular traffic on the non-priority approaches to intersections.



#### 4.4.5 Results of the Micro-simulation Analysis

The micro-simulation operations analysis confirmed that delays for intersections within the study area are not significantly different between the No-Build Alternative and the TSM Alternative and LPA. For the TSM Alternative and LPA, capacity at intersections will also be impacted by the implementation of a TSP system that will facilitate the progression of the proposed transit service at critical bottlenecks.

The results of the micro-simulation operational analysis were used to identify two types of mitigation measures. The first type of mitigation measure looked at potential physical improvements or changes to the roadway geometry that could be implemented within the right-of-way to facilitate traffic flow and the operation of the DTC Project. These mitigation measures include intersection improvements such as increasing queue lengths and traffic signal timing modifications. The second type of mitigation measure focused on travel demand management (TDM) strategies within Downtown Fort Lauderdale. TDM strategies could encourage the use of the transit circulator to reduce automobile use within downtown. TDM strategies could also encourage downtown commuters to park their vehicles outside of the downtown core, thereby reducing the number of vehicles within the downtown core. Internal circulation within the downtown core would be provided by the proposed transit circulator.

#### 4.5 Transit Service Impacts

Public transit impacts are measured by their effect on the quality of transit service provided. The quality of service measures include geographic coverage, service hours and frequency, transit trip times, transit travel-time changes, transfers required, system reliability, passenger comfort, and safety.

##### 4.5.1 Geographic Coverage

The DTC Project's LPA adds transit coverage to the area bounded by the Florida East Coast (FEC) Railroad on the west, Federal Highway on the east, N Flagler Drive on the north and SE 17th Street on the south, due to the increased capture area assumed for rail (streetcar). The DTC Project's service area includes all of Downtown Fort Lauderdale and is divided horizontally by the New River. The alignment of the LPA runs along Andrews Avenue and NE 3rd Avenue between SE 17th Street and NE 6th Street. Direct access is provided between the DTC Project and the Broward County Central Transit Terminal, which is located on the northwest corner of Broward Boulevard and NW 1st Avenue/Brickell Avenue. This connection will provide access to regional transit service for downtown residents, workers, and visitors.

##### 4.5.2 Quality of Transit Service

Transit service quality is determined by travel time, travel costs, reliability, aesthetics, perception and the physical comfort of travel. The comfort of travel is affected by transit-stop facilities and amenities, vehicle aesthetics, ride smoothness, adequate space or crowding on vehicles or at stops, seating versus standing in vehicles or at stops, platform wait time, air conditioning and protection from weather. Compared to the existing bus service, the DTC Projects' LPA would offer many improvements related to quality of service, such as increased seating capacity and shorter wait times. While waiting for transit service, riders will enjoy improved transit-stop facilities and amenities, including weather protection and seating.

The DTC Project's LPA's streetcar would have a seating capacity of 40 passengers with an additional standing capacity of 115 passengers for a total capacity of approximately 155 passengers. In contrast, the buses under consideration for the TSM Alternative would have reduced seating



capacities. A standard bus, similar to the buses operated by BCT, has a seating capacity of 40 passengers with additional standing capacity of 20 passengers, for a total capacity of 60 passengers. However, it is unlikely and impractical that a standard bus can operate effectively along the proposed LPA alignment within the dense urban environment of Downtown Fort Lauderdale, due to the stop-and-go traffic associated with heavy traffic volumes, closely spaced intersections and frequent transit stops, along with the tight turning radii at several intersections along the alignment. A more appropriate vehicle to operate for the TSM Alternative within Downtown Fort Lauderdale would be a smaller shuttle-type bus with a reduced seating capacity of approximately 28 passengers with additional standing capacity of 12 passengers, for a total capacity of 40 passengers. Hence, the DTC Project's LPA would have a much higher passenger capacity within the proposed alignment, would offer a higher level of comfort and quality of transit service, and would achieve operational efficiencies.

#### 4.6 Transit Ridership

This section presents the transit ridership forecasts for the DTC Project's alternatives for the project's opening year (assumed to be 2015 for the purpose of ridership forecasting) together with an analysis of the anticipated ridership for the long-range forecast year of 2030. Within the context of an FTA Small Starts Alternatives Analysis, project alternatives were analyzed for the opening year. The DTC Project's LPA was then analyzed for 2030 versus the No-Build and TSM Alternatives to comply with the NEPA requirements. Ridership forecasts were developed using a hybrid "market" approach which combined the forecasts obtained from the regional travel demand model (Florida Standard Urban Transportation Model Structure (FSUTMS) SERPM v6.02, which is the current version of SERPM in effect at the time of the analysis) with additional "off model" analysis designed to address markets which SERPM is not appropriately sensitive to. In particular, SERPM did not address two key markets of the Downtown Fort Lauderdale Central Business District (CBD):

1. Non-motorized (walk and bike) trips generated in the trip generation and trip distribution steps of SERPM but removed from the model prior to mode choice and assignment. This population of trips is significant in the Downtown Fort Lauderdale CBD area.
2. Special generator venues and special events in the Downtown Fort Lauderdale CBD which the SERPM model data does not sufficiently reflect.

One additional complication leads to potential confusion when evaluating different alternatives: for the purposes of analyzing ridership, FTA Small Starts rules for User Benefit calculations require that downtown-type streetcar circulator services cannot be modeled as operationally different from a bus over the same route (i.e. the TSM or "Baseline" Alternative). The incremental user benefits between the LPA (streetcar) and TSM/Baseline (bus) Alternatives can only consist of asserted "un-included attributes" benefits, which the travel demand model cannot be appropriately sensitive to.

The ridership forecasting approach recognizes three categories of "un-included attributes" associated with the DTC Project's LPA: (1) guideway-like characteristics, (2) span of good service, and (3) passenger amenities. Depending on the characteristics of the project for each of these three categories, a lump-sum credit is assigned, which is expressed as equivalent minutes of travel time savings for each project trip and a discount on the weight used to describe the burden of each minute of in-vehicle time for each project trip. The maximum values of these adjustments are 15 minutes of time savings for each project rider and a 20 percent discount on the travel time.

Proposed projects that have fewer "un-included attributes" (little separation from mixed traffic, limited span of good service, and few guideway-like features) will be assigned smaller adjustments. Regardless of the "un-included attributes" adjustments applied for a particular project, this forecasting approach only applies full adjustments for guideway-only trips while applying reduced





adjustments for guideway trips that depend on local buses for either access or egress to the system. These adjustments are made to the forecasts derived from the regional travel model (SERPM in this case). Consequently, these adjustments yield additional user benefits for the riders predicted to use the proposed project – and hence the cost-effectiveness of the project – but do not change the predicted number of riders. Therefore, for ridership forecasting purposes, SERPM forecasts for the TSM/Baseline Alternative and the LPA are identical; the differences between these alternatives are generated entirely by the “un-included attributes” post-processing step.

The alternatives evaluated for ridership were operational variations of the same alternatives described in Chapter 2. A series of “sensitivity runs” for different service frequencies was completed to fine-tune the alternatives. The following sensitivity operational variations were analyzed:

- No-Build
- TSM/Baseline (bus) with 7½-minute headways all day
- LPA (streetcar) with 7½-minute headways all day
- Sensitivity Variation #1: LPA (streetcar) with 7½-minute headway in peak periods and 10-minute headways all other times
- Sensitivity Variation #2: LPA (streetcar) with 10-minute headway in peak periods and 15-minute headways all other times.

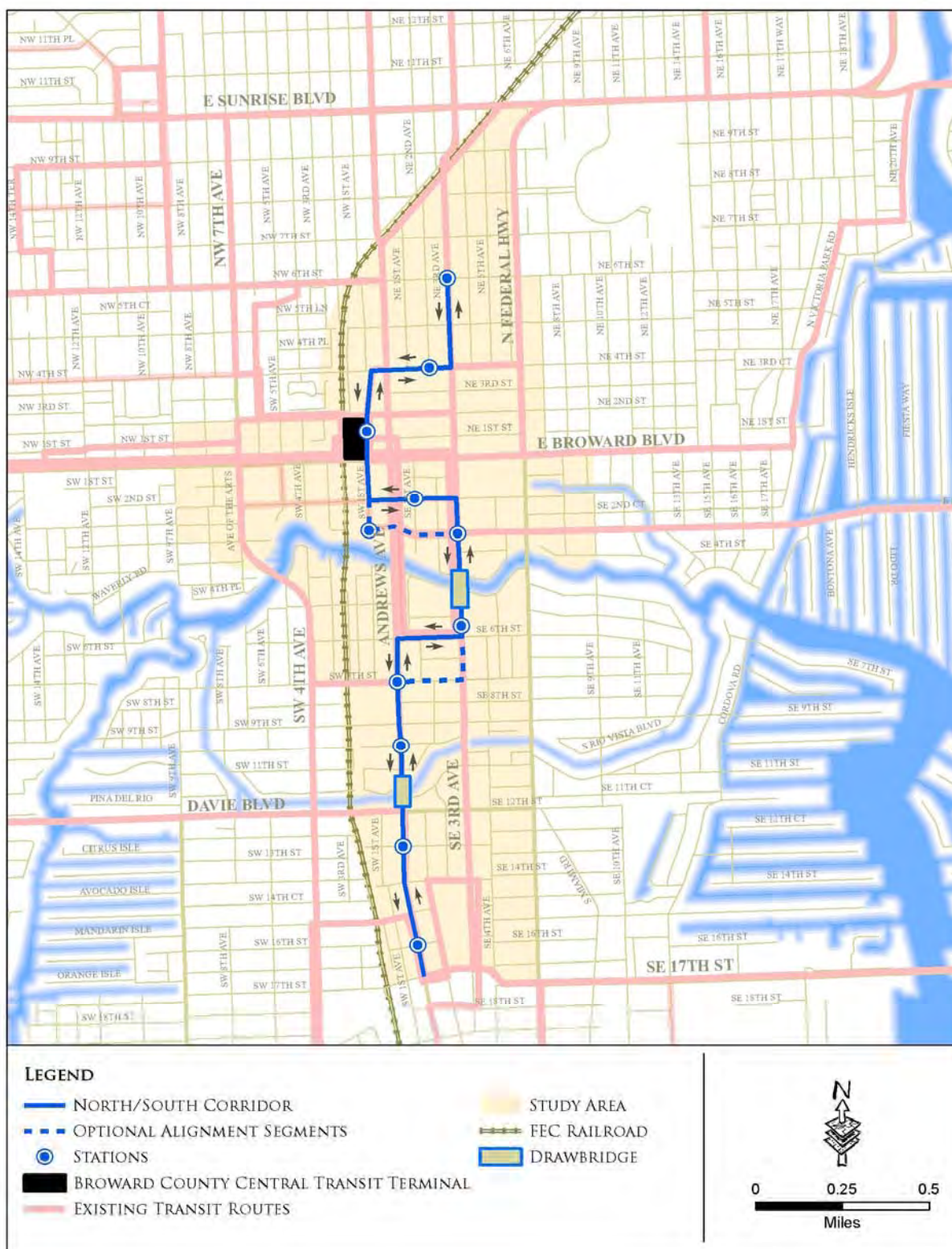
The SERPM model forecasts daily transit ridership for an “average weekday.” The transit trips are expressed in linked transit trips. A linked passenger trip includes all travel segments from trip origin to final destination as a single trip, regardless of transfers or intermediate destinations. These linked passenger trips provide an estimate of people using the transit system. Total regional transit ridership includes trips by bus or rail in Miami-Dade, Broward, and Palm Beach Counties. For each alternative, total transit trips include passengers who shift from one transit service to another in response to service changes and passengers who shift from automobiles to public transportation in response to transit service improvements.

#### 4.6.1 Opening Year Ridership

SERPM was used to develop travel forecasts for the expected opening year (2015 for the purpose of ridership forecasting) of the DTC Project. Years 2000 and 2030 population and employment projections were readily available from the existing SERPM dataset; 2015 population and employment data were estimated by interpolating between 2000 and 2030 data using a linear growth rate. These estimated population and employment data were subsequently used to develop the ridership estimates for the No-Build and the TSM/Baseline Alternative for 2015.

With the DTC Project’s LPA, a new transit mode (streetcar) is introduced to the region. As described earlier, FTA prescribes that downtown-type streetcar circulator services do not operate with any measurable operational benefit (i.e. faster or more frequently) than a corresponding bus service, if the streetcars operate in the same right-of-way. Therefore, when estimating ridership and transportation system user benefits, the only allowable differences between bus and streetcar over the same alignment is a series of “un-included attribute” adjustments which capture the less-measurable benefits of the streetcar system. The alignment for the TSM/Baseline and LPA alternatives is illustrated in Figure 4-2.

Figure 4-2. Transportation System Management Alternative Alignment







#### 4.6.1.1 2015 Total Daily Person Trips and Transit (Linked) Trips (SERPM Model)

The estimated average daily transit ridership from SERPM for the alternatives (No-Build, TSM/Baseline, and LPA) was summarized for all transit modes within the tri-county area (Miami-Dade, Broward, and Palm Beach Counties) for 2015. Throughout the region, introduction of a circulator route in the Downtown Fort Lauderdale CBD (bus or streetcar) would have a negligible increase on transit share on a regional or even countywide basis; however, there is a slight increase in transit share for trips heading to, from, or within Downtown Fort Lauderdale. The most frequent service level variation (7½-minute headways all day) for the LPA would increase the transit trips in the region by approximately 330 new transit riders region-wide.

The ridership forecasts from the SERPM model do not include additional trips arising from the non-motorized/short trip market or the special generators in Downtown Fort Lauderdale. Moreover, since the TSM/Baseline and LPA/Build alternatives are identical in the SERPM model (as explained previously per FTA rules), the results for these two alternatives are identical. Table 4-1 shows the 2015 Daily Projected Person and Transit Trips.

**Table 4-1. 2015 Daily Projected Person and Transit Trips**

Alternative:		No-Build	TSM/Baseline	LPA/Build		
Project Service Headway:		n/a	7.5/7.5	7.5/7.5	7.5/10	10/15
Regionwide (3-county)	Total Person Trips	20,592,882	20,592,882	20,592,882	20,592,882	20,592,882
	Total Transit Trips	423,883	424,212	424,194	424,178	424,101
	Transit Share	2.1%	2.1%	2.1%	2.1%	2.1%
Within Broward County	Total Person Trips	6,098,296	6,098,296	6,098,296	6,098,296	6,098,296
	Total Transit Trips	81,799	82,083	82,083	81,997	81,997
	Transit Share	1.3%	1.3%	1.3%	1.3%	1.3%
To/From Ft. Lauderdale CBD	Total Person Trips	386,488	386,488	386,488	386,488	386,488
	Total Transit Trips	10,508	10,743	10,743	10,723	10,679
	Transit Share	2.7%	2.8%	2.8%	2.8%	2.8%
Within Ft. Lauderdale CBD	Total Person Trips	30,635	30,635	30,635	30,635	30,635
	Total Transit Trips	591	675	675	669	651
	Transit Share	1.9%	2.2%	2.2%	2.2%	2.1%

#### 4.6.1.2 2015 Daily Region-Wide Person Trips by Purpose

The estimated 2015 daily transit and highway person trips for the entire region (Miami-Dade, Broward, and Palm Beach Counties) are broken down into three purposes and by peak and off-peak periods. The first of these purposes, home-based work trips, includes all trips involving a person between their home and their place of work. The second purpose, home-based other trips, involves all trips between a person's home and any place other than work. Non-home-based trips, the third purpose, cover the trips which do not begin or end at a person's home.

Table 4-2 compares transit, highway and total trips by purpose between the No-Build, TSM/Baseline, and LPA for the DTC Project.



**Table 4-2. Purpose-based Regional Daily Trips – 2015**

	Regional Transit Trips		Regional Highway Trips		Total Regional Person Trips	
	No-Build	TSM /LPA Alternative	No-Build	TSM/LPA Alternative	No-Build	TSM/LPA Alternative
Home-based Work Peak	116,231	116,309	2,636,235	2,636,157	2,752,466	2,752,466
Home-based Other Peak	67,105	67,146	4,628,437	4,628,397	4,695,542	4,695,543
Non-Home-based Peak	32,364	32,438	1,720,131	1,720,057	1,752,495	1,752,495
Peak Period Trips	215,700	215,893	8,984,803	8,984,611	9,200,503	9,200,504
Home-based Work Off-peak	76,565	76,600	1,776,288	1,776,251	1,852,853	1,852,851
Home-based Other Off-peak	97,667	97,718	5,917,811	5,917,760	6,015,478	6,015,478
Non-Home-based Off-peak	33,951	34,001	3,490,098	3,490,051	3,524,049	3,524,052
Off-Peak Trips	208,183	208,319	11,184,197	11,184,062	11,392,380	11,392,381
Total Daily Trips	423,883	424,212	20,169,000	20,168,673	20,592,883	20,592,885 <sup>(1)</sup>

(1) – Difference of two trips from No-Build Alternative due to rounding.

As presented in Table 4-2, the DTC Project is estimated to increase the total regional transit trips by approximately 330. Most of these new transit trips (86 percent) will be within Broward County, since approximately 284 new transit trips are estimated for Broward County, as shown in Table 4-1. This relatively small change in regional trips is reflective of the more local nature of the DTC Project due to its relatively compact coverage area. As seen from the data, total daily person trips remain consistent between the alternatives since the same socio-economic dataset and, therefore, person trip table is used for both the No-Build Alternative and the TSM/Baseline Alternative and LPA.

The potential effect of the proposed LPA can also be seen in the transit share by trip purpose. Figure 4-3 presents that when DTC Project is added along the LPA alignment, the peak period non-home-based trip segment experiences the largest percentage increase in transit trips of approximately 0.23 percent over the No-Build Alternative. This same purpose was also the highest growth segment in the off-peak period, increasing by approximately 0.15 percent. These findings show that one of the markets that will benefit from the implementation of the DTC Project is the internal trips within Downtown Fort Lauderdale, such as midday trips from work to other downtown locations such as retail and eating establishments.



## Alternatives Analysis/Environmental Assessment Chapter 4 – Transportation Impacts

**Figure 4-3. Change in 2015 Transit Person Trips**

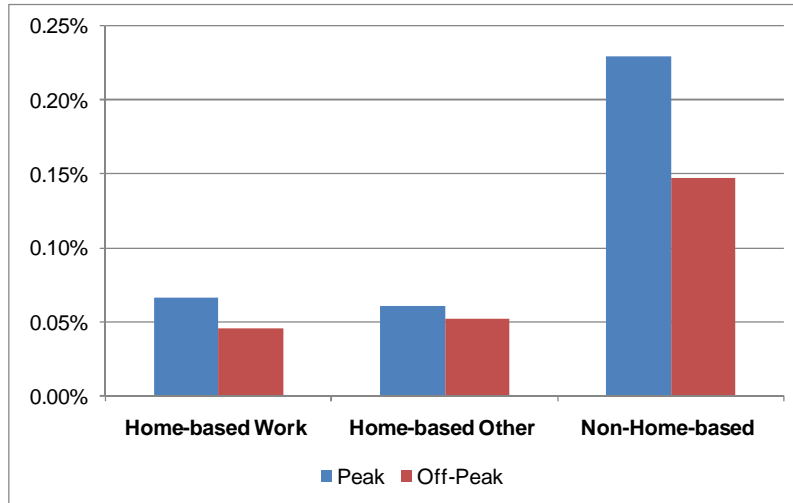


Table 4-3 presents a summary of the opening year (2015) forecasts. As indicated in Table 4-3, the DTC Project's daily ridership is expected to be approximately 3,200 in the opening year.

**Table 4-3. Summary of Opening Year Forecasts**

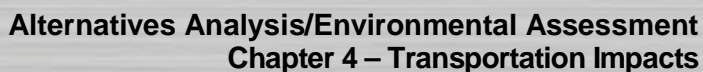
<i>Forecast Run Set</i> <i>Measure</i>	As Originally Modeled (SERPM only)	As modeled, plus Add-Ins for pedestrians and events	As modeled, plus Add-Ins for pedestrians and events	As modeled, plus Add-Ins for pedestrians and events
<i>Assumptions:</i>				
Service Headway ( <i>Peak/Offpeak</i> )	7.5/7.5	7.5/7.5	7.5/10	10.0/15
Assumed Unincluded Attribute Time	1 minute	2 minutes	2 minutes	2 minutes
Assumed In-Vehicle Time discount	0.05	0.10	0.10	0.10
Assumed Fare	\$1.00	\$1.00	\$1.00	\$1.00
Annualization Factor	303	303	303	303
Small Starts Adjustment (FTA-derived)	1.5	1.5	1.5	1.5
<i>Results:</i>				
Total Regional Person Trips (Daily)	20,592,882	20,598,993	20,598,993	20,598,993
Total Regional Transit Trips (Daily)	424,194	425,152	422,521	422,445
WAVE Trips (Daily)	2,247	3,207	3,051	2,445
<i>Percentage Change</i>			-5%	-24%
<i>Project Passenger Miles (Daily)</i>	2,287	3,008	2,842	2,241
<i>Project Passenger Miles (Annualized)</i>	692,961	982,827	932,529	750,426
Total Daily TSUB, Hours (vs TSM)	38	112	105	100
Annualized TSUB, Hours (vs TSM)	11,514	36,614	34,553	32,826
Adjusted Annual TSUB, hours (vs TSM)	17,271	54,920	51,830	49,239





#### 4.6.1.3 2015 Ridership by Station for the DTC Project's LPA

Figure 4-4 presents the estimated daily boardings at each of the proposed stations for opening year of the DTC Project. The total daily boardings for the DTC Project's LPA in 2015 (assumed opening year for purpose of ridership forecasting) are anticipated to be approximately 3,200, which includes the contribution from the regional model markets (SERPM) and the non-motorized (off-model) market. The Broward County Central Transit Terminal has the highest projected boardings along the alignment, with 994 daily boardings. Additional ridership contributions from special events are not included in this forecast since these events cannot be expressed as an average daily value.



The map displays the proposed North/South Corridor in Fort Lauderdale, Florida. The corridor is shown as a blue line running north-south, with stations marked by blue circles. Key streets shown include E Sunrise Blvd, E Broward Blvd, Davie Blvd, and SE 17th St. The map also shows existing transit routes (pink lines), the FEC Railroad (yellow line), and various water bodies (blue areas). A legend in the bottom left corner defines the symbols used: North/South Corridor (solid blue line), Optional Alignment Segments (dashed blue line), Stations (blue circle), Preferred M & SF Site (red rectangle), Study Area (yellow shaded area), Existing Transit Routes (pink line), FEC Railroad (yellow line), and Drawbridge (blue rectangle). A scale bar in the bottom right corner indicates distances up to 0.5 miles, and a north arrow is also present.

**LEGEND**

- NORTH/SOUTH CORRIDOR
- - - OPTIONAL ALIGNMENT SEGMENTS
- STATIONS
- PREFERRED M & SF SITE
- STUDY AREA
- EXISTING TRANSIT ROUTES
- FEC RAILROAD
- DRAWBRIDGE

0 0.25 0.5  
Miles



The DTC Project's No-Build, TSM/Baseline, and LPA alternatives were forecast for the 2030 long-range plan year using the same multi-market process. Although the region is in the process of adopting 2035 land-use forecasts, these forecasts were not approved at the time this analysis was performed.

Because this project is anticipated to be advanced using FTA Small Starts funding, the Transportation System User Benefits and Cost-Effectiveness analysis was only performed for the opening year (2015 for purpose of ridership forecasting), as per FTA requirements. Moreover, for the 2030 model runs, only the 7½- minute all-day headway variation was analyzed, since the other variations were only intended to be opening-year sensitivity tests.

#### 4.6.1.4 2030 Total Daily Person Trips and Transit (Linked) Trips (SERPM Model)

Estimated average daily transit ridership from the SERPM model for the DTC Project's No-Build, TSM, and LPA Alternatives was summarized for all of the transit modes within the tri-county area (Miami-Dade, Broward, and Palm Beach Counties) for the year 2030. Table 4-4 shows that, throughout the region, introduction of a circulator route in the Downtown Fort Lauderdale CBD (bus or streetcar) would have a negligible increase on transit share on a regional or even countywide basis; however, a slight increase is shown in transit share for trips heading to, from, or within the Downtown Fort Lauderdale CBD. The LPA would increase the transit trips in the region by approximately 445 new transit riders region-wide.

It should be noted that since these ridership forecasts are results entirely from the SERPM model, and the forecasts do not include the additional trips arising from the non-motorized/short trip market or the special generators within Downtown Fort Lauderdale. In addition, these ridership forecasts do not take into account the economic development anticipated to occur along the DTC Project's LPA's alignment, which is expected to result in the growth of population and employment within the "streetcar influence zone." Moreover, since the TSM/Baseline and LPA/Build alternatives are identical in the SERPM model (as explained previously per FTA rules), the forecasts for these two alternatives are identical.

**Table 4-4. 2030 Daily Projected Person and Transit Trips**

		Future Year (2030) Alternatives		
Alternative:		No-Build	TSM/Baseline	LPA/Build
Project Service Headway:			7.5/7.5	7.5/7.5
Regionwide (3-county)	Total Person Trips	25,785,416	25,785,416	25,785,416
	Total Transit Trips	540,709	541,154	541,154
	<i>Transit Share</i>	2.1%	2.1%	2.1%
Within Broward County	Total Person Trips	7,264,079	7,264,079	7,264,079
	Total Transit Trips	101,743	102,108	102,108
	<i>Transit Share</i>	1.4%	1.4%	1.4%
To/From Ft. Lauderdale CBD	Total Person Trips	463,841	463,841	463,841
	Total Transit Trips	13,153	13,416	13,416
	<i>Transit Share</i>	2.8%	2.9%	2.9%
Within Ft. Lauderdale CBD	Total Person Trips	43,032	43,032	43,032
	Total Transit Trips	894	991	991
	<i>Transit Share</i>	2.1%	2.3%	2.3%





#### 4.6.1.5 Additional (“Off-Model”) Markets

Similar to the analysis described previously for DTC Project for the 2015 ridership forecasts, a simple logit procedure was applied to estimate the portion of short-distance non-motorized downtown trips likely to use the TSM/Baseline (bus) alternative or the LPA (streetcar). Table 4-5 summarizes the contribution of this market to transit ridership in the study area. Event-driven trips were also estimated in a similar manner. Because it is difficult to forecast the growth of special events and venues in a long-range forecast, it was decided to use the same number of trips estimated for 2015 as a constant (if small) contribution to ridership for 2030. Approximately 71,000 additional annual streetcar trips were assumed to reflect this travel market.

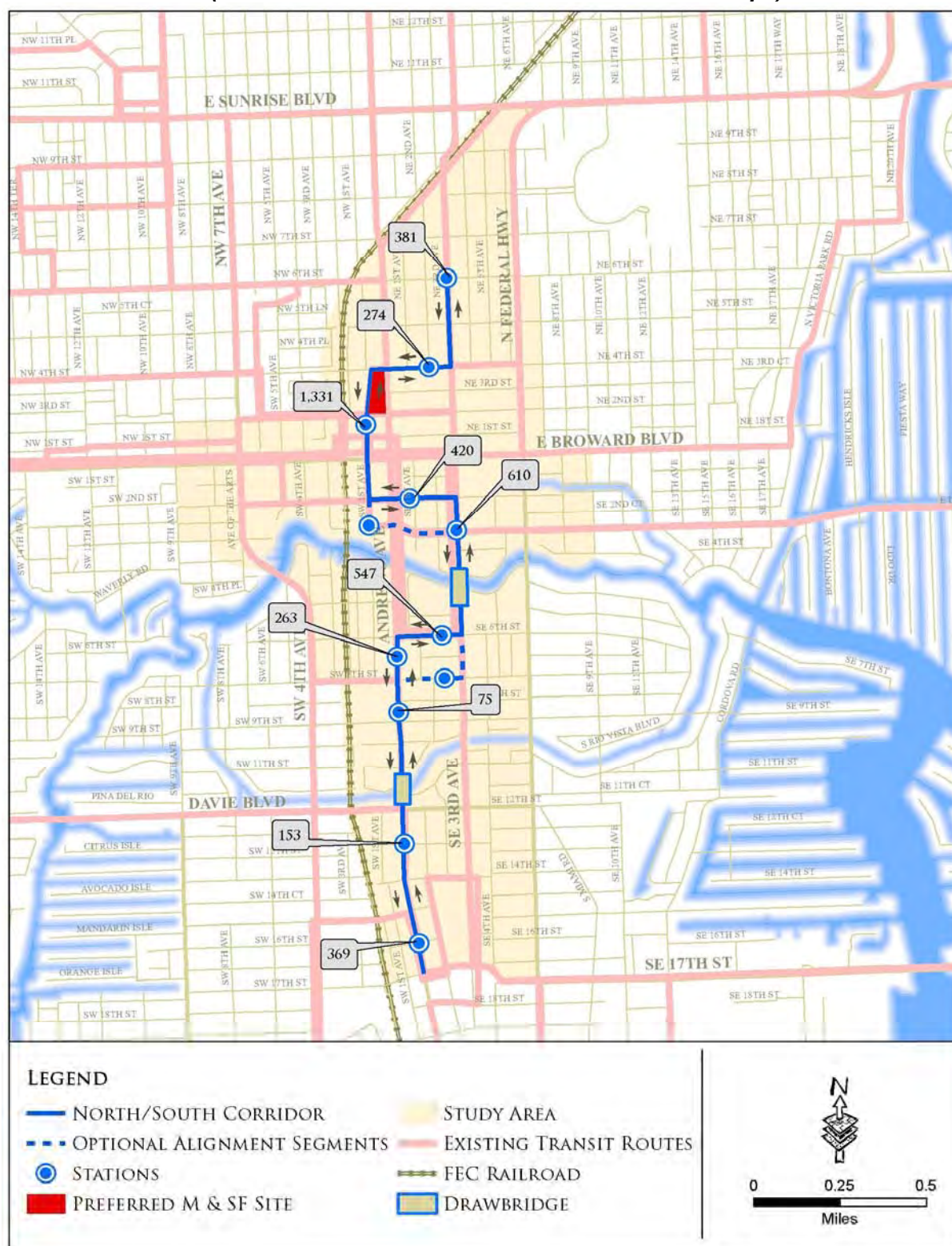
**Table 4-5. Trip Impacts from Non-Motorized Market, 2030**

Non-Motorized Market in Ft. Lauderdale CBD		Future Year (2030)		
Alternative:		No-Build	TSM/Baseline	LPA/Build
Project Service Headway:		n/a	7.5/7.5	7.5/7.5
Base Land Use	Person Trips	8,240	8,240	8,240
	Transit Trips (All Routes)	2,044	2,473	2,473
	Share	24.8%	30.0%	30.0%
	Project Trips (TSM-Bus or Streetcar)	-	1,288	1,288
	Share	0.0%	15.6%	15.6%

#### 4.6.1.6 2030 Ridership by Station for the DTC Project’s LPA

Figure 4-5 presents the estimated daily boardings at each of the DTC Project’s proposed stations in 2030. The total daily boardings for the DTC Project’s LPA in 2030 are anticipated to be approximately 4,400, which includes the contribution from the regional model markets (SERPM) and the non-motorized (off-model) market. Additional contributions from special events are not included in this figure since special events cannot be expressed as an average daily value.

**Figure 4-5. LPA Alternative Estimated Daily Boardings (2030)**  
(Includes SERPM Model + Pedestrian Off-Model Trips)





#### 4.7 Construction Impacts

Construction of the DTC Project is anticipated to start in 2014 and extend to 2016. Operation of the DTC Project is anticipated to begin in mid-2016.

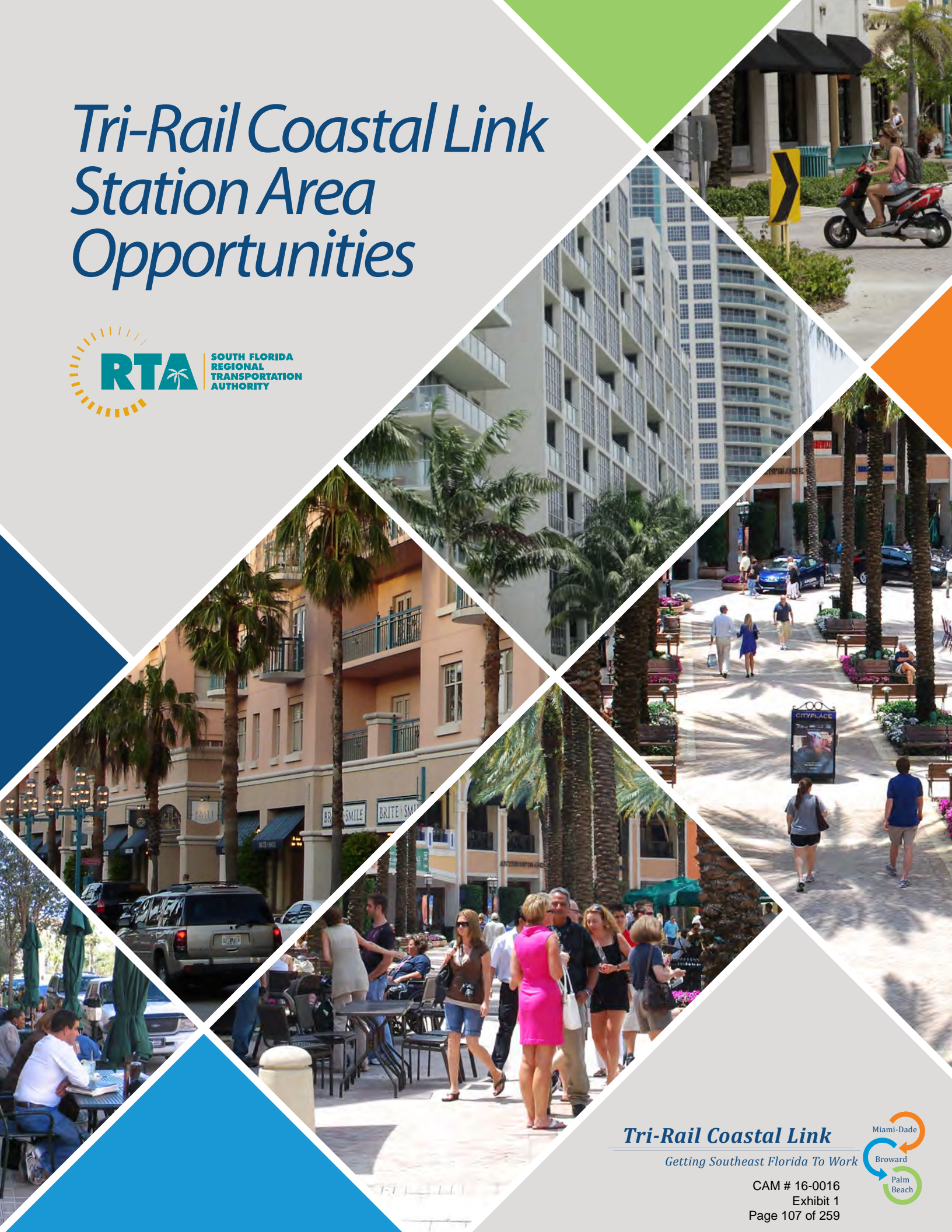
Potential transportation impacts from construction activity may result from temporary road narrowing or closings causing traffic to detour around or slow down near a construction site. Maintenance of traffic and pedestrian control/coordination would follow local jurisdiction guidelines. Access to businesses will be maintained to the maximum extent possible. Typical roadway construction traffic control methods will be followed including the use of signage and barricades. Temporary traffic signalization adjustments may be necessary when construction occurs at intersections. It is not anticipated that construction activities would routinely require closing roadways. If roadway closures are required, closure periods would be determined to minimize disruptions to traffic flow and impacts to businesses. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions.

The 3rd Avenue Bridge rehabilitation will require closing the bridge to vehicular traffic for approximately 6 months. The bascule leaves of the bridge would be locked in the open position to allow boats to travel up and down the New River. During construction vehicular traffic could be temporarily detoured from the 3rd Avenue Bridge to the Andrews Avenue Bridge or the Henry E. Kinney Tunnel (Federal Highway), which provide nearby alternative routes across the New River to the west and east, respectively. A small portion of the Riverwalk, which passes under and perpendicular to the 3rd Avenue Bridge, would also be closed during the bridge rehabilitation and pedestrians and bicyclists detoured. Construction materials used in the bridge rehabilitation work would be delivered to the construction area either by truck or by barge. These construction materials would be stored nearby on construction staging areas, which are likely to be county-, city-, or DDA-owned property.

The DTC Project's LPA also crosses the Tarpon River, but the existing bridge over the Tarpon River is a fixed low-level bridge which will require minimal construction modifications to accommodate the streetcar tracks and overhead catenary system.



# Tri-Rail Coastal Link Station Area Opportunities



**Tri-Rail Coastal Link**

*Getting Southeast Florida To Work*

CAM # 16-0016

Exhibit 1

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# Acknowledgements

The South Florida Regional Transportation Authority would like to acknowledge the Coastal Cities for their work preparing for Tri-Rail Coastal Link passenger rail service along the Florida East Coast railway corridor. We hope that this book tells the story about how your community will benefit from the Tri-Rail Coastal Link.



## South Florida Regional Transportation Authority

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Report Prepared by

**PARSONS  
BRINCKERHOFF**

April 2013

# *TOD Booklet Purpose*

Much work has been done by the communities along the Florida East Coast railway in anticipation of Tri-Rail Coastal Link passenger service. Many communities have engaged their citizens in discussions about their vision for the station areas, and how these station areas can connect to key destinations in their towns. This booklet is intended to summarize the work that has been prepared to date and provide information about the development potential for each station area. The book is divided into five sections:

1. TOD and Tri-Rail provides an overview of the opportunity to implement TOD along the Tri-Rail Coastal Link corridor.
2. Overview of TOD introduces the concept of TOD, its benefits, and principles for success.
3. Creating TOD: Station Typologies recommends TOD typologies that can be applied to stations along the corridor.
4. Proposed Stations provides specific analysis for the stations along the proposed Tri-Rail Coastal Link corridor.
5. Existing Tri-Rail Stations provides specific analysis for the stations along the existing Tri-Rail corridor.

## Section 1

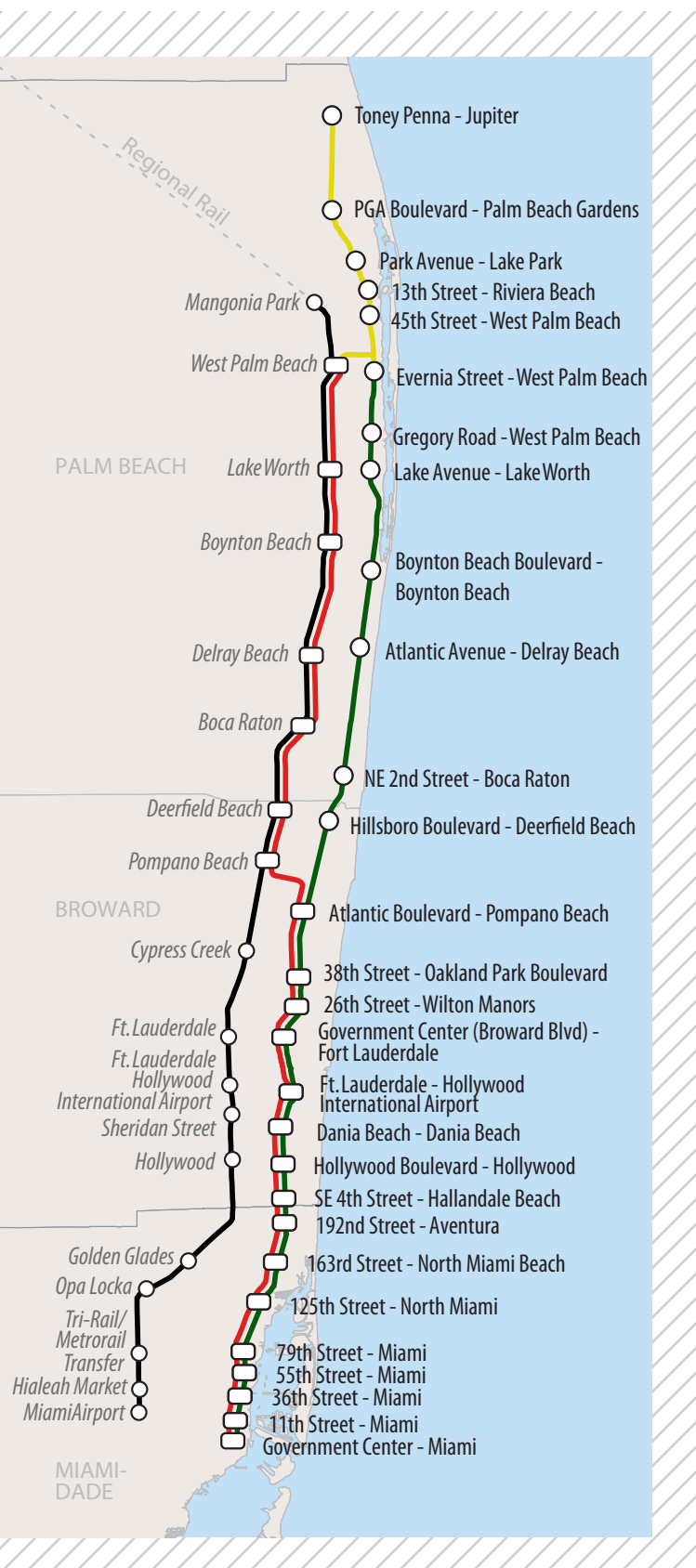
# *TOD and Tri-Rail*

Riding Tri-Rail is the preferred mode of transportation for many throughout South Florida. With the addition of the proposed Tri-Rail Coastal Link, this preference will grow stronger. The Tri-Rail Coastal Link is anticipated to increase access to transit for thousands of people who live and work along the Southeast Florida Coastline.

More than a means to get from point A to point B, the Tri-Rail Coastal Link capital investment connects livability, mobility, and transit by expanding the regional transit network in Southeast Florida. The Tri-Rail Coastal Link provides greater access to multiple destinations within numerous cities, neighborhoods, and activity centers between Jupiter in Palm Beach County and downtown Miami. It also connects the existing Tri-Rail service in the South Florida Rail Corridor along I-95 to the historic city centers along US 1. Currently, only 16 percent of the jobs within the region are reachable via transit in less than 90 minutes. With the Tri-Rail Coastal Link, downtown areas and neighborhoods will now be directly accessible by regional passenger rail. Improved access makes the area more attractive to businesses and improves the quality of life for residents.

This report explores the potential of the communities served by the Tri-Rail Coastal Link to leverage the transit investment. They can draw people into their communities by creating new, vibrant livable places around the transit stations. Known as Transit Oriented Development (TOD), this walkable, mixed-use development pattern can transform an auto-dependent place into one with value and character: a place people want to be.





## Seizing the TOD Opportunity

The 28 proposed station locations for the Tri-Rail Coastal Link on the Florida East Coast Railway vary significantly in character, creating unique attributes and market potential for TOD. They also present a variety of development types, including greenfield sites, low-density suburban communities, downtown business districts, and high-density urban development. This variety provides opportunity, as does the permanent nature of fixed-guideway transit. Fixed-guideway transit has significantly greater potential over bus transit to catalyze development because it is seen as a permanent investment in a corridor.

The Tri-Rail Coastal Link Station Area Market and Economic Analysis report indicates that between 2015 and 2025, the station locations have an incremental value—based on development and unit values—of approximately \$2.66 billion, which equates to approximately 4,100 additional dwelling units and 8.5 million additional square feet of commercial development.

To realize this regional benefit, however, the transit system must have the following key attributes:

- The quality of the train experience must be high enough that people are willing to leave the comfort of their automobiles.
- There must be significant time savings realized by taking the commuter rail train over driving.
- In less developed areas, there must be parking available at the station sites.





*Midtown Miami*

Within the proposed Tri-Rail Coastal Link corridor, the foundation on which to build TOD already exists. Boca Raton, Delray Beach, Lake Worth, and Hollywood are communities built on grids of streets forming the backbone of walkable urbanism. West Palm Beach, Fort Lauderdale, 54th Street, 36th Street in Midtown Miami, and downtown Miami all have walkable, mixed-use centers with a variety of housing choices.



*Washington, DC*

## Increased Desire for Walkable Urban Centers

Walkable places have a higher value than places that are non-walkable. A 2012 Brookings Institution study of walkability in the Washington, DC, region found that on a scale of 1 (completely non-walkable) to 5 (very walkable), renters would pay about \$300 more for an apartment that scored a "2" over a "1" and \$1,200 more for an apartment that scored a "5." Each step on the scale equated to an 80-percent increase in retail sales and a \$9-per-square-foot increase in office space.

“”

Cities and neighborhoods with the highest land values are those where people can easily interact and connect both within neighborhoods and to destinations outside and they have held their land value even in the recession.

~ Are We There Yet? Creating Complete Communities for 21st Century America (Reconnecting America)



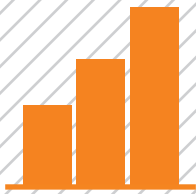
Hollywood



West Palm Beach

Nationally, the market for TOD is strong. More and more people prefer to live in urban centers that are compact, walkable, and have a mix of uses and services—the exact type of place that TOD creates. Currently, the demand far exceeds the supply: according to a 2011 article in *The Atlantic* magazine, a third of American households want to live where they can own fewer cars, but less than 10 percent can find housing in these locations.

Market demand is expected to grow as baby boomers age and younger generations embrace a more urban lifestyle that does not include rely on owning a car. According to AARP, by 2030, 20 percent of Americans will be over the age of 65, of which one in five will not drive. Between 2001 and 2009, the average annual vehicle miles traveled for young people decreased by 23 percent (based on a 2012 study by the US Public Interest Research Group and the Frontier Foundation). According to research by the Center for Transit-Oriented Development, by 2030, 25 percent of people in the rental or housing market will be seeking housing near transit.



# How Will the Region Benefit from Tri-Rail Coastal Link?

## *Economic Benefits:*

- *\$580 million in new residential development*
- *\$850 million in new commercial development*
- *\$18 million in tax revenue from new development*
- *5,000 new construction jobs*
- *\$250 million in labor income*
- *\$630 million in overall economic output*
- *28,000 new permanent jobs*

## *Transportation Benefits:*

- *\$140 million in time savings*
- *\$12 million in fuel savings*
- *\$11 million in vehicle operating savings*

## *Regional Mobility:*

- *Significantly increase regional mobility* where only 16 percent of jobs are reachable via transit in less than 90 minutes

## *Environmental Benefits:*

- *The service will reduce vehicular emissions by approximately 2,300 tons of CO<sub>2</sub> per year*

## *Fiscal Conditions:*

- *Cost of public infrastructure and services reduced through more compact, mixed-use development and the ability to create a more stable and higher-value regional real estate market as a result of greater transit proximity for new and existing properties in station areas*

## Section 2

# Overview of TOD

## What is Transit-Oriented Development?

Transit-Oriented Development aligns transit investments with a community's vision for how it wants to grow. Characterized by a mix of uses, more-intense development, and walkable streets within a ½ mile of transit (a typical 10-minute walk), TOD promotes activity around the clock and brings potential riders closer to transit facilities.

TOD enables people who live and work there to walk more, use transit more, and own fewer cars than the rest of the larger community. People who live in a TOD are five times more likely to commute by transit than other residents. Locations next to fixed-guideway systems, such as Tri-Rail corridors, also maintain land value as experienced during the recent recession.

## Benefits of TOD

Communities can make significant progress toward improving their quality of life by linking transit and land use. TODs increase mobility choice and reduce transportation costs. By creating “activity nodes” linked by transit, TOD creates more options for travel, especially for those who cannot or choose not to use a car. Residents living in transit-rich neighborhoods spend 16 percent less on transportation than those living in auto-dependent neighborhoods—according to a study by the Center for Transit-Oriented Development—saving an average of \$9,500 per household. Since transportation is the second-largest household expense, the reduction in transportation costs effectively increases disposable household income.

TOD increases health benefits and public safety by making walking more convenient than driving and providing infrastructure that supports walking and biking. According to recent studies, people who live in neighborhoods within an easy walk of shops and businesses are 7 percent less likely to be obese. The increased activity provides “eyes on the street” throughout the day and evening, thus helping to increase safety for pedestrians, transit users, and others.

### Transit Access Reduces Transportation Costs and Increases Discretionary Income

Transit-Rich Neighborhood



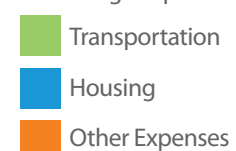
Average US Family



Auto-Dependent  
Neighborhood



Percentage Expenditure:



Source: Center for Transit-Oriented Development



# Principles for Successful TOD

Planning and implementing successful TOD involves many small decisions that directly influence the land use, circulation, urban form, and overall performance of a place. **Six basic principles define the essential characteristics of successful TODs.** While these principles should be applied to create a transit-supportive environment surrounding each of the station areas, TOD must be customized to be compatible with a community's character and aspirations.



## 1 Medium- to high-density development

Density is about scale, with the goal of creating a compact walkable district. TOD has a higher net average density than the community average, with highest densities located closest to the transit station. Higher densities increase ridership by providing access to more people, and create an active place where people want to be.



## 2 A mix of land uses

Concentrating a mix of land uses creates an interesting place with a variety of destinations allowing people to live, work, and play in the same place. A transit-supportive environment includes a mix of residential, commercial, service, employment, and public uses. Employment uses should be located closer to transit: people are willing to walk further to get to their homes.



## 3 Compact, high quality pedestrian-oriented environment

Every transit trip starts and ends with a pedestrian trip. "Calming" streets by reducing traffic speeds, activating the street with active ground-floor uses, and adding amenities—storefront windows, awnings, architectural features, lighting, and landscaping—help create a comfortable pedestrian environment.





## 4

### An active defined center

Defined centers create an 18-hour place by offering multiple attractions and reasons for pedestrians to frequent the area both day and night. Centers must have both a dense mix of uses and a sense of place and community so that people choose to gather there. A cohesive, active center can be created by planning TOD as a district rather than individual projects.



## 5

### Limited, managed parking

Abundant and inexpensive parking motivates people to drive rather than use transit. By creating a more managed parking supply and moving parking from surface parking lots to on-street parking and structures, residents, shoppers, and employees are encouraged to use transit and to walk once they reach their destination.



## 6

### Public leadership

The public sector must lead the TOD effort before the private sector is willing to commit time and money. Public leadership is needed from when a station area is being developed throughout the life span of the station area. A collaborative and enabling approach—with the use of new innovative tools to complement and enhance planning efforts—makes for successful implementation.

# TOD Timeline

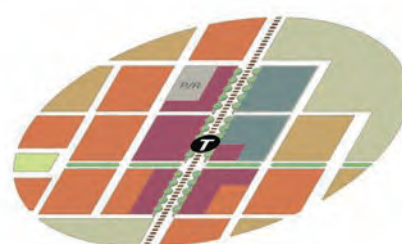
TOD is an evolutionary process: development in the right form, function, and location does not occur overnight. Planning begins well before transit construction is underway and service commences. It can take years, sometimes decades, for planning and development to achieve high-performing TOD. **Generally speaking, there are five key phases involved in creating successful TOD.** TOD planning and development should progress at the same pace as the planning and development of the transit project. As the certainty of the transit investment increases, so should the strength of the planning.

## 1 Before the Plan



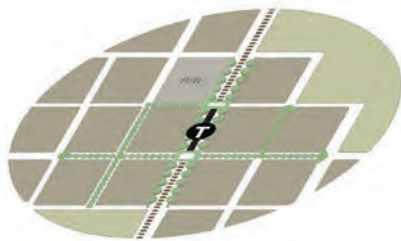
When a region and its communities decide to pursue high-capacity transit, the TOD discussion should also begin. A public discussion focused on the question, “How do we want to grow and how can transit help us get there?” can help identify important places to serve, opportunities for redevelopment, and potential station locations. An overall TOD corridor vision and strategy can help define the different roles each station will play in the corridor (i.e., employment district, health care focus, etc.). This coordinated approach will help ensure that the station area visions complement, rather than compete, with each other so the full economic development potential of the overall corridor can be reached.

## 2 The TOD Plan



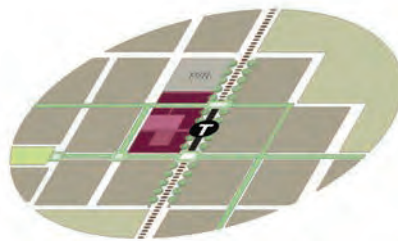
With TOD, one size does not fit all. TOD plans can specify details about desired land uses, density, urban form, and pedestrian amenities—all elements to facilitate and encourage the use of transit as well as creation of high quality, desirable places. Ideally, TOD plans and associated guidelines are adopted into land use policy and require future development to be consistent with TOD principles. An implementation strategy should be part of TOD plans and provide a road map on how to make the plan reality, including roles and responsibilities of various partners.

### 3 Public Improvements near the Station



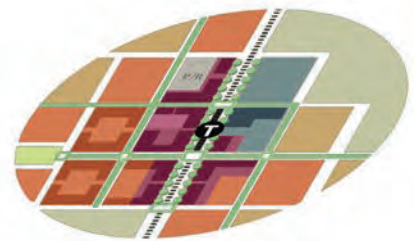
As transit infrastructure construction begins (platform, stations, and tracks), additional public realm station area improvements, such as pedestrian crossings and connections near station platforms, should also be made. By enhancing walkability and supporting future TOD, these public improvements lay the groundwork for assuring easy access to transit stations. Although some improvements may not be considered TOD supportive on the surface, such as surface parking, they facilitate future TOD as the market matures. It is also during this phase that TOD implementation begins in full force, through TOD regulations and incentives, and identified and prioritized TOD opportunity sites.

### 4 Partnerships and Improved Amenities



As the transit line matures, interest in development along and near the line will likely increase. Government and its partners will need to take the lead in managing and encouraging TOD to ensure that development consistent with TOD principles is built. Regulations, incentives, TOD pilot projects, and the provision of public amenities, such as parks and streetscape improvements, can promote TOD and high quality station places where people want to live, work, and play.

### 5 Built TOD Districts



As TOD districts reach build-out, there will be instances where additional mixed-use/residential infill, redevelopment, parking structures, pedestrian improvements, and open space are desired. Although government and non-profit partners will still have a role in implementing TOD, more specialized TOD developers will emerge, broadening the pattern of TOD throughout the corridor.

## Section 4

# *Proposed Stations*

The following pages summarize the proposed 28 station areas in the Tri-Rail Coastal Link corridor. A land use typology was applied based on a vision for each station area as identified by stakeholders during public planning efforts. The visions describe future areas of change, access and connectivity improvements, and the future urban form of the station area. The future economic impact of the proposed station is also shown. The station area today is described as well.

The proposed Tri-Rail Coastal Link stations have different forms, functions, and characteristics within their respective communities and the larger region. The typologies and station area summaries reflect these differences. In addition, the station areas are in varying stages of “readiness” to become successful TODs. Some are more suburban in character, while others are more urban. Others serve to support major regional destinations and are as fully developed as they will ever be.

As the Tri-Rail Coastal Link project moves from planning to design to construction and finally to operation, the creation of transit-supportive communities will also progress as described in the TOD Timeline (page 10). Taking the next step to move the TOD station area visions from planning to implementation can be enhanced by developing a cohesive, regional strategy to support local actions.

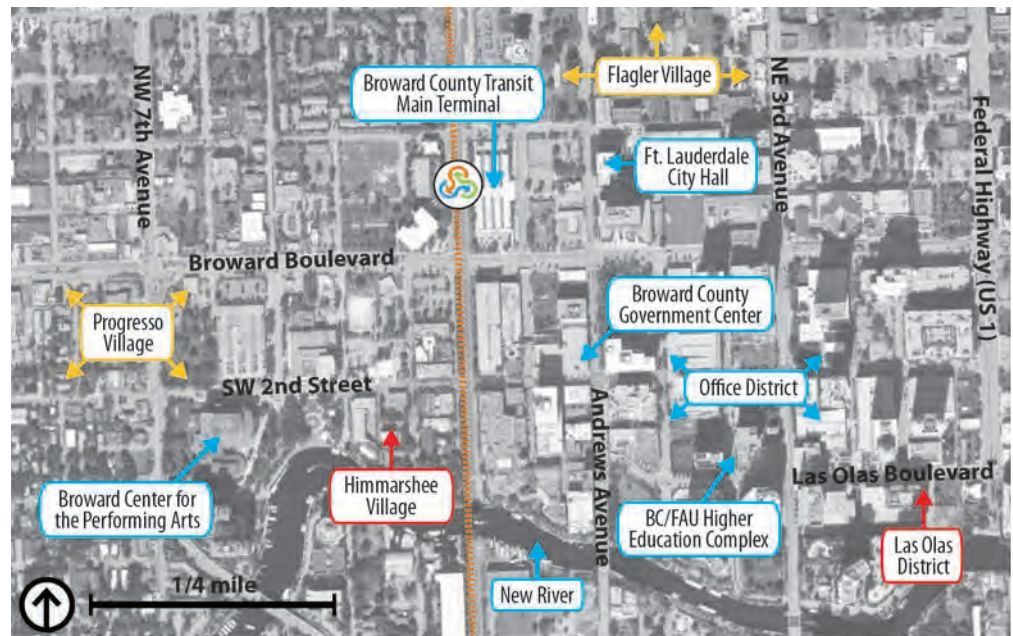


# Government Center/ Broward Boulevard

FORT LAUDERDALE

NW 2nd Street and Broward Boulevard

## Station Area Today



proposed station community retail residential industrial vacant

## Strengths and Opportunities

- Existing development (municipal buildings, high-rise offices, and multi-family condominiums) support transit.
- Located adjacent to the Broward County Transit main terminal.
- Located in close proximity to the planned Fort Lauderdale "Wave" Streetcar route, which will open access to the entire downtown.
- Good potential pedestrian connectivity and access.
- Over 20 acres of vacant land in the station area—many with transit supportive development plans in place—will catalyze development around the station.
- Current planning activity for the four-block area to create a mixed-use downtown mobility hub, including the Broward County Transit terminal, future streetcar maintenance facility, and a co-located All Aboard Florida and Florida East Coast Railway commuter rail station.

## Weaknesses and Barriers

- New River may constrain access to the south.
- Broward Boulevard (seven lanes) presents a pedestrian safety issue.



## Station Area Tomorrow



### 1/2-Mile Station Area

#### Jobs

people employed (2018)\*\*

16,780

new jobs\*\*\*

5,340

#### Housing

total residents (2018)\*\*

7,450

new housing units\*

330

value of new housing\*

\$87,800,000

#### New Commercial

new development (sq. ft.)\*

1,515,000

value of new development\*

\$124,200,000

#### New Revenue

ad valorem

\$874,000

non ad valorem

\$554,000

## Future Vision

The station will serve Broward County's highest density area with direct pedestrian linkages to bus transit, All Aboard Florida, and Wave Streetcar service.

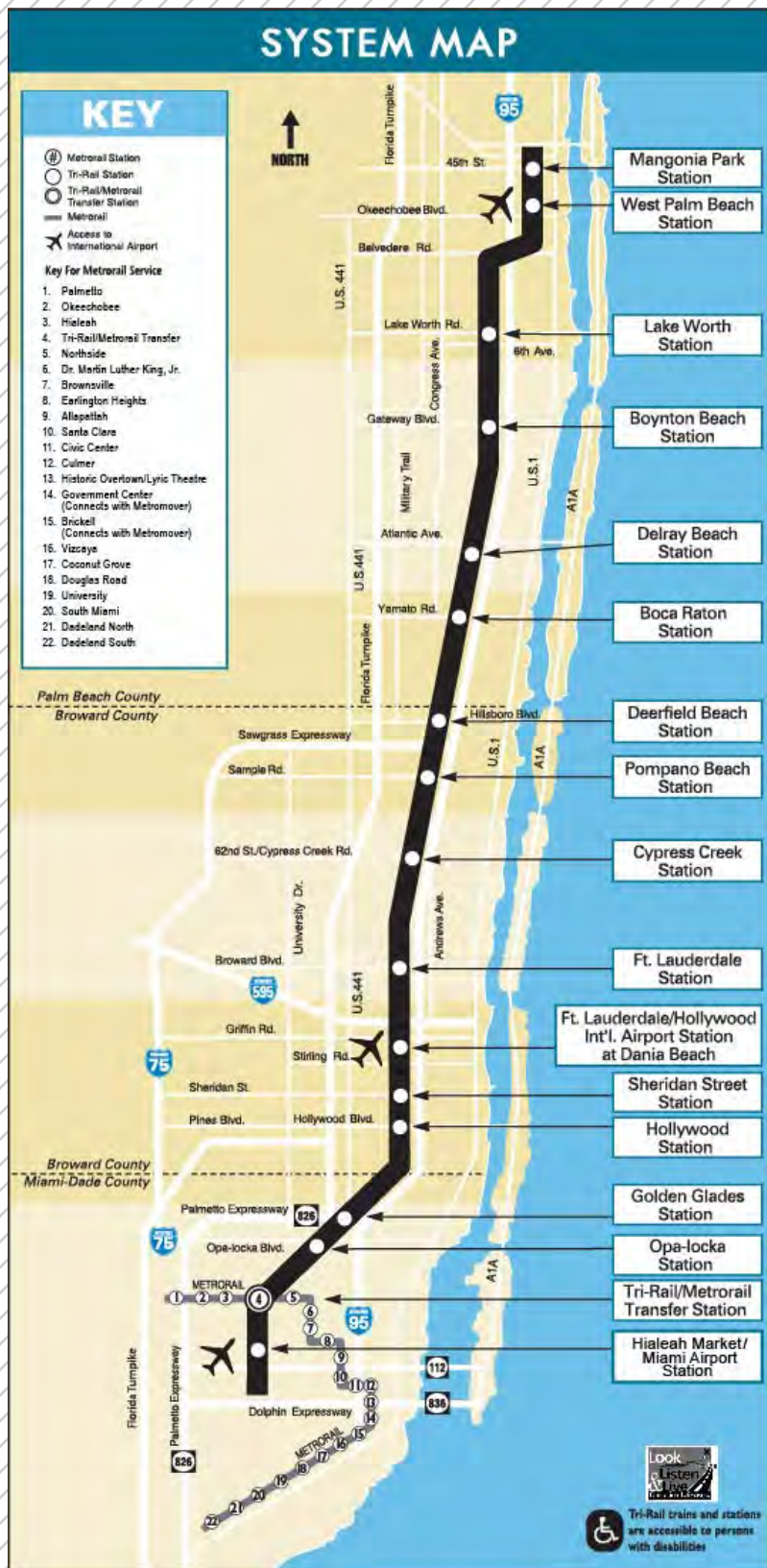
- The new transit station will create a landmark urban gateway and generate increased pedestrian traffic and economic vitality to the heart of downtown.
- The Broward Boulevard corridor will be a connected series of districts and neighborhoods.
- East of the station (along Broward Boulevard), a mixed-use center will have the greatest concentration and diversity of commercial and civic uses, with higher-density housing in the downtown city center.
- West of the station (along Broward Boulevard), densities will be lower, with a variety of housing and neighborhood-scale office and service uses.

Future Vision taken from City of Fort Lauderdale. Images from Fort Lauderdale Master Plan Update: Design Guidelines, 2007, Broward Boulevard Gateway Improvement Project, 2012, and the South Florida East Coast Corridor Transit Study: Station Area Planning Workbook, 2012.

\* Estimated for 2015-2025 with station

\*\* FDOT SERPM Model (6.5.2)

\*\*\* Tri-Rail Coastal Service Station Area Market and Economic Analysis, April 2013





# CENTRAL BROWARD EAST-WEST TRANSIT STUDY MODELING METHODOLOGY TECHNICAL MEMORANDUM



December 2012



**JACOBS**

**AECOM**



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## 1.0 Introduction

The purpose of this memo is to present the methodology used for modeling alternatives for the Central Broward East-West Transit Study. This document discusses the project and the major alternatives that were proposed to address the transportation issues in the study area.

The Florida Department of Transportation (FDOT) District Four, in partnership with the Broward Metropolitan Planning Organization (MPO), Broward County Transit (BCT), and the South Florida Regional Transportation Authority (SFRTA), is conducting the Central Broward East-West Transit Study (Exhibit 1). The scope of this Study is to evaluate the introduction of premium transit (bus rapid transit (BRT) or modern streetcar) service that improves east-west mobility in the study area. The study area, in central Broward County, extends from Oakland Park Boulevard to the north, the Sawgrass Expressway/I-75 in the west, Stirling Road and Griffin Road to the south, and the Intracoastal Waterway/Port Everglades in the east. The study area is approximately 14 miles long and 8 miles wide and is illustrated in Exhibit 1.

**Exhibit 1: Project Location Map**



The study area includes a commercial area in the west (Sawgrass Mills Mall and BB&T Center, formerly the Bank Atlantic Center), a major education hub (South Florida Education Center (SFEC)) in the middle, and the Fort Lauderdale-Hollywood International Airport, and downtown Fort Lauderdale in the east. The study area contains approximately 633,000 people and 311,000 jobs<sup>1</sup>. The study area has approximately 131,000 public and private school students, and 57,000 college/university students (out of which, approximately 43,000 are located in the SFEC)<sup>2</sup>.

The most heavily used existing east-west transit option in the study area is BCT's route #72, running along Oakland Park Boulevard between Sawgrass Mills Mall and A1A at a frequency of 15 minutes. There are two Tri-Rail stations within

the study area: the Broward Boulevard Tri-Rail Station and the Griffin Road (Fort Lauderdale-Hollywood International Airport at Dania Beach) Tri-Rail Station. These stations connect the study area to regional attractions.

<sup>1</sup> From SERPM 6.7 ZDATA

<sup>2</sup> From SERPM 6.7 ZDATA

## 2.0 Alternatives

This section describes the primary alternatives used in this phase of the Study.

### 2.1 No Build Alternative

The No Build Alternative uses the adopted cost feasible 2035 Long Range Transportation Plan (LRTP) to represent the highway and the background transit system both inside and outside the study area. The 2035 highway network includes three reversible managed lanes along I-595 in addition to the access improvements along the general purpose lanes. The existing 95 Express Lanes are assumed to extend to Yamato Road in West Palm Beach. A toll is applied to single-occupant vehicles and non-preregistered carpools in these lanes, with the toll amount set by the operating speed of the managed lanes. There are significant transit improvements proposed for Broward County in the 2035 LRTP network in comparison to the 2010 transit network, including more than a 190 percent increase in daily transit-vehicle-miles and a 150 percent increase in daily transit-vehicle-hours. Numerous new BRT and rapid bus routes, providing high speed and high frequency service, are planned on all major roadways in Broward County. For this study, BRT is assumed to have a higher frequency service along with limited stops operating in an exclusive transit-only right-of-way. Rapid bus service is also assumed to have higher service levels and limited stops; however, it will operate in general purpose lanes and potentially be impacted by auto traffic congestion. Two of the proposed rapid buses operate in the study area: the Oakland Park Boulevard and Sunrise Boulevard rapid buses. The planned rapid buses along University Drive and SR 7 will offer major transfer opportunities to study area riders. Additional local bus service is also proposed along Griffin Road, Flamingo Road, Nob Hill Road and Pine Island Road. These facilities do not have any fixed-route transit service. The I-595 Express bus service began in May 2012 and connects the western parts of Broward County to downtown Fort Lauderdale and downtown Miami. The detailed list of the study area transit routes and their headway service levels are provided in Exhibit 2.

### 2.2 TSM Alternative

The TSM Alternative builds upon the No Build Alternative service by adding a premium bus service with 10 minute peak and 15 minute off-peak service. The premium bus runs along the Griffin Road general purpose lanes between University Drive/Nova Drive and Broward General Hospital (SE 17<sup>th</sup> Street and Andrews Avenue). The premium bus service runs in mixed-flow traffic. The local bus service along Griffin Road terminates at the Griffin Road/University Drive station of the premium bus service. A 60 minutes off-peak service is added for the I-595 express buses.

The boarding and transfer fares for these limited-stop buses are same as the BCT local bus (\$1.32 boarding fare), which follow BCT's existing policy for its limited-stop Breeze service. The \$1.32 fare was derived to reflect the BCT monthly pass at an average daily fare value. The use of the monthly pass fare also includes the benefits of that pass in terms of the cost to transfer and the ability to ride external systems at a reduced fare.

Exhibit 2: Summary of Study Area Transit Service Levels 2010-2035

Direction	Route	Route Name	Headway (Peak/Off-peak)	
			2010	2035
East-West Routes	72	Oakland Park Blvd Local Bus	15/20	10/15
	Rapid Bus	Oakland Park Blvd/Andrews Rapid Bus	-/-	10/15
	Rapid Bus	Oakland Park Blvd Rapid Bus EW	-/-	10/15
	36	Sunrise Blvd Local Bus	15/20	10/15
	Rapid Bus	Sunrise Blvd Rapid Bus	-/-	5/7.5
	22	Broward Blvd Local Bus	30/40	20/20
	Rapid Bus	Broward Blvd Rapid Bus - SR 7 to BCT	-/-	5/7.5
	Rapid Bus	Broward Blvd Rapid Bus - Central Terminal to BCT	-/-	20/20
	New Local	Griffin Rd Local	-/-	20/30
	30	Peters Rd Local Bus	30/30	10/15
	12	West Regional Terminal to North Beach Park	45/45	15/20
	Express Bus	I-595 Pilot Express - Weston P&R to Broward Med. Center	-/-	30/0
	Express Bus	I-595 Pilot Express - Bank Atlantic P&R to Broward Med. Center	-/-	30/0
	Express Bus	I-595 Pilot Express - Weston P&R to Miami Downtown	-/-	30/0
	Express Bus	I-595 Pilot Express - Bank Atlantic P&R to Miami Downtown	-/-	30/0
North-South Routes	New Local	Flamingo Rd Local Bus	-/-	20/30
	New Local	Nob Hill Rd Local Bus	-/-	15/20
	New Local	Pine Island Local Bus	-/-	15/20
	2	University Blvd Local Bus	20/30	10/15
	Breeze/Rapid Bus	University Blvd Rapid Bus	30/0	5/7.5
	9	Davie to Downtown Local Bus	45/45	15/20
	18	SR 7 Local Bus	15/15	10/15
	Breeze/Rapid Bus	SR 7 Rapid Bus	30/0	5/7.5
	1	US 1 Local Bus	15/15	10/15
	Breeze/Rapid Bus	US 1 Rapid Bus	30/0	10/15
Regional Routes	TRL	Tri-Rail	25/60	20/60

\*Headway times are in minutes.

Source: Broward MPO 2035 Long Range Transportation Plan (LRTP)

## 2.3 Build Alternatives

The Build Alternatives use the No Build background transit network. The local bus service along Griffin Road terminates at the Griffin Road/University Drive station. A 60 minutes off-peak service is added for the I-595 express buses. There are three main types of Build Alternatives proposed for the Study, each with slightly different service patterns in three distinct areas of the study area: western, central and eastern.

The western section of the alignment is between Sawgrass Mills and the SFEC. All Build Alternatives propose a premium bus (rapid bus) connecting the Sawgrass Mills area to the SFEC utilizing the arterial roadways and the I-595 general purpose lanes. There are two new park and ride locations along the proposed alignment: one at the BB&T Center and the other at University Drive/Nova Drive. The park and ride access is free at all the locations.

The central section of the alignment connects the western area to the eastern area. One alignment connects the SFEC via Broward Boulevard and SR 7 to the Broward Boulevard Tri-Rail Station, referred to as the SR 7/Broward Boulevard Premium Bus Alternative. The other alignment serves the same area by connecting from the SFEC via Griffin Road to the Griffin Road Tri-Rail Station, referred to as the Griffin Road Alternatives. This section has either streetcar or premium bus service, depending upon the alternative selected.

The third area, the eastern section of the alignment, is located between the Broward Boulevard Tri-Rail Station and Griffin Road Tri-Rail Station. All alternatives in this area propose modern streetcar service. The details of the three main types of alternatives are discussed below.

For the SR 7/Broward Boulevard Premium Bus Alternative, a premium bus operates in general purpose lanes between Sawgrass Mills and the CBT Terminal via the SFEC campus area. There are 14 stops in each direction. A modern streetcar runs between Broward Boulevard Tri-Rail Station and Griffin Road Tri-Rail Station, and includes 12 stations.

In the Griffin Road Alternatives, a premium bus operates in general purpose lanes between Sawgrass Mills and the SFEC area. The premium bus has a total of four stops, including three in the Sawgrass Mills area and one at the intersection of University Drive and Nova Drive. From the intersection of University Drive and Nova Drive, one alternative includes modern streetcar service along Nova Drive to Davie Road, and then continues east on Griffin Road to the Griffin Road Tri-Rail Station. The other Griffin Road alternative follows a similar alignment but operates premium bus instead of modern streetcar to the Griffin Road Tri-Rail Station. Both alternatives have 22 stations in the eastbound and westbound directions.

The alignments of the Build Alternatives are shown in Exhibits 3 and 4.



Exhibit 3: SR 7/Broward Boulevard Premium Bus Alternative



Exhibit 4: Griffin Road Alternatives





The travel times are calculated differently for mixed-flow and exclusive right-of-way vehicles. Travel times for mixed-flow vehicles are computed by adding an average delay time per modeled stop (if a stop exists along the link) to the auto time for each link, and then summing across all links in the route. Travel times for exclusive right-of-way vehicles are calculated from equations of motion based on the operating characteristics of the proposed vehicle. This is consistent with the methodology used in SERPM 6.7. Exhibits 5 and 6 show the expected and estimated travel times for the proposed premium transit services in the alternatives. The expected travel time is calculated considering acceleration/deceleration estimates and other operational constraints along the proposed alignment.

**Exhibit 5: Expected and Estimated Travel Times (in Minutes) for the SR 7/Broward Boulevard Premium Bus Alternative**

Route	Direction	Expected	Estimated
Sawgrass Mills - BCT (Bus)	EB	44	56
	WB	44	49
Project Guideway (Rail)	EB	24	24
	WB	21	24

Source: Estimated travel times from SERPM 6.7

**Exhibit 6: Headways, Expected, and Estimated Travel Times (in Minutes) for the Griffin Road Alternatives**

Route	Direction	Headway (in minutes) (peak/off-peak)	Expected	Estimated
Sawgrass Mills - SFEC (Bus)	EB	20/30	18	19
	WB		18	15
Project Guideway (Rail)	EB	10/15	40	38
	WB		39	41

Source: Estimated travel times from SERPM 6.7

The BCT local bus transfer and boarding fares are used for both premium bus and modern streetcar.

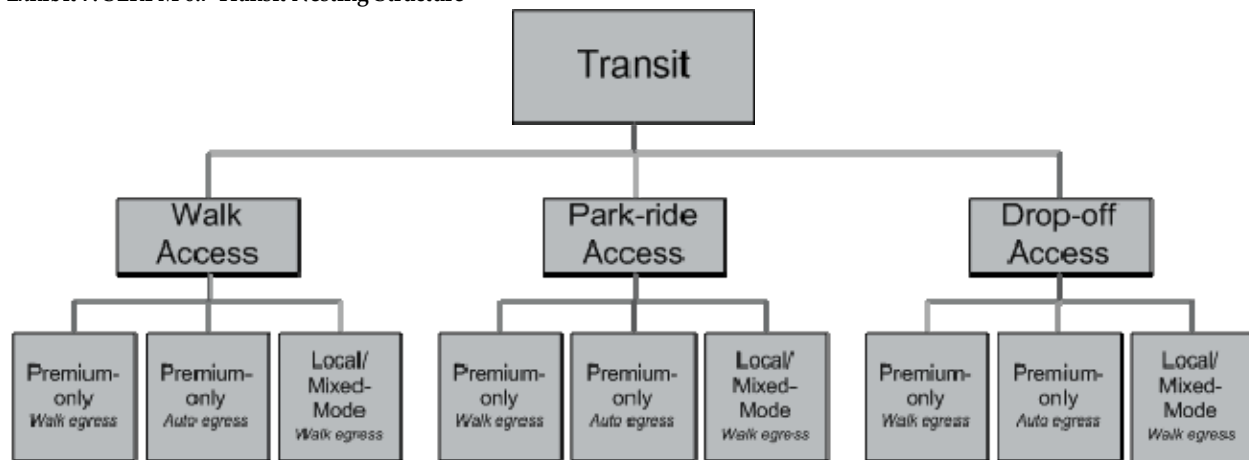
## 3.0 Travel Demand Model Overview

SERPM 6.7, the travel demand model used for this study, represents a regional model covering Miami-Dade, Broward, and Palm Beach Counties. SERPM 6.7 was developed through extensive calibration and validation using the transit on-board surveys conducted between 2008 and 2010. All of these were Origin/Destination (O/D) surveys with riders being asked about details on their transit trip such as origin/destination, mode of access, transit route sequence, socio-demographic information, trip purpose and other details. The five transit services surveyed are Tri-Rail (in 2008), Metrorail (2009), I-95 Express Bus (2010), Palm Tran (2010) and Broward County Transit (2010). Metrobus was previously surveyed in 2004 and was also used in this effort. The details of its characteristics and development are discussed in depth in the “*Calibration Technical Memo*” of the SERPM 6.7 Transit Model, which has been included electronically with this document.

### 3.1 Pathbuilding/Mode Choice Structure

The transit pathbuilding structure consists of the three access modes (walk, park-ride, and drop-off) and three line-haul/egress paths: premium-only (walk-egress), premium-only (auto-egress), and local/mixed-mode (walk-egress). This structure has a total of nine (3x3) paths. By extension, these paths comprise the lowest level of the mode choice nesting structure. The transit nest of the mode choice structure is shown in Exhibit 7.

Exhibit 7: SERPM 6.7 Transit Nesting Structure



“Premium” transit services are defined as those not subject to auto signals and/or general traffic delays. Existing premium transit services in southeast Florida include Tri-Rail, Metrorail, BCT’s 95 Express bus service (which operates on the I-95 managed lanes), and Miami-Dade Transit’s (MDT) 95X express bus (which also operates on the I-95 managed lanes). All other services are considered “local”; these include bus services provided by Palm Tran, BCT, and MDT.

The limited-stop services proposed in the TSM Alternative of the 2035 LRTP are coded with the new premium bus service (Rapid Bus service mode). This is the same mode definition (mode 34) used for all other premium service (BRT and Rapid buses) in the 2035 LRTP. The premium bus services are assumed to have signal priority and/or pre-emption and other amenities to allow them to avoid general signal and traffic delays. The proposed modern streetcar services for the Build Alternatives are

coded with a distinct mode number (mode 35) so that the model procedures can apply benefits derived from un-included attributes applicable to this service.

For the introduction of a new transit mode to an area, FTA allows a grant applicant to claim credit for the user benefits caused by attributes of that mode beyond the travel time and cost measures currently available in the local travel model. The additional benefits are applicable to this study in the following forms:

- (1) A positive constant (bonus) for trips using the project via park/ride access and no dependence on local buses.
- (2) A less onerous weight (IVTT discount) applied to the time spent riding the new facility compared to the weight applied to time spent on all other modes.

Using FTA guidelines for accounting for un-included attributes, the model applies a 10% discount to in-vehicle travel time (IVTT) on this mode and up to 7 minutes of IVTT bonus if this mode appears on the transit path. Both the premium bus and modern streetcar mode definitions allow them to be selected in the premium-only paths, as well as the local/mixed-mode path. The presence of key modes in the pathbuilding structure is shown in Exhibit 8.

**Exhibit 8: Presence of Modes in the Transit Path Structure**

SERPM 6.7 Mode			Walk Access			Park-Ride Access			Drop-off Access		
Type	Description	Number	Premium-only Walk Egress	Premium-only Auto Egress	Local/Mixed-mode Walk Egress	Premium-only Walk Egress	Premium-only Auto Egress	Local/Mixed-mode Walk Egress	Premium-only Walk Egress	Premium-only Auto Egress	Local/Mixed-mode Walk Egress
Existing	Tri-Rail	15	•	•	•	•	•	•	•	•	•
Existing	Local Bus Service	33			•			•			•
Existing	Express Bus Service	33			•			•			•
New	Downtown WAVE	32	•	•	•	•	•	•	•	•	•
New	Premium Bus (Rapid/BRT Bus Service)	34	•	•	•	•	•	•	•	•	•
New	Modern Streetcar (LRT)	35	•	•	•	•	•	•	•	•	•

- implies the mode appears in the mentioned transit path

The travel component weights used in pathbuilding are shown in Exhibit 9. The only modification from the standard SERPM 6.7 weights is the addition of a 10% IVTT discount for the proposed modern streetcar service. All other proposed transit services, including the new premium bus service, do not receive an IVTT discount.

**Exhibit 9: SERPM 6.7 Pathbuilding Components and Their Respective Values**

Component	Value
In-vehicle time	1.00x for all bus modes and Metromover 0.90x Proposed CBT Modern Streetcar service 0.85x Metrorail 0.80x Tri-Rail
Initial and transfer wait time	2.0x for the first 7 minutes of wait time 1.0x after the first 7 minutes of wait time
Access time	2.00x for walk-access time For park and ride and kiss and ride access time: <ul style="list-style-type: none"> <li>• 2.00x for very low density areas</li> <li>• 2.00x for low density areas</li> <li>• 2.00x for medium density areas</li> <li>• 3.50x for high density areas</li> <li>• 5.00x for CBD areas</li> </ul>
Egress time	2.00x for walk-egress time 4.00x for auto-egress time
Transfer walk time	2.00x
Transfer Penalty	5.0 minutes per transfer for walk access 20.0 minutes per transfer for park-ride access 10.0 minutes per transfer for drop-off access
Transit fare	Appropriate boarding and transfer fare applied at \$8.13 value-of-time

### 3.2 Mode Choice Model

The SERPM 6.7 mode choice model utilizes auto availability market segmentation (AAMS) rather than one based on auto ownership. The three AAMS categories are:

1. Zero-cars available to the household;
2. Households where the number of workers (for HBW) or people (for non-work trips) exceed the number of autos available to the household; and
3. Households where the number of workers or people are equal to or less than the number of autos available to the household.

Mode choice is executed individually for peak and off-peak HBW, HBO, HBU, and NHB trips. The mode choice procedures produce trip tables by each sub-mode/access mode combination for the three market segments (i.e., AAMS categories 1, 2, and 3) so that trips from a particular market segment can be reviewed or assigned separately, if desired.

A new set of mode choice coefficients is being used for SERPM 6.7. The new set of coefficients is detailed in Exhibit 10. The mode choice coefficients are consistent with the weights used in the transit path builder. The values used to estimate these coefficients are discussed in detail in "Calibration Technical Memo". The auto operating cost has been carried forward from the SERPM 6.5 (LRTP) model.

Exhibit 10: SERPM 6.7 Mode Choice Coefficients

**Actual Transit Path Building Weights (relative to IVTT coefficient)**

Variable	Peak			Off-Peak		
	HBW	HBO	NHB	HBW	HBO	NHB
Transit run time, highway run time	1.00	1.00	1.00	1.00	1.00	1.00
Transit walk time, highway terminal time	2.00	2.00	2.00	2.00	2.00	2.00
Pre-weighted* transit auto access/egress time	1.00	1.00	1.00	1.00	1.00	1.00
Transit first wait (<=7 minutes)	2.00	2.00	2.00	2.00	2.00	2.00
Transit first wait (>7 minutes)	1.00	1.00	1.00	1.00	1.00	1.00
Transit transfer wait time	2.00	2.00	2.00	2.00	2.00	2.00
Transit number of transfers (Walk access)	5.00	5.00	5.00	5.00	5.00	5.00
Transit number of transfers (Park-ride access)	20.00	20.00	20.00	20.00	20.00	20.00
Transit number of transfers (Kiss-ride access)	10.00	10.00	10.00	10.00	10.00	10.00
Transit fare (Value of time in \$/hr)	\$ 8.13	\$ 6.94	\$ 7.49	\$ 8.13	\$ 6.94	\$ 7.49
Highway auto operating costs (Value of time in \$/hr)	\$ 8.13	\$ 6.94	\$ 7.49	\$ 8.13	\$ 6.94	\$ 7.49
Highway parking costs (Value of time in \$/hr)	\$ 8.13	\$ 6.94	\$ 7.49	\$ 8.13	\$ 6.94	\$ 7.49
HOV time difference	0.72	1.00	1.00	0.90	1.00	1.00

Variables not used in the transit path building process but used in mode choice utility calculations.

**Mode Choice Coefficient**

Variable Coefficient	Peak			Off-Peak		
	HBW	HBO	NHB	HBW	HBO	NHB
Transit run time, highway run time	-0.0250	-0.0150	-0.0250	-0.0250	-0.0150	-0.0250
Transit walk time, highway terminal time	-0.0500	-0.0300	-0.0500	-0.0500	-0.0300	-0.0500
Pre-weighted* transit auto access/egress time	-0.0250	-0.0150	-0.0250	-0.0250	-0.0150	-0.0250
Transit first wait (<=7 minutes)	-0.0500	-0.0300	-0.0500	-0.0500	-0.0300	-0.0500
Transit first wait (>7 minutes)	-0.0250	-0.0150	-0.0250	-0.0250	-0.0150	-0.0250
Transit transfer wait time	-0.0500	-0.0300	-0.0500	-0.0500	-0.0300	-0.0500
Transit number of transfers (Walk access)	-0.1250	-0.0750	-0.1250	-0.1250	-0.0750	-0.1250
Transit number of transfers (Park-ride access)	-0.5000	-0.3000	-0.5000	-0.5000	-0.3000	-0.5000
Transit number of transfers (Kiss-ride access)	-0.2500	-0.1500	-0.2500	-0.2500	-0.1500	-0.2500
Transit fare	-0.0018	-0.0013	-0.0020	-0.0018	-0.0013	-0.0020
Highway auto operating costs	-0.0018	-0.0013	-0.0020	-0.0018	-0.0013	-0.0020
Highway parking costs	-0.0018	-0.0013	-0.0020	-0.0018	-0.0013	-0.0020
HOV time difference	-0.0180	-0.0150	-0.0250	-0.0180	-0.0150	-0.0250

**Initial Nesting Coefficients**

Nest	Peak			Off-Peak		
	HBW	HBO	NHB	HBW	HBO	NHB
Auto	0.500	0.500	0.500	0.500	0.500	0.500
Auto - shared ride	0.500	0.500	0.500	0.500	0.500	0.500
Transit	0.500	0.500	0.500	0.500	0.500	0.500
Transit - Access category	0.500	0.500	0.500	0.500	0.500	0.500

\*Access time weighted @2X to 5X, depending on the area type of the production zone.



The market segment constants are appropriately updated to reflect the observed transit markets in the South Florida region. The new set of market segment constants and mode choice nest constants used to calibrate the mode choice model are discussed in detail in the “*Calibration Technical Memo*” of SERPM 6.7 Transit Model and are provided in Appendix B. The main focus of the development of SERPM 6.7 was to improve the transit portion of the model; hence, the auto shares were estimated in the same way as was done in the SERPM 6.5 (LRTP) model.

The alternative-specific constants (ASCs), shown in Exhibit 11, are used for accounting the additional comfort and safety (i.e., non-quantitative) benefits provided to the passengers by premium services compared to an equivalent trip on other bus services. The only modification from standard SERPM 6.7 is the addition of an ASC of up to seven minutes for the proposed modern streetcar service. All other proposed bus services in the TSM and Build Alternatives were not assigned an ASC.

**Exhibit 11: SERPM 6.7 ASCs for Regional and Study Area Transit Line-Haul Modes**

SERPM 6.7 Mode				
Type	Description	Mode Number	In-Vehicle Travel Time Reduction	Constant
Existing	Tri-Rail	15	20%	Tri-Rail IVTT up to 15 minutes
Existing	Metrorail	14	15%	Metrorail IVTT up to 10 minutes
Existing	BCT Local Bus Service	33	0%	0
Existing	BCT Express Bus Service	33	0%	0
New	BCT Downtown WAVE	32	0%	0
New	BCT Premium Bus	34	0%	0
New	BCT Modern Streetcar	35	10%	IVTT up to 7 minutes

### 3.3 Regional Validation

2010 is the base year for the SERPM 6.7 calibration and validation. SERPM 6.7 is calibrated and validated using the transit survey data at the regional level. The details of the validation analyses are provided in the “*Calibration Technical Memo*” of the SERPM 6.7 Transit Model. The model estimates are very close to the observed travel behavior in Broward County. The details of the validation of SERPM 6.7 at the corridor level are discussed in *Section 3.4, Corridor Validation*.

### 3.4 Corridor Validation

Key corridor characteristics were reviewed for reasonableness: auto speeds, transit travel times, transit flows and daily transit boardings. Specifically, the auto speeds and transit travel times used to develop the transit impedances for mode choice were reviewed.

The estimated auto speeds are compared to the observed speeds by dividing the major east-west study area roadways into two segments. SR 7 was used as the divider. The model generally overestimates the speeds, except for a few segments on I-595, Broward Boulevard, and Peters Road. For the majority of segments, the estimated speeds are within the reasonable range (within 10 mph) for both the AM peak and off-peak periods as shown in Exhibit 12.

Exhibit 12: Study Area Auto Travel Speed Comparison

Roadway Name (Segment)	Dir	Posted Speed	AM Peak Speeds (mph)				Difference (Est. - Obs.)		Off Peak Speeds (mph)				Difference (Est. - Obs.)	
			Observed		Estimated		EB	WB	Observed		Estimated		EB	WB
			EB	WB	EB	WB			EB	WB	EB	WB		
Broward Blvd (Flamingo Rd - SR-7)	EW	45	24	33	31	39	7	5	31	41	38	38	7	-2
Broward Blvd (SR-7 - Federal Hwy)	EW	38	18	20	22	30	4	10	24	26	29	29	5	3
Griffin Rd (Flamingo Rd - SR-7)	EW	45	23	25	32	38	9	13	28	31	38	38	11	7
Griffin Rd (SR-7 - Federal Hwy)	EW	44	26	30	32	37	6	7	28	37	37	37	9	0
I-595 (Sawgrass Exp - SR-7)	EW	64	35	63	44	66	8	3	64	62	60	61	-4	-1
I-595 (SR-7 - Federal Hwy)	EW	63	57	64	41	62	-16	-2	62	60	57	61	-5	0
Sunrise Blvd (Sawgrass Exp - SR-7)	EW	45	28	26	32	37	4	11	37	33	37	37	1	4
Sunrise Blvd (SR-7 - NE 13th St)	EW	41	22	24	25	32	2	8	21	23	31	31	10	8
Peters Rd (Flamingo Rd - SR-7)	EW	39	22	25	34	36	12	11	24	31	37	37	12	6
Peters Rd (SR-7 - Federal Hwy)	EW	39	23	30	21	33	-2	3	24	25	30	30	6	5
SR 84 West (N Flamingo Rd - SW 64th Ave)	EW	41	23	28	37	40	15	12	26	26	46	40	19	13
SR 84 East (I-595 - Federal Hwy)	EW	41	23	33	23	36	1	3	30	34	32	35	2	1

Sources: Observed data collected using GPS device in floating car runs made in September 2011; estimated data from SERPM 6.7

The major east-west competing transit routes for the Central Broward East-West Transit Study are Oakland Park Boulevard, Sunrise Boulevard, and Broward Boulevard. The estimated end-to-end travel times for these routes are generally within seven minutes of the observed travel times, as shown in Exhibit 13. Travel times for the dominate peak direction, eastbound, are well within reasonable limits.

Exhibit 13: Study Area Transit Travel Time Comparison

Route Name	AM Peak Travel Times (minutes)					Off-Peak Travel Times (minutes)				
	Observed Run Time	Estimated Run Time	Difference (Est. - Obs.)	Distance (mile)	Difference per mile (sec/mile)	Observed Run Time	Estimated Run Time	Difference (Est. - Obs.)	Distance (mile)	Difference per mile (sec/mile)
Rte 72:Oakland Park Blvd EB	70	70	0	16.2	2	65	63	-2	16.2	-6
Rte 72:Oakland Park Blvd WB	75	64	-11	16.2	-39	70	63	-7	16.2	-25
Rte 36: Sunrise Blvd EB	98	94	-4	20.9	-11	93	87	-6	20.9	-17
Rte 36: Sunrise Blvd WB	97	90	-7	20.8	-21	92	87	-5	20.8	-15
Rte 22: Broward Blvd EB	70	65	-5	14.8	-21	65	52	-13	14.8	-54
Rte 22: Broward Blvd WB	70	58	-12	14.8	-49	60	52	-8	14.8	-34
Rte 30: Peters Rd WB	44	39	-5	10.1	-28	40	39	-1	10.1	-8
Rte 30: Peters Rd EB	44	44	0	10.1	0	40	39	-1	10.1	-8
Rtw 9: Young Circle/BCT NB	85	88	3	20.4	9	75	80	5	20.4	16
Rtw 9: Young Circle/BCT SB	80	87	7	20.3	20	75	81	6	20.3	17
Rte 40: Beach/Lauderhill Mall EB	66	74	8	13.7	34	60	68	8	13.7	34
Rte 40: Beach/Lauderhill Mall WB	65	72	7	13.8	30	65	69	4	13.8	19
Rte 56: Plantation EB	90	85	-5	18.4	-17	90	78	-12	18.4	-40
Rte 56: Plantation WB	85	82	-3	18.4	-11	85	78	-7	18.4	-24
Rte 12: Sheridan/SFEC EB	80	78	-2	20.2	-5	75	72	-3	20.2	-8
Rte 12: Sheridan/SFEC WB	85	77	-8	20.2	-24	75	73	-2	20.2	-6

Sources: Observed data from BCT time tables; estimated data from SERPM 6.7.

The model provides a good representation of the dispersed travel patterns of BCT trips in Broward County, as shown in Appendix C. With respect to route-level boardings in the study area, the model underestimates ridership along the east-west routes in the study area, as shown in Exhibit 14. This is consistent with other east-west routes in the county. The model provides a reasonable estimate for the major study area bus route number 22 (Broward Boulevard), with 3,500 estimated riders, compared to the 4,200 observed.

Exhibit 14: Daily Transit Ridership for Study Area Routes

Direction	Route No.	Route Description	Observed	Estimated	Difference (Est. - Obs.)
East-West Routes	22	Broward Blvd Local	4,216	3,527	-689
	72	Oakland Park Blvd Local	7,593	6,017	-1,576
	36	Sunrise Blvd Local	7,176	4,910	-2,266
	30	Peters Rd Local	2,234	2,096	-138
	12	W. Regional Term. to N. Beach Park	1,787	2,138	352
North-South Routes	9	Young Circle to Downtown Local	2,046	2,019	-27
	2	University Dr Local	6,338	7,333	996
	102	University Dr Breeze	903	2,325	1,422
	18	SR 7 Local	14,639	12,215	-2,424
	441	SR 7 Breeze	1,918	729	-1,189
	1	US 1 Local	7,228	7,344	116
	101	US 1 Breeze	919	1,151	232
Regional Routes	TRL	Tri-Rail	12,200	13,001	801
<b>Broward County Transit (BCT) Total Regional Boardings</b>			119,624	123,245	3,621

Sources: Observed data from 2010 BCT transit on-board survey; estimated data from SERPM 6.7.

## 4.0 Travel Demand Forecasts Overview

Ridership forecasts were prepared for the No Build, TSM, and Build Alternatives, as shown in Exhibit 15. The premium bus services in the TSM Alternative generate 4,400 study area boardings and 90 linked transit trips as compared to the No Build Alternative. The SR 7/Broward Boulevard Premium Bus Alternative is estimated to produce 8,700 daily project boardings, and nearly 2,500 linked transit trips as compared to the No Build Alternative. The Griffin Road Modern Streetcar Alternative produces the highest number of project boardings at 11,300 and 3,500 new transit riders. The Griffin Road Premium Bus Alternative produces 7,900 boardings and 2,500 new transit riders. For the build alternatives, the number of transit dependent boardings (estimated boardings arising from the zero-car household trips) is approximately 20 percent of the total project boardings. The TSM alternative has close to 30 percent of transit dependent boardings.

Exhibit 15: Daily Project Boardings Summary for the Alternatives

Alternatives	Daily Project Boardings (Year 2035)			
	Sawgrass Premium Bus	CBT Guideway Project	Project Total	New Transit Riders (cf. No Build)
TSM Alternative	*4,400	-	4,400	90
SR 7/Broward Boulevard Premium Bus	5,100	3,600	8,700	2,500
Griffin Road Modern Streetcar	900	10,400	11,300	3,500
Griffin Road Premium Bus	3,200	4,700	7,900	2,500

\* Boardings on the Griffin Road premium bus services.

\*\*For the purpose of sharing these numbers with the public, the projected boardings were rounded to the nearest hundreds. For this reason, the numbers shown in this table do not exactly match the numbers that appear in the appendices.

Trip patterns in the Build Alternatives are very dispersed, with no dominant destination along the alignments. Generally, across the Build Alternatives approximately 20% of ridership occurs west of the SFEC, approximately 40% occurs between the SFEC and I-95, and approximately 40% occurs east of I-95. Trip movements in the western section of the study area connect the residential areas around the Sawgrass Mills area to the SFEC educational institutions. Trip movements between the SFEC and I-95 generally show circulation movements in and around the SFEC, with some connections to the Tri-Rail stations. Trips east of I-95 generally consist of riders circulating to the major attractions, including the Fort Lauderdale-Hollywood International Airport, Broward General Hospital, and downtown Fort Lauderdale. Detailed tables of activity and boardings by transit routes are provided in Appendices D and E respectively.

There are some differences in ridership characteristics and patterns between Premium Bus and Modern Streetcar riders. Streetcar ridership occurs more in the peak periods (approximately 65% peak) than Bus ridership (approximately 50%). Additionally, streetcar ridership is much more reliant on work and university-trips (65%) than Bus ridership (approximately 50%).

For transit dependant boardings, riders generally access both modes by walking (approximately 65%) with the remaining share equally distributed between park-ride and drop-off access.

It should be noted that the Griffin Road Premium Bus Alternative produces significantly less boardings in comparison to the Griffin Road Modern Streetcar Alternative while both have the same alignment.

This is due in part to the forced transfer at the Griffin Road Tri-Rail Station for riders going from SFEC (central part) to downtown Fort Lauderdale (eastern part) or vice versa. The intra-segment, both central and eastern, trips remain the same for both alternatives. This transfer results in additional travel time of between 5 to 15 minutes for the one directional trip. The increased travel time makes the transit option very unattractive in comparison to the auto mode.

The SR 7/Broward Boulevard Premium Bus Alternative produces lower boardings compared to the Griffin Road Alternatives. This is primarily because there is already an extensive premium bus service provided along Broward Boulevard in the 2035 LRTP transit network which competes directly with the alternative.

#### 4.1 Preliminary Uncertainty Analysis

Additional forecasts were developed to begin to address the uncertainties in forecasting. An alternative very similar to the Griffin Road Modern Streetcar Alternatives was used. The only differences were that in the SFEC area, the modern streetcar made a one-way loop using Nova Drive, Davie Road, Griffin Road and University Drive, and an additional station was included at Perimeter Road just north of the airport. Three runs were made to assess the impacts of socio-economic growth and proposed increases in highway and transit services. Two runs (Run 1 and 3) were prepared for existing year (2010) build and interim year (2016) build alternatives. The land use/person trips data for the interim year was interpolated using the base year (2010) and horizon year (2035) data; which shows approximately 6-7 percent growth relative to 2010. Another run (Run 2) was prepared to test the impacts of competing transit services on the build alternatives. For this run, the build alternative was tested on 2010 highway and transit networks using the 2035 land use data.

Forecasts were also developed using FTA's Aggregate Rail Ridership Forecasting (ARRF-II) tool. The tool uses CTPP 2000 journey to work data and was developed to provide rail ridership estimates for New Starts cities. While ARRF-II's methodology is based on journey-to-work flows, its ridership forecast does reflect all work and non-work trips. For developing the future year forecasts using ARRF-II, CTPP trips were increased to reflect the corresponding future year trips based on the SERPM6.7 work trips. These forecasts were developed only for the fixed guideway portion of the project. It is important to note that ARRF-II does not take factors including highway or transit supply into consideration. ARRF-II is typically used in areas that currently do not have fixed-guideway service. The model area includes an urban fixed-guideway service in Miami-Dade County and a commuter rail system serving the three counties in the region. However, the fixed-guideway service proposed for this project is in an environment more sub-urban in nature than Miami-Dade's Metrorail. Therefore, the project team felt it was appropriate to develop ARRF-II forecasts for comparison purposes.

The travel demand model results show a modest increase in boardings between 2010 and 2016. This is due to the improved background transit system assumed in 2016 even though there is a 6-7% growth in regional person trips. The improved background transit system offers significant competitive bus service along Broward Boulevard. In addition, the I-595 express bus service and a local bus route along Griffin Road are providing travelers with more options.

The results from the Future Year Build, No Improvements in Highway/Transit service run (Run 2) also confirm this finding. The project daily boardings for this run increase to more than 13,000. The detailed boardings by transit route are provided in Appendix E.



**Exhibit 16: Summary of Tests for Reasonableness of Forecasts**

Run	Scenario	Land Use/ Person Trips	Transit/ Highway Networks	Sawgrass Premium Bus	CBT Guideway Project	Project Total	ARRF-II Boardings
-	Alternative Baseline					10,200	
1	Existing Year Build	2010	2010	900	8,400	9,300	8,500
2	Future Year Build, No Improvements in Highway/Transit Service	2035	2010	1,100	12,000	13,100	12,400
3	Interim Year Build	2016	*2016	800	8,600	9,400	10,900

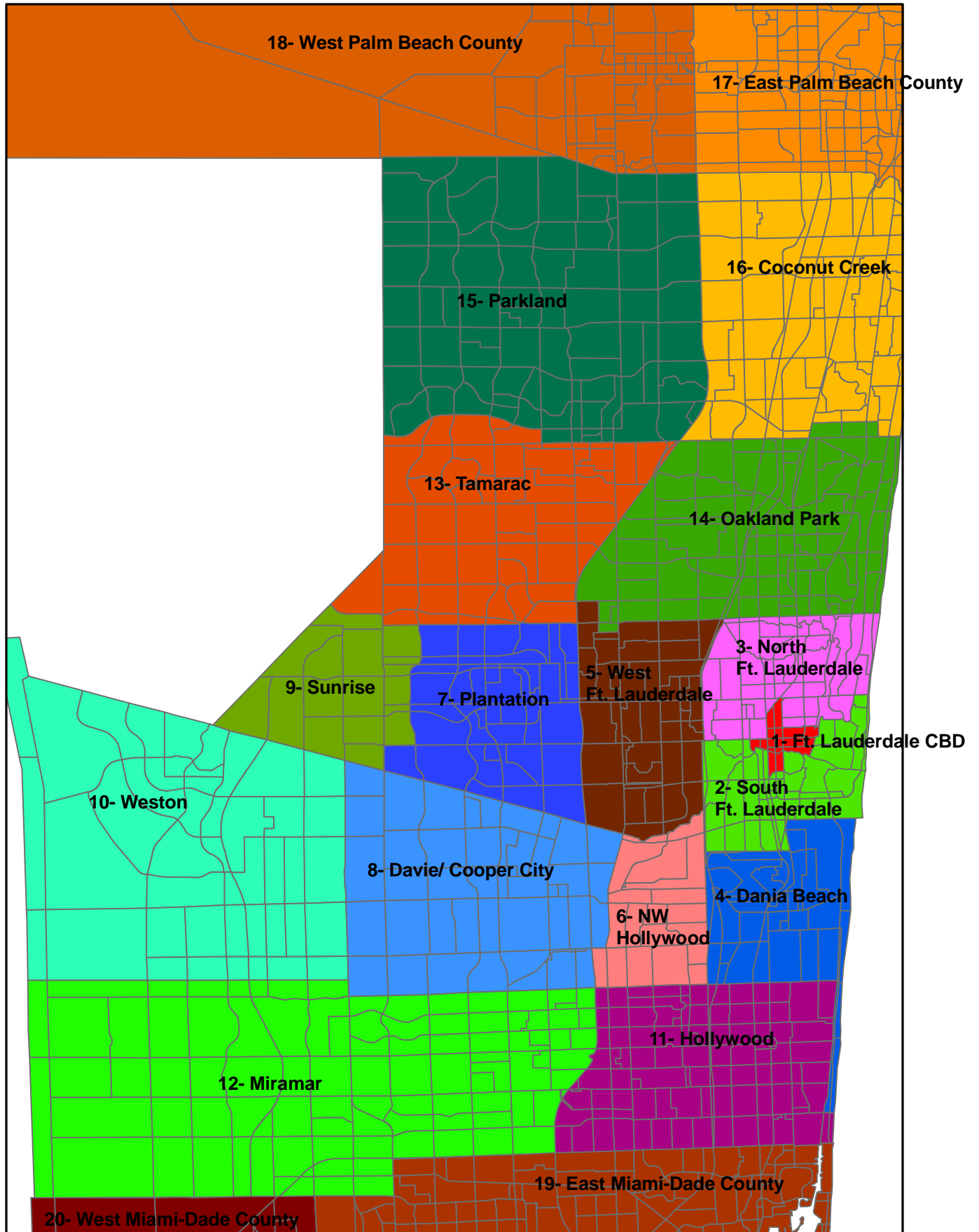
\*Transit network is 2016 E + C network provided by Jacobs.

\*\*For the purpose of sharing these numbers with the public, the projected boardings were rounded to the nearest hundreds. For this reason, the numbers shown in this table do not exactly match the numbers that appear in the appendices.

The increase in ARRF-II boardings between runs 1 and 2 (transit network is kept the same) is similar to the model's estimated boardings for the fixed guideway portion of the project. However, ARRF-II results show an increase in boardings between 2010 and 2016 in comparison to model forecasts. As mentioned previously, the lower forecast from the travel demand model is likely due to the competitive bus service captured by the travel model but not ARRF-II. Given these results, it appears that the travel demand model does a reasonable job in forecasting ridership for the Build Alternatives.

## Appendix A: Corridor Districts Map

# 2010 BCT Survey- Districts



## Appendix B: SERPM 6.7 Mode Choice Constants

### Combined Market Segment Constants

Purpose	Market	Drive Alone	Shared Ride 2	Shared Ride 3+	Walk-LM-Walk	Walk-P-Walk	Walk-P-Auto	PnR-LM-Walk	PnR-P-Walk	PnR-P-Auto	KnR-LM-Walk	KnR-P-Walk	KnR-P-Auto
HBW PK	0 Car HHs	-	1.10	1.40	1.90	1.90	(0.10)	-	-	(2.00)	1.80	1.80	(0.20)
	Cars < Workers HHs	-	-	-	-	-	(1.00)	(0.10)	(0.10)	(2.10)	0.40	0.40	(0.60)
	Cars >= Workers HHs	-	(0.03)	(0.10)	(2.80)	(2.80)	(3.80)	(1.90)	(1.90)	(2.90)	(2.00)	(2.00)	(3.00)
HBO PK	0 Car HHs	-	0.30	0.30	2.20	2.20	0.60	0.70	0.70	(0.90)	2.70	2.70	1.10
	Cars < Workers HHs	-	-	-	(1.40)	(1.40)	(2.00)	(1.40)	(1.40)	(2.00)	(0.70)	(0.70)	(1.30)
	Cars >= Workers HHs	-	-	-	(1.40)	(1.40)	(2.00)	(1.40)	(1.40)	(2.00)	(0.70)	(0.70)	(1.30)
NHB PK	All HHs	-	-	-	-	-	(1.00)	-	-	(1.00)	-	-	(1.00)
HBU PK	All HHs	-	-	-	(1.00)	(1.00)	(1.60)	(1.00)	(1.00)	(1.60)	(1.00)	(1.00)	(1.60)
HBW OP	0 Car HHs	-	1.00	1.40	2.00	2.00	-	0.30	0.30	(1.70)	2.40	2.40	0.40
	Cars < Workers HHs	-	-	-	(0.10)	(0.10)	(1.10)	0.40	0.40	(1.60)	0.80	0.80	(0.20)
	Cars >= Workers HHs	-	(0.03)	(0.10)	(2.70)	(2.70)	(3.70)	(1.20)	(1.20)	(2.20)	(1.60)	(1.60)	(2.60)
HBO OP	0 Car HHs	-	0.20	0.30	2.10	2.10	0.50	0.80	0.80	(0.80)	2.70	2.70	1.10
	Cars < Workers HHs	-	-	-	(1.40)	(1.40)	(2.00)	(1.10)	(1.10)	(1.70)	(0.90)	(0.90)	(1.50)
	Cars >= Workers HHs	-	-	-	(1.40)	(1.40)	(2.00)	(1.10)	(1.10)	(1.70)	(0.90)	(0.90)	(1.50)
NHB OP	All HHs	-	-	-	-	-	(1.00)	-	-	(1.00)	-	-	(1.00)
HBU OP	All HHs	-	-	-	(1.00)	(1.00)	(1.60)	(1.00)	(1.00)	(1.60)	(1.00)	(1.00)	(1.60)

### Mode Choice Nest Constants

@ Nest Level		Nesting Coeff	HBWPK	HBOPK	NHBPK	HBU PK	HBWOP	HBOOP	NHBOP	HBU OP
GRAND TOTAL										
NSTC 11	AUTO	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 12	TRANSIT	0.50000	0.15300	-1.49800	-1.30900	-0.88500	0.38300	-1.68300	-2.03800	-0.40000
AUTO										
NSTC 21	Drive Alone	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 22	Share Ride	0.50000	-2.40000	-0.08603	-0.66534	-0.03403	-2.38300	-0.09345	-0.70000	-0.04345
SHARE RIDE										
NSTC 31	Share Ride 2	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 32	Share Ride 3+	1.00000	-1.65454	-0.41315	-0.75298	-0.45315	-1.64963	-0.41960	-0.77675	-0.41960
TRANSIT										
NSTC 41	Walk Access	0.50000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 42	Park-ride Access	0.50000	-1.48509	-0.50340	-0.10276	-1.30340	-0.85520	-0.25426	2.25090	0.55026
NSTC 43	Drop-off Access	0.50000	-3.37076	-2.62375	-1.40648	-1.90375	-2.01788	-2.42093	0.37547	-0.60593
WALK ACCESS										
NSTC 51	Walk Access - Local/Mixed Mode -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 52	Walk Access - Premium only -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 53	Walk Access - Premium only -Auto Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PARK-RIDE ACCESS										
NSTC 61	Park-ride Access - Local/Mixed Mode -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 62	Park-ride Access - Premium only -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 63	Park-ride Access - Premium only -Auto Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
DROP-OFF ACCESS										
NSTC 71	Drop-off Access - Local/Mixed Mode -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 72	Drop-off Access - Premium only -Walk Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
NSTC 73	Drop-off Access - Premium only -Auto Egress	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



### Mode Choice Constants (Top Level)

Purpose	Market	Drive Alone	Shared Ride 2	Shared Ride 3+	Walk-LM-Walk	Walk-P-Walk	Walk-P-Auto	PnR-LM-Walk	PnR-P-Walk	PnR-P-Auto	KnR-LM-Walk	KnR-P-Walk	KnR-P-Auto
HBW PK	0 Car HHs	0.0000	-0.9250	-1.2636	0.6280	0.6280	0.1280	-0.5895	-0.5895	-1.0895	-1.0824	-1.0824	-1.5824
	Cars < Workers HHs	0.0000	-1.2000	-1.6136	0.1530	0.1530	-0.0970	-0.6145	-0.6145	-1.1145	-1.4324	-1.4324	-1.6824
	Cars >= Workers HHs	0.0000	-1.2075	-1.6386	-0.5470	-0.5470	-0.7970	-1.0645	-1.0645	-1.3145	-2.0324	-2.0324	-2.2824
HBO PK	0 Car HHs	0.0000	0.0320	-0.0713	-0.9480	-0.9480	-1.3480	-1.5747	-1.5747	-1.9747	-2.1349	-2.1349	-2.5349
	Cars < Workers HHs	0.0000	-0.0430	-0.1463	-1.8480	-1.8480	-1.9980	-2.0997	-2.0997	-2.2497	-2.9849	-2.9849	-3.1349
	Cars >= Workers HHs	0.0000	-0.0430	-0.1463	-1.8480	-1.8480	-1.9980	-2.0997	-2.0997	-2.2497	-2.9849	-2.9849	-3.1349
NHB PK	All HHs	0.0000	-0.3327	-0.5209	-1.3090	-1.3090	-1.5590	-1.3604	-1.3604	-1.6104	-2.0122	-2.0122	-2.2622
HBU PK	All HHs	0.0000	-0.0170	-0.1303	-1.1350	-1.1350	-1.2850	-1.7867	-1.7867	-1.9367	-2.0869	-2.0869	-2.2369
HBW OP	0 Car HHs	0.0000	-0.9415	-1.2539	0.8830	0.8830	0.3830	0.0304	0.0304	-0.4696	-0.0259	-0.0259	-0.5259
	Cars < Workers HHs	0.0000	-1.1915	-1.6039	0.3580	0.3580	0.1080	0.0554	0.0554	-0.4446	-0.4259	-0.4259	-0.6759
	Cars >= Workers HHs	0.0000	-1.1990	-1.6289	-0.2920	-0.2920	-0.5420	-0.3446	-0.3446	-0.5946	-1.0259	-1.0259	-1.2759
HBO OP	0 Car HHs	0.0000	0.0033	-0.0766	-1.1580	-1.1580	-1.5580	-1.6101	-1.6101	-2.0101	-2.2185	-2.2185	-2.6185
	Cars < Workers HHs	0.0000	-0.0467	-0.1516	-2.0330	-2.0330	-2.1830	-2.0851	-2.0851	-2.2351	-3.1185	-3.1185	-3.2685
	Cars >= Workers HHs	0.0000	-0.0467	-0.1516	-2.0330	-2.0330	-2.1830	-2.0851	-2.0851	-2.2351	-3.1185	-3.1185	-3.2685
NHB OP	All HHs	0.0000	-0.3500	-0.5442	-2.0380	-2.0380	-2.2880	-0.9126	-0.9126	-1.1626	-1.8503	-1.8503	-2.1003
HBU OP	All HHs	0.0000	-0.0217	-0.1266	-0.6500	-0.6500	-0.8000	-0.3749	-0.3749	-0.5249	-0.9530	-0.9530	-1.1030

### Mode Choice Constants (Total Level in equivalent IVTT)

Purpose	Market	Drive Alone	Shared Ride 2	Shared Ride 3+	Walk-LM-Walk	Walk-P-Walk	Walk-P-Auto	PnR-LM-Walk	PnR-P-Walk	PnR-P-Auto	KnR-LM-Walk	KnR-P-Walk	KnR-P-Auto
HBW PK	0 Car HHs	-	(37)	(51)	25	25	5	(24)	(24)	(44)	(43)	(43)	(63)
	Cars < Workers HHs	-	(48)	(65)	6	6	(4)	(25)	(25)	(45)	(57)	(57)	(67)
	Cars >= Workers HHs	-	(48)	(66)	(22)	(22)	(32)	(43)	(43)	(53)	(81)	(81)	(91)
HBO PK	0 Car HHs	-	2	(5)	(63)	(63)	(90)	(105)	(105)	(132)	(142)	(142)	(169)
	Cars < Workers HHs	-	(3)	(10)	(123)	(123)	(133)	(140)	(140)	(150)	(199)	(199)	(209)
	Cars >= Workers HHs	-	(3)	(10)	(123)	(123)	(133)	(140)	(140)	(150)	(199)	(199)	(209)
NHB PK	All HHs	-	(13)	(21)	(52)	(52)	(62)	(54)	(54)	(64)	(80)	(80)	(90)
HBU PK	All HHs	-	(1)	(9)	(76)	(76)	(86)	(119)	(119)	(129)	(139)	(139)	(149)
HBW OP	0 Car HHs	-	(38)	(50)	35	35	15	1	1	(19)	(1)	(1)	(21)
	Cars < Workers HHs	-	(48)	(64)	14	14	4	2	2	(18)	(17)	(17)	(27)
	Cars >= Workers HHs	-	(48)	(65)	(12)	(12)	(22)	(14)	(14)	(24)	(41)	(41)	(51)
HBO OP	0 Car HHs	-	0	(5)	(77)	(77)	(104)	(107)	(107)	(134)	(148)	(148)	(175)
	Cars < Workers HHs	-	(3)	(10)	(136)	(136)	(146)	(139)	(139)	(149)	(208)	(208)	(218)
	Cars >= Workers HHs	-	(3)	(10)	(136)	(136)	(146)	(139)	(139)	(149)	(208)	(208)	(218)
NHB OP	All HHs	-	(14)	(22)	(82)	(82)	(92)	(37)	(37)	(47)	(74)	(74)	(84)
HBU OP	All HHs	-	(1)	(8)	(43)	(43)	(53)	(25)	(25)	(35)	(64)	(64)	(74)

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## Appendix C: BCT Ridership Flow Tables

## SERPM 6.7 (2010 Model) District-to-District Observed vs. Estimated Transit Trip Flows (BCT)

DRAFT

1/31/2012

## 2010 BCT Survey - District-to-District Flows

Production District	Attraction District																				Total	Total %	
	1	2	3	4	5	6	7	8	9	10	Corridor Subtotal	11	12	13	14	15	16	17	18	19			20
1-Ft Lauderdale CBD	17	88	72	18	31	8	82	6	8	0	331	6	4	28	154	57	23	0	0	109	0	712	1%
2-South Ft Lauderdale	242	504	215	97	258	102	131	76	33	7	1,666	115	35	71	494	30	123	4	1	90	5	2,634	3%
3-North Ft Lauderdale	628	818	1,450	384	746	119	377	241	191	10	4,964	148	54	195	1,331	201	404	67	0	71	33	7,468	9%
4-Dania Beach	184	63	733	277	54	80	18	150	14	15	1,588	746	136	71	161	29	66	69	4	169	4	3,042	4%
5-West Fort Lauderdale	733	673	1,002	48	1,091	168	919	421	642	40	5,737	517	143	529	1,437	408	505	107	68	322	10	9,784	12%
6-NW Hollywood	27	34	123	64	80	61	3	73	1	27	494	144	62	21	31	1	24	112	24	15	0	929	1%
7-Plantation	347	308	511	211	1,215	66	1,402	250	468	8	4,786	71	255	717	589	243	153	14	0	103	4	6,935	8%
8-Davie/Cooper City	60	175	16	126	261	186	175	223	115	32	1,370	61	108	34	114	6	96	4	0	118	4	1,914	2%
9-Sunrise	31	8	27	0	102	30	203	4	86	14	506	17	42	105	64	15	7	21	0	7	0	785	1%
10-Weston	3	0	7	0	0	0	12	21	78	30	150	0	55	2	9	11	0	0	0	28	0	255	0%
Corridor Subtotal	2,273	2,671	4,156	1,226	3,839	821	3,325	1,466	1,634	183	21,592												
11-Hollywood	209	217	301	773	369	582	116	475	47	77		4,346	1,298	131	469	117	68	8	0	1,349	56	11,007	13%
12-Miramar	108	21	88	156	117	204	254	431	129	41		774	1,288	60	178	69	6	17	14	765	50	4,769	6%
13-Tamarac	96	52	234	59	745	16	318	299	451	20		80	219	1,214	1,357	781	290	150	2	102	0	6,485	8%
14-Oakland Park	614	621	1,116	128	522	154	227	263	334	13		121	105	531	2,297	851	1,170	130	25	95	12	9,330	11%
15-Parkland	217	123	206	20	411	23	190	83	216	50		64	110	290	1,329	2,311	863	89	13	57	7	6,670	8%
16-Coconut Creek	119	214	550	121	229	43	48	130	39	1		27	83	134	1,989	780	1,594	165	16	55	1	6,339	8%
17-Eastern Palm Beach	0	41	57	5	74	27	80	2	8	0		1	2	10	91	16	201	4	0	8	0	628	1%
18-Western Palm Beach	0	0	4	0	4	0	5	0	7	0		0	0	10	4	37	0	0	0	0	0	72	0%
19-Eastern Miami-Dade	102	52	99	93	147	178	171	216	13	27		848	477	184	171	82	11	1	65	199	0	3,134	4%
20-Western Miami-Dade	0	14	15	0	3	0	8	14	4	2		23	52	0	3	10	0	0	0	0	0	146	0%
Total	3,737	4,025	6,825	2,581	6,460	2,048	4,741	3,380	2,881	414		8,110	4,526	4,335	12,271	6,056	5,603	963	232	3,662	186	83,037	100%
Total %	5%	5%	8%	3%	8%	2%	6%	4%	3%	0%		10%	5%	5%	15%	7%	7%	1%	0%	4%	0%	100%	

\* 5,230 Community Buses (6.72%) are added to the observed trips

Intra-District Flows 18,396

% Intra-District Flows 22%

Top 10 corridor movements

## BCT- Estimated District-to-District Flows

Production District	Attraction District																				Total	Total %	
	1	2	3	4	5	6	7	8	9	10	Corridor Subtotal	11	12	13	14	15	16	17	18	19			20
1-Ft Lauderdale CBD	258	413	275	65	96	24	54	29	10	2	1,226	33	13	33	210	17	49	12	0	20	0	1,613	2%
2-South Ft Lauderdale	773	920	393	149	169	49	112	64	13	14	2,655	84	23	35	359	41	75	8	1	41	2	3,324	4%
3-North Ft Lauderdale	899	898	910	86	499	71	196	93	91	8	3,750	91	25	141	1,579	112	311	62	3	29	2	6,105	7%
4-Dania Beach	203	366	122	555	74	207	141	161	15	6	1,850	589	71	36	201	37	69	7	1	186	5	3,051	4%
5-West Fort Lauderdale	581	505	537	93	1,129	80	652	346	139	20	4,081	121	83	492	1,286	283	258	61	6	65	4	6,740	8%
6-NW Hollywood	51	76	25	138	38	167	32	109	8	3	646	196	65	21	32	9	8	1	0	46	1	1,024	1%
7-Plantation	256	174	149	62	526	34	1,743	549	342	41	3,876	75	103	746	531	249	138	36	3	60	6	5,824	7%
8-Davie/Cooper City	68	87	24	101	107	139	383	842	67	55	1,874	217	500	87	85	40	11	2	1	89	7	2,911	3%
9-Sunrise	64	30	30	12	66	8	386	139	271	58	1,064	19	50	197	79	39	14	2	1	27	4	1,495	2%
10-Weston	20	12	9	9	21	7	97	136	129	212	652	30	159	31	25	10	7	2	0	68	10	993	1%
Corridor Subtotal	3,172	3,481	2,474	1,270	2,724	785	3,796	2,467	1,086	419	21,675												
11-Hollywood	259	271	85	791	150	375	202	360	31	45		2,786	836	74	301	122	79	26	7	998	31	7,828	9%
12-Miramar	92	87	32	130	95	149	223	638	93	202		1,000	3,576	112	125	60	28	6	1	565	53	7,269	9%
13-Tamarac	158	109	115	30	305	16	637	231	242	40		58	97	1,826	1,139	1,229	204	34	9	56	6	6,542	8%
14-Oakland Park	573	423	760	64	541	32	200	68	45	14		80	38	447	3,367	507	951	97	8	34	2	8,249	10%
15-Parkland	172	68	98	23	151	12	216	97	54	16		44	58	633	880	4,345	733	121	97	50	6	7,873	9%
16-Coconut Creek	117	105	112	22	70	5	37	23	11	3		21	17	101	1,239	566	2,571	357	24	10	2	5,412	6%
17-Eastern Palm Beach	27	36	41	13	20	5	49	12	14	5		13	36	28	129	108	309	16	2	4	0	866	1%
18-Western Palm Beach	8	6	6	3	8	1	12	5	5	1		5	6	17	65	194	68	2	11	2	0	425	1%
19-Eastern Miami-Dade	239	332	119	471	234	176	302	447	128	66		1,471	1,208	174	378	270	167	14	8	428	4	6,636	8%
20-Western Miami-Dade	11	43	27	27	27	9	36	34	17	12		102	143	26	24	46	8	0	0	5	0	597	1%
Total	4,827	4,960	3,870	2,843	4,325	1,567	5,709	4,382	1,725	822		7,036	7,104	5,257	12,034	8,285	6,057	865	182	2,782	145	84,777	100%
Total %	6%	6%	5%	3%	5%	2%	7%	5%	2%	1%		8%	8%	6%	14%	10%	7%	1%	0%	3%	0%	100%	

Top 10 corridor movements

Intra-District Flows 25,933

% Intra-District Flows 31%

SERPM 6.7 (2010 Model) District-to-District Observed vs. Estimated Transit Trip Flows (BCT)  
8/8/2012

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2010 BCT Survey (zero car) - District-to-District Flows

Production District	Attraction District																				Total	Total %	
	1	2	3	4	5	6	7	8	9	10	Corridor Subtotal	11	12	13	14	15	16	17	18	19			20
1-Ft Lauderdale CBD	17	14	19	1	24	2	30	0	0	0	106	6	0	22	47	38	13	0	0	105	0	337	1%
2-South Ft Lauderdale	189	212	121	38	73	91	69	29	28	5	854	79	22	60	272	17	32	3	0	52	5	1,397	4%
3-North Ft Lauderdale	283	325	664	108	476	52	144	60	89	4	2,206	56	36	105	752	115	186	44	0	25	15	3,541	11%
4-Dania Beach	94	13	35	116	22	39	6	45	0	0	370	439	18	62	58	11	36	56	0	53	4	1,107	3%
5-West Fort Lauderdale	135	336	286	29	524	181	470	68	227	24	2,282	201	31	245	704	172	212	48	47	94	0	4,036	12%
6-NW Hollywood	16	8	33	23	6	10	4	15	0	27	142	17	26	18	21	0	0	0	0	3	0	227	1%
7-Plantation	254	84	247	176	430	24	1,011	69	161	2	2,457	38	46	382	265	59	46	6	0	22	0	3,321	10%
8-Davie/Cooper City	8	125	4	31	15	52	39	117	17	25	432	29	55	10	88	0	0	0	0	35	0	649	2%
9-Sunrise	0	0	18	0	3	0	20	3	30	14	89	0	0	26	5	1	4	5	0	2	0	132	0%
10-Weston	0	0	0	0	0	0	0	7	26	11	44	0	14	2	0	0	0	0	0	7	0	67	0%
Corridor Subtotal	995	1,117	1,428	521	1,574	450	1,792	415	578	112	8,982												
11-Hollywood	148	130	163	453	242	127	51	296	13	42		2,040	528	56	306	14	33	8	0	690	50	5,390	16%
12-Miramar	94	0	47	7	11	64	127	60	22	14		143	278	7	59	0	4	0	14	102	8	1,062	3%
13-Tamarac	15	26	67	14	265	0	115	118	88	4		29	67	500	440	270	160	90	2	13	0	2,284	7%
14-Oakland Park	310	259	337	93	260	98	123	87	85	10		54	38	239	1,062	323	484	11	0	5	12	3,888	12%
15-Parkland	20	65	43	6	58	0	78	10	37	0		4	3	90	387	595	235	7	6	14	0	1,657	5%
16-Coconut Creek	33	65	87	8	132	7	19	39	15	0		14	3	82	673	300	574	55	16	5	1	2,129	6%
17-Eastern Palm Beach	0	6	38	0	7	0	0	0	7	0		0	2	4	32	0	92	0	0	0	0	188	1%
18-Western Palm Beach	0	0	0	0	0	0	5	0	7	0		0	0	0	0	5	0	0	0	0	0	17	0%
19-Eastern Miami-Dade	20	25	79	25	39	48	71	109	6	10		503	193	42	79	14	1	1	28	43	0	1,336	4%
20-Western Miami-Dade	0	14	0	0	0	0	5	0	0	2		0	11	0	0	9	0	0	0	0	0	41	0%
Total	1,636	1,708	2,289	1,128	2,588	794	2,385	1,134	859	192		3,653	1,372	1,951	5,251	1,943	2,112	333	114	1,269	96	32,806	100%
Total %	5%	5%	7%	3%	8%	2%	7%	3%	3%	1%		11%	4%	6%	16%	6%	6%	1%	0%	4%	0%	100%	

\* 5,230 Community Buses (6.72%) are added to the observed trips

Intra-District Flows 7,803  
% Intra-District Flows 24%

Top 10 corridor movements

BCT- Estimated (zero car) District-to-District Flows

Production District	Attraction District																				Total	Total %		
	1	2	3	4	5	6	7	8	9	10	Corridor Subtotal	11	12	13	14	15	16	17	18	19			20	
1-Ft Lauderdale CBD	45	65	38	7	17	11	22	13	1	0	220	1	8	22	41	7	23	9	0	2	0	334	1%	
2-South Ft Lauderdale	175	176	47	9	62	7	58	27	3	11	575	14	7	18	149	28	40	4	0	3	0	838	3%	
3-North Ft Lauderdale	376	451	379	34	245	53	122	67	74	4	1,805	49	16	91	895	77	206	54	3	7	1	3,205	10%	
4-Dania Beach	15	69	25	160	19	129	88	117	4	2	628	158	16	14	32	9	24	4	0	27	1	911	3%	
5-West Fort Lauderdale	238	187	213	31	388	29	261	207	84	9	1,647	27	41	293	667	184	166	54	4	22	1	3,106	10%	
6-NW Hollywood	13	16	6	11	8	53	10	37	1	1	156	26	22	14	9	4	4	1	0	4	0	239	1%	
7-Plantation	60	57	44	19	177	10	516	306	124	7	1,319	18	22	347	265	148	101	33	2	8	1	2,265	7%	
8-Davie/Cooper City	4	26	2	21	16	30	80	267	15	20	480	31	202	30	32	17	2	1	0	7	1	803	3%	
9-Sunrise	21	2	5	3	12	1	80	82	33	6	245	1	12	28	27	8	5	1	0	2	1	331	1%	
10-Weston	1	1	0	0	4	1	32	55	15	30	139	6	48	4	1	1	1	1	0	5	0	206	1%	
Corridor Subtotal	949	1,050	760	294	948	323	1,268	1,177	355	90	7,213													
11-Hollywood	128	129	40	309	75	197	138	182	19	36		955	387	49	213	102	61	25	7	268	9	3,329	11%	
12-Miramar	28	30	10	17	32	53	72	264	34	105	264	1,141	60	61	23	17	4	1	125	11		2,351	7%	
13-Tamarac	45	35	26	12	56	2	130	136	44	15	12	46	428	365	435	58	23	2	6	1		1,874	6%	
14-Oakland Park	127	82	125	15	129	9	69	23	13	5	28	13	170	885	267	327	62	3	5	0		2,358	8%	
15-Parkland	56	10	36	9	29	3	50	49	10	6	8	18	81	262	1,350	129	59	42	5	0		2,210	7%	
16-Coconut Creek	27	26	23	4	22	1	12	13	5	1	8	7	55	436	267	878	206	14	2	0		2,007	6%	
17-Eastern Palm Beach	3	3	11	0	1	0	1	1	0	0	1	4	1	15	23	46	5	0	0	0		117	0%	
18-Western Palm Beach	0	1	0	0	1	0	2	1	1	0	0	1	2	26	74	13	1	6	0	0		130	0%	
19-Eastern Miami-Dade	166	260	86	310	181	120	235	345	109	55	734	850	140	308	228	154	13	7	124	2		4,427	14%	
20-Western Miami-Dade	6	34	24	18	19	6	18	21	10	8	70	79	17	13	37	4	0	0	1	0		384	1%	
Total	1,535	1,660	1,143	988	1,492	714	1,996	2,213	599	320		2,411	2,939	1,862	4,700	3,289	2,259	559	92	623	29		31,425	100%
Total %	5%	5%	4%	3%	5%	2%	6%	7%	2%	1%		8%	9%	6%	15%	10%	7%	2%	0%	2%	0%		100%	

Top 10 corridor movements

Intra-District Flows 7,818  
% Intra-District Flows 25%



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## Appendix D: Detailed Boarding Results For Build Alternatives

Station Name	Bank Atlantic - BCT Terminal				Nova Dr/University Dr - BCT Terminal			
	Eastbound		Westbound		Eastbound		Westbound	
	On	Off	On	Off	On	Off	On	Off
Bank Atlantic	189	0	0	107	-	-	-	-
Corporate Park	94	74	12	424	-	-	-	-
136th Ave	186	9	53	61	-	-	-	-
Nova Dr/University Dr	595	110	332	56	595	0	0	56
Nova Dr/70th Ave	39	641	12	498	39	468	2	498
Nova Dr/Davie Rd	85	57	50	47	85	39	10	47
SR 7/Davie Blvd	30	80	312	15	30	58	265	15
SR7/ Broward Blvd	174	27	109	89	174	21	95	89
Broward / 31st Ave	16	14	53	4	16	14	50	4
Broward / I-95 (TRI-RAIL)	225	116	88	26	225	90	70	26
Broward 15th Ave	38	15	31	5	38	12	26	5
Broward 5th Ave	2	83	43	1	2	81	37	1
Broward 2nd Ave	0	7	7	0	0	6	6	0
Central Broward Bus Terminal	0	443	230	0	0	414	178	0
Total	1673	1676	1332	1333	1204	1203	739	741

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All Trips

Station Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - Tri-Rail FLL/I-95	0	236	308	391	79	227	598	205	0	0	0	72	9	2	8	2,134
2 - FLL Airport	120	0	61	15	4	27	29	12	0	0	0	2	1	2	9	281
3 - SW 4th Ave/SE 24th St	19	13	0	15	6	13	34	12	0	0	0	13	2	4	5	135
4 - WAVE 16th St	50	3	10	0	3	12	24	9	0	0	0	6	2	2	6	128
5 - WAVE 12th St	23	2	11	8	0	1	13	5	0	0	0	5	1	1	5	75
6 - WAVE 7th ST (NB)	0	0	0	0	0	0	8	0	0	0	0	21	3	4	13	49
7 - WAVE Las Olas Blvd	62	8	26	24	5	0	0	3	1	2	0	8	7	3	12	160
8 - WAVE Andrews (NB)	0	0	0	0	0	0	0	0	0	0	0	3	3	2	1	9
9 - WAVE 6th & Andrews (SB)	30	9	13	15	3	0	0	0	0	0	0	0	0	0	0	70
10 - WAVE 6th St (SB)	13	3	6	5	0	0	0	0	0	0	0	0	0	0	0	27
11 - WAVE Andrews (SB)	6	0	3	0	0	0	2	0	0	0	0	0	0	0	0	12
12 - Broward/ 2nd Ave	89	7	63	42	13	0	26	0	12	63	1	0	4	4	3	327
13 - Broward/ 5th Ave	18	1	7	12	4	0	2	0	3	4	0	3	0	4	1	59
14 - Broward/ 15th Ave	10	1	18	6	2	0	13	0	1	11	2	2	4	0	5	74
15 - Broward Tri-Rail St	24	20	53	122	44	0	211	0	30	160	78	120	27	38	0	928
Total	463	303	579	655	163	281	959	246	47	241	81	254	63	66	65	4,467
	10.4%	6.8%	13.0%	14.7%	3.6%	6.3%	21.5%	5.5%	1.1%	5.4%	1.8%	5.7%	1.4%	1.5%	1.5%	100%
	WB/SB Stations										EB/NB Stations					

Direction	Trips	
Eastbound	2,598	58.3%
Westbound	1,862	41.7%
Total	4,460	100.0%

Access Type	Trips	
Walk	2,803	62.7%
PnR	1,206	27.0%
KnR	459	10.3%
Total	4,467	100.0%

Time Period	Trips	
Peak	3,118	69.9%
Off-Peak	1,342	30.1%
Total	4,460	100.0%

Trips by Segment (CBT Rail + Rapid Bus)	1	2	3	Total	
1 - Sawgrass Mills - University/Nova	168	401	0	569	7.2%
2 - University/Nova - Tri-Rail FLL/I-95	552	1,134	720	2,406	30.4%
3 - Tri-Rail FLL/I-95 - Broward Tri-Rail St	0	463	4,467	4,930	62.4%
Total	720	1,998	5,187	7,905	100.0%
	9.1%	25.3%	65.6%		

Intermodal Trips on Light Rail

Mode Used/Access Type	Walk	PnR	KnR	Total
Light Rail & Tri-Rail	33	84	25	142
Light Rail & Sawgrass Rapid Bus	143	1	2	146
Light Rail & All BCT Rapid Buses	935	53	28	1,016
Light Rail & All BCT Local Buses	889	68	96	1,053
Light Rail & WAVE	15	0	0	15

\*Trip could have involved more than the two modes mentioned above

Rapid Bus Boardings

Station Name	Bank Atlantic - FLL Tri-Rail St				Nova Dr/University Dr - FLL Tri-Rail St			
	Eastbound		Westbound		Eastbound		Westbound	
	On	Off	On	Off	On	Off	On	Off
Bank Atlantic	200	0	0	137	-	-	-	-
Corporate Park	109	86	13	390	-	-	-	-
136th Ave	192	14	55	90	-	-	-	-
University/Nova	119	173	357	43	119	0	0	43
Nova / 70th Ave	166	49	0	56	166	49	0	56
Nova / Davie	47	36	23	24	47	30	9	24
Davie / Oaks	18	146	14	211	18	51	1	211
Griffin/Davie	60	27	26	41	60	9	7	41
Griffin/SR 7	222	102	207	112	222	76	155	112
Griffin/32nd Ave	26	129	162	13	26	120	129	13
Tri-Rail FLL/I-95	0	393	263	0	0	323	200	0
Total	1159	1155	1120	1117	658	658	501	500



CAM # 16-0016  
Exhibit 1  
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All Trips

Station Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	
1 - University/Nova	0	302	68	524	142	129	49	258	155	53	159	26	84	128	85	0	0	0	38	10	3	6	2,219	18.5%
2 - Nova / 70th Ave	18	0	12	18	17	31	4	20	11	2	9	1	4	8	6	0	0	0	8	6	0	2	176	1.5%
3 - Nova / Davie	43	27	0	22	25	53	4	25	9	4	10	3	3	8	6	0	0	0	9	4	7	1	261	2.2%
4 - Davie / Oaks	18	2	4	0	16	27	4	7	10	3	9	1	3	7	4	0	0	0	7	3	0	1	128	1.1%
5 - Griffin/Davie	27	18	26	85	0	52	22	48	36	26	48	9	34	58	41	0	0	0	44	12	2	2	590	4.9%
6 - Griffin/SR 7	97	65	54	377	89	0	89	140	83	85	123	19	78	119	97	0	0	0	74	8	1	1	1,600	13.3%
7 - Griffin/32nd Ave	45	5	5	17	35	94	0	26	32	11	20	7	10	19	13	0	0	0	34	11	2	3	390	3.2%
8 - Tri-Rail FLL/I-95	130	86	26	266	109	75	42	0	98	71	120	24	61	139	67	0	0	0	33	14	4	15	1,379	11.5%
9 - FLL Airport	182	28	15	54	25	98	17	27	0	23	20	3	7	17	10	0	0	0	2	3	4	13	548	4.6%
10 - SW 4th Ave/SE 24th St	12	2	1	8	8	18	2	11	11	0	32	6	14	35	15	0	0	0	7	3	6	3	195	1.6%
11 - WAVE 16th St	16	7	3	14	11	28	6	37	4	28	0	7	16	43	16	0	0	0	3	3	4	11	258	2.1%
12 - WAVE 12th St	4	2	1	7	4	7	2	24	3	13	26	0	2	22	10	0	0	0	2	1	3	7	138	1.1%
13 - WAVE 7th St (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	0	3	6	5	13	39	0.3%
14 - WAVE Las Olas Blvd	14	10	3	32	20	26	7	32	6	33	41	9	0	0	8	1	5	0	1	5	5	29	287	2.4%
15 - WAVE Andrews (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	2	9	18	0.2%
16 - WAVE 6th & Andrews (SB)	8	5	2	14	11	16	2	18	5	17	27	5	0	0	0	0	0	0	0	0	0	0	130	1.1%
17 - WAVE 6th St (SB)	6	1	0	4	4	9	1	5	1	5	8	0	0	0	0	1	0	0	0	0	0	0	47	0.4%
18 - WAVE Andrews (SB)	6	1	0	8	6	2	1	7	1	5	0	0	0	4	0	0	0	0	0	0	0	0	42	0.4%
19 - Broward/ 2nd Ave	58	22	10	85	23	50	31	67	2	47	19	6	0	3	0	0	5	0	0	1	3	70	499	4.2%
20 - Broward/ 5th Ave	6	8	2	19	8	8	5	16	3	12	20	8	0	8	0	3	8	2	7	0	7	8	155	1.3%
21 - Broward/ 15th Ave	2	2	1	5	4	3	2	11	11	21	30	6	0	45	0	3	22	7	16	8	0	7	205	1.7%
22 - Broward Tri-Rail St	4	9	15	29	29	7	4	19	161	404	226	90	0	374	0	31	238	125	695	184	61	0	2,706	22.5%
Total	695	601	250	1,588	584	735	293	797	642	864	946	229	316	1,047	380	41	277	134	986	285	120	201	12,010	100.0%
	5.8%	5.0%	2.1%	13.2%	4.9%	6.1%	2.4%	6.6%	5.3%	7.2%	7.9%	1.9%	2.6%	8.7%	3.2%	0.3%	2.3%	1.1%	8.2%	2.4%	1.0%	1.7%	100%	
	WB/SB Stations																EB/NB Stations							

Direction	Trips	
Eastbound	5,431	45.2%
Westbound	6,577	54.8%
Total	12,008	100.0%

Access Type	Trips	
Walk	7,424	61.8%
PnR	2,959	24.6%
KnR	1,627	13.5%
Total	12,010	100.0%

Time Period	Trips	
Peak	7,869	65.5%
Off-Peak	4,139	34.5%
Total	12,008	100.0%

Intermodal Trips on Light Rail

Mode Used/Access Type	Walk	PnR	KnR	Total
Light Rail & Tri-Rail	412	311	197	920
Light Rail & Sawgrass Rapid Bus	451	34	30	515
Light Rail & All BCT Rapid Buses	451	34	30	515
Light Rail & WAVE	95	1	2	98

\*Trip could have involved more than the two modes mentioned above

Trips By Segment	Boardings		Attractions	
	#	%	#	%
University/Nova - Tri-Rail FLL/I-95	5,363	44.7%	4,746	39.5%
Tri-Rail FLL/I-95 - Broward Tri-Rail St	6,646	55.3%	7,264	60.5%
Total	12,010	100.0%	12,010	100.0%

All Trips

Station Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	
1 - University/Nova	0	274	37	362	58	94	33	165	114	41	136	19	69	108	69	0	0	0	22	7	2	3	1,613	19.1%
2 - Nova / 70th Ave	14	0	8	16	12	25	3	12	9	1	9	1	3	7	4	0	0	0	6	5	0	1	136	1.6%
3 - Nova / Davie	36	15	0	19	19	43	3	17	8	3	9	2	3	8	4	0	0	0	7	3	6	0	205	2.4%
4 - Davie / Oaks	11	3	3	0	9	19	3	5	6	3	8	1	3	7	4	0	0	0	5	2	0	1	93	1.1%
5 - Griffin/Davie	19	14	4	63	0	34	13	30	28	21	44	7	28	56	36	0	0	0	27	7	2	2	435	5.2%
6 - Griffin/SR 7	80	68	26	278	57	0	69	82	63	78	139	17	79	122	97	0	0	0	62	6	1	1	1,327	15.7%
7 - Griffin/32nd Ave	36	4	5	12	30	75	0	21	26	9	22	6	7	18	13	0	0	0	28	9	2	2	325	3.8%
8 - Tri-Rail FLL/I-95	130	72	21	202	79	61	33	0	87	98	153	32	60	122	66	0	0	0	30	11	4	8	1,267	15.0%
9 - FLL Airport	171	30	9	45	20	77	14	16	0	20	20	3	7	19	11	0	0	0	2	3	3	9	480	5.7%
10 - SW 4th Ave/SE 24th St	12	2	1	6	6	14	1	8	8	0	28	6	13	35	12	0	0	0	6	2	5	3	168	2.0%
11 - WAVE 16th St	14	6	2	11	8	23	5	29	3	26	0	5	14	40	15	0	0	0	3	2	4	8	217	2.6%
12 - WAVE 12th St	2	2	0	4	4	5	1	12	2	9	21	0	1	19	9	0	0	0	1	1	2	3	98	1.2%
13 - WAVE 7th St (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	0	0	0	2	5	3	9	32	0.4%
14 - WAVE Las Olas Blvd	11	5	2	20	16	19	5	24	4	27	33	8	0	0	8	1	4	0	1	5	4	20	215	2.6%
15 - WAVE Andrews (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	6	13	0.2%
16 - WAVE 6th & Andrews (SB)	5	2	1	9	8	11	2	11	3	14	27	4	0	0	0	0	0	0	0	0	0	0	97	1.1%
17 - WAVE 6th St (SB)	4	1	0	4	3	5	0	5	1	5	6	0	0	0	0	1	0	0	0	0	0	0	36	0.4%
18 - WAVE Andrews (SB)	3	1	0	4	4	2	0	4	1	4	0	0	0	4	0	0	0	0	0	0	0	0	29	0.3%
19 - Broward/ 2nd Ave	28	17	5	57	13	30	18	42	2	35	15	4	0	5	0	0	4	0	0	1	3	37	313	3.7%
20 - Broward/ 5th Ave	4	6	2	13	6	6	4	12	2	9	16	6	0	6	0	2	8	1	6	0	5	6	121	1.4%
21 - Broward/ 15th Ave	1	1	1	5	3	1	1	7	9	18	23	4	0	33	0	2	22	9	12	5	0	5	162	1.9%
22 - Broward Tri-Rail St	3	5	1	15	15	5	2	13	12	24	136	42	0	237	0	28	139	104	209	28	38	0	1,056	12.5%
Total	584	527	128	1,146	367	547	213	516	388	444	845	170	288	854	352	35	177	114	432	103	84	123	8,436	100.0%
	6.9%	6.3%	1.5%	13.6%	4.4%	6.5%	2.5%	6.1%	4.6%	5.3%	10.0%	2.0%	3.4%	10.1%	4.2%	0.4%	2.1%	1.3%	5.1%	1.2%	1.0%	1.5%	100%	
	WB/SB Stations																EB/NB Stations							

Direction	Trips	
Eastbound	4,413	52.4%
Westbound	4,008	47.6%
Total	8,421	100.0%

Access Type	Trips	
Walk	5,355	63.5%
PnR	2,088	24.8%
KnR	993	11.8%
Total	8,436	100.0%

Time Period	Trips	
Peak	5,012	59.5%
Off-Peak	3,409	40.5%
Total	8,421	100.0%

Intermodal Trips on Light Rail

Mode Used/Access Type	Walk	PnR	KnR	Total
Light Rail & Tri-Rail	397	378	272	1,047
Light Rail & Sawgrass Rapid Bus	367	27	27	421
Light Rail & All BCT Rapid Buses	367	27	27	421
Light Rail & WAVE	58	0	3	61

\*Trip could have involved more than the two modes mentioned above

Trips By Segment	Boardings		Attractions	
	#	%	#	%
University/Nova - Tri-Rail FLL/I-95	4,132	49.0%	3,512	41.6%
Tri-Rail FLL/I-95 - Broward Tri-Rail St	4,304	51.0%	4,925	58.4%
Total	8,436	100.0%	8,436	100.0%

All Trips

Station Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	
1 - University/Nova	0	205	43	479	61	77	38	152	65	44	122	16	54	101	48	0	0	0	12	5	2	2	1,525	17.7%
2 - Nova / 70th Ave	14	0	10	15	12	25	3	14	8	1	7	2	4	6	6	0	0	0	5	4	0	1	137	1.6%
3 - Nova / Davie	42	13	0	15	20	42	3	17	6	3	9	2	3	7	4	0	0	0	5	3	6	1	201	2.3%
4 - Davie / Oaks	13	2	1	0	9	25	3	7	5	3	9	1	3	6	5	0	0	0	5	3	0	1	102	1.2%
5 - Griffin/Davie	19	13	5	58	0	37	14	27	19	20	40	7	25	53	30	0	0	0	23	9	1	1	402	4.7%
6 - Griffin/SR 7	32	50	25	291	65	0	91	134	54	85	134	21	78	132	87	0	0	0	34	5	0	1	1,318	15.3%
7 - Griffin/32nd Ave	36	4	5	14	24	103	0	23	17	11	21	10	9	17	14	0	0	0	13	10	1	3	336	3.9%
8 - Tri-Rail FLL/I-95	168	64	27	249	106	118	22	0	34	134	238	49	94	195	96	0	0	0	55	37	3	12	1,701	19.7%
9 - FLL Airport	86	12	4	9	18	68	5	16	0	12	15	3	8	21	14	0	0	0	3	3	2	4	303	3.5%
10 - SW 4th Ave/SE 24th St	12	2	1	7	7	17	1	9	6	0	24	7	14	35	15	0	0	0	5	3	4	3	173	2.0%
11 - WAVE 16th St	12	7	2	14	9	26	6	30	4	21	0	4	13	37	15	0	0	0	3	2	3	9	217	2.5%
12 - WAVE 12th St	2	1	0	5	3	5	2	21	2	11	13	0	1	19	9	0	0	0	2	1	2	5	105	1.2%
13 - WAVE 7th St (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	11	4	0	0	0	3	5	3	14	39	0.5%
14 - WAVE Las Olas Blvd	9	6	2	24	18	21	4	37	5	27	32	8	0	0	8	1	4	0	2	5	3	24	240	2.8%
15 - WAVE Andrews (NB)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	2	4	11	0.1%
16 - WAVE 6th & Andrews (SB)	4	7	2	23	10	13	4	19	4	22	17	3	0	0	0	0	0	0	0	0	0	0	127	1.5%
17 - WAVE 6th St (SB)	5	1	0	5	2	7	1	6	1	5	6	1	0	0	0	1	0	0	0	0	0	0	41	0.5%
18 - WAVE Andrews (SB)	7	4	2	9	11	2	2	9	1	7	0	0	0	4	0	0	0	0	0	0	0	0	58	0.7%
19 - Broward/ 2nd Ave	13	8	2	34	6	14	16	30	2	22	16	5	0	5	0	0	4	0	0	1	2	17	199	2.3%
20 - Broward/ 5th Ave	3	6	2	20	8	7	3	18	3	11	17	7	0	3	0	2	12	0	4	0	4	3	133	1.5%
21 - Broward/ 15th Ave	1	1	1	5	2	1	1	7	3	13	15	5	0	35	0	2	14	9	23	6	0	4	147	1.7%
22 - Broward Tri-Rail St	3	4	1	16	15	5	3	17	17	34	136	46	0	227	0	28	149	106	213	62	43	0	1,124	13.0%
Total	480	410	134	1,291	407	613	223	592	255	486	871	197	308	915	353	35	184	115	414	166	82	109	8,638	100.0%
	5.6%	4.8%	1.5%	14.9%	4.7%	7.1%	2.6%	6.8%	2.9%	5.6%	10.1%	2.3%	3.6%	10.6%	4.1%	0.4%	2.1%	1.3%	4.8%	1.9%	0.9%	1.3%	100%	
	WB/SB Stations																EB/NB Stations							

Direction	Trips	
Eastbound	4,583	53.1%
Westbound	4,045	46.9%
Total	8,628	100.0%

Access Type	Trips	
Walk	5,811	67.3%
PnR	1,904	22.0%
KnR	923	10.7%
Total	8,638	100.0%

Time Period	Trips	
Peak	5,340	61.9%
Off-Peak	3,288	38.1%
Total	8,628	100.0%

Intermodal Trips on Light Rail

Mode Used/Access Type	Walk	PnR	KnR	Total
Light Rail & Tri-Rail	259	298	191	748
Light Rail & Sawgrass Rapid Bus	223	10	12	245
Light Rail & All BCT Rapid Buses	223	10	12	245
Light Rail & WAVE	66	0	3	69

\*Trip could have involved more than the two modes mentioned above

Trips By Segment	Boardings		Attractions	
	#	%	#	%
University/Nova - Tri-Rail FLL/I-95	4,020	46.5%	3,557	41.2%
Tri-Rail FLL/I-95 - Broward Tri-Rail St	4,618	53.5%	5,081	58.8%
Total	8,638	100.0%	8,638	100.0%

## Appendix E: Boardings by Transit Route

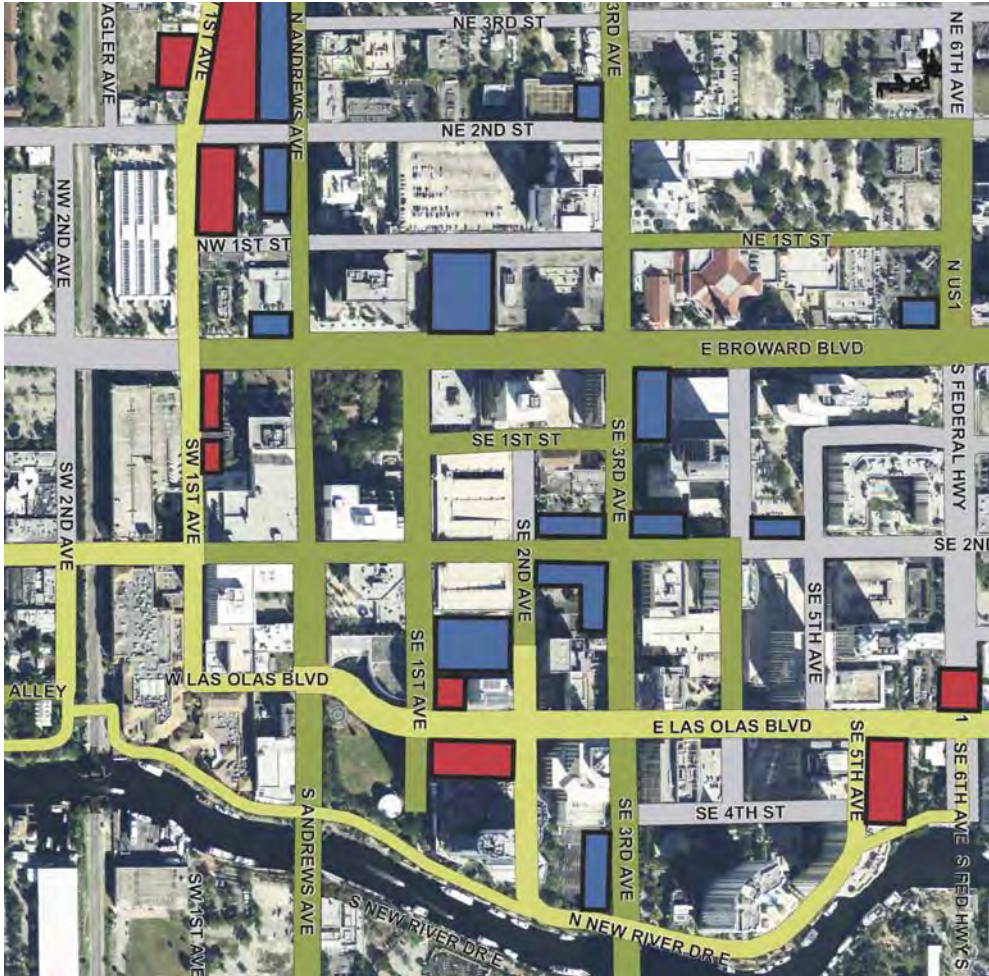


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Central Broward Transit - Daily Boardings by Transit Route

	Model Route No.	Route Name	2010 Observed	2035 No Build	2035 TSM	Broward Boulevard/S R 7 Alternative	Griffin Road Modern Streetcar Alternative	Griffin Road Premium Bus Alternative	Griffin Road Modern Streetcar 2010 Network	Griffin Road Modern Streetcar One-Way Loop 2010 Network	Griffin Road Modern Streetcar 2010 Build	Griffin Road Modern Streetcar 2016 Build
Land Use Data Transit/Highway Network			2035 2035	2035 2035	2035 2035	2035 2035	2035 2035	2035 2035	2035 2010	2035 2010	2010 2010	2016 2016
Project	M35L1	Guideway Project	-	-	-	3,768	10,380	4,460	12,008	9,318	8,421	8,628
	M34L96/97	Sawgrass Rapid Bus	-	-	4,428	4,953	917	3,430	1,139	901	897	833
	Guideway Project Subtotal		-	-	4,428	8,721	11,297	7,890	13,147	10,219	9,318	9,461
	M32L1	Wave	-	302	381	70	79	64	158	76	101	131
East-West Routes	M33L72	Oakland Park Boulevard Local Bus	7,593	6,411	6,380	6,327	6,301	6,353	7,673	6,316	5,911	7,042
	M34L95	Oakland Park Boulevard/Andrews Rapid Bus	-	4,222	4,210	4,136	4,175	4,225	-	4,182	-	-
	M34L72	Oakland Park Boulevard Rapid Bus EW	-	3,582	3,595	3,601	3,638	3,644	-	3,629	-	-
	Oakland Park Boulevard Subtotal		-	14,215	14,185	14,064	14,114	14,222	7,673	14,127	5,911	7,042
	M33L36	Sunrise Boulevard Local Bus	7,176	6,823	6,626	6,594	6,451	6,483	5,879	6,466	4,794	4,846
	M34L75	Sunrise Boulevard Rapid Bus	-	4,621	4,422	4,358	4,359	4,580	-	4,359	-	-
	Sunrise Boulevard Subtotal		7,176	11,444	11,048	10,952	10,810	11,063	5,879	10,825	4,794	4,846
	M33L22	Broward Boulevard Local Bus	4,216	2,660	2,560	2,085	2,144	2,127	2,769	2,152	1,923	3,884
	Broward Boulevard Rapid Bus - SR 7 to BCT Central Terminal		-	4,799	3,998	3,905	3,400	3,690	-	3,410	-	-
	M34L92	Broward Boulevard Rapid Bus - BCT Central Terminal to West Regional Terminal	-	1,851	1,813	1,447	1,586	1,744	-	1,599	-	-
	M34L90	Broward Boulevard Subtotal	-	9,310	8,371	7,437	7,130	7,561	2,769	7,161	1,923	3,884
	M33L207	Griffin Road Local Bus	-	2,580	405	2,431	278	289	-	311	-	-
	M33L30	Peters Road Local Bus	2,234	4,226	3,867	3,707	3,535	3,831	1,811	3,535	1,572	2,348
	M33L154	I-595 Pilot Express - Weston P&R to Broward Medical Center	-	428	393	239	222	256	-	222	-	130
	M33L155	I-595 Pilot Express - BB&T (Bank Atlantic) Center to Broward Medical Center	-	293	271	147	126	146	-	132	-	108
	M33L156	I-595 Pilot Express - Weston P&R to Downtown	-	1,977	2,664	2,812	2,858	2,857	-	2,790	-	1,102
	M33L157	I-595 Pilot Express - BB&T (Bank Atlantic) Center to Downtown Miami	-	2,066	2,698	2,933	2,981	2,959	-	2,920	-	1,055
North-South Routes	M33L201	Flamingo Road Local Bus	-	1,669	1,651	1,621	1,616	1,620	-	1,604	-	-
	M33L202	Nob Hill Road Local Bus	-	1,573	1,507	1,530	1,505	1,512	-	1,496	-	-
	M33L203	Pine Island Road Local Bus	-	1,791	1,716	1,719	1,658	1,677	-	1,658	-	-
	M33L2	University Drive Local Bus	6,338	8,154	8,529	8,622	8,704	8,612	10,160	8,553	7,424	6,869
	M34L291	University Drive Rapid Bus	903	16,818	16,587	16,956	17,382	18,057	2,801	17,357	2,183	4,896
	M33L9	Davie to Downtown Local Bus	2,046	5,342	5,144	4,125	4,230	4,374	2,138	4,650	1,795	1,716
	M33L18	SR 7 Local Bus	14,639	11,911	11,975	11,846	11,803	11,792	17,413	11,816	12,911	12,723
	M34L441	SR 7 Rapid Bus	1,918	28,697	28,529	28,156	28,519	27,992	974	28,374	842	2,496
	M33L1	US 1 Local Bus	7,228	7,265	7,444	6,874	6,997	7,153	8,451	7,065	6,749	5,014
	M34L191	US 1 Rapid Bus	919	11,898	11,709	11,752	11,670	11,745	1,079	11,614	993	2,567
Regional Routes	M15L1	Tri-Rail	12,200	16,200	16,083	15,915	15,873	15,899	19,731	15,873	13,079	13,078
	M14L1	Metrorail Existing	57,884	152,330	152,327	152,418	152,418	152,419	266,096	152,369	57,526	47,575
	M14L13	Metrorail Extension	-	125,787	125,834	125,978	125,961	125,963	-	125,894	-	46,311

# FORT LAUDERDALE DOWNTOWN WALKABILITY ANALYSIS



**SUBMITTED JANUARY 15, 2013**

**JEFF SPECK  
AICP, CNU-A, LEED-AP, HON. ASLA**

## EXECUTIVE SUMMARY

By applying a design strategy centered on walkability, this study asserts and attempts to demonstrate how a limited number of relatively small planning interventions can exert a profound influence on the livability and vitality of downtown Fort Lauderdale.

This study applies an “urban triage” methodology that determines where walkability is achievable in the short run and integrates these findings with an analysis of important anchors and paths in order to designate a Primary and Secondary Network of Walkability in the downtown. These Networks indicate where, in both the short- and mid-term, the fewest investments in infrastructure are likely to have the greatest impact on people’s choice to walk.

## GENERAL RECOMMENDATIONS

General recommendations to the downtown include, but are not limited to:

- Adjusting meter rates to result in the proper rate of curb vacancy;
- Making use of shade trees rather than palm trees almost everywhere;
- Making streetscape improvements in the order suggested by the Networks of Walkability (described ahead);
- Applying enhanced urban coding within the Networks of Walkability;
- Prohibiting the abandonment of further vehicular streets;
- Designing all future streets with 10-foot-max travel lanes, 8-foot-max parking lanes, ample sidewalks, and continuous tree cover;
- Adding integrated bike lanes where they fit—and *sharrows* where they don’t—along Las Olas, Himmarshee, N 2<sup>nd</sup> Street, N 4<sup>th</sup> Street, and Brickell Avenue, and separated bike lanes against E 3<sup>rd</sup> Avenue and, eventually, Broward Boulevard;
- Eliminating unnecessary loops from, and simplifying transfers between, the planned WAVE streetcar and Bus Rapid Transit systems; and
- Not allowing transit stops not undermine walkability by unduly widening pavements or removing parallel parking.

## SITE-SPECIFIC RECOMMENDATIONS

The report contains hundreds of site-specific recommendations, organized principally by street. While further explanation is needed (and provided ahead), they can be summarized as follows:

*Broward Boulevard* should receive an attractive low barrier along the curb in most locations, and shade trees where possible. Its crosswalk at Federal Highway should be replaced, and several sidewalks expanded into adjacent properties. Mid-term, it should be restriped with 10-foot travel lanes to create curbside buffers, receive additional crossings at SE 1<sup>st</sup> Street and Financial Plaza, eliminate several underutilized bus and turn lanes, and receive LPs. Ultimately, it should be redesigned through a public process to be a four-lane *complete street* including parallel parking, biking facilities, and a roundabout where it meets Federal Highway.

*Las Olas Boulevard* should receive consistent parallel parking along all of its curbs, and either bike lanes or *sharrows* as space allows. It’s thick baluster above the Kinney Tunnel should be replaced temporarily by something more transparent, and eventually by a retail pad overhanging the highway. It should receive two-way traffic where it bends into Brickell Avenue, and shade trees wherever they are missing.

*South 2<sup>nd</sup> Street (Himmarsee)* should receive a similar treatment as above, from Brickell to the Center for the Performing Arts. It's passage under the parking structure at SE 1<sup>st</sup> should receive better wayfinding.

*The Riverwalk*, as it awaits its eventual north-south loop, should create a new wayfinding loop that includes Las Olas and Himmarsee to its north. It should further be made to connect to the Plaza above the Kinney Tunnel as soon as possible.

*N 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Streets* all contain too much pavement for their current use, and should be restriped to include an appropriate application of parallel parking and/or bike lanes. The Flagler Greenway should make use of 2<sup>nd</sup> Street to shift cyclists west to W 7<sup>th</sup> Avenue and east to Brickell. *N 1<sup>st</sup> Street* should also include a parking lane where excess pavement exists.

*Federal Highway* should receive LPI signals and shade trees where they are lacking. A signalized crossing should be provided at NE 2<sup>nd</sup> Street, and perhaps also at 1<sup>st</sup> and 3<sup>rd</sup>. Ultimately, in conjunction with a roundabout at Broward Boulevard, the highway should be limited to a 4-lane section (plus turning lanes) from the Kinney tunnel to NE 4<sup>th</sup> Street. Like Broward Boulevard, it would also benefit from a low, attractive barrier along the sidewalk edge.

*Brickell Avenue* should be restriped to include additional parallel parking and bike facilities. As the main north-south axis in the Primary Network of Walkability, it should additionally receive the highest priority when it comes to streetscape improvements.

*E 3<sup>rd</sup> Avenue* should receive low barriers along its sidewalks as it crosses the New River. As soon as possible, the Avenue should be designated a *complete street* and trade two of its travel lanes for curbside parking on one flank and a two-way separated bike path on the other.

*Andrews Avenue* should maintain its current striping through downtown for now, but reserve its two outer lanes for parallel parking at all times except rush hour. By right-sizing its 12-foot lanes across the new river, additional space can be carved out for a protected sidewalk across the bridge, so that pedestrians can avoid the current spiral ramp. Eventually, the entire avenue should be rebuilt along the lines of the City's 2007 Downtown Master Plan.

*W 7<sup>th</sup> Avenue* should narrow its 12-foot lanes to 10-feet in order to carve out room for the southern extension of the Flagler greenway, which can run in both directions down its eastern flank beginning at NW 2<sup>nd</sup> Street.

*SE 1<sup>st</sup> Avenue and SW 5<sup>th</sup> Avenue* both contain excess pavement on the block south of Broward Boulevard. The former should receive angled parking in place of its parallel stalls, while the latter should be restriped to include parallel parking and bike lanes on each flank. Additionally, SW 5<sup>th</sup> Avenue should eventually run past the front of the Center for the Performing Arts to connect to W Las Olas, currently a cul-de-sac.

*Flagler Greenway* should jog west on N 2<sup>nd</sup> Street to continue south as a separated path down the side of W 7<sup>th</sup> Avenue.

This Executive Summary does not provide the full set of recommendations outlined in this study, not does it communicate their justification. For that reason, we encourage a review of the full document.



## OVERVIEW

### Process

By applying a design strategy centered on walkability, this study asserts and attempts to demonstrate how a limited number of relatively small planning interventions can exert a profound influence on the livability and vitality of downtown Fort Lauderdale.

This study applies an “urban triage” methodology that determines where walkability is achievable in the short run and integrates these findings with an analysis of important anchors and paths in order to designate a Primary and Secondary Network of Walkability in the downtown. These Networks indicate where, in both the short- and mid-term, the fewest investments in infrastructure are likely to have the greatest impact on people’s choice to walk.

These Networks of Walkability are then used as a means to prioritize a series of suggested improvements, principally to thoroughfares, but also to flanking properties. In most cases, suggested street improvements attempt to make use of restriping rather than reconstruction in order to conserve funds. Recommendations are also prioritized with an eye towards where the City is better able to exert its authority, understanding that State- and County-owned thoroughfares are more difficult to modify quickly.

The study area for this exercise is principally the heart of the downtown, bounded by W 7<sup>th</sup> Avenue, Federal Highway, N 4<sup>th</sup> Street, and the New River. Conditions beyond these borders are considered in this report’s recommendations, but all recommendations are limited to this area and the three bridges that connect it to the south side of the River.

Recommendations are divided into Short-, Mid-, and Long-Term actions, based not on their priority but on their ability to be accomplished quickly. A longer-term action is not one that should be delayed, but one that is likely to experience delay in its implementation, and therefore needs to be started soon if it is to produce results before very long. That said, many actions that are considered a higher priority achieve that status in part because they are likely to face fewer impediments and therefore produce results most quickly.

Because they are much under discussion and have a great impact on walkability, this study pays considerable attention also to the downtown’s nascent bicycle network and evolving transit network, making suggestions as to how they can best support walkability as well as thrive in their own right. It concludes with Next Steps, highlighting the ten short-term physical interventions that can be expected to have the most immediate impacts on the walkability and vitality of downtown Fort Lauderdale.

## Recommendations

This executive summary is no substitute for reading the entirety of the report, especially since it is impossible in few pages to present the reasoning behind the proposals contained herein. With that warning, the paragraphs that follow sacrifice argument for comprehensiveness in an attempt to list every significant recommendation that follows.

## JUSTIFICATION

Downtown Fort Lauderdale is not considered particularly walkable for good reason. While it contains a generally good mix of uses in a network of mostly small blocks, that network has been degraded by the widening (and speeding) of its streets, the placement of parking lots against sidewalk edges, and the addition of many pedestrian-unfriendly buildings. Remedying these problems across the majority of the downtown is a project for many decades, but carving out a limited area of excellent walkability can be accomplished quite quickly, and can have a profound impact on the function and the reputation of the city.

Accomplishing this change is important for all the reasons that walkability is important. These reasons include making Fort Lauderdale a more attractive place for residents and workers and improving the health of the city's inhabitants while reducing their carbon footprint as well. Walkable cities are wealthier, healthier, and more sustainable cities.

## BACKGROUND

Most people have the choice to walk or to drive. Most will only make the choice to walk if that walk is useful, safe, comfortable, and interesting.

The *useful walk* means having the best mix of uses all in close proximity. The *safe walk* means designing thoroughfares so that pedestrians feel safe, which includes: small blocks and streets, lanes of the proper width, limited turn lanes, bike lanes where appropriate, continuous on-street parking and shade trees, ample sidewalks, limited curb cuts, and pedestrian-friendly signals. The *comfortable walk* means bringing buildings up to the sidewalk edge, avoiding surface parking lots and missing teeth, and planting more shade trees. The *interesting walk* means requiring active building edges against principal walking streets.

All of these conditions must be met to truly encourage walking, which is very hard to do. For that reason, it is necessary to delineate a Network of Walkability where such an outcome is possible, and to focus improvements there first.

## SETTING PRIORITIES

The *urban triage* methodology already described under *Process* leads to the diagram on the following page, in which a Primary (short-term) and Secondary (mid-term) Network of Walkability are defined in order to direct and prioritize modifications to the

downtown. These consist primarily of the redesign of thoroughfares, but also include the construction of new buildings on a limited number of key sites.



*The Primary Network of Walkability (light green) is the location of the most important street improvements and building opportunities (red). The Secondary Network (dark green) contains the next most important improvements and building sites (blue).*

As indicated above, the Primary Network of Walkability, in addition to the Riverwalk, is centered upon Las Olas, W. Himmarshee, and Brickell Avenue. As a result, these three trajectories receive special attention in the report's recommendations.

## GENERAL RECOMMENDATIONS

General recommendations to the downtown include:

- Supplementing the downtown's incomplete crosswalk network;
- Adjusting meter rates to result in the proper rate of curb vacancy;
- Making use of shade trees rather than palm trees almost everywhere;
- Maintaining minimum sidewalk clear zones;
- Making streetscape improvements in the order suggested by the Networks of Walkability;
- Introducing Leading Pedestrian Interval signals (LPIs);
- Applying enhanced urban coding within the Networks of Walkability;
- Prohibiting the abandonment of further vehicular streets; and
- Designing all future streets with 10-foot-max travel lanes, 8-foot-max parking lanes, ample sidewalks, and continuous tree cover.

## THE BICYCLE NETWORK

This study proposes integrated bike lanes where they fit—and *sharrows* where they don't—along Las Olas, Himmarshee, N 2<sup>nd</sup> Street, N 4<sup>th</sup> Street, and Brickell Avenue, and separated bike lanes against E 3<sup>rd</sup> Avenue and, eventually, Broward Boulevard. It also recommends that the Flagler Greenway jog west on N 2<sup>nd</sup> Street to continue south as a separated path down the side of W 7<sup>th</sup> Avenue. It asserts certain minimal standards for these facilities, and recommends that the next two Bike-Share stations be located by the Cheesecake Factory and at the Broward Central Terminal, respectively.

## THE TRANSIT NETWORK

This study reviews the proposed routes and station locations of the WAVE streetcar and planned Bus Rapid Transit, and makes suggestions for enhancing same by eliminating unnecessary loops and simplifying transfers where possible. It also raises the mandate that transit stops not undermine walkability by unduly widening pavements or removing parallel parking.

## SITE-SPECIFIC RECOMMENDATIONS

### Thoroughfares

The report contains hundreds of site-specific recommendations, organized principally by street. While further explanation is needed (and provided ahead), they can be summarized as follows:

(Note: These are repeated from the *Executive Summary*)

*Broward Boulevard* should receive an attractive low barrier along the curb in most locations, and shade trees where possible. Its crosswalk at Federal Highway should be replaced, and several sidewalks expanded into adjacent properties. Mid-term, it should be restriped with 10-foot travel lanes to create curbside buffers, receive additional crossings at SE 1<sup>st</sup> Street and Financial Plaza, eliminate several underutilized bus and turn lanes, and receive LPIs. Ultimately, it should be redesigned through a public process to be a four-lane *complete street* including parallel parking, biking facilities, and a roundabout where it meets Federal Highway.

*Las Olas Boulevard* should receive consistent parallel parking along all of its curbs, and either bike lanes or *sharrows* as space allows. Its thick baluster above the Kinney Tunnel should be replaced temporarily by something more transparent, and eventually by a retail pad overhanging the highway. It should receive two-way traffic where it bends into Brickell Avenue, and shade trees wherever they are missing.

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*The Riverwalk*, as it awaits its eventual north-south loop, should create a new wayfinding loop that includes Las Olas and Himmarshee to its north. It should further be made to connect to the Plaza above the Kinney Tunnel as soon as possible.

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*Andrews Avenue* should maintain its current striping through downtown for now, but reserve its two outer lanes for parallel parking at all times except rush hour. By right-sizing its 12-foot lanes across the new river, additional space can be carved out for a protected sidewalk across the bridge, so that pedestrians can avoid the current spiral ramp. Eventually, the entire avenue should be rebuilt along the lines of the City's 2007 Downtown Master Plan.

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*SE 1<sup>st</sup> Avenue and SW 5<sup>th</sup> Avenue* both contain excess pavement on the block south of Broward Boulevard. The former should receive angled parking in place of its parallel stalls, while the latter should be restriped to include parallel parking and bike lanes on each flank. Additionally, SW 5<sup>th</sup> Avenue should eventually run past the front of the Center for the Performing Arts to connect to W Las Olas, currently a cul-de-sac.



## Buildings

Finally, as suggested by the *Infill Sites* diagram, the following additional modifications are recommended, principally on private property:

- Placing a residential or hotel use on the key missing tooth just west of the County Courthouse on Broward Boulevard;
- Adding greenery or art to the blank southern wall of the Art Museum;
- Removing the internal bridges within River Front that obscure views of the Riverwalk from downtown;
- Prioritizing construction on the three missing teeth along Las Olas;
- Placing a building against the sidewalk on the north side of Himmarshee just west of SW 3<sup>rd</sup> Avenue;
- Placing front doors facing SE 1<sup>st</sup> Street in the three stores currently facing only the parking garage that holds them.;
- Ensuring that the new WAVE “One-Stop-Shop” creates an active façade against Brickell Avenue;
- Narrowing the curb-cut and driveway to the bank drive-thru on the north side of Broward Boulevard across from SE 1<sup>st</sup> Avenue;
- Encouraging large amount of residential within the River Front complex;
- Improving facades along Himmarshee between Brickell Avenue and the FEC corridor;
- Creating a thin building against Brickell Avenue’s east sidewalk just south of Broward Boulevard;
- Eventually creating an enhanced design code for new buildings against a rebuilt Broward Boulevard; and
- Eventually placing a building in the parking lot at the NW corner of Broward Boulevard and Federal Highway.

It is understood that, unlike its thoroughfares, the City has less ability to control the disposition of these parcels, most of which are privately owned. But, from financial incentives to urban design codes, to the bully pulpit, City leadership can choose to circle the wagons around these few sites to encourage that they be built soon and built well, given their importance in achieving a walkable downtown.



## ATTACHMENT 10

Environmental Protection and Growth Management Department  
**PLANNING AND REDEVELOPMENT DIVISION**

1 North University Drive, Suite 102-A • Plantation, Florida 33324 • 954-357-6666 • FAX 954-357-6521 • 954-519-1412

DATE: October 31, 2014

**RECEIVED**

TO: Barbara Blake Boy, Executive Director  
Broward County Planning Council

OCT 31 2014

FROM: Martin Berger, Planning Section Manager

**BROWARD COUNTY  
PLANNING COUNCIL**

SUBJECT: Broward County Land Use Plan Amendment PCT 15-1  
Fort Lauderdale Downtown RAC Traffic Circulation Analysis

In response to your request, the Development Management and Environmental Review Section of the Planning and Redevelopment Division has reviewed the City of Fort Lauderdale's Traffic Circulation Analysis for the Downtown Regional Activity Center text amendment to the BCLUP and has the following comments:

1. The trip reduction rate of 47% is not adequately justified. We concur that the transit and other multi-modal improvements planned for the downtown area will reduce the number of vehicle trips generated by the proposed 5,000 new dwelling units, but not to that extent. While we are supportive of the concept of internal capture, a 15% reduction for internal capture for mixed use developments is questionable as the city needs to document how this 15% would be over and above the internal capture resulting from the MPO's model output. Second, unless the American Communities Survey was specific to Fort Lauderdale, its use is questionable to justify 17% of all commuters in the downtown RAC walk, bicycle, carpool or take transit to work. Also, commutes to work only comprise a portion of all trips. Third, assuming a 15% trip reduction for developing around transit centers is also questionable, because the Wave Streetcar is not a "transit center." Finally, the analysis states that the All Aboard Florida commuter rail would reduce trips into and from the Downtown RAC. Since this is a long distance regional travel alternative, it appears that it would only add trips to the RAC, i.e., trips to and from the station.
2. The analysis state that Table F-2 in Appendix A identifies the major roadway segments within the study [area] that may be impacted by the proposed amendment. It may identify those segments within the RAC, but the study area is bounded by I-95, Oakland Park Boulevard, SR A1A and I-595.
3. A review of the MPO model's trip distribution and assignment with only a 7% reduction for internal capture appears reasonable. This assignment shows that there are 35 segments that are impacted by the amendment within the study area, not 15 as stated in the study. However, once an acceptable internal capture rate is agreed upon, it is anticipated that the number of impacted segments will be reduced.

If you have any questions concerning this response, please advise.

cc: Cynthia Chambers, Director, Environmental Protection and Growth Management Department  
Henry Sniezek, Director, Planning and Redevelopment Division

**From:** Todd Okolichany <TOkolichany@fortlauderdale.gov>  
**Sent:** Wednesday, December 17, 2014 11:15 AM  
**To:** Blake Boy, Barbara  
**Cc:** Von Stetina, Deanne; Alia Awwad  
**Subject:** RE: Downtown Units LUPA - Vehicular Trip Rate Reduction Methodology  
**Attachments:** Internal Capture Calculations for the Downtown RAC.PDF

Barbara –

**RECEIVED**

Sorry, I forgot to include the internal capture calculations as back-up documentation.

DEC 17 2014

Todd Okolichany, AICP, LEED Green Assoc. | Principal Planner

**BROWARD COUNTY  
PLANNING COUNCIL**

**From:** Todd Okolichany  
**Sent:** Wednesday, December 17, 2014 10:59 AM  
**To:** Blake Boy, Barbara  
**Cc:** Deanne Von Stetina (dvonstetina@broward.org); Ella Parker; Debora Griner; Alia Awwad; Elizabeth Van Zandt; John Milledge (john@jmmpa.com)  
**Subject:** Downtown Units LUPA - Vehicular Trip Rate Reduction Methodology

Hi Barbara –

Please see attached for an updated trip rate reduction methodology for the Downtown Units LUPA. The methodology outlines the approach used for the overall trip reduction rate, which has been revised to 21%.

This attachment also includes a summary of the multimodal infrastructure projects in the Downtown area. Our understanding is that Broward County staff will review/approve the trip reduction rate and provide the impacted roadways. After we receive the list of impacted roadways City staff will expand upon our analysis of the mitigation measures for each of the significantly impacted corridors, including multimodal and capital improvement projects such as the Wave Streetcar, "Connecting the Blocks" projects, etc. We will provide this information by Friday, December 19<sup>th</sup> in order to meet the deadline for the January 22<sup>nd</sup> Planning Council agenda.

Please forward this attachment to Henry, Marty and other appropriate County staff.

Thanks & Regards,

Todd Okolichany, AICP, LEED Green Assoc. | Principal Planner

*"We Build Community"*

Urban Design & Planning Division

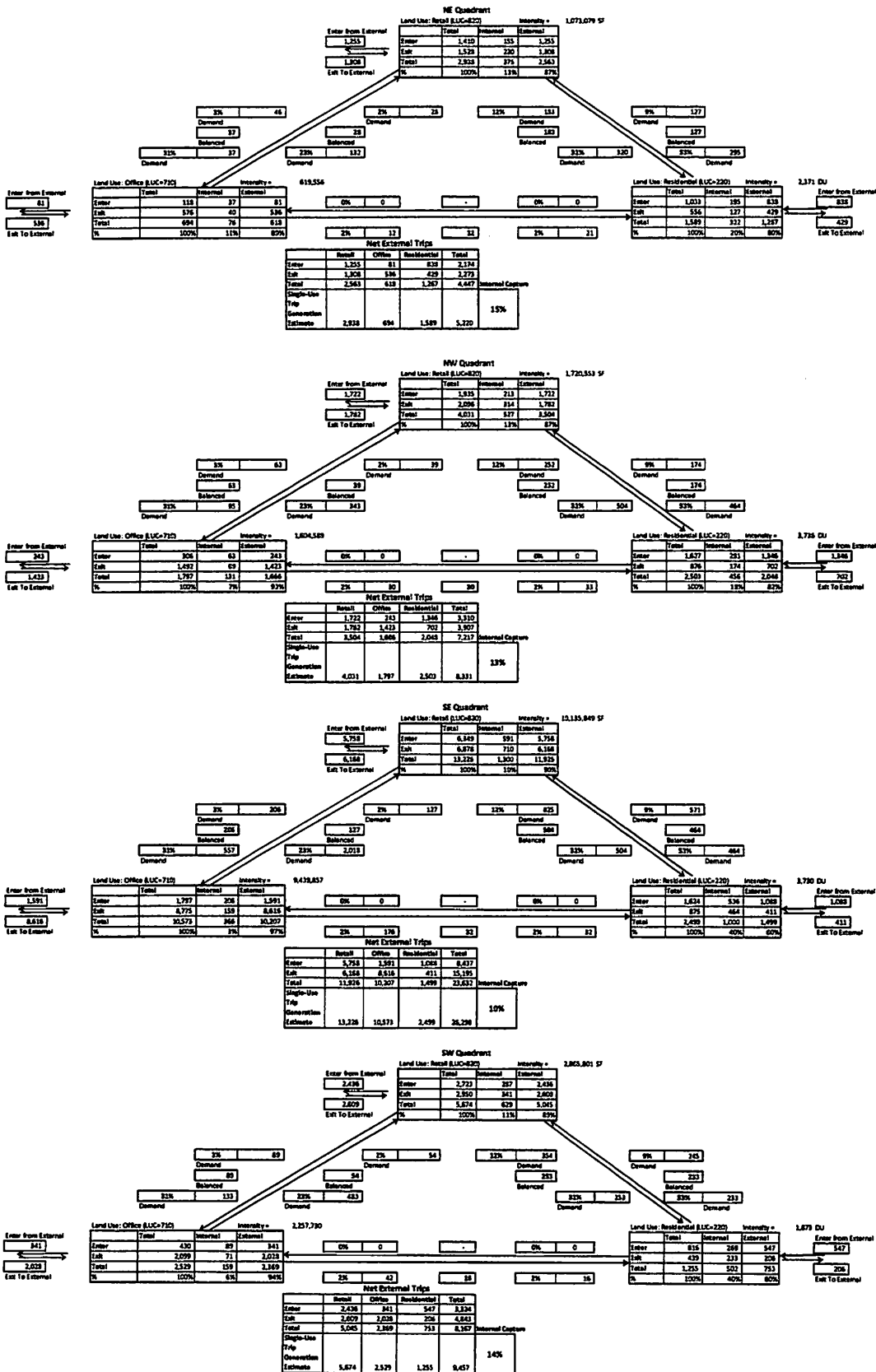
City of Fort Lauderdale | Department of Sustainable Development

700 NW 19 Avenue, Fort Lauderdale FL 33311

P 954-828-5256 | F 954-828-5858 [tokolichany@fortlauderdale.gov](mailto:tokolichany@fortlauderdale.gov)

Under Florida law, most e-mail messages to or from City of Fort Lauderdale employees or officials are public records and may be subject to public disclosure. Please consider the environment before printing.

PM Peak Internal Trip Capture Analysis



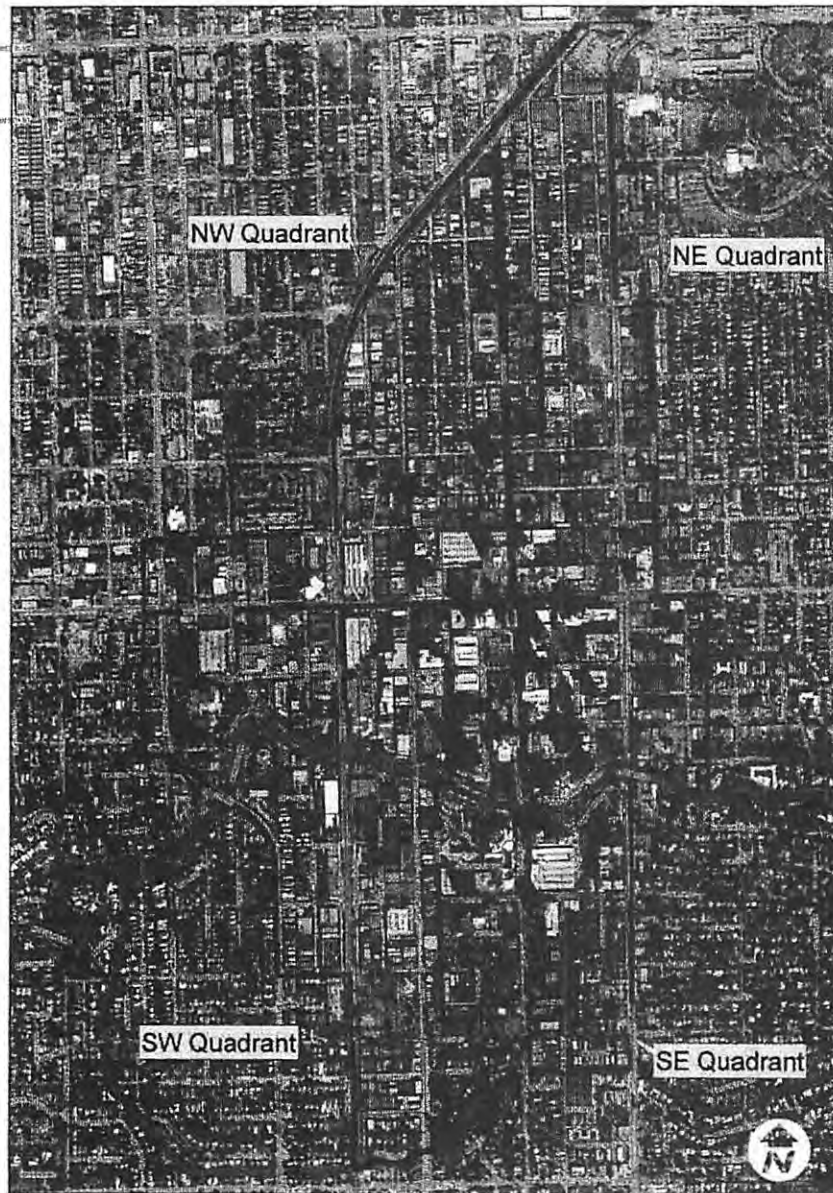
Average Internal Capture =

13%

## Trip Rate Reduction Methodology for the Downtown LUPA

The following outlines the trip rate reduction methodology related to the proposed 5,000 dwelling units (DU) applied for through the Downtown RAC LUPA:

- The specific built-out land use scenario of the Downtown RAC was analyzed by quadrant. The following map outlines the boundaries of the Downtown RAC quadrants.



**Downtown Build-Out**

Map: 1/24/2016 11:11 AM, Project: Downtown Build-Out, Map: 1/24/2016

### Legend

- Quadrant
- Property Line
- Unimproved Land
- Parking Lot

Source: Aerial Photo, Project/Map Data





- The built out intensity by land use, including the proposed 5,000 DU is shown below:

Quadrant	Residential (DU)	Retail (SF)	Office (SF)
NE	2,371	1,073,079	619,556
NW	3,736	1,720,553	1,604,589
SE	3,730	10,135,849	9,439,857
SW	1,873	2,865,801	2,257,730
<b>Total</b>	<b>11,710</b>	<b>15,795,282</b>	<b>13,921,732</b>

- Trip generation rates were calculated based on the ITE Trip Generation Manual 9<sup>th</sup> edition formulas for the different land uses:
  - Retail, Land Use Code (LUC) 820,  $T = 0.67\ln(X) + 3.31$ , where T is the number of PM Peak Trips and X is 1,000 square feet (SF) gross floor area (GFA)
  - Office, LUC 710,  $T = 1.12X + 78.45$ , where T is the number of PM Peak Trips and X is 1,000 SF GFA
  - Residential, LUC 220,  $T = 0.67X$ , where X is the number of dwelling units (DU)
- Using the internal capture methodology outlined in the ITE Trip Generation Manual, Volume 1, internal capture rates for each quadrant were calculated based on the downtown mixed uses. The attached document "Internal Capture Calculations for the Downtown RAC", demonstrates the computations undertaken to derive each internal capture rate.
- Based on these calculations, the average internal capture rate was found to be **13%**.
- As demonstrated in the previous submission, data obtained from the American Community Survey showed that 17 percent of all commuters use travel modes other than driving alone. The 17 percent applies to AM & PM Peak hours, as they coincide with typical commute patterns. To avoid double counting, and to discount the potential overlap between mixed-uses and actual commute patterns, a conservative assumption can be made that internal capture rates in downtown overlap with non-auto commute rates. Therefore, out of the 17 percent, 13 percent is deducted to yield a non-auto commute rate of **4%**.
- Based on travel forecasting estimates for the proposed Wave Streetcar, the SERPM Version 6 Model estimates that approximately 805 trips will be taken by the Wave. These trips can be deducted from the projected vehicular trips for the Downtown RAC, since that portion of the Wave route will operate in the Downtown Core. Additionally, off-model travel forecasting methods estimate that the Wave Streetcar will capture an additional 1,024 trips of the pedestrian travel market, which is typically not accounted for in the model. The specific methodology will be provided in the follow up documentation. This adds an additional 2% trip reduction rate, putting the total estimated Wave trips at 2,640 trips, which yields a total trip reduction estimate of **4%** as shown below.

Quadrant	Residential (DU)	Retail (SF)	Office (SF)	Residential PM Peak Trips	Retail PM Peak Trips	Office PM Peak Trips
NE	2,371	1,073,079	619,556	1,438	2,938	772
NW	3,736	1,720,553	1,604,589	2,257	4,031	1,876
SE	3,730	10,135,849	9,439,857	2,253	13,226	10,651
SW	1,873	2,865,801	2,257,730	1,139	5,674	2,607
<b>Total</b>	<b>11,710</b>	<b>15,795,282</b>	<b>13,921,732</b>	<b>7,086</b>	<b>25,869</b>	<b>15,906</b>
<b>Total PM Peak Trips for all uses in Downtown</b>						<b>48,861</b>
<b>PM Peak Modeled Wave Trips in Downtown</b>						<b>805</b>
<b>PM Peak Off-Model Wave Trips in Downtown</b>						<b>1,024</b>
<b>Total PM Peak Wave Trips</b>						<b>1,829</b>
<b>% of PM Peak Trips that will shift to the Wave Streetcar</b>						<b>4%</b>

- Based on the above calculations, the total trip reduction rate is **21%**.

In addition to the quantitative approach outlined above, a number of elements will contribute to additional vehicular trip reductions. The City has made policy and investment commitments to improve the quality of the infrastructure supporting this compact development. Multimodal improvements through capital investments for infrastructure and increased transit service will improve the walking, biking and transit rider experience. The City believes these conditions will encourage behavior changes and mode shifts that the model is not designed to capture.

The active planning and implementation of these improved infrastructure conditions will accelerate the mode shift in the downtown area. Because land use and transportation are interdependent, it is important to address both aspects, which the City is intending to do through increased dwelling units and actively changing the streetscape and services within the Downtown RAC.

The following is an outline of the infrastructure improvement programs and efforts in the Downtown area. The follow-up documentation will include the project-by-project breakdown of these improvements.

- Over \$16,499,200 have been identified in the City's "Connecting the Blocks" Plan for short-term improvements in the Downtown RAC, in addition to approximately \$190,927,960 in planned improvements for the area.
- Approximately \$17,000,000 in infrastructure improvements are programmed in the City's five-year Community Investment Program (CIP), where funding is allocated through the Downtown Walkability Program, streetscape improvement projects, Transit Oriented Development (TOD) initiatives, and other efforts.

- The City is working with Broward County on identifying “Context Sensitive Corridors” through the Downtown area, which would facilitate the implementation of multimodal corridors that would enhance the multimodal travel experience.
- Development contributions through the City’s Development Review Committee and the County’s Transit Concurrency System aim to mitigate vehicular traffic impacts through implementing multimodal solutions to provide multimodal infrastructure.
- The Wave Streetcar project is a partnership between multiple agencies in the region. The City’s contribution has exceeded \$31,000,000 that is being allocated to the planning, design, and implementation of the system.
- The Downtown area will consist of a connected network of transit systems that will collectively enhance transit accessibility and ultimately foster the modal shift from the car. Existing local bus routes, Tri-Rail, and Sun Trolley Service, combined with the proposed transit projects such as the Wave, Tri-Coastal Link Service, East-West Transit, and All Aboard Florida, will not only provide a connected premium transit service within the Downtown area, but will also facilitate regional transit travel into the City, thereby further reducing vehicular trips.

## ATTACHMENT 12

**From:** Sniezek, Henry  
**Sent:** Thursday, December 18, 2014 2:47 PM  
**To:** Blake Boy, Barbara  
**Cc:** Von Stetina, Deanne; Cabrera, Ivan; Berger, Martin  
**Subject:** RE: Downtown Fort Lauderdale Regional Activity Center - Trip Rate Reduction Methodology

12/18/14

Good afternoon, Barbara. The City's proposed trip reduction rate of 21% is acceptable to the Planning and Redevelopment Division.

Thank you for the opportunity to comment. Please feel free to contact me at your convenience if you have any questions.

Henry

**From:** Blake Boy, Barbara  
**Sent:** Wednesday, December 17, 2014 11:24 AM  
**To:** Sniezek, Henry; Berger, Martin  
**Cc:** Von Stetina, Deanne; Cabrera, Ivan  
**Subject:** Downtown Fort Lauderdale Regional Activity Center - Trip Rate Reduction Methodology

Good morning, Henry and Marty—

The City of Fort Lauderdale has provided the attached documentation regarding its proposed trip rate reduction methodology for proposed BCLUP amendment PCT 15-1. Please advise of your position or comments regarding the proposal at your earliest convenience. Please contact Deanne or Ivan if you have any questions or need additional information. Thank you.

Barbara

--Referenced attachments included in Attachment 11--

# ATTACHMENT 13.A.

## ALTERNATIVE TRAFFIC ANALYSIS PCT 15-1

December 18, 2014

### **INTRODUCTORY INFORMATION**

Jurisdiction: Fort Lauderdale

Size: Approximately 710.0 acres

### **TRIPS ANALYSIS**

#### **Potential Trips - Proposed Land Use Designation**

Proposed Designation:	Fort Lauderdale Downtown Regional Activity Center (RAC)
Potential Development:	Addition of 5,000 dwelling units
Trip Generation Rates:	"ITE Equation (223) Mid-Rise Apartment"* "ITE Equation (232) High-Rise Residential Condominium/ Townhouse"
Total P.M. Peak Hour Trips:	2,264 peak hour trips
<b>Total P.M. Peak Hour Trips with 21% trip reduction rate:**</b>	<b><u>1,789 peak hour trips</u></b>

### **PLANNING COMMENTS**

The proposed amendment is projected to increase traffic on the regional transportation network by approximately 1,789 p.m. peak hour trips at the long-term planning horizon. Distribution of the projected additional p.m. peak hour trips indicate that the proposed amendment would exacerbate impacts on 13 affected roadway links consisting of Sistrunk Boulevard between Northwest 27 Avenue and Andrews Avenue, Broward Boulevard between I-95 and the FEC Railroad (3 links), Northwest 7/9 Avenue Connector between Sistrunk Boulevard and Sunrise Boulevard, Andrews Avenue between State Road 84 and Southeast 17 Street, Andrews Avenue between Davie Boulevard and Broward Boulevard (2 links), Andrews Avenue between Sunrise Boulevard and Prospect Road (2 links), and Federal Highway between Southeast 7 Street and Sistrunk Boulevard (2 links), all of which are projected to operate at an unacceptable level of service (LOS) "E" or "F," with or without the proposed amendment. In addition, Broward Boulevard, between the FEC Railroad and Federal Highway, denigrates from an acceptable LOS "D" to an unacceptable LOS "F," with the addition of the trips generated by the proposed amendment.

\*Institute of Transportation Engineers (ITE) traffic generation equations from "Trip Generation - Ninth Edition," the professionally accepted methodology for estimating the number of vehicle trips likely to be generated by a particular land use.

\*\*21% Trip reduction rate includes internal capture (13%), non-auto commutes (4%) and transit (4%).



Trafficway	Section	2035 CAPACITY	Without Amendment		With Amendment	
			VOLUME	LOS	VOLUME	LOS
Sunrise Boulevard	Andrews Avenue to Searstown	5,390	4,175	C	4,342	C
Sistrunk Boulevard	NW 27 Avenue to Andrews Avenue	2,628	2,866	F	2,980	F
	Andrews Avenue to Federal Highway	1,197	599	D	694	D
NW/NE 4 Street	NW 9 Avenue to NE 15 Avenue	1,197	398	C	483	C
Broward Boulevard	I-95 to SW 11 Avenue	5,390	7,374	F	7,715	F
	SW 11 Avenue to SW 7 Avenue	5,390	5,392	F	5,714	F
	SW 7 Avenue to FEC Railroad	4,500	5,157	F	5,509	F
	FEC Railroad to Federal Highway	4,500	4,489	D	4,712	F
SW 2 Street	SW 7 Avenue to SE 3 Avenue	1,197	749	D	794	D
NW 7/9 Avenue Connector	Sistrunk Boulevard to Sunrise Boulevard	2,920	3,490	F	3,620	F
SW 4 Avenue	Davie Boulevard to SW 7 Street	2,628	1,812	D	1,930	D
	SW 7 Street to Las Olas Boulevard	2,628	2,148	D	2,280	D
NW 7 Avenue	Las Olas Boulevard to Broward Boulevard	2,628	2,270	D	2,402	D
	Broward Boulevard to Sistrunk Boulevard	2,628	2,074	D	2,238	D
	Sistrunk Boulevard to Sunrise Boulevard	2,628	1,005	C	1,151	C
Andrews Avenue	SR 84 to SE 17 Street	2,628	2,646	E	2,732	F
	SE 17 Street to Davie Boulevard	2,628	2,302	D	2,388	D
	Davie Boulevard to SW 7 Street	2,628	2,630	E	2,736	F
	SW 7 Street to Broward Boulevard	2,628	2,704	E	2,816	F
	Broward Boulevard to Sistrunk Boulevard	2,628	2,183	D	2,330	D
	Sunrise Boulevard to Oakland Park Boulevard	2,628	3,570	F	3,675	F
	Oakland Park Boulevard to Prospect Road	2,628	3,384	F	3,471	F
SE 3 Avenue	Davie Boulevard to Southeast 7 Street	2,920	2,095	D	2,200	D
	SE 7 Street to Broward Boulevard	2,920	2,757	D	2,920	D
NE 3 Avenue	Broward Boulevard to Sistrunk Boulevard	2,920	2,203	D	2,398	D
	Sistrunk Boulevard to Sunrise Boulevard	2,920	2,385	D	2,521	D
NE 4 Avenue/Wilton Drive	Sunrise Boulevard to Oakland Park Boulevard	2,920	2,681	D	2,795	D
Federal Highway	SE 7 Street to Broward Boulevard	4,500	5,703	F	5,966	F
	Broward Boulevard to Sistrunk Boulevard	4,500	4,593	F	4,804	F
	Sistrunk Boulevard to Searstown	4,500	4,190	D	4,380	D

ATTACHMENT 13.B.



## ATTACHMENT 14

**Cabrera, Ivan**

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**From:** Blake Boy, Barbara  
**Sent:** Monday, December 22, 2014 7:50 AM  
**To:** Snizek, Henry; Berger, Martin  
**Cc:** Von Stetina, Deanne; Cabrera, Ivan; Schwarz, Pete  
**Subject:** FW: Downtown LUPA Traffic Analysis and Mitigation  
**Attachments:** Downtown LUPA - Traffic Analysis and Mitigation.pdf; PCT 15-1 traffic (new format) original 2454 pm ph trips.xlsx

Good morning—

The City of Fort Lauderdale staff has submitted the attached pdf file of information related to the Downtown Regional Activity Center traffic analysis and mitigation. In addition, I have attached the Planning Council draft of impacted links at both the initial review and with the 21% rediction, to assist your review.

Planning Council staff respectfully requests your review and comments regarding the proposed analysis and mitigation.

Please do not hesitate to contact me if you have any questions during your review and evaluation. Thank you.  
Barbara

**BARBARA BLAKE BOY, EXECUTIVE DIRECTOR**  
**BROWARD COUNTY PLANNING COUNCIL**  
115 South Andrews Avenue, Room 307 | Fort Lauderdale, FL 33301  
954.357.6982 (direct)

[www.broward.org/planningcouncil](http://www.broward.org/planningcouncil)

[www.browardnext.org](http://www.browardnext.org)



“You can never plan the future by the past.” – Edmund Burke

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**From:** Alia Awwad [mailto:AAwwad@fortlauderdale.gov]  
**Sent:** Friday, December 19, 2014 7:54 PM  
**To:** Blake Boy, Barbara  
**Cc:** Von Stetina, Deanne; Lorraine Tappen; Todd Okolichany; Debora Griner; Diana Alarcon; Elizabeth Van Zandt; Ella Parker; Jenni Morejon; Todd Okolichany  
**Subject:** Downtown LUPA Traffic Analysis and Mitigation

Barbara,

As discussed, attached please find the Downtown LUPA traffic analysis and mitigation plan for the proposed 5,000 dwelling units. Please let me know if you need additional information. Thank you for your time and consideration.

**Alia Awwad, PE** | Senior Mobility Engineer  
City of Fort Lauderdale | Transportation & Mobility

## **Downtown LUPA Traffic Analysis and Impact Mitigation**

This report is a follow up to the Downtown LUPA Traffic Analysis Section to address comments made by the Broward County Planning Council (BCPC) and Broward County staff. The document is divided into three sections: the trip reduction rate methodology, impacted corridors, and the mitigation plan for corridors adversely impacted by the proposed 5,000 dwelling units.

### **1.0 TRIP REDUCTION RATE METHODOLOGY**

The following outlines the trip reduction rate methodology related to the proposed 5,000 dwelling units (DU) applied for through the Downtown RAC LUPA:

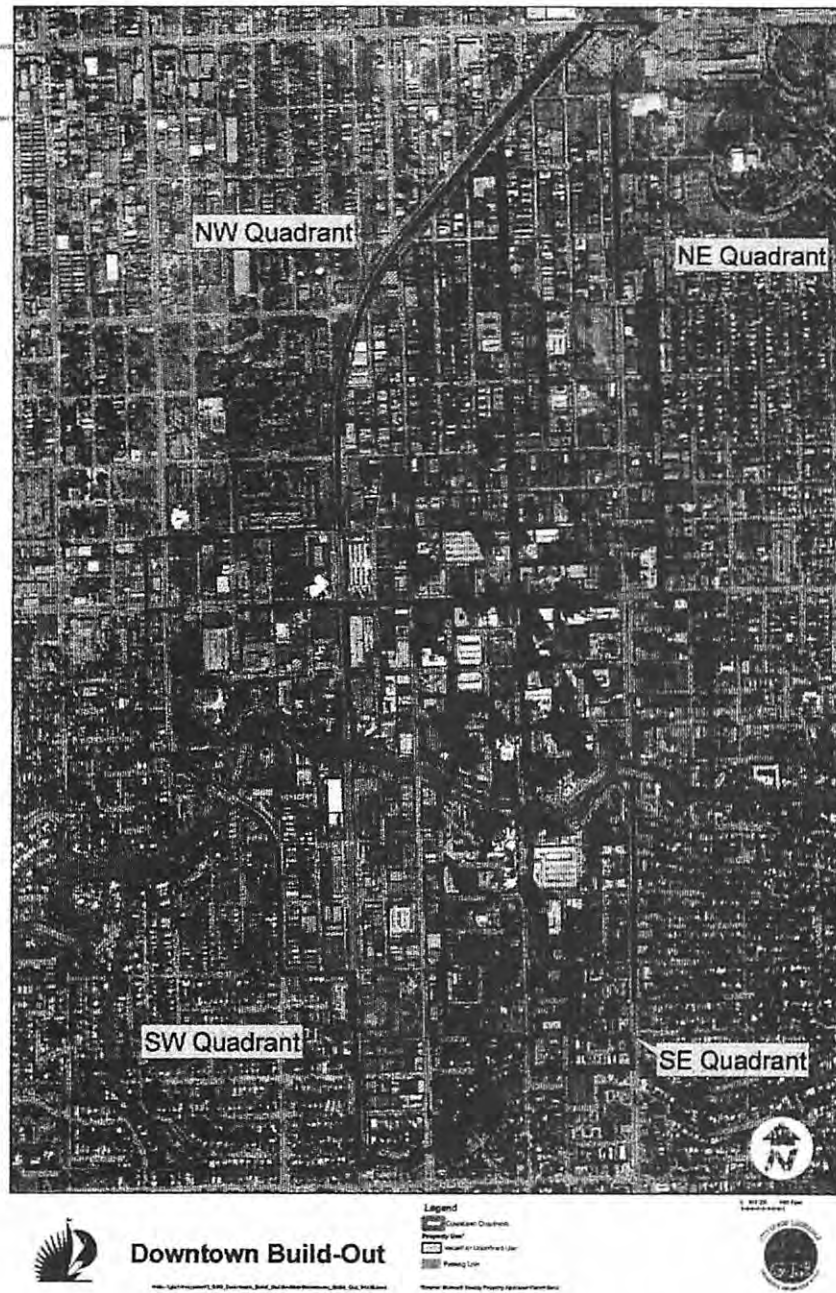
- The specific built-out land use scenario of the Downtown RAC was analyzed by quadrant. Figure 1 shows the boundaries of the Downtown RAC quadrants.

**RECEIVED**

**DEC 22 2014**

**BROWARD COUNTY  
PLANNING COUNCIL**

Figure 1: Downtown RAC Quadrant Map



- The built out intensity by land use, including the proposed 5,000 DU is shown in Table 1 below:

Table 1: Land Use Intensity in the Downtown RAC by Quadrant

Quadrant	Residential (DU)	Retail (SF)	Office (SF)
NE	2,371	1,073,079	619,556
NW	3,736	1,720,553	1,604,589
SE	3,730	10,135,849	9,439,857
SW	1,873	2,865,801	2,257,730
<b>Total</b>	<b>11,710</b>	<b>15,795,282</b>	<b>13,921,732</b>

- Trip generation rates were calculated based on the ITE Trip Generation Manual 9<sup>th</sup> edition formulas for the different land uses:
  - Retail, Land Use Code (LUC) 820,  $T = 0.67\ln(X) + 3.31$ , where T is the number of PM Peak Trips and X is 1,000 square feet (SF) gross floor area (GFA)
  - Office, LUC 710,  $T = 1.12X + 78.45$ , where T is the number of PM Peak Trips and X is 1,000 SF GFA
  - Residential, LUC 220,  $T = 0.67X$ , where X is the number of dwelling units (DU)
- Using the internal capture methodology outlined in the ITE Trip Generation Manual, Volume 1, internal capture rates for each quadrant were calculated based on the downtown mixed uses. Appendix A demonstrates the computations undertaken to derive each internal capture rate.
- Based on these calculations, the average internal capture rate was found to be **13%**.
- As demonstrated in the previous submission, data obtained from the American Community Survey showed that 17 percent of all commuters use travel modes other than driving alone. The 17 percent applies to AM & PM Peak hours, as they coincide with typical commute patterns. To avoid double counting, and to discount the potential overlap between mixed-uses and actual commute patterns, a conservative assumption can be made that internal capture rates in downtown overlap with non-auto commute rates. Therefore, out of the 17 percent, 13 percent is deducted to yield a non-auto commute rate of **4%**.
- Based on travel forecasting estimates for the proposed Wave Streetcar, the SERPM Version 6 Model estimates that approximately 805 trips will be taken by the Wave. These trips can be deducted from the projected vehicular trips for the Downtown RAC, since that portion of the Wave route will operate in the Downtown Core. Additionally, off-model travel forecasting methods estimate that the Wave Streetcar will capture an additional 1,024 trips of the pedestrian travel market, which is typically not accounted for in the model. This adds an additional 2% trip reduction rate, putting the total estimated Wave trips at 2,640 trips, which yields a total trip reduction estimate of **4%** as shown below in Table 2.



Table 2: Projected Downtown RAC Land Use and Wave PM Peak Trips

Quadrant	Residential (DU)	Retail (SF)	Office (SF)	Residential PM Peak Trips	Retail PM Peak Trips	Office PM Peak Trips
NE	2,371	1,073,079	619,556	1,438	2,938	772
NW	3,736	1,720,553	1,604,589	2,257	4,031	1,876
SE	3,730	10,135,849	9,439,857	2,253	13,226	10,651
SW	1,873	2,865,801	2,257,730	1,139	5,674	2,607
<b>Total</b>	<b>11,710</b>	<b>15,795,282</b>	<b>13,921,732</b>	<b>7,086</b>	<b>25,869</b>	<b>15,906</b>
<b>Total PM Peak Trips for all uses in Downtown</b>						<b>48,861</b>
<b>PM Peak Modeled Wave Trips in Downtown</b>						<b>805</b>
<b>PM Peak Off-Model Wave Trips in Downtown</b>						<b>1,024</b>
<b>Total PM Peak Wave Trips</b>						<b>1,829</b>
<b>% of PM Peak Trips that will shift to the Wave Streetcar</b>						<b>4%</b>

- Based on the above calculations, the total trip reduction rate is **21%**.

In addition to the quantitative approach outlined above, a number of elements will contribute to additional vehicular trip reductions. The City has made policy and investment commitments to improve the quality of the infrastructure supporting this compact development. Multimodal improvements through capital investments for infrastructure and increased transit service will improve the walking, biking and transit rider experience. The City believes these conditions will encourage behavior changes and mode shifts that the model is not designed to capture.

## 2.0 SIGNIFICANTLY IMPACTED CORRIDORS

The trip reduction methodology outlined in the previous section was submitted to the BCPC and approved on 12/18/2014. The BCPC subsequently ran the regional model with the agreed upon trip reduction rate and provided the following list of impacted corridors with and without the proposed amendment. Table 3 shows surrounding impacted corridors and associated volumes, capacity, and LOS figures without the proposed amendment. Table 4 shows surrounding impacted corridors and associated volumes, capacity, and LOS with the proposed amendment.

All of the listed corridors are considered significantly impacted because their impact exceeds 3 percent of the total adopted capacity for the segment. Out of these segments, 14 were found to be adversely impacted, where the vehicular LOS is degraded by the proposed amendment. Out of these 14 segments, only two include an actual shift in LOS grade: Broward Blvd from the FEC Railway to Federal Highway,

and Andrews Ave from SW 7<sup>th</sup> St to Broward Blvd. The next section describes the mitigation plan for the adversely impacted corridors.

Table 3: Affected Regional Transportation Network Without the Proposed Amendment: Traffic 2035

<i><b>Trafficway</b></i>	<i><b>Section</b></i>	<i><b>VOL</b></i>	<i><b>CAP</b></i>	<i><b>LOS</b></i>
1. Sunrise Boulevard	Andrews Avenue to Searstown	4,175	5,390	C
2. Sunrise Boulevard/Federal Highway	Searstown to Gateway	6,230	4,500	F
3. Sistrunk Boulevard	Northwest 27 Avenue to Andrews Avenue	2,866	2,628	F
4. Sistrunk Boulevard	Andrews Avenue to Federal Highway	599	1,197	D
5. Northwest/Northeast 4 Street	Northwest 9 Avenue to Northeast 15 Avenue	398	1,197	C
6. Broward Boulevard	I-95 to Southwest 11 Avenue	7,374	5,390	F
7. Broward Boulevard	Southwest 11 Avenue to Southwest 7 Avenue	5,392	5,390	F
8. Broward Boulevard	Southwest 7 Avenue to FEC Railroad	5,157	4,500	F
9. Broward Boulevard	FEC Railroad to Federal Highway	4,489	4,500	D
10. Southwest 2 Street	Southwest 7 Avenue to Southeast 3 Avenue	749	1,197	D
11. Northwest 9 Avenue	Broward Boulevard to Sistrunk Boulevard	469	1,197	C
12. Northwest 7/9 Avenue Connector	Sistrunk Boulevard to Sunrise Boulevard	3,490	2,920	F
13. Southwest 4 Avenue	Davie Boulevard to Southwest 7 Street	1,812	2,628	D
14. Southwest 4 Avenue	Southwest 7 Street to Las Olas Boulevard	2,148	2,628	D
15. Northwest 7 Avenue	Las Olas Boulevard to Broward Boulevard	2,270	2,628	D
16. Northwest 7 Avenue	Broward Boulevard to Sistrunk Boulevard	2,074	2,628	D
17. Northwest 7 Avenue	Sistrunk Boulevard to Sunrise Boulevard	1,005	2,628	C
18. Andrews Avenue	SR 84 to Southeast 17 Street	2,646	2,628	E
19. Andrews Avenue	Southeast 17 Street to Davie Boulevard	2,302	2,628	D
20. Andrews Avenue	Davie Boulevard to Southwest 7 Street	2,630	2,628	E
21. Andrews Avenue	Southwest 7 Street to Broward Boulevard	2,704	2,628	E
22. Andrews Avenue	Broward Boulevard to Sistrunk Boulevard	2,183	2,628	D
23. Andrews Avenue	Sistrunk Boulevard to Sunrise Boulevard	2,076	2,628	D
24. Andrews Avenue	Sunrise Boulevard to Oakland Park Boulevard	3,570	2,628	F
25. Andrews Avenue	Oakland Park Boulevard to Prospect Road	3,384	2,628	F
26. Southeast 3 Avenue	Southeast 17 Street to Davie Boulevard	1,508	2,920	D
27. Southeast 3 Avenue	Davie Boulevard to Southeast 7 Street	2,095	2,920	D
28. Southeast 3 Avenue	Southeast 7 Street to Broward Boulevard	2,757	2,920	D
29. Northeast 3 Avenue	Broward Boulevard to Sistrunk Boulevard	2,203	2,920	D
30. Northeast 3 Avenue	Sistrunk Boulevard to Sunrise Boulevard	2,385	2,920	D
31. Northeast 4 Avenue/Wilton Drive	Sunrise Boulevard to Oakland Park	2,681	2,920	D

<i>Trafficway</i>	<i>Section</i>	<i>VOL</i>	<i>CAP</i>	<i>LOS</i>
	Boulevard			
32. Federal Highway	Southeast 7 Street to Broward Boulevard	5,703	4,500	F
33. Federal Highway	Broward Boulevard to Sistrunk Boulevard	4,593	4,500	F
34. Federal Highway	Sistrunk Boulevard to Searstown	4,190	4,500	D

Table 4: Affected Regional Transportation Network With the Proposed Amendment: Traffic 2035

<i>Trafficway</i>	<i>Section</i>	<i>VOL</i>	<i>CAP</i>	<i>LOS</i>
1. Sunrise Boulevard	Andrews Avenue to Searstown	4,370	5,390	C
2. Sunrise Boulevard/Federal Highway	Searstown to Gateway	6,379	4,500	F
3. Sistrunk Boulevard	Northwest 27 Avenue to Andrews Avenue	2,999	2,628	F
4. Sistrunk Boulevard	Andrews Avenue to Federal Highway	709	1,197	D
5. Northwest/Northeast 4 Street	Northwest 9 Avenue to Northeast 15 Avenue	497	1,197	C
6. Broward Boulevard	I-95 to Southwest 11 Avenue	7,772	5,390	F
7. Broward Boulevard	Southwest 11 Avenue to Southwest 7 Avenue	5,768	5,390	F
8. Broward Boulevard	Southwest 7 Avenue to FEC Railroad	5,567	4,500	F
9. Broward Boulevard	FEC Railroad to Federal Highway	4,749	4,500	F
10. Southwest 2 Street	Southwest 7 Avenue to Southeast 3 Avenue	802	1,197	D
11. Northwest 9 Avenue	Broward Boulevard to Sistrunk Boulevard	506	1,197	C
12. Northwest 7/9 Avenue Connector	Sistrunk Boulevard to Sunrise Boulevard	3,641	2,920	F
13. Southwest 4 Avenue	Davie Boulevard to Southwest 7 Street	1,950	2,628	D
14. Southwest 4 Avenue	Southwest 7 Street to Las Olas Boulevard	2,301	2,628	D
15. Northwest 7 Avenue	Las Olas Boulevard to Broward Boulevard	2,384	2,628	D
16. Northwest 7 Avenue	Broward Boulevard to Sistrunk Boulevard	2,265	2,628	D
17. Northwest 7 Avenue	Sistrunk Boulevard to Sunrise Boulevard	1,175	2,628	C
18. Andrews Avenue	SR 84 to Southeast 17 Street	2,746	2,628	E
19. Andrews Avenue	Southeast 17 Street to Davie Boulevard	2,402	2,628	D
20. Andrews Avenue	Davie Boulevard to Southwest 7 Street	2,754	2,628	E
21. Andrews Avenue	Southwest 7 Street to Broward Boulevard	2,834	2,628	F
22. Andrews Avenue	Broward Boulevard to Sistrunk Boulevard	2,354	2,628	D
23. Andrews Avenue	Sistrunk Boulevard to Sunrise Boulevard	2,163	2,628	D
24. Andrews Avenue	Sunrise Boulevard to Oakland Park Boulevard	3,692	2,628	F
25. Andrews Avenue	Oakland Park Boulevard to Prospect Road	3,485	2,628	F
26. Southeast 3 Avenue	Southeast 17 Street to Davie Boulevard	1,596	2,920	D
27. Southeast 3 Avenue	Davie Boulevard to Southeast 7 Street	2,217	2,920	D
28. Southeast 3 Avenue	Southeast 7 Street to Broward Boulevard	2,946	2,920	D
29. Northeast 3 Avenue	Broward Boulevard to Sistrunk Boulevard	2,430	2,920	D
30. Northeast 3 Avenue	Sistrunk Boulevard to Sunrise Boulevard	2,544	2,920	D
31. Northeast 4 Avenue/Wilton Drive	Sunrise Boulevard to Oakland Park Boulevard	2,814	2,920	D



<u>Trafficway</u>	<u>Section</u>	<u>VOL</u>	<u>CAP</u>	<u>LOS</u>
32. Federal Highway	Southeast 7 Street to Broward Boulevard	6,010	4,500	F
33. Federal Highway	Broward Boulevard to Sistrunk Boulevard	4,839	4,500	F
34. Federal Highway	Sistrunk Boulevard to Searstown	4,412	4,500	D

### 3.0 MITIGATION PLAN FOR ADVERSELY IMPACTED CORRIDORS

The City's Transportation & Mobility Department's mission for Transportation is to promote the livability, health, and economic benefits of a bicycle-, pedestrian-, and transit-friendly environment by creating a safe, effective, and connected network of transportation options for our neighbors and surrounding communities. With South Florida's population continuing to increase, road congestion and mobility problems stemming from additional vehicles on the road will exacerbate an already congested roadway system. The days of widening roads to create more capacity have come to an end. With the cost of owning a car or multiple cars continuing to grow, the family budget in the current scenario has taken a hit.

Future population and employment growth can be accommodated successfully through an integrated transit system that can carry a person from home to work and back again in a safe, clean, reliable, and affordable manner. Benefits of an integrated transit network that includes bus, rail, trolley, and other forms of public transportation will promote economic development, provide job access, and alleviate congestion that threatens our region with gridlock.

Fort Lauderdale is at the epicenter of the emerging transit system being planned for the region. With projects such as the Wave Streetcar, the Central Broward East West Study, the Tri-Rail Link Coastal Service, and the All-Aboard Florida inter-regional rail service scheduled to begin in the next few years, Fort Lauderdale is well-positioned to take advantage of and benefit greatly from these initiatives.

The congestion of vehicles along our roadways impacts many people, not only when trying to get to work, but also when running errands. Personal occupancy vehicles are a necessity in Fort Lauderdale based upon our current conditions, but the Transportation & Mobility Department is working hard to provide desirable alternatives to taking your car to work and on short trips to run errands through improving sidewalks, bike lanes, and creating an improved transit network.

The City has made policy and investment commitments to improve the quality of the infrastructure supporting this compact development. Multimodal improvements through capital investments for infrastructure and increased transit service will improve the walking, biking and transit rider experience. The City believes these conditions will encourage behavior changes and mode shifts that the model is not designed to capture. We also believe the active planning and implementation of these improved infrastructure conditions will accelerate mode shift in the downtown area. Because land use and transportation are interdependent, it is important to address both aspects, which the City is intending to do through increased dwelling units and actively changing the streetscape and services within the Downtown RAC.

Based on the trip generation methodology, trip reduction rate, and regional model, 14 corridor segments were found to be adversely impacted by the proposed amendment. The 14 corridors can be grouped into the following corridors:

1. Sunrise Blvd from Searstown to Gateway
2. Sistrunk Blvd from NW 27<sup>th</sup> Ave to Andrews Ave
3. Broward Blvd from I-95 to Federal Hwy
4. NW 7/9 Ave Connector from Sistrunk Blvd to Sunrise Blvd
5. Andrews Ave:
  - a. From SR 84 to SE 17<sup>th</sup> St
  - b. From Davie Blvd to Broward Blvd
  - c. From Sunrise Blvd to Prospect Rd
6. Federal Hwy from SE 7<sup>th</sup> St to Sistrunk Blvd.

Mitigation measures have been identified for these projects based on ongoing multimodal projects and initiatives. On a city-wide level, multiple projects such as transit efforts, Community Investment Plan (CIP) projects, and development contributions all serve to improve multimodal conditions to the Downtown area and surrounding street network. Corridor-specific projects and studies are also included.

### ***3.1 Ongoing Projects and Initiatives in the Downtown RAC and Surrounding Network***

#### **3.1.1 Overview**

Figure 2 illustrates the multimodal efforts that are taking place in the City, including in the Downtown RAC. Several transit projects, including the Wave Streetcar, the East-West Broward Transit Study, All Aboard Florida (AAF), and Tri-Coastal Link Service are proposed for planning, design and construction in the upcoming years to tie into the existing transit system to create a connected transit network that would create a convenient alternative to the car. Half-mile and one-mile buffers are also shown to delineate the walking and bicycling areas from the proposed Wave stations, respectively. These buffers denote the potential walk and bike market area that can be captured with the implementation of the Wave, further fostering the potential shift from vehicular travel.

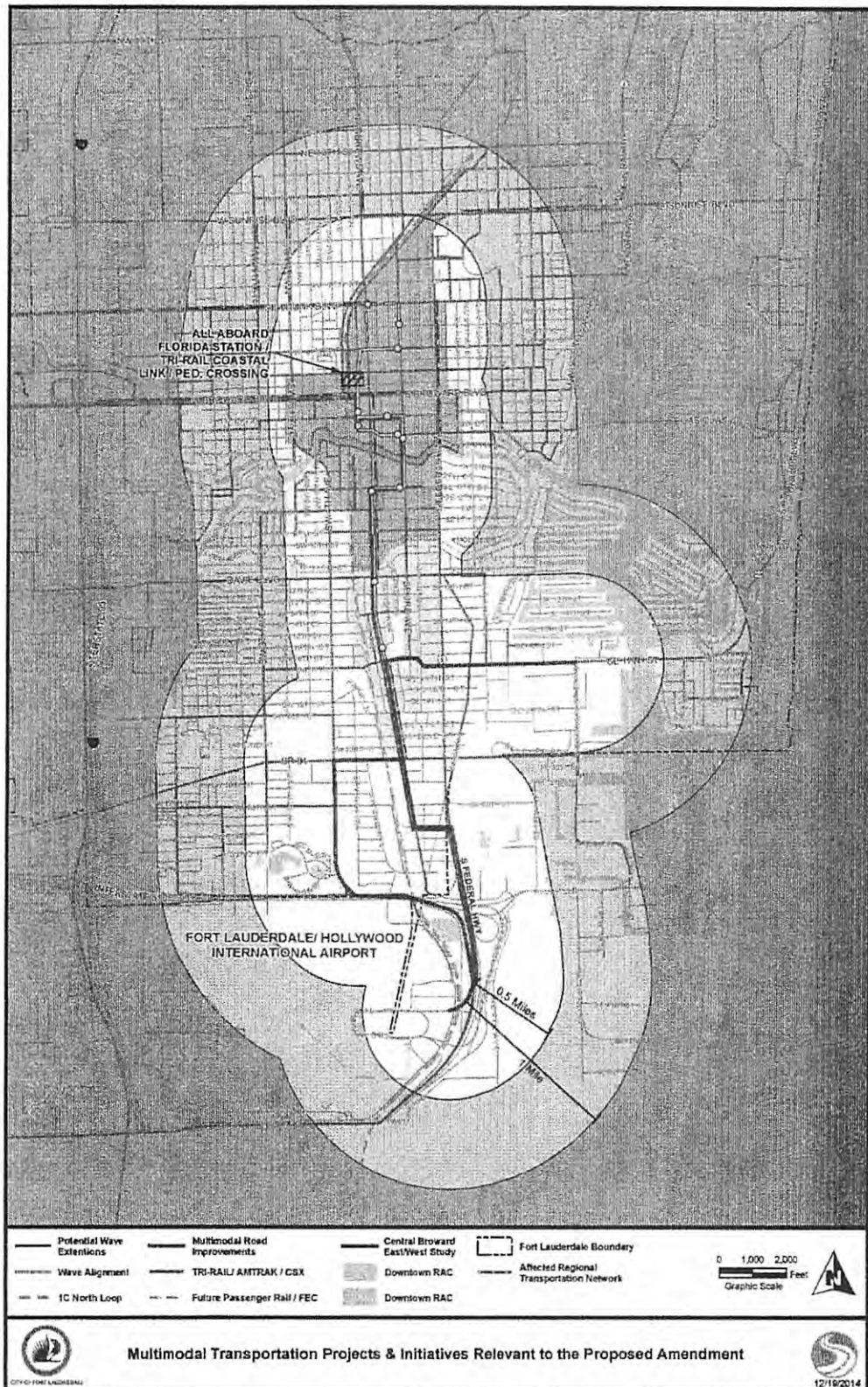
Additionally, corridors have been identified throughout the City for planned and programmed multimodal improvements, with the aim of enhancing multimodal mobility and accessibility and facilitating multimodal travel and the shift from the car. As shown, the adversely impacted corridors coincide with these multimodal efforts. The next section will provide additional details on the specific programmed improvements.

Other efforts that will contribute to alleviating the adverse impacts to the identified corridor segments

include developer contributions that are focused on implementing off-site multimodal improvements, the mobility hub efforts led by the Broward MPO, and Context Sensitive Corridors. The following section will also elaborate on these efforts.



Figure 2: Multimodal Efforts Related to the Proposed Amendment



### 3.1.2 Transit Investments

There are several mass transit projects currently underway within the Downtown RAC that will greatly enhance transit options and accessibility, including the Wave Streetcar, the FEC All Aboard Florida commuter rail, the Tri Rail Coastal Link Service, and the proposed premium transit service connecting downtown Fort Lauderdale with western Broward County (the Central East-West Transit Broward Study):

#### *The Wave Streetcar*

The Wave Streetcar is a fixed guideway investment slated to begin construction in late 2015 and become operational in late 2017. The initial 2.7 mile system starts at Sistrunk Boulevard/ NE 6<sup>th</sup> Street and travels to SE 17<sup>th</sup> Street along both Andrews and 3<sup>rd</sup> Avenues. As a local circulator system, the Wave Streetcar will make frequent stops and promote short trips throughout the study area. The project is fully funded for both capital and operations. The project has undergone 30% design plans and the final design contract was recently issued, with 60% design plans underway. The vehicle procurement will be advertised in early 2015. Construction is anticipated to start by early 2016 and continue for a period of 18 – 24 months. A total of nine stops are proposed in the Downtown RAC, connecting residential uses to office, governmental, institutional, retail, and other major activity centers.

The Wave Streetcar is currently in design and is slated for construction over the next two years. The project will come with a real time information system package, allowing the end user to track when the next vehicle will arrive at the station through station message boards and through smart phone applications and web based systems. With planned 7.5 minute headways during peak periods, opening day ridership (2017) is estimated at 2,640. As seen in other systems across the United States, streetcar opening day ridership estimates are significantly undervalued due to limitations to the model. Tucson, AZ, a similar system in size to the Wave Streetcar opened in July 2014. With a projection of less than 4,000 riders per day, the actual opening day ridership numbers were between 15,000 – 25,000 per day on the opening weekend. In addition, the Wave Streetcar comes with traffic signalization improvements to the impacted signals along the alignment. A prioritization/ preemption communication system is also part of the Wave Streetcar, which will ensure headways are maintained for the streetcar vehicles.

The Wave Streetcar is anticipated to highly improve transit accessibility in the Downtown RAC and therefore reduce vehicle trips. The City has committed a total of \$38 million in cash and land donations, as well as through a designated special assessment district. Federal, State, and Regional funds have also been committed totaling almost \$150 million. The Wave Streetcar will serve as a circulator in Downtown and will connect to major destinations, thus allowing customers to either use it for commuting or shopping trips. The Wave Streetcar alignment goes outside of the Downtown Regional Activity Center and connects through the South Regional Activity Center, making connections to the surrounding neighborhoods and the Hospital District. Once the Wave Streetcar is in place, the existing Sun Trolley service will be rerouted to service the surrounding neighborhoods and make connections to the system, increasing the connectivity and accessibility even further.

In addition, there are plans to expand the initial 2.7 mile downtown starter line to connect to the Broward County Convention Center and the Fort Lauderdale-Hollywood International Airport. An alternatives analysis report was completed and the National Environmental Protection Act (NEPA)

process is expected to begin by February 2015 for these extensions, a process being led by the Florida Department of Transportation (FDOT), in partnership with the Wave Streetcar Partnership team. The system is envisioned to connect to other major transit projects, thereby creating a cohesive and convenient transit system that provides a viable alternative to the car.

#### *All Aboard Florida*

All Aboard Florida (AAF), a higher-speed commuter rail is proposed to run from Miami to Orlando, operating along the Florida East Coast (FEC) Railway. Construction has already begun in Miami and Palm Beach, and planning and design has been complete at the City of Fort Lauderdale location, which will be located adjacent to the Downtown RAC between NW 2<sup>nd</sup> St and NW 4<sup>th</sup> St. Total daily ridership at this location is anticipated to exceed 3,400 riders. Once implemented, AAF would create a faster and attractive alternative for regional travel in South Florida, thus reducing trips into and from the Downtown RAC. Plans are already underway to complete transit oriented development east and west of the FEC tracks.

#### *Tri Coastal Link Service*

The Tri Coastal Link is a proposed commuter passenger rail service along the FEC Railway that would connect major South Florida destinations from Miami to Jupiter. The system will connect to existing and proposed local and mass transit service in the Downtown RAC, including the Wave Streetcar and the AAF systems. The enhanced intermodal connectivity would promote higher transit ridership and transit-oriented development. Currently, a station is proposed within the Downtown RAC at NW 2<sup>nd</sup> Ave and Broward Blvd.

#### *Central Broward East-West Transit Study*

The Central Broward East-West Transit Study is an analysis to examine the implementation of premium transit service from Downtown Fort Lauderdale to Sawgrass Mills, thereby creating an east-west mass transit connection. Several stops are planned in the City of Fort Lauderdale, including in the Downtown RAC. The transit service is proposed to connect to the Wave Streetcar and to the Broward Boulevard Tri-Rail station. The project is managed by the FDOT.

### 3.1.3 Multimodal Plans and Implementation Efforts

The "Connecting the Blocks" Plan is a multimodal transportation plan commissioned by the City of Fort Lauderdale in 2013 to plan and identify multimodal improvements on all major corridors in the City with the purpose of creating a fully connected city of tomorrow. The needs of these multimodal improvements were identified through Complete Streets initiatives that would enhance walkability and bikeability. Over \$16,499,200 have been identified in the City's "Connecting the Blocks" Plan for short-term improvements in the Downtown RAC, in addition to approximately \$190,927,960 in planned improvements for the area.

As part of implementing the Connecting the Blocks Plan, approximately \$13 million has been programmed by the City of Fort Lauderdale's in the FY2015 Community Investment Program (CIP) to advance streetscape, walkability, and multi-modal projects in the Downtown RAC, including but not limited to: corridor streetscape improvements, intersection improvements, crosswalk improvements,

lighting, wayfinding signage, street furniture, bicycle amenities, undergrounding of overhead utilities, wider sidewalks, public art, plazas, and more. These projects are currently funded and are in the City's FY 15 work program. Appendix B includes a list of these funded projects.

Included in this listing of projects is the \$3.5 Million Downtown Fort Lauderdale Mobility Hub Project which includes design and construction of physical improvements to achieve a high-quality user experience, seamless mobility and mode transfer, walkability and bike ability, and to catalyze transit oriented development. The Project is located within a four block area generally bounded by Broward Boulevard, Andrews Avenue, NW 4<sup>th</sup> Street, and the Florida East Coast Railroad ("FEC") tracks. The City owns approximately four acres within the Project area. The Project focuses on connections to multiple modes of transportation, including the Wave Streetcar, All Aboard Florida FEC commuter rail station, Transportation Management Association (TMA) Community bus/trolleys, Broward County Transit's Broward Central Terminal, future Central Broward East-West transit extensions and stations, and future Tri-Rail Coastal Link.

In addition to this multimodal initiative, the City is working with Broward County on identifying a number of corridors as "Context Sensitive Corridors". This program provides the framework for municipalities to identify eligible corridors on the County's Trafficways Plan to create a more multimodal and "context-sensitive" urban corridor. In the Downtown RAC, NE 3<sup>rd</sup> Ave and Andrews Ave have been identified as potential corridors for this process.

In addition, the Urban Land Development Code, which is the City's legal framework for development applications and reviews, requires developments to contribute multimodal improvements for generated traffic impacts. Multimodal improvements and mitigation measures include both on-site and nearby improvements that would both promote multimodal transportation use and enhance the existing multimodal transportation network. These improvements are recognized in the Downtown Master Plan, requiring above minimum improvements such as 7-foot sidewalks. Other TDM methods that are being implemented through the Code in the Downtown RAC include parking exemptions, where most development is not required to provide parking, thereby leveraging alternative modes of travel. Pricing public parking, providing adequate landscaping and shade trees, and minimizing vehicle conflicts with bicyclists and pedestrians are also examples of Code requirements that promote walkable environments and reduced vehicle use. The City works with the development community to encourage multimodal contributions to mitigate projected traffic impacts. For example, multimodal contributions from approximately ten projects exceeded \$460,000 in the past year.

Finally, it is important to note that as the City, and especially Downtown, transitions into a fully connected multimodal urban environment, considering multimodal LOS, rather than vehicular LOS, becomes essential. While growth and density may theoretically contribute to increased vehicular trips, providing multimodal improvements would enhance transit, bicycle, and pedestrian LOS. There are currently methodologies that provide multimodal LOS, including the FDOT Quality/LOS Handbook, which would allow for evaluating roads from a multimodal perspective. These techniques are based on national standard guidelines, including the Highway Capacity Manual and the Green Book, which are also recognizing and encouraging considering traffic and development impacts from a holistic, multimodal perspective. With the implementation of the planned, proposed, and committed multimodal investments described in this summary, multimodal LOS is enhanced in the Downtown RAC and will compensate and alleviate vehicular LOS impacts.

### ***3.2 Projects Specific to the Adversely Impacted Corridors***

In addition to the Downtown and city-wide projects described in the previous section, the following narrative provides an outline of the projects currently underway that are specific to the adversely impacted corridors:

#### **3.2.1 Sunrise Blvd from Searstown to Gateway**

The impacted segment is currently programmed for resurfacing by FDOT in May 2015 (FM 428726-1). The US1/Federal Highway \$4.5 million project begins at Broward Blvd and continues to NE 17<sup>th</sup> Way. It will include resurfacing, pedestrian enhancements to crossings, an additional pedestrian crossing, bike accommodations through sharrows along the adversely impacted segment and a parallel bike facility to the north and south of Sunrise to accommodate additional bike traffic. Conversations regarding long term improvements needed at Gateway have begun between FDOT, Broward County and the City including reconfigurations of the intersection, signal timing analysis and multimodal improvements. FDOT also has a PTO study programed in their work program from the Sawgrass Expressway to A1A beginning in 2016.

#### **3.2.2 Sistrunk Blvd from NW 27<sup>th</sup> Ave to Andrews Ave**

The city recently spent approximately \$12 million to improve the corridor with sidewalks, pedestrian lighting, landscaping, on-street parking, and other amenities. Additionally, a Wave Streetcar station is proposed as part of the Northern Wave Streetcar Loop at N Andrews Ave and Sistrunk Blvd.

#### **3.2.3 Broward Blvd from I-95 to Federal Hwy**

A significant reconstruction project is in design by FDOT for this entire corridor. The roadway is being widened to accommodate a bike lane, the sidewalks are being reconstructed with concrete, a new pedestrian crossing is being added at NW/SW 1<sup>st</sup> Ave, and bridge reconstruction. This \$23 million project is currently in design and is scheduled for construction in July 2016. Additional improvements are programmed for the I95 Broward Blvd interchange in the work program. The PD&E is scheduled in FY16 with construction funded and programmed in FY24. This will have a significant impact on moving vehicles and people in and out of the roadway. These improvements will include enhancements to the Tri-rail station and future streetcar routes.

In addition, multiple Wave Streetcar stations are proposed within close proximity to Broward Blvd as part of the initial 2.7-mile system. Other projects specific to this corridor segment include the Wayfinding signage program, the Mobility Hub initiative, and the funded Downtown Walkability program.

The All Aboard Fort Lauderdale Station will also be located within walking proximity to Broward Blvd, creating a central transit hub that will provide access to other transit systems, including Tri-Rail and the Tri-Rail Coastal Link Service. The station will include creating the connection on NW 2<sup>nd</sup> Ave between

NW 2<sup>nd</sup> St and NW 4<sup>th</sup> St based on Complete Streets principles, in addition to providing bicycle, and pedestrian amenities at the station.

#### 3.2.4 NW 7/9 Ave Connector from Sistrunk Blvd to Sunrise Blvd

This project was to construct a new roadway through an industrial park. The project was deemed to not be cost feasible based on discovered contamination. The new plan for this area is to create Complete Streets improvements on the streets as they set to improve pedestrian, bicycle, and vehicle movements through this area. Although unfunded, it is a priority in the Connecting the Blocks program. The preliminary design is estimated to begin in FY16 with construction to follow.

#### 3.2.5 Andrews Ave

- From SR 84 to SE 17<sup>th</sup> St
- From Davie Blvd to Broward Blvd
- From Sunrise Blvd to Prospect Rd

Andrews Avenue is scheduled for improvements that include the bicycle and pedestrian improvements from Las Olas Blvd. to Oakland Park Blvd. This project will be in design in FY16 with construction programmed in FY18. The Andrews Ave from Davie Blvd to SE 5<sup>th</sup> St is in the FDOT work program for design in FY18. These will include multimodal improvements to allow a variety of transportation access in the corridor. The future extensions of the Wave will be located in the southern portion of Andrews Ave so will serve to provide transit improvements alleviate some vehicle congestion.

The Wave extension connecting Downtown to the Airport is proposed to run on S Andrews Ave from SR 84 to SE 17<sup>th</sup> St. Additionally, the Downtown Walkability program identified in the CIP includes improvements encompassing the Andrews Ave area.

#### 3.2.6 Federal Hwy from SE 7<sup>th</sup> St to Sistrunk Blvd.

The impacted segment is currently programmed for resurfacing by FDOT in May 2015 (FM 428726-1). The US1/Federal Highway \$4.5 million project begins at Broward Blvd and continues to NE 17th Way. It will include resurfacing and pedestrian enhancements to crossings. Downtown Walkability, Wayfinding Signage program, and the Tunnel Plaza project are examples of other projects directly benefiting this corridor segment.

### ***3.3 Other Projects Relevant to the Significantly Impacted Corridors***

The following is a list of additional projects that are related to the significantly impacted corridors identified in the model:



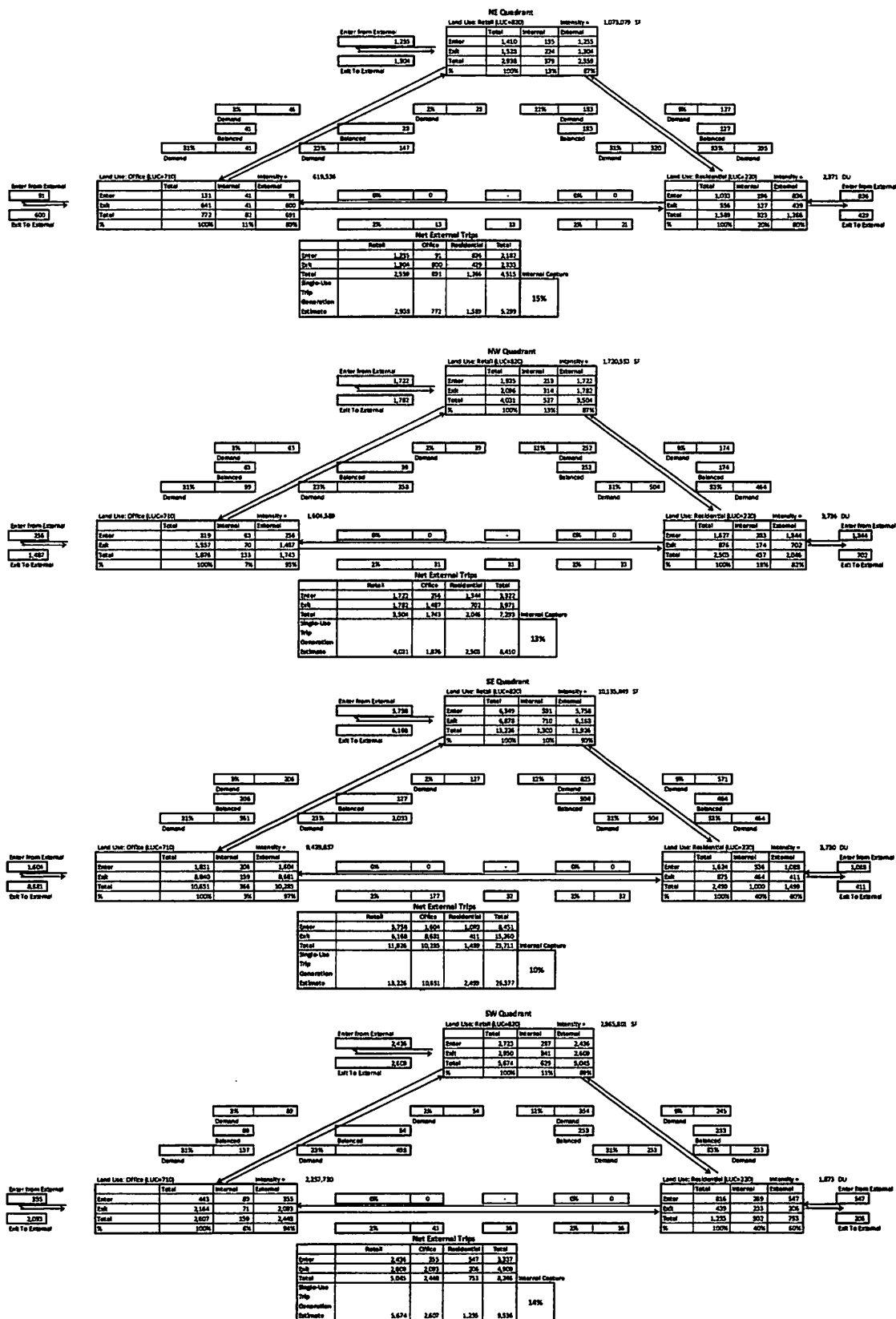
1. SE 3<sup>rd</sup> Avenue (SE 17<sup>th</sup> St to SE 6<sup>th</sup> St) – this segment is programmed to be completed in this corridor and includes sidewalk repair and enhancements by Broward County, bicycle lanes and additional pedestrian crossings by FDOT. The project is currently in design with construction anticipated in FY17.
2. NE 4<sup>th</sup> Ave (Sunrise Blvd to city limits) - this segment is programmed to be completed in this corridor and includes bicycle lanes and potential pedestrian crossings by FDOT. The project is scheduled to be in design in FY16 with construction anticipated in FY18.
3. SW 4<sup>th</sup> Ave (Davie Blvd to Las Olas Blvd) – this segment recently realized pedestrian enhancements along the east side of the street conducted by Broward County. FDOT has programmed a bike lane project from Broward Blvd to Perimeter Road to be in construction in FY16.

#### **4.0 Conclusion**

Based on the quantitative and qualitative information provided in this report, the City is requesting approval of the proposed 5,000 dwelling units in the Downtown RAC. As demonstrated in the previous sections the multiple ongoing projects and initiatives will mitigate the adversely impacted corridors identified by the regional model. The City will continue to work with its regional partners to advance multimodal mobility and accessibility in the Downtown RAC and City overall.

## **APPENDIX A**

### **PM Peak Internal Trip Capture Analysis**



15%

## **APPENDIX B**

### **Community Investment Plan (CIP) Projects**



## DOWNTOWN WALKABILITY PROJECT PHASE 2

**PROJECT#: 11953**

**Project Mgr:** Elizabeth Van Zandt x3796  
**Department:** Transportation & Mobility  
**Fund:** 331 CIP - General Fund  
**District:** ☐ I ☒ II ☐ III ☒ IV  
**Address:** Citywide  
**City:** Fort Lauderdale  
**State:** FL  
**Zip:** 33311

**Description:** Fiscal Year 2015 funding will be used to continue implementation of the projects identified in the 2013 walkability study that are deemed to be the City Commission's highest priorities and that will make the largest impact on walkability.

The anticipated projects include, but are not limited to: 1) NE 3rd Street and NE 3rd Avenue intersection and crosswalk improvements including stamped treatments and ADA upgrades. 2) Las Olas Boulevard and Federal Highway intersection and crosswalk improvements including stamped treatments and ADA upgrades. 3) SE 2nd Street and SE 4th Avenue pedestrian crossing improvements including stamped treatments and ADA upgrades. 4) NE 1st Street mid-block pedestrian crosswalk between N. Andrews and NE 3rd Avenues.

**Justification:** A walkability study was conducted in Fort Lauderdale by Jeff Speck during Fiscal Year 2013. This study resulted in recommendations for a variety of projects identified to improve walkability in the downtown area. The City Commission authorized \$500,000 in FY 2014 that resulted in pedestrian crossings, ADA ramp upgrades, painted intersections, and other pedestrian improvements.

**Source Of the Justification:** Jeff Speck Walkability Plan (5/28/2013)

**Project Type:** Transportation

### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CIP - General Fund 331		\$500,000						\$500,000
<b>TOTAL:</b>		\$500,000						\$500,000

Comments:

### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			\$0

Comments:

### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
ENGINEERING FEES — CIP - General Fund								
6534	331	\$65,000						\$65,000
CONSTRUCTION — CIP - General Fund								
6599	331	\$435,000						\$435,000
<b>TOTAL</b>		\$500,000						\$500,000

Comments:

### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Integrate transportation land use and planning to create a walkable and bikeable community

### Quarters To Perform Each Task

**Project Planning:** 1  
**Design:** 1  
**Bidding:**  
**Construction:** 2



## DOWNTOWN WALKABILITY PROJECT PHASES 3-6

### PROJECT#: FY 20150299

**Project Mgr:** Elizabeth Van Zandt x3796  
**Department:** Transportation & Mobility  
**Fund:** 331 CIP - General Fund  
**District:** ☐ I ☒ II ☐ III ☒ IV  
**Address:** Citywide  
**City:** Fort Lauderdale  
**State:** FL  
**Zip:** 33311

**Description:** Fiscal Year 2016-2019 funding will be used to continue implementation of the projects identified in the 2013 walkability study that are deemed to be the highest City Commission priorities and those that will make the largest impact on walkability.

The anticipated projects will include pedestrian and bicycle infrastructure improvements detailed and prioritized in the draft Connectivity Program. Once adopted the Connectivity Program will be used to determine project limits within the study area for Walkability Phases 3-6. Detailed project limits and components will be added to the CIP request for the upcoming funding period. Amenities called for in the study that are not covered in the Connectivity Plan will be included for the defined project limits, including but not limited to wayfinding signage, shade trees and landscaping, pedestrian lighting, low impact stormwater infrastructure, and enhance pedestrian crossing improvements such as painted intersections.

**Justification:** A walkability study was conducted in Fort Lauderdale by Jeff Speck during Fiscal Year 2013. This study resulted in recommendations for a variety of projects identified to improve walkability in the downtown area. The City Commission authorized \$500,000 in FY 2014 that resulted in pedestrian crossings, ADA ramp upgrades, painted intersections, and other pedestrian improvements.

**Source Of the Justification:** Press Forward Fort Lauderdale 2018, A Five-Year Strategic Plan

**Project Type:** Transportation

#### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CIP - General Fund 331			\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000
<b>TOTAL:</b>			\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000

Comments:

#### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			\$0

Comments:

#### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CONSTRUCTION --- CIP - General Fund								
6599	331		\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000
<b>TOTAL</b>			\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000

Comments:

#### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Integrate transportation land use and planning to create a walkable and bikeable community

#### Quarters To Perform Each Task

**Project Planning:** 1  
**Design:** 1  
**Bidding:**  
**Construction:** 2





## DOWNTOWN WAYFINDING AND INFORMATIONAL SIGNAGE

**PROJECT#: FY 20150239**

**Project Mgr:** Elizabeth Van Zandt x3796  
**Department:** Transportation & Mobility  
**Fund:** 331 CIP - General Fund  
**District:** ☐ I ☐ II ☐ III ☐ IV  
**Address:** Various Areas Downtown  
**City:** Fort Lauderdale  
**State:** FL  
**Zip:** 33301

**Description:** Funding will pay for design, fabrication, construction and installation of a family of distinct, coordinated, vehicular, pedestrian, and parking signage; transit vehicle informational signage; and gateway signage for Downtown Fort Lauderdale, generally bounded by Sunrise Blvd., 17th Street, Avenue of the Arts, and Federal Highway.

**Justification:** The Downtown Development Authority and the City partnered on a wayfinding signage plan for Downtown in 2008. Wayfinding signage for the Beach is currently being implemented, providing branding for the City and recognition of place. The Downtown is also an activity center with a large pedestrian population and is in need of wayfinding signage.

**Source Of the Justification:** Downtown Master Plan (06/19/2007, CAR 07-1004, R-02)

**Project Type:** Transportation

### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CIP - General Fund 331		\$263,750						\$263,750
Parking Fund 461		\$111,250						\$111,250
<b>TOTAL:</b>		<b>\$375,000</b>						<b>\$375,000</b>

Comments:

### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			<b>\$0</b>

Comments:

### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
<b>CONSTRUCTION --- CIP - General Fund</b>								
6599	331	\$263,750						\$263,750
<b>CONSTRUCTION --- Parking Fund</b>								
6599	461	\$111,250						\$111,250
<b>TOTAL</b>		<b>\$375,000</b>						<b>\$375,000</b>

Comments:

### Strategic Connections:

**Cylinder:** Public Places

**Strategic Goals:** Be a community that finds opportunities and leverages partnerships to create unique, inviting and connected gathering places that highlight our beaches, waterways, urban areas and parks

**Objectives:** Enhance the City's identity and appearance through well-maintained green space, parks major corridors, gateways and medians

### Quarters To Perform Each Task

**Project Planning:** 1  
**Design:** 1  
**Bidding:**  
**Construction:** 2

## SE/SW 6 STREET CORRIDOR IMPROVEMENTS

### PROJECT#: FY20120131

<b>Project Mgr:</b>	Elizabeth Van Zandt x3796	<b>Department:</b>	Transportation & Mobility	<b>Address:</b>	SE/SW 6 Street/Andrews Ave
		<b>Fund:</b>	331 CIP - General Fund	<b>City:</b>	Fort Lauderdale
		<b>District:</b>	<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input checked="" type="checkbox"/> IV	<b>State:</b>	FL
				<b>Zip:</b>	33301

**Description:** This project includes a complete redesign of the right-of-way to incorporate the one way condition in front of the Broward County Judicial Complex and the two way condition for the sections east and west of the complex. This project will create a transit, pedestrian and bicycle friendly environment for commuters, jurors, residents and visitors to the area. The limits of this project are from SE/SW 6th Street from Andrews Avenue to Federal Highway.

Improvements will include, but are not limited to: lighting, landscaping, wayfinding signage, enhanced crosswalks, wider sidewalks, and iconic features.

**Justification:** The project includes a portion of the Wave Streetcar route and will be closely coordinated with the design and construction. This street was identified in the Downtown Master Plan and the 6th Street Coalitions improvement plan conducted by representatives of the 110 Tower (across the street from the Courthouse), the City, County, and the Downtown Development Authority.

There are two Wave Streetcar stations in close proximity to the corridor that will serve the 6th Street businesses and judicial users. It is imperative that we make these walks safe and comfortable.

**Source Of the Justification:** Downtown Master Plan (06/19/2007, CAR 07-1004, R-02)

**Project Type:** Transportation

#### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CIP - General Fund 331		\$350,000	\$2,350,000					\$2,700,000
<b>TOTAL:</b>		<b>\$350,000</b>	<b>\$2,350,000</b>					<b>\$2,700,000</b>

**Comments:**

#### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			<b>\$0</b>

**Comments:** No impact to operating budget

#### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
<i>ENGINEERING FEES — CIP - General Fund</i>								
6534	331	\$350,000						\$350,000
<i>CONSTRUCTION — CIP - General Fund</i>								
6599	331		\$2,350,000					\$2,350,000
<b>TOTAL</b>		<b>\$350,000</b>	<b>\$2,350,000</b>					<b>\$2,700,000</b>

**Comments:**

#### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Integrate transportation land use and planning to create a walkable and bikeable community

#### Quarters To Perform Each Task

<b>Project Planning:</b>	1
<b>Design:</b>	2
<b>Bidding:</b>	
<b>Construction:</b>	4



## LAS OLAS BOULEVARD SAFETY PROJECT

### PROJECT#: 11136

<b>Project Mgr:</b>	Elizabeth Van Zandt x3796	<b>Department:</b>	Transportation & Mobility	<b>Address:</b>	E Las Olas Blvd-Andrews - SE
		<b>Fund:</b>	331 CIP - General Fund	<b>City:</b>	Fort Lauderdale
		<b>District:</b>	<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input checked="" type="checkbox"/> IV	<b>State:</b>	FL
				<b>Zip:</b>	33301

**Description:** The project includes improvements to Las Olas Boulevard from Andrews Avenue to the Intracoastal Waterway. Elements include: streetscape improvements; signal timing modifications; traffic calming measures, including a raised intersection and bulb-outs; pedestrian signalization; and crosswalk upgrades, including in-pavement LED crosswalk lights, speed management, bike lanes and lane adjustments.

**Justification:** Public outreach and a transportation study were conducted for this corridor. Results of the study illustrate the need for additional safety measures in the area. Colee Hammock has developed a Transportation Master Plan for solely the Colee Hammock neighborhood; however a comprehensive assessment of the needs of the entire area must be conducted.

This project coincides with FDOT project 431669.1.

**Source Of the Justification:** Downtown Master Plan (06/19/2007, CAR 07-1004, R-02)

**Project Type:** Streets and Sidewalks

#### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
FDOT 778			\$341,282					\$341,282
CIP - General Fund 331		\$1,100,000	\$800,000					\$1,900,000
<b>TOTAL:</b>		<b>\$1,100,000</b>	<b>\$1,141,282</b>					<b>\$2,241,282</b>

Comments:

#### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			<b>\$0</b>

Comments:

#### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
<b>ENGINEERING FEES — FDOT</b>								
6634	778		\$341,282					\$341,282
<b>CONSTRUCTION — CIP - General Fund</b>								
6699	331	\$1,100,000	\$800,000					\$1,900,000
<b>TOTAL</b>		<b>\$1,100,000</b>	<b>\$1,141,282</b>					<b>\$2,241,282</b>

Comments:

#### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Improve pedestrian, bicyclist and vehicular safety

#### Quarters To Perform Each Task

**Project Planning:** 2

**Design:** 3

**Bidding:**

**Construction:** 4





## NE/NW 4TH STREET PROJECT#: FY 20150248

<b>Project Mgr:</b>	Elizabeth Van Zandt x3796	<b>Department:</b>	Transportation & Mobility	<b>Address:</b>	NE/NW 4th Street/US1/Avenue
		<b>Fund:</b>	331 CIP - General Fund	<b>City:</b>	Fort Lauderdale
		<b>District:</b>	<input type="checkbox"/> I <input checked="" type="checkbox"/> II <input checked="" type="checkbox"/> III <input type="checkbox"/> IV	<b>State:</b>	FL
				<b>Zip:</b>	33301

**Description:** This project includes making pedestrian and bicycle improvements to portions of NE/NW 4th Street from US 1 to Avenue of the Arts (NW 7th Avenue). Redesign of the street will include improvements that make it safer for pedestrians and bicyclists to traverse the corridor, including lighting, shade trees, signage, intersection/crossing improvements, and more.

**Justification:** NE/NW 4th Street has become increasingly important with the planned closure of NW 2nd Street at the FEC tracks. An important east/west corridor, NE/NW 4th Street will be the primary multimodal corridor with vehicular, bus, Wave Streetcar, pedestrian, and bike travel as well as a connection to the planned Broward Mobility Hub, the first in the County.

With the planned All Aboard Florida and Wave Streetcar projects in the area, improvement to NE/NW 4th Street is needed to facilitate the anticipated increase in multi modes of travel.

NE/NW 4th Street is a top unfunded priority in the draft Multimodal Connectivity Program. Much of the corridor is included within the Downtown Masterplan, and is within the Transit Overlay District aimed at making the pedestrian realm more walkable. The corridor was called out as a priority within Jeff Speck's Downtown Walkability Study.

**Source Of the Justification:** Jeff Speck Walkability Plan (5/28/2013)

**Project Type:** Transportation

### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CIP - General Fund 331		\$1,100,000						\$1,100,000
<b>TOTAL:</b>		\$1,100,000						\$1,100,000

Comments:

### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			\$0

Comments:

### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
<i>ENGINEERING FEES -- CIP - General Fund</i>								
6534	331	\$300,000						\$300,000
<i>CONSTRUCTION -- CIP - General Fund</i>								
6599	331	\$800,000						\$800,000
<b>TOTAL</b>		\$1,100,000						\$1,100,000

Comments:

### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Integrate transportation land use and planning to create a walkable and bikeable community

### Quarters To Perform Each Task

**Project Planning:** 1

**Design:** 2

**Bidding:**

**Construction:** 5

## FLAGLER VILLAGE TRAIN STATION TOD

**PROJECT#: FY 20150199**

**Project Mgr:** Alfred Battle      **Department:** Sustainable Development      **Address:** Flagler Village Train Station  
**Fund:** 347 CRA - NWPFH      **City:** Fort Lauderdale  
**District:** ☐ I ☒ II ☒ III ☐ IV      **State:** FL  
**Zip:** 33311

**Description:** Provides funding for public improvements and initiatives in support of a Transit Oriented Development (TOD) program in the Flagler Village area.

**Justification:** The project would assist in implementing community and economic development initiatives in the NPF CRA Five-Year Strategic Plan for this area to enhance the business climate, beautification, accessibility, walkability and safety of this area.

**Source Of the Justification:** NWPFH CRA Implementation Plan (10/16/2007, Memo 07-230, CRA MTG)

**Project Type:** Neighborhood Enhancement

### Project Funding Source(s):

SOURCE	AVAILABLE \$	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CRA - NWPFH 347		\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000			\$7,000,000
<b>TOTAL:</b>		\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000			\$7,000,000

**Comments:**

### Impact On Operating Budget:

IMPACT	AVAILABLE \$	UNFUNDED	TOTAL FUNDING
			\$0
<b>TOTAL</b>			\$0

**Comments:**

### Project Budget/Funding Use:

USAGE	FUNDING SRC.	FY2015	FY2016	FY2017	FY2018	FY2019	UNFUNDED	TOTAL FUNDING
CONSTRUCTION — CRA - NWPFH								
6599	347	\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000			\$7,000,000
<b>TOTAL</b>		\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000			\$7,000,000

**Comments:**

### Strategic Connections:

**Cylinder:** Infrastructure

**Strategic Goals:** Be a Pedestrian friendly, multi-modal City

**Objectives:** Integrate transportation land use and planning to create a walkable and bikeable community

### Quarters To Perform Each Task

**Project Planning:** 4

**Design:** 4

**Bidding:**

**Construction:** 8



## ATTACHMENT 15

Environmental Protection and Growth Management Department  
115 S. Andrews Avenue, Room 329 • Fort Lauderdale, Florida 33301 • 954-357-6612 • FAX 954-357-8655

To: Barbara Boy, Executive Director  
Broward County Planning Council

From: Henry Sniezek, Deputy Director  
Environmental Protection and Growth Management Department

Date: January 8, 2015

Re: Updated Comments – PCT 15-1 – City of Fort Lauderdale - Transportation Impacts

RECEIVED

JAN 8 2015

BROWARD COUNTY  
PLANNING COUNCIL

County staff has reviewed the information submitted by the City on December 22, 2014, which is intended to address anticipated transportation network impacts resulting from the proposed development of 5,000 additional dwelling units in the Fort Lauderdale Downtown RAC. **At this time, County staff is unable to find that the information submitted by the City adequately addresses the estimated additional significant impacts to the transportation network.** It is noted that the current transportation impact analysis already reflects a 21% reduction in impacts, agreed to by County staff, due to internalization of trips and expected use of multi-modal facilities. The City proposes to address the remaining estimated significant and negative impacts to the transportation network through currently planned or programmed multi-modal projects. However, an analysis has not been submitted which demonstrates that the estimated net increase in traffic resulting from the additional development will be adequately mitigated or off-set by multi-modal projects.

County staff recognizes and supports the City's policies and plans to accommodate all forms of mobility within and in the vicinity of this compact dense mixed-use area via a variety of options, including pedestrian, bicycle and transit facilities and services, in addition to capacity for automobile travel. County staff is committed to working with the City regarding the City's effort to identify an adequate and financially feasible mobility mitigation strategy that is appropriate for the subject intense mixed-use area. It is proposed that the County Staff's "Complete Streets Team" be utilized to work with the City concerning a multi-modal mitigation strategy. It is noted that roadway improvements for affected areas may be included as a part of the city's multi-modal strategy. Such strategy must also be demonstrated as financially feasible and based on professionally accepted mitigation measures. Any multi-modal mitigation measures that rely upon enhanced transit service will require a mechanism to provide an ongoing dedicated revenue source for future operations and maintenance of those enhanced services. In this light, regarding transportation impacts, County staff does not object to the land use plan amendment being



**Page 2**

transmitted to the State for review, and suggests that the Florida Department of Transportation, who are part of the State review team, be requested to participate in discussions with the City. It is our understanding that, if the land use plan amendment is transmitted by the County Commission to the State for review, the required second Planning Council public hearing is anticipated at the earliest for April or May, 2015. Updated and final County staff comments regarding transportation impacts would be provided for the Planning Council's second public hearing.

Thank you for the opportunity to provide comments. Please feel free to contact me at your convenience if you have any questions.

cc:       Broward County Staff Complete Streets Team  
          Todd Okolichany, AICP, LEED Green Associate, Principal Planner  
          City of Fort Lauderdale

## ATTACHMENT 16



Transportation Department

**Transit Division** – Service and Capital Planning

One N. University Drive, Suite 3100A, Plantation, FL 33324 ♦ Phone: 954-357-8340 ♦ Fax: 954-357-8482

October 14, 2014

Barbara Blake Boy, Executive Director  
Broward County Planning Council  
115 South Andrews Avenue, Room 307  
Fort Lauderdale, Florida 33301

**RECEIVED**

OCT 14 2014

BROWARD COUNTY  
PLANNING COUNCIL

RE: Land Use Plan Amendment to Broward County Land Use Plan, PCT 15-1

Dear Ms. Barbara Blake Boy:

Broward County Transit (BCT) has reviewed your correspondence dated August 12, 2014 regarding Land Use Plan Amendment PCT 15-1 located in the City of Fort Lauderdale for current and planned bus service. Current fixed-route county bus service to the amendment site is currently provided by BCT Routes 1, 6, 9, 10, 11, 14, 20, 22, 30, 31, 40, 50, 60, and 81. Broward County Transit recommends that the proposed development be designed in a manner that provides safe movement of pedestrian and bicycle improvements within the site and will provide connectivity to the local bus stops and pedestrian and bicycle network. Please see the following table for detailed information:

BCT ROUTE	DAYS OF SERVICE	HOURS OF SERVICE A.M. – P.M	SERVICE FREQUENCY
1	Monday – Friday Saturday Sunday	5:05a – 12:23x 5:19a – 12:23x 6:20a – 10:06p	17/18 Min 22 Minutes 22 Minutes
6	Monday – Friday Saturday Sunday	5:15a – 10:55p 5:45a – 10:55p 8:20a – 9:05p	30 Minutes 60 Minutes 60 Minutes
9	Monday – Friday Saturday Sunday	5:30a - 10:15p 5:50a - 10:20p 8:30a - 8:10p	45 Minutes 60 Minutes 60 Minutes

Broward County Board of County Commissioners

Sue Gunzburger • Dale V.C. Holness • Kristin D. Jacobs • Martin David Kiar • Chip LaMarca • Stacy Ritter • Tim Ryan • Barbara Sharief • Lois Wexler  
[www.broward.org](http://www.broward.org)



CAM # 16-0016

Exhibit 1

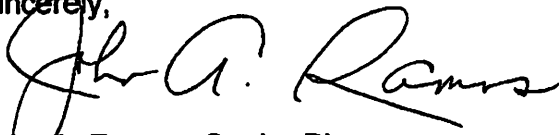
Page 213 of 259

10	Monday – Friday Saturday Sunday	5:21a - 11:37p 5:10a - 11:10p 8:20a - 8:45p	30/35 Min 30/35 Min 40/45 Min
11	Monday – Friday Saturday Sunday	5:00a - 11:55p 5:00a - 11:15p 7:00a - 9:15p	33/36 Min 45 Min 50/60 Min
14	Monday – Friday Saturday Sunday	5:04 – 11:07p 5:36 – 11:05p 7:40 – 8:09p	20 Minutes 45 Minutes 45 Minutes
20	Monday – Friday Saturday Sunday	5:40a - 9:50p 6:00a – 8:50p 10:00a - 7:45p	45 Minutes 60 Minutes 60 Minutes
22	Monday – Friday Saturday Sunday	5:00a - 11:30p 5:25a – 11:35p 8:15a - 9:50p	15 Minutes 30 Minutes 30 Minutes
30	Monday – Friday Saturday Sunday	5:30a – 10:35p 6:00a – 10:35p 9:30a - 7:50p	20 Minutes 30 Minutes 45 Minutes
31	Monday – Friday Saturday Sunday	5:03a – 11:06p 5:28a – 10:59p 8:50a – 9:16p	30 Minutes 45 Minutes 45 Minutes
40	Monday – Friday Saturday Sunday	5:30a - 11:25p 5:30a - 11:00p 7:40a - 8:05p	20/30 Min 30 Minutes 40 Minutes
50	Monday – Friday Saturday Sunday	5:20a – 10:58p 5:30a - 11:28p 7:45a - 8:55p	20/30 Min 30 Minutes 45 Minutes
60	Monday – Friday Saturday Sunday	5:25a – 10:52p 5:30a - 11:11p 9:05a - 7:58p	20/30 Min 30 Minutes 45 Minutes
81	Monday – Friday Saturday Sunday	5:16a - 11:45p 5:41a – 11:43p 8:00a – 9:10p	30 Minutes 30 Minutes 45 Minutes

Additionally, this site is serviced by the City of Fort Lauderdale Sun Trolley Community Bus Service. Future fixed-route bus services include weekday & weekend headway, weekday & weekend span of service, route realignment, route extension, premium rapid bus, and premium high capacity improvements are specified in the Broward County Transit Development Plan (TDP) and Broward MPO 2035 Long Range Transportation Plan (LRTP).

Should you have any questions, please call or email me at 954-357-8450 / [jramos@broward.org](mailto:jramos@broward.org) if you require any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Ramos". The signature is fluid and cursive, with the first name "John" and last name "Ramos" being the most prominent parts.

John A. Ramos, Senior Planner  
Service and Capital Planning

The School Board of Broward County, Florida  
**SCHOOL CONSISTENCY REVIEW REPORT**

LAND USE  
SBBC-1646-2014  
County No: PCT 15-1  
Downtown Fort Lauderdale Housing

September 22, 2014



Growth Management  
Facility Planning and Real Estate Department  
600 SE 3rd Avenue, 8th Floor  
Fort Lauderdale, Florida 33301  
Tel: (754) 321-2177 Fax: (754) 321-2179  
[www.browardschools.com](http://www.browardschools.com)

**RECEIVED**

SEP 22 2014

BROWARD COUNTY  
PLANNING COUNCIL

ATTACHMENT 17

# SCHOOL CONSISTENCY REVIEW REPORT - LAND USE

PROJECT INFORMATION	IMPACT OF PROPOSED CHANGE	PROPERTY INFORMATION
Date: September 22, 2014	Units Permitted 0 Units Proposed 5,000	Existing Land Use: Downtown Regional
Name: Downtown Fort Lauderdale Housing	NET CHANGE (UNITS) 5,000	Proposed Land Use: Downtown Regional
SBBC Project Number: SBBC-1646-2014	Students Permitted Proposed NET CHANGE	Current Zoning RAC-
County Project Number: PCT 15-1	Elem 0 135 135	Proposed Zoning: RAC-
Municipality Project Number: 2T13	Mid 0 55 55	Section:
Owner/Developer: City of Fort Lauderdale	High 0 40 40	Township:
Jurisdiction: Fort Lauderdale	Total 0 230 230	Range:

## SHORT RANGE - 5-YEAR IMPACT

Currently Assigned Schools	Gross Capacity	LOS Capacity	Benchmark* Enrollment	Over/Under LOS	Classroom Equivalent Needed to Meet LOS	% of Gross Capacity
Croissant Park Elementary	846	846	761	-85	-4	90.0%
North Fork Elementary	713	713	553	-160	-8	77.6%
North Side Elementary	608	608	434	-174	-9	71.4%
Walker Elementary	1,017	1,017	603	-414	-23	59.3%
New River Middle	1,493	1,493	1,380	-113	-5	92.4%
Sunrise Middle	1,403	1,403	1,349	-54	-2	96.2%
Fort Lauderdale High	2,001	2,001	2,073	72	3	103.6%
Stranahan High	2,518	2,518	1,554	-964	-38	61.7%

Currently Assigned Schools	Adjusted Benchmark	Over/Under LOS-Adj. Benchmark Enrollment	% Gross Capacity Adjusted Benchmark	Projected Enrollment				
				14/15	15/16	16/17	17/18	18/19
Croissant Park Elementary	762	-84	90.1%	752	802	809	802	793
North Fork Elementary	553	-160	77.6%	543	515	509	512	508
North Side Elementary	434	-174	71.4%	421	436	433	431	438
Walker Elementary	608	-409	59.8%	580	549	542	534	509
New River Middle	1,401	-92	93.8%	1,386	1,408	1,416	1,413	1,398
Sunrise Middle	1,361	-42	97.0%	1,336	1,351	1,366	1,358	1,353
Fort Lauderdale High	2,073	72	103.6%	2,028	1,908	1,927	1,841	1,823
Stranahan High	1,597	-921	63.4%	1,552	1,594	1,606	1,637	1,653

Students generated are based on the student generation rates contained in the currently adopted Broward County Land Development Code. A traditional cohort survival methodology is used to project school-by-school District traditional school enrollment out over the next five years, and a proportional share of charter school enrollment is used to project future charter school enrollment by school level Districtwide. For more information: <http://www.broward.k12.fl.us/dsa/EnrollmentProj.shtml>. The annual benchmark enrollment is used to apply individual charter school enrollment impacts against school facility review processes.

\*The first Monday following Labor Day



## LONG RANGE - TEN-YEAR IMPACT

Impacted Planning Area	School District's Planning Area Data			Aggregate Projected Enrollment				
	Aggregate School Capacity	Aggregate Enrollment	Aggregate Over/(Under) Enrollment	17/18	18/19	19/20	20/21	21/22
Area E - Elementary	13,701	10,592	-3,109	10,788	10,903	11,018	11,133	11,248
Area E - Middle	5,350	4,367	-983	4,558	4,619	4,679	4,740	4,801
Area E - High	7,794	6,455	-1,339	5,162	5,222	5,282	5,343	5,403

## CHARTER SCHOOL INFORMATION

Charter Schools within 2-mile radius	2013-14 Contract Permanent Capacity	2013-14 Benchmark* Enrollment	Over/(Under)	Projected Enrollment		
				14/15	15/16	16/17
Charter School Of Excellence _2@ Fort Lauderdale	500	29	-471	29	29	29
Charter School Of Excellence Es	310	278	-32	278	278	278
Florida Virtual Academy At Broward County	0	43	43	43	43	43
Mavericks High Central Broward	550	309	-241	309	309	309
Melrose High	600	28	-572	28	28	28
Somerset Village Academy Middle	750	132	-618	132	132	132
The Obama Academy For Boys	720	93	-627	93	93	93
The Red Shoe Charter School For Girls	720	92	-628	92	92	92

Students generated are based on the student generation rates contained in the currently adopted Broward County Land Development Code.

A traditional cohort survival methodology is used to project school-by-school District traditional school enrollment out over the next five years, and a proportional share of charter school enrollment is used to project future charter school enrollment by school level Districtwide. For more information: <http://www.broward.k12.fl.us/dsa/EnrollmentProj.shtml>. The annual benchmark school enrollment is used to apply individual charter school enrollment impacts against school facility review processes.

\*The first Monday following Labor Day

# **PLANNED AND FUNDED IMPROVEMENTS IN THE ADOPTED DISTRICT EDUCATIONAL FACILITIES PLAN** (Years 1 - 5)

School(s)	Description of Improvements
Croissant Park Elementary	None
North Fork Elementary	None
North Side Elementary	None
Walker Elementary	None
New River Middle	None
Sunrise Middle	None
Fort Lauderdale High	Construct two 3-story buildings, previously budgeted and already factored into the schools FISH capacity number.
Stranahan High	None

# **PLANNED IMPROVEMENTS IN THE ADOPTED DISTRICT EDUCATIONAL FACILITIES PLAN** (Years 6 - 10)

Improvements for Planning Area E	
School Level	Comments
Elementary	None
Middle	None
High	None

## Comments

Information contained in the application indicates that the approximately 710-acre site is generally located south of Sunrise Boulevard and north of Tarpon River between SE 8th Avenue and NW/SW 7th Avenue in the City of Fort Lauderdale. The current land use designation for the site is Regional Activity Center (RAC), which currently allows 8,100 residential units on the site. Among the currently allowed 8,100 residential units, 3,000 residential units (which were added via Land Use Plan Amendment (LUPA) PCT 05-3) are subject to a Tri-Party Educational Mitigation Agreement (OR BK 43756, Pages 1606 -1626). The applicant proposes to add an additional 5,000 mid-rise residential units into and within the RAC site, which are anticipated to generate a total 230 additional students (135 elementary, 55 middle, and 40 high school) into Broward County Public Schools.

Please be advised that this application was reviewed utilizing 2013-14 school year data because the current school year (2014-15) data will not be available until updates are made utilizing the Benchmark Day Enrollment Count. This application was reviewed based on its location in the School District's Long Range Seven Planning Areas, and Ten-Year Long Range Plan contained in the Adopted District Educational Facilities Plan (DEFP). However, the statistical data regarding the Level of Service (LOS) standard status of the actual schools impacted by this land use application in the initial five years of the ten-year period is depicted herein for informational purposes only.

Schools serving the amendment site in the 2013-14 school year are: Elementary - Croissant Park, North Fork, North Side, and Walker; Middle - New River, Sunrise, and arkway (very small portion of the site); High - Fort Lauderdale and Stranahan. The same schools are serving the site in the 2014-15 school year. Based on the District's Public School Concurrency Planning Document, all but Fort Lauderdale High (operating at 103.6% of gross capacity) schools are operating below the adopted LOS of 100% of gross capacities in the 2013-14 school year. Incorporating the cumulative students anticipated from approved and vested developments anticipated to be built within the next three years (2013-14 - 2015-16), all but Fort Lauderdale High (expected to operate at 101.3% of gross capacity in the 2014-15 school year) schools are expected to operate below the adopted LOS of 100% of gross capacities through the 2015-16 school year. It should be noted that the school capacity or Florida Inventory of School Houses (FISH) for the impacted schools reflects compliance with the class size constitutional amendment and the permanent capacity additions that are planned for the schools within the first three years of the Five-Year Adopted DEFP, FY 2013-14 - 2017-18. Also, to ensure maximum utilization of the impacted Concurrency Service Areas, the Board may utilize other options such as school boundary changes to accommodate students generated from developments in the County. Charter schools located within a two-mile radius of the subject site in the 2013-14 school year are depicted herein.

Capital Improvements scheduled in the long range section (2018-19 to 2022-23) of the currently Adopted DEFP, FY 2013-14 - 2017-18 regarding pertinent impacted schools are depicted above. Based on the School District's Seven Long Range Planning Areas, the amendment site is located within School District Planning Area "E" and the elementary, middle, and high schools currently serving Planning Area "E" and their cumulative student enrollments, cumulative capacities, and pertinent student enrollment projections are depicted herein. Therefore, Planning Area "E" is anticipated to have sufficient excess capacity to support the students generated by the residential units proposed in the Planning Area.

Please be advised that the mitigation for the student impact anticipated from previously approved application PCT 05-3 is addressed in the Educational Mitigation Agreement between Broward County, the City of Fort Lauderdale, and the School Board of Broward County, Florida. Since the application PCT 15-1 adds more residential to the RAC site, the existing Agreement must be amended to recognize the incorporation of the additional residential units and reflect the students anticipated from the proposed additional units. Therefore, staff recommends that approval of LUPA PCT 15-1 should be conditioned upon amendment of the Educational Mitigation Agreement. Please be advised that if approved, the units from this project will be subject to a public school concurrency review at the plat, site plan (or functional equivalent) phase of development review, whichever comes first.

The School Board of Broward County, Florida  
**SCHOOL CONSISTENCY REVIEW REPORT**  
PROJECT NUMBER: SBBC-1646-2014

09/22/2014  
Date

Reviewed By:

  
Signature

Mohammed Rasheduzzaman, AICP

Name

Planner

Title

## ATTACHMENT 18

EP&GMD COMMENTS

PCT 15- 1

Page 1

**RECEIVED**

SEP 18 2014

**BROWARD COUNTY  
PLANNING COUNCIL**

### **ENVIRONMENTAL PROTECTION & GROWTH MANAGEMENT DEPARTMENT REVIEW AND COMMENTS ON PROPOSED BROWARD COUNTY LAND USE PLAN MAP AMENDMENT**

**For:** Broward County Planning Council

**Applicant:** City of Fort Lauderdale

**Amendment No.:** PCT 15 - 1

**Jurisdiction:** Fort Lauderdale                      **Size:** Approximately 710 acres

**Existing Use:** Commercial, office, industrial, transportation, recreation and open space,  
single- and multi-family residential and vacant

**Current Land Use Designation:** Regional Activity Center consisting of:  
8,100 dwelling units (7,650 market rate units and 450  
affordable housing units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit  
Recreation and Open space: 8.5 acres minimum

**Proposed Land Use Designation:** Regional Activity Center consisting of:  
13,100 dwelling units (11,900 market rate units and  
1,200 affordable housing units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit  
Recreation and Open space: 8.5 acres minimum

**Location:** Sections: 2,3,10 and 11      Township: 50 Range: 42; generally located  
south of Sunrise Boulevard, north of the Tarpon River, between U.S.  
1/Federal Highway and Northwest 7 Avenue.

Note: Findings and Recommendations do not constitute waivers from any federal, state or local law.

## ANALYSIS AND FINDINGS:

### **DEVELOPMENT & ENVIRONMENTAL REGULATION DIVISION**

**Wetlands** - [CP Policies 7.5.9, 7.5.11, 13.8.1, 13.8.2, 13.8.3, 13.8.5, 13.8.6, 13.9.3, 13.9.4, 13.9.6, 13.10.1, 13.10.3, 13.10.4; BCLUP Policies 09.05.01, 09.05.06, 09.05.08, 09.05.09, 09.05.13, 09.05.17 09.05.18]

Project details were not provided so it is unknown if wetlands will be impacted at this time. Any work in, on, over or under waters or wetlands of Broward County will require a license. Any mangrove impacts (trimming, alteration or removal) requires a license from this Department.

**Upland Resources (including Tree Preservation and Greenways)** - [CP Policies 13.6.11, 13.6.13, 13.6.14; BCLUP Policies 01.06.02, 05.03.02, 05.03.04, 05.03.05, 09.01.06, 09.01.08, 09.01.09, 09.01.10]

Review of aerial photographs indicates that the subject site contains mature tree canopy. Development of the site must comply with the Tree Preservation Regulations of the City of Fort Lauderdale. The applicant is required to minimize the number of trees to be removed by incorporating suitable existing trees in the site plan design. If trees cannot be incorporated into the site plan in their current location, the applicant is required to relocate suitable trees. Any trees permitted for removal must be replaced. If the above requirements are adhered to, the proposed land use plan amendment is not expected to have a negative impact on upland resources.

**Marine and Riverine Resources** - [CP Policies 7.5.10, 13.2.3, 13.5.3, 13.7.6, 13.7.8; BCLUP Policies 05.03.02, 06.01.04, 06.01.05, 06.01.06, 09.02.06, 09.03.01, 09.03.02, 09.03.05, 09.03.06, 09.03.07, 09.03.08, 09.03.09, 09.03.10, 09.03.11, 09.04.02]

The proposed land use designation is not expected to have an impact on marine or riverine resources. Impacts to resources require review and licensing under Article XI of Chapter 27, Broward County Code of Ordinances.

### **POLLUTION PREVENTION, REMEDIATION AND AIR QUALITY DIVISION**

**Air Quality** - [CP Policy 13.1.15, BCLUP Policy 09.14.03] The preliminary traffic analysis indicates that the proposed amendment would result in an increase by 2,454 PM peak hour trips per day compared to trips associated with the current designation. Based upon the trips generated



## EP&GMD COMMENTS

PCT 15- 1

Page 3

and the projected levels of service on surrounding roadways, an amendment to the proposed land use designation can reasonably be assumed to have a moderate impact on air quality. There are air permitted facilities in this area, however, there are no existing or potential odor or noise concerns. Due to the attraction of mobile sources to commercial areas, if the applicant incurs the construction of parking facilities, the Broward County Code of Ordinances, Parking Facility Rule might be applicable.

The Air Quality Program recommends pro-active long term planning methods that will result in the prevention of any further deterioration of our air quality and quality of life. The Air Quality Program recommends that the plan for development includes air quality measures or provisions that will support alternative methods of transportation. These measures include promoting the use of transit, promoting the use of ridesharing, promoting the use of alternative fuel vehicles (AFV) where appropriate and AFV infrastructure, bikeways and bike storage facilities, and the use of pedestrian friendly designs which will include native tree shaded areas. SJS 9/16/14

**Wellfield Protection** - [CP Policies 4.2.10, 4.4.13, 7.5.2, 7.5.3, 7.5.4, 13.2.2, 13.3.3; BCLUP Policies 09.02.01, 09.02.03, 09.02.05] The proposed amendment site is not currently within a wellfield zone of influence. No special restrictions apply under Broward County's Wellfield Protection regulations. NH 08-18-14

**Solid Waste** - [CP Policies 6.1.2, 6.1.3, 13.2.7; BCLUP Policies 01.04.04, 08.01.11, 08.01.13, 08.01.14, 08.01.15]

There are 2 active solid waste facilities located within one mile and one-quarter mile of the proposed amendment site. They are: 1) Envirocycle located at 849 SW 21<sup>st</sup> Terrace, Fort Lauderdale, FL 33312 and 2) City of Fort Lauderdale Sludge Transfer Station (Plant A) located at 2101 NW 6<sup>th</sup> Street, Fort Lauderdale, FL 33311. There are 2 inactive solid waste facilities located within approximately one-quarter mile of the site. 1) Fort Lauderdale Transfer Station Public Works located at 201 SW 12<sup>th</sup> Avenue, Fort Lauderdale, FL 33312 and 2) Tire Recycling Systems Inc. 616 NW 2<sup>nd</sup> Avenue, Fort Lauderdale, FL 33311. (DL 9/2/2014)

**Contaminated Sites** - [CP Policies 13.2.1, 13.2.6, 13.2.7; BCLUP Policies 01.04.04, 03.04.01]

The list of known contaminated sites (from PPRAQD's GIS Database of Contaminated Locations in Broward County) has been reviewed. There are 18 active contaminant sites found on, adjacent, or in close proximity 0.25 miles to the proposed amendment location. Corrected NH 12-30-14

**SARA TITLE III (Community Right to Know)** - [CP Policy 13.2.7; BCLUP Policies 01.04.04, 03.04.01] The list of known SARA Title III facilities (from PPRAQD's GIS Database of SARA Title III Facilities in Broward County) has been reviewed. There are 4 SARA Title III facilities on the proposed amendment site. NH 08-18-14

## EP&GMD COMMENTS

PCT 15- 1

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**Hazardous Material Facilities** - [CP Policies 13.2.1, 13.2.6, 13.2.7; BCLUP Policies 01.04.04, 03.04.01] The list of known hazardous material facilities and storage tank facilities (from EPGMD's GIS Database of Hazardous Material Facilities in Broward County) has been reviewed. There are a total of 72 Hazardous Material Facilities, 21 Storage Tank Facilities, and 30 facilities with combined Storage Tanks and Hazardous Materials. NH 08-20-14

### **ENVIRONMENTAL PLANNING & COMMUNITY RESILIENCE DIVISION:**

**Specially Designated Areas** - [ CP policies 13.6.1, 13.6.4, 13.6.6, 13.6.7, 13.6.9, 13.6.10, 13.7.2, 13.7.5; BCLUP Policies 09.01.01, 09.01.02, 09.01.03, 09.01.04, 09.01.05, 09.01.06, 09.01.11] County specially designated areas, e.g. Natural Resource Areas, Native Vegetative Communities Category Local Areas of Particular Concern, Urban Wilderness Inventory sites, do not exist within the boundaries of the proposed amendment site.

**Protected Natural Lands** – The project site is not included in the Protected Natural Lands Inventory and not adjacent to a site in the inventory. The Protected Natural Lands Inventory is a comprehensive database of public and private native vegetative communities that have been protected through acquisition or regulatory mechanisms and are managed for conservation purposes. The Inventory provides information regarding the ownership and management for each of the Protected Natural Lands and may be accessed at:

<http://www.broward.org/NaturalResources/LandStewardship/Pages/NaturalLands.aspx>.

**Priority Planning Areas for Sea Level Rise** – [CP Policies 19.2.2, 19.3.7, 19.3.12, 19.3.13; BCLUP Policies A.03.04, A.03.05, A.03.06, A.03.07, 9.07.02, 9.09.04, 12.01.13]

The Priority Planning Areas for Sea Level Rise Map identifies areas that are at increased risk of flooding due to, or exacerbated by, sea level rise by the year 2060. In review of land use plan amendments, the County requires the applicant to demonstrate that the project will not increase saltwater intrusion or areawide flooding, not adversely affect groundwater quality or environmentally sensitive lands, and that subsequent development will be served by adequate stormwater management and drainage facilities.

The County also strongly discourages those amendments which would place additional residential and non-residential development at risk of flooding from sea level rise. The County will take into consideration sea level rise and flood protection mitigation strategies and requirements included within the city's local comprehensive plans and/or development regulations, or improvements

## EP&GMD COMMENTS

PCT 15- 1

Page 5

committed to by the applicant which would mitigate or enhance flood protection and adaptation from rising sea levels.

The proposed amendment site does contain, fall within, and/or overlap with an area for planning consideration, as indicated on the Priority Planning Areas for Sea Level Rise Map. Therefore, Policies A.03.05, 9.07.02, 9.09.04 and 12.01.13 apply to the review of this project. Information to demonstrate compliance with these policies should be submitted by the applicant to the Planning Council. County staff will evaluate information provided and issue an update to comments, as needed.

Please see the attached PPA map zoomed to the proposed amendment site for more information.

**NatureScape Program** – [CP Policies 4.4.8, 13.3.5, 13.3.7; BCLUP A.02.01] – – Development of the proposed amendment site should be coordinated with the NatureScape Broward Program for guidance in development of any related landscaping plans. NatureScape is about creating Florida-friendly landscapes that conserve water, protect water quality, and create wildlife habitat.

**Surface Water Management** - [CP Policies 7.4.2, 7.4.3, 7.5.2, 7.5.9, 13.2.4, 13.3.12; BCLUP Policies 08.01.18, 08.01.19, 09.04.01, 09.04.02, 09.07.01, 09.07.03, 09.09.01, 09.09.02, 09.09.04, 09.10.02]

The proposed amended site is not located within a drainage control district and falls under the jurisdiction of the City of Fort Lauderdale. Development within the site will be required to meet the drainage standards of the City, Broward County Department of Planning and Environmental Protection, and the South Florida Water Management District. The proposed amendment site is located within zones 0.2 PCT, low- and moderate-risk zone, and AH, inland high-risk zone, areas of shallow flooding with average depths between 1 and 3 feet. A minimum elevation of 5NGVD, as found on the Broward County 100-Year Flood Maps will prevail in those areas where jurisdictionally appropriate.

**Water Recharge** - [CP Policies 7.4.3, 7.5.2, 7.5.3, 7.5.4, 7.5.7, 7.5.9, 7.5.11, 7.5.12, 13.3.12, 13.3.13; BCLUP Policies 06.01.01, 06.01.03]

The proposed land use designation would involve an insignificant percentage of impervious area. The development resulting from the proposed land use designation would result in no impact to the net volume of water available for recharge. The impact on recharge capacity resulting from development under the proposed designation would be minor. This impact level is determined by factoring the size of the site with the percent change of impervious area from the current designation to the proposed designation. See the attached Water Recharge Questionnaire.

**BROWARD COUNTY PLANNING COUNCIL**

**WATER RECHARGE QUESTIONNAIRE**

**as completed by**

**ENVIRONMENTAL PROTECTION & GROWTH MANAGEMENT DEPARTMENT**

***I. Introductory Information***

- A. *Amendment No.:*** PCT 15 - 1
- B. *Municipality:*** City of Fort Lauderdale
- C. *Applicant:*** City of Fort Lauderdale

***II. Site Characteristics***

- A. *Size:*** Approximately 710 acres

***Location:*** Sections: 2,3,10 and 11 Township: 50 Range: 42; generally located south of Sunrise Boulevard, north of the Tarpon River, between U.S. 1/Federal Highway and Northwest 7 Avenue.

- B. *Existing Use:*** Commercial, office, industrial, transportation, recreation and open space, single- and multi-family residential and vacant

***III. Broward County Land Use Plan Designation***

***A. Current Land Use Designation:***

Regional Activity Center consisting of:  
8,100 dwelling units (7,650 market rate units and 450 affordable housing units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit  
Recreation and Open space: 8.5 acres minimum

***B. Proposed Land Use Designation:***

Regional Activity Center consisting of:  
13,100 dwelling units (11,900 market rate units and 1,200 affordable housing units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit

Recreation and Open space: 8.5 acres minimum

**IV. Water Recharge Review**

***A. Describe the general impacts of the current land use designation on water recharge:***

The current land use designation is Regional Activity Center. A typical value for an impervious area produced by this type of development is approximately 77 percent.

***B. Describe the general impacts of the proposed land use designation on water recharge:***

The proposed land use designation is Regional Activity Center. A typical value for an impervious area produced by this type of development is approximately 77 percent.

**V. Impact of Change in Land Use Designation**

The proposed land use designation would involve an insignificant percentage of impervious area. The development resulting from the proposed land use designation would result in no impact in the volume of water available for recharge.

This impact level is determined by factoring the size of the site with the percent change of impervious area from the current designation to the proposed designation.

**VI. Comments**

By: \_\_\_\_\_ Date \_\_\_\_\_

Maena Angelotti

Natural Resources Planning and Management Division

**BROWARD COUNTY PLANNING COUNCIL**  
**WETLAND RESOURCE QUESTIONNAIRE**

**as completed by the**

**ENVIRONMENTAL PROTECTION & GROWTH MANAGEMENT DEPARTMENT**

***I. Introductory Information***

- A. *Amendment No.:*** PCT 15 -1
- B. *Municipality:*** City of Fort Lauderdale
- C. *Project Name:*** Downtown Fort Lauderdale Housing

***II. Site Characteristics***

- A. *Size:*** Approximately 710 acres
- B. *Location:*** Sections: 2,3,10 and 11 Township: 50 Range: 42; generally located south of Sunrise Boulevard, north of the Tarpon River, between U.S. 1/Federal Highway and Northwest 7 Avenue.
- C. *Existing Use:*** Commercial, office, industrial, transportation, recreation and open space, single- and multi-family residential and vacant

***III. Broward County Land Use Plan Designation***

- A. *Current Designation:*** Regional Activity Center consisting of:  
8,100 dwelling units (7,650 market rate  
units and 450 affordable housing units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit  
Recreation and Open space: 8.5 acres  
minimum



Wetland Resource Questionnaire  
PCT 15-1

- B. ***Proposed Designation:*** Regional Activity Center consisting of:  
13,100 dwelling units (11,900 market  
rate units and 1,200 affordable housing  
units)  
Commercial: no specified limit  
Industrial: no specified limit  
Transportation: no specified limit  
Recreation and Open space: 8.5 acres  
minimum

IV. **Wetland Review**

- A. ***Are wetlands present on subject property?*** *Possibly.*

- B. ***Describe extent (i.e. percent) of wetlands present on subject property.***

*Unknown at present*

- C. ***Describe the characteristics and quality of wetlands present on subject property.***

*Unknown at present*

- D. ***Is the property under review for an Environmental Resource License?*** No

*If yes, at what stage in the process is the application?*

- E. ***Has the applicant demonstrated that should the proposed Land Use designation be approved, the proposed project will be consistent with the requirements of Article XI, Chapter 27 of the Broward County Code of Ordinances?*** No.

*If yes, what is the mitigation requirement for the property?*

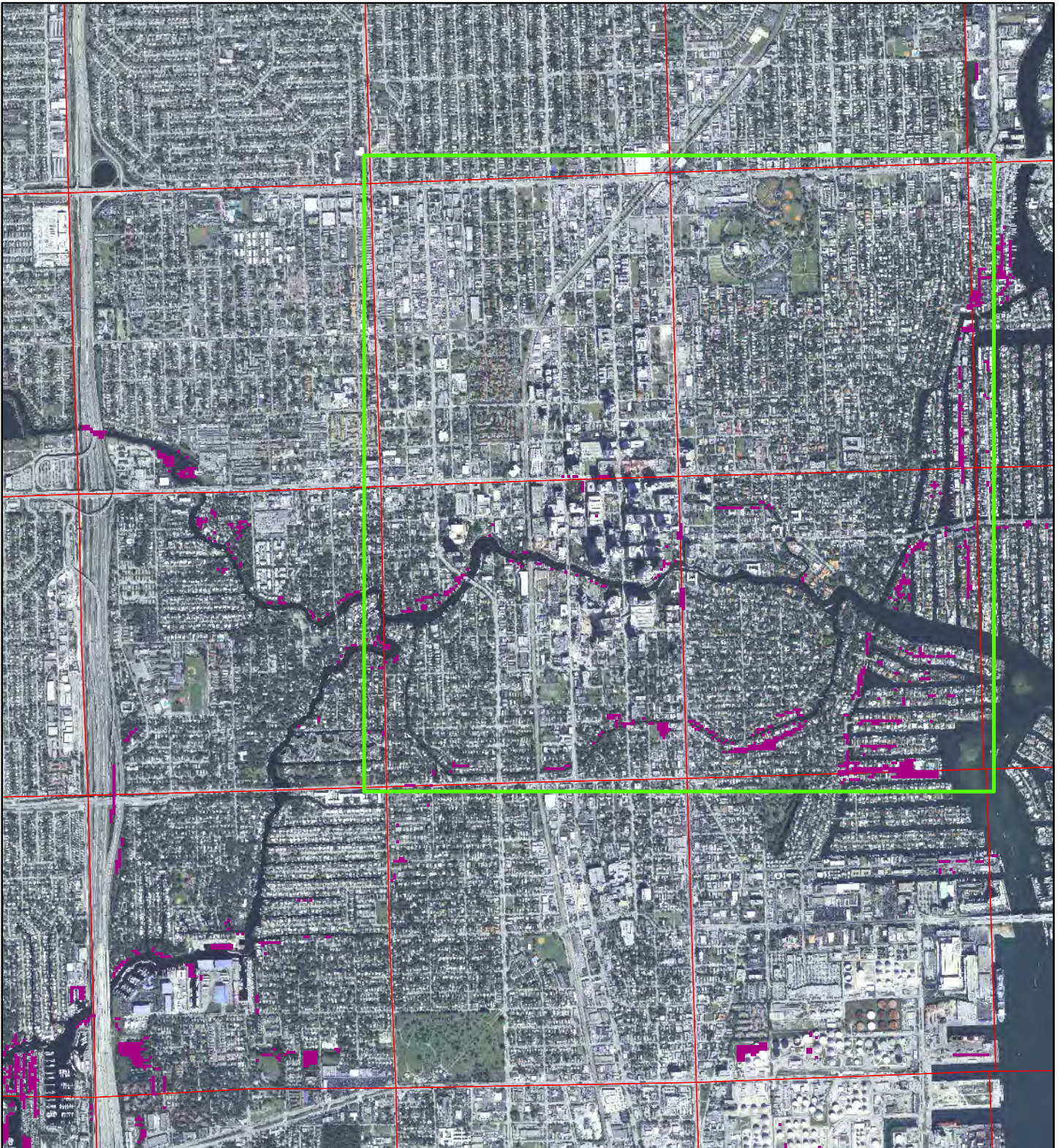
V. **Comments**

Project details were not provided so it is unknown if wetlands will be impacted at this time. Any work in, on, over or under waters or wetlands of Broward County will require a license. Any mangrove impacts (trimming, alteration or removal) requires a license from this Department.

**Completed by:** Linda Sunderland, NRS IV  
Aquatic & Wetland Resources Manager



# Broward County Land Use Plan Proposed Amendment PCT 15 - 1



0 5001,000 2,000  
Feet



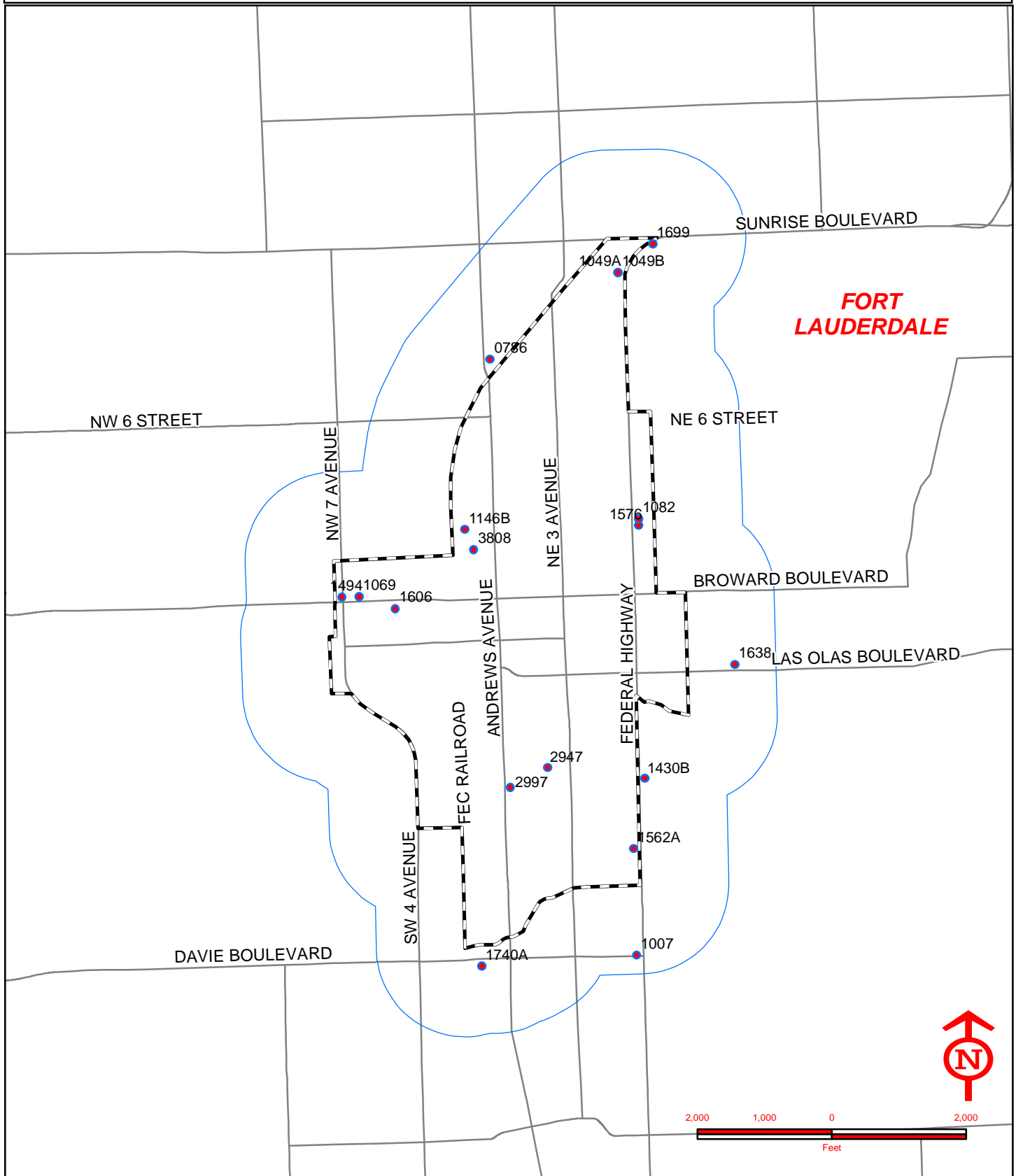
Proposed Land Use Plan Amendment



Priority Planning Areas for Sea Level Rise: Areas near tidal water bodies at an increased risk of inundation under a 2 foot sea level rise scenario, projected to occur by 2060.



**ATTACHMENT 19**  
**DOWNTOWN FORT LAUDERDALE REGIONAL ACTIVITY CENTER**  
**CONTAMINATED SITES**  
**AMENDMENT PCT 15-1**



# Contaminated Sites Database List of Active CS

Site Number	Facility Name	Facility Address	Pollutant	Facility Type
NF-1146B	NATIONAL LINEN #159	307 NW 1ST AVE 33301	Chlorinated	Dry Cleaner
SF-1049A	Sears Auto Repair and Tire Center	901 N FEDERAL HWY Fort Lauderdale 33304	Gasoline	Auto Repair
NF-1049B	Sears Auto Repair and Tire Center	901 N FEDERAL HWY Fort Lauderdale 33304	Used Oil	Auto Repair
SF-1069	HESS #9304	621 W BROWARD BLVD Fort Lauderdale 33312	Petroleum	Gas Station
SF-1082	7-ELEVEN #26304	330 N FEDERAL HWY Fort Lauderdale 33301	Petroleum	Gas Station
SF-1007	CITGO QUICK MART	1199 S FEDERAL HWY Fort Lauderdale 33316	Petroleum	Gas Station
OT-0786	RITEWAY DRYCLNRS	725 PROGRESSO DR Fort Lauderdale 33304	Chlorinated	Dry Cleaner
SF-1430B	AMOCO	606 NE 6TH AVE Fort Lauderdale 33304	Petroleum	
SF-1740A	HARRY SANTOS & COMPANY	1217 SW 1ST AVE Fort Lauderdale 33315	Petroleum	
SF-1699	KING SUNRISE	700 E SUNRISE BLVD Fort Lauderdale 33304	Petroleum	Car Dealer
SF-1638	TEXACO	1017 E LAS OLAS BLVD Fort Lauderdale 33301	Petroleum	Gas Station
SF-1576	TENNECO STATION #146	300 N FEDERAL HWY Fort Lauderdale 33301	Mixed Product	Gas Station
SF-1606	7-ELEVEN #25359	460 W BROWARD BLVD Fort Lauderdale 33312	Petroleum	Gas Station
NF-2947	BROWARD COUNTY COURTHOUSE	201 SE 6TH ST Fort Lauderdale 33301	Diesel	Emergency Generator
SF-1562A	SHELL SERVICE STN	817 S FEDERAL HWY Fort Lauderdale 33316	Petroleum	Gas Station
SF-1494	AMOCO STATION #837	701 W BROWARD BLVD Fort Lauderdale 33311	Petroleum	Gas Station
NF-2997	Broward County Judicial Complex South Garage	612 S ANDREWS AVE Fort Lauderdale 33301	Gasoline	Vacant Lot
NF-3808	Former BMS Property	217 NW 1ST AVE Fort Lauderdale 33301	Chlorinated	Vacant Lot

## ATTACHMENT 20



Our Best.  
Nothing Less.

### LIBRARIES DIVISION • Historical Commission

301 Harmon (S.W. 13th) Avenue • Fort Lauderdale, Florida 33312 • 954-357-5553 • FAX 954-357-5522

August 29, 2014

Ivan Cabrera  
Broward County Planning Council  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

RECEIVED

AUG 29 2014

Re: **Broward County Historical Commission Review**  
**BCLUP Amendment PCT 15-1**

BROWARD COUNTY  
PLANNING COUNCIL

Dear Ivan Cabrera:

I have had an opportunity to review BCLUPA PCT 15-1 generally described as "an addition of 5,000 dwelling units" to the City of Fort Lauderdale Downtown RAC. (pg. 6). The stated purpose of the proposed amendment is to "help guide future residential growth to the Downtown in a responsible manner, utilizing the Downtown RAC's existing and planned infrastructure, while preserving surrounding residential neighborhoods." (pg. 4)

Section, VII *ANALYSIS OF NATURAL AND HISTORICAL RESOURCES* requires the applicant to "indicate if the site contain, is located adjacent to or has the potential to impact any of the natural and historic resource(s) below, and if so, how they will be protected or mitigated" (Pg. 25)

**Per Section VII (A)** the applicant is required to identify, "Historic Sites or districts on the National Register of Historic Places or locally designated historic sites" (Pg. 25).

#### Applicant Response:

A review of the Broward County Comprehensive Plan, the City of Fort Lauderdale Comprehensive plan, the National Register of historic Places and locally designated sites indicates that there are three historic sites in the amendment site, all of which continue to be preserved subject to the provisions of the City's historic resources preservation regulations and procedures. The three historic sites are as follows:

- Stranahan House – 335 SE 6<sup>th</sup> Avenue
- New River Inn – 231 SW 2<sup>nd</sup> Avenue
- Bryan Building – 22-223 Brickell Avenue

In addition, a small portion of the Sailboat Bend Historic District... located within a transition zone, which restricts building height within the Downtown RAC ...

Broward County Board of County Commissioners

Sue Gunzburger • Dale V.C. Holness • Kristin Jacobs • Martin David Kiar • Chip LaMarca • Stacy Ritter • Tim Ryan • Barbara Sharief • Lois Wexler  
[www.broward.org](http://www.broward.org)

...the City of Fort Lauderdale's Historic Preservation Guidelines ... help to manage and protect the City's architectural and historical resources... (Pgs. 25-26).

**Per Section VII (B)** requires the applicant to identify "Archaeological Sites listed on the Florida Master Site File" (Pg. 26).

**Applicant Response:**

A review of the Florida Master Site File, as well as Comprehensive Plans of both Broward County and the City of Fort Lauderdale indicates there are no archaeological sites located on the amendment site. However, the areas adjacent to the New River are designated "Archaeologically Significant Zones". Broward County must approve any future development within these zones. The City of Fort Lauderdale also has in place regulations regarding archaeological sites and review procedures. (Pg. 26).

**Per Section VII (D)** requires the applicant to identify "Local Areas of Particular Concern identified within the Broward County Land Use Plan" (Pg. 26).

**Applicant Response:**

A review of the Broward County Comprehensive Plan indicates there are no Local Areas of Particular Concern affecting the amendment site. (Pg. 26).

**Broward County Historical Commission (BCHC) review and comment:**

During my review of the proposed amendment I consulted the Broward County Comprehensive Plan (Cultural Resource Maps Series) as well as the City of Fort Lauderdale Comprehensive Plan, the Florida Master Site File, the National Register of Historic Places as well as local planning document *The City of Fort Lauderdale, Planning and Zoning department, Historic Resources* report (2009). Here are the results:

**BCHC review of Section VII (A):**

A review of the *City of Fort Lauderdale, Planning and Zoning Department Historic Resources* report (2009), as well as the Florida Master Site File, the Broward County Comprehensive Plan, and the National Register of Historic Resources indicates there are twenty-five (25) locally designated historic resources including three (3) historic districts in excess of 560 individually designated/eligible historic resources, located within or adjacent (500 feet or less) the amendment area; they are:

- |    |                       |                             |
|----|-----------------------|-----------------------------|
| 1. | North Side School     | 120 NE 11 <sup>th</sup> St. |
| 2. | David E. Oliver House | 231 SW 8 <sup>th</sup> Ave. |
| 3. | Bryan Homes           | 301 SW 3 <sup>rd</sup> Ave. |
| 4. | South Side School     | 701 S. Andrews Ave          |



- |        |                                                                   |                                                                     |
|--------|-------------------------------------------------------------------|---------------------------------------------------------------------|
| 5.     | Old Bus Station/<br>Tibbets Building                              | 201 SW 1 <sup>st</sup> Ave                                          |
| 6.     | Pace Furniture/<br>Archaeology Museum                             | 203 SW 1 <sup>st</sup> Ave                                          |
| 7.     | Bivens Hotel/<br>Colonial Hotel                                   | 211 SW 1 <sup>st</sup> Ave                                          |
| 8.     | Himmarsee Court Apts.                                             | 717 SE 2 <sup>nd</sup> St.                                          |
| 9.     | William's House/<br>Gilda's Club                                  | 119 Rose Dr.<br>SE 5 <sup>th</sup> Ct.                              |
| 10.    | Smoker Park                                                       |                                                                     |
| * 11.  | St. Anthony's School/<br>Convent and Gymnasium                    | 816 NW 3 <sup>rd</sup> St.                                          |
| 12.    | Bryan Building/<br>Sheppard Building                              | 220 SW 1 <sup>st</sup> Ave.                                         |
| 13.    | Stranahan House/<br>Campsite                                      | 335 SE 6 <sup>th</sup> Ave.                                         |
| 14.    | New River Inn                                                     | 231 SW 2 <sup>nd</sup> Ave.                                         |
| * 15.  | Progresso Plaza                                                   | 901 Progresso Dr.                                                   |
| 16.    | Woman's Club                                                      | 15 SE 1 <sup>st</sup> St.                                           |
| 17.    | Goulding/ Dallas House                                            | 620 NE 3 <sup>rd</sup> St.                                          |
| 18.    | Needham Estate                                                    | 828 SE 4 <sup>th</sup> St.                                          |
| 19.    | Southern Bell Telephone/<br>Exchange Building                     | 115 NE 3 <sup>rd</sup> Ave.                                         |
| 20.    | Southside Fire Station                                            | 700 S. Andrews Ave.                                                 |
| 21.    | Sailboat Bend Historic District                                   | (over 550 buildings designated<br>as an historic district)          |
| 22.    | Himarshee St./ SW 2 <sup>nd</sup> Ave Historic District (aka H-1) | ( approximately 17 buildings designated<br>as an historic district) |
| 23.    | Stranahan House Historic District                                 | 335 SE 6 <sup>th</sup> Ave.                                         |
| ** 24. | Coca-Cola Building                                                | 644 S. Andrews Ave.                                                 |
| ** 25. | Broward Co. Main Library                                          | 100 S. Andrews Ave.                                                 |

\* Located within 500 feet of amendment area.

\*\* Local City Designated Historic Resource (designated since 2009)

A review of the Florida Master Site File and the National Register of Historic Places indicates there are six (6) historic resources listed on the National Register of Historic Places located within or adjacent (500 feet or less) the amendment area; they are:

1. Stranahan House - 335 S 6<sup>th</sup> Ave
2. New River Inn - 229 SW 2<sup>nd</sup> Ave
3. Bryan Building - 22-230 Brickell Ave

4. South Side School - 701 S Andrews Ave
5. St. Anthony School - 820 NE 3<sup>rd</sup> St.
6. Williams House - 119 Rose Drive

**BCHC review of Section VII (B):**

The applicant response is incomplete. A review of the Florida Master Site File indicated there are ten (10) previously identified archaeological sites located within or adjacent (500 feet or less) the amendment area; they are:

- |     |                                   |                |
|-----|-----------------------------------|----------------|
| 1.  | Fort Lauderdale #2                | - FMSF 8BD103  |
| 2.  | New River Midden                  | - FMSF 8BD196  |
| 3.  | Stranahan N1                      | - FMSF 8BD259  |
| 4.  | East Annex Site                   | - FMSF 8BD289  |
| 5.  | Tarpon Site                       | - FMSF 8BD2909 |
| 6.  | Brickell Block                    | - FMSF 8BD2916 |
| 7.  | Symphony Site                     | - FMSF 8BD3943 |
| 8.  | Knowlton Sand Mound               | - FMSF 8BD4218 |
| 9.  | New River, SW 4 <sup>th</sup> Ave | - FMSF 8BD4406 |
| 10. | Marina Lofts site                 | - FMSF 8BD4878 |

The amendment site includes two archaeologically significant zones:

1. The North Bank New River Archaeological Zone
2. The South Bank New River Archaeological Zone

**BCHC review of Section VII (D):**

A review of the Broward County Comprehensive Plan, Land Use Plan indicates there are twenty-four (24) Broward County Local Area of Particular Concern – Historic Sites located within or adjacent (500 feet or less) the amendment area. Two of the identified Local Areas of Particular Concern are included on the National Register of Historic Places. The Broward County Local Areas of Particular Concern affected by the amendment include:

1. National Register site #2 New River Inn
2. National Register site #4 Stranahan House
3. Site #3 Sailboat Bend Historic District
4. Site #4 Old Fort Lauderdale High School Site
5. Site #7 John and Gilda Bryan House
6. Site #90 Retail Stores/Apartments
7. Site #91 Tom M. Bryan Building
8. Site #92 Tibbets Building
9. Site #93 Colonial Hotel
10. Site #94 Woman's Club
11. Site #95 Reed Bryan House

12. Site #96 Weidling Building
13. Site #97 Tom M. Bryan House
14. Site #98 Philemon Bryan House
15. Site #99 King-Cromartie House
16. Site #100 Sheppard Hotel
17. Site #101 Maxwell Arcade
18. Site #102 Coca-Cola Building
19. Site #103 South Side School
20. Site #104 South Side Fire Station
21. Site #107 Himarshee Court
22. Site #109 John Needham House
23. Site #110 Tom Bryan Home
24. Site #111 E.N Sperry House

BCHC comments relative to findings:

Based on the results of my review of available information (above), the application Section VII (A), (B), and (D) are incomplete in the following regards:

1. The application includes incomplete listing of required documentation of historic resources;

The proposed amendment has potential to impact a large number of historic resources that comprise a significant portion of the remaining historic resource of Broward County and the City of Fort Lauderdale. Review of pertinent documents indicates that there are in excess of 500 buildings and ten (10) archaeological sites located within or adjacent (500 feet or less) the amendment area. In addition, there are in excess of 500 structures contained within the three historic districts which are included in the amendment area, each of which is susceptible to either direct or in-direct impacts as result of impact to the larger district such as by attrition of historic resources or incompatible development. Many of these sites are included in the National Register of Historic Places and many more historic resources have been determined to be eligible for historic designation or are yet to be evaluated for inclusion in the National Register of Historic Places or local historic designation. There is a large discrepancy between the reported three (3) historic sites identified by the applicant and the results of the this review.

2. The application does not address the potential impact of the proposed amendment on the affected historic resources;

The urban center of the City of Fort Lauderdale includes a high density of structures, buildings, and archaeological sites which are significant physical reminders of the prehistoric and historic development of the City of Fort Lauderdale and of Broward County. Some of these resources carry significance as physical reminders of locally important events and people such as the Bryan Homes (Broward County Local Areas of Particular Concern Site #s: 95, 97, 98, 110) while others such as the Coca-Cola Building (Broward County Local Area

of Particular Concern site #102 / National Register Site) carry significance as significant reminders of National trends as well as the influence of local trends and architecture.

Recent developments suggest that the procedures currently in place are not adequate for the protection of historic resources or to ensure that the loss of historic resources is responsibly mitigated. A review of recent developments indicates that the Local Area of Particular Concern, Site #96 the Weidling Building was demolished in the fall of 2013 despite request from Broward County Historical Commission for consultation with the property developers and a recommendation that the structure be adaptively reused rather than destroyed. In addition, because the property is located within the North Bank New River Archaeological Zone and situated adjacent to the Brickell Bock archaeological site (Florida Master Site File #8BD2916), the Broward County Historical Commission requested and recommended a Phase One archaeological survey of the property, however, no such survey has been forthcoming.

In addition to the historic resources identified above, a complete review of the Florida Master Site File indicates the following historic resources occur within or adjacent (500 feet or less) the amendment area:

**Historic bridges (4)**

1. Andrews Ave Bridge - FMSF 8BD4372
2. Railroad Bridge - FMSF 8BD4088
3. Henry E. Kinney Tunnel - FMSF 8BD4505
4. SR5 tarpon River Bridge - FMSF 8BD4643

**Resource Groups (6)**

1. Federal Highway - FMSF 8BD4373
2. Andrews Avenue - FMSF 8BD4374
3. FEC RR - FMSF 8BD4087
4. Sailboat Bend Hist. Dist - FMSF8BD4428
5. Beverly Heights Hist. Dist. - FMSF 8BD4781
6. FT Laud. Hist. Dist (H1) - FMSF 8BD181

**Structures at last fifty years or older (542)**

This includes 19 structures which have been determined potentially eligible for inclusion on the National Register by the Florida State Historic Preservation Office,

And;

373 structures which have not been evaluated by the Florida State Historic Preservation Office and which therefore *may be eligible* for inclusion on the National Register.

\* SEE COMPLETE LISTING BELOW.

**The Broward County Historical Commission recommends the following actions as condition of approval of the proposed amendment.**

1. This letter will be included as exhibit to this amendment.
2. Pursuant to the City of Fort Lauderdale Comprehensive Plan, Volume I – Historic Preservation Element, Policy 1.1.2 and 1.1.4: the applicant will obtain an official record search of the proposed amendment area from the Florida Master Site File, Florida Division of Historical Resources.  
  
\* The results of the official record search will be included as exhibit to this amendment.
3. Pursuant to the City of Fort Lauderdale Comprehensive Plan, Volume I – Historic Preservation Element, Objective 1.2 , Policy 1.2.1 of the City of Fort Lauderdale Comprehensive Plan, Volume I – Historic Preservation Element which states that the City shall: *“Evaluate the historical resources of Fort Lauderdale for eligibility for designation as opportunities arise, pursuant to the historic preservation Ordinance and/or nomination to the National Register of Historic Places. ”* (pg. 11-3)  
  
\* The City will initiate local (City) designation as well as National Register nomination of City-owned historic resources eligible for such designations as identified in the this amendment.
4. Pursuant to the City of Fort Lauderdale Comprehensive Plan, Volume I – Historic Preservation Element, Objective 1.8 which states: Objective 1.8 of the City of Fort Lauderdale Comprehensive Plan, Volume I – Historic Preservation Element states that the City shall: *“ Encourage the retention of historical and cultural resources, which foster community identity and civic pride. This may include the revitalization of older housing stock, the preservation of existing low residential density, the discouragement of intrusion from more extensive incompatible uses, and the discouragement of urban sprawl.”* (Pg. 11-5)  
  
\* The City will include a list of Historic Resources, as defined in the City of Fort Lauderdale Comprehensive Plan, Volume I – Administrative and Implementation element (Pg. 1-20), as exhibit to the proposed amendment.

As defined in the City of Fort Lauderdale Comprehensive Plan, Volume I – Administrative and Implementation Element, Historic Resources are defined as: *“ All areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places, or designated by a local government as historically, architecturally, or archaeologically significant.”* (Pg. 1-20)

5. The amendment should include the following language as it pertains to discovery of historic and/or archaeological resources within the amendment area.

*In the event archaeological features or artifacts are discovered during the course of development, the Broward County Office of Planning shall be notified within twenty four (24) hours of the discovery and sufficient time provided to allow proper recordation, recovery, or preservation of the find (Broward Co. Florida Ord. 92-38).*

*If, in the event, any unmarked human burial remains are discovered, then work in the vicinity of the burial find is to halt immediately until a determination can be made, in accordance with Florida State Statutes, Chapter 872, by either the state archaeologist or the county medical examiner as to jurisdiction, custody, and disposition of the remains. Should this occur, this office is to be contacted immediately to facilitate the coordination of the find.*

If you have any questions regarding these comments or would like additional information please contact me at the Broward County Historical Commission by telephone: (954) 357-5506 or email: [mdefelice@broward.org](mailto:mdefelice@broward.org).

Sincerely,

Matthew DeFelice  
County Archaeologist

Ec: Peggy Davis, Manager, Libraries Division, Historical Commission  
David Baber, Historic Preservation Coordinator, Libraries Division





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Coastal Archaeology & History Research, Inc.

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December 8, 2014

Ivan J. Cabrera  
Broward County Planning Council  
115 S. Andrews Avenue, Room 307  
Fort Lauderdale, Florida 33301

RECEIVED

DEC - 8 2014

Re: PCT 15-1 City of Fort Lauderdale Response  
Review and Recommendation

BROWARD COUNTY  
PLANNING COUNCIL

Dear Mr. Cabrera:

I have had an opportunity to review the City of Fort Lauderdale's response to comments from the Broward County Historical Commission review of PCT 15-1. The City's adequately captures the recommendations of the former Broward County Historical Commission; furthermore, the commitment to exhibit the County's original recommendation as attachment will provide future reference to the intent of the County's recommendation.

Recommendation

In my capacity as the County's consultant archaeologist, it is my recommendation that the response be accepted as received.

Please contact me if you have any questions or if you would like additional information regarding this review and recommendation.

Respectfully,

Matthew DeFelice  
Coastal Archaeology and History Research, Inc.

Ec: Maribel Feliciano, Planning Administrator, Broward County Planning and  
Redevelopment Division  
Rick Ferrer, Historic Preservation Officer, Broward County Planning and Redevelopment  
Division



## ATTACHMENT 22

RECEIVED

SEP 11 2014

BROWARD COUNTY  
PLANNING COUNCIL

Environmental Protection and Growth Management Department

### EMERGENCY MANAGEMENT DIVISION

201 N.W. 84<sup>th</sup> Avenue • Plantation, Florida 33324-1895 • 954-831-3900 • FAX 954-382-5805

September 10, 2014

14.105

Ms. Barbara Blake Boy  
Executive Director  
Broward County Planning Council  
115 South Andres Avenue, Room 307  
Fort Lauderdale, FL 33301

RE: Broward County Land Use Plan PCT 15-1 ✓

~~Dear Ms. Blake Boy~~ *Barbara*

Broward County Emergency Management Division has reviewed the proposed Land Use Amendment PCT 15 -1 located in the City of Fort Lauderdale. The proposed site is currently designated as a Regional Activity Center (RAC) consisting of 8,100 dwelling units as designated in the Broward County Land Use Plan. The proposal is to increase the dwelling units to 13,100 within the Regional Activity Center. The net increase would then be an additional 5,000 dwelling units for the Regional Activity Center.

The City of Fort Lauderdale has provided information regarding the build out analysis performed that splits the Regional Activity Center into four quadrants. The NE and SE quadrants contain parcels of property east of US 1. A portion of those two quadrants east of US 1 are located in a Broward County mandatory hurricane evacuation zone for a Category 3 or higher storm. A significant amount of those two quadrants are not part of Broward County's mandatory hurricane evacuation zone. The provided traffic calculations show that of the new proposed 5,000 dwelling units as part of this amendment, approximately 1,214 dwelling units are anticipated in to be built in the NE quadrant and 1,345 dwelling units are anticipated in the SE quadrant. The total area for the quadrants represents a larger geographic area beyond the designated mandatory hurricane evacuation zone.

An original analysis was provided for Land Use Plan Amendment PCT-05-3 for an increase to 13,000 dwelling units for the RAC back in 2005. Additionally, a review for this Land Use Plan Amendment PCT 15-1 was conducted to achieve up to near the same request with increase to 13,100 dwelling units. A small component of the overall Regional Activity Center is located east of US 1 in a mandatory hurricane evacuation zone for a Category 3 of higher storm. At this current time, this proposed revision is not anticipated to have a negative impact on the capacity of Broward County's shelters nor on the level of service for the hurricane evacuation zone routes for a hurricane evacuation. However, we strongly recommend that all new residential development in the RAC (due to the influx of 5,000 more dwelling units) develop hurricane contingency plans.

Sincerely,

*Miguel Ascarrunz*

Miguel Ascarrunz, FPEM  
Director



## ATTACHMENT 23

Environmental Protection and Growth Management Department  
**PLANNING AND REDEVELOPMENT DIVISION**

115 S. Andrews Avenue, Room 329K • Fort Lauderdale, Florida 33301 • 954-357-6634 • FAX 954-357-8655

**RECEIVED**

SEP 19 2014

**DATE:** September 18, 2014

**TO:** Barbara Blake Boy, Executive Director  
Broward County Planning Council

**BROWARD COUNTY  
PLANNING COUNCIL**

**FROM:** Henry Sniezek, Director  
Planning and Redevelopment Division

**HENRY  
SNiezek**

Digitally signed by HENRY SNEIEK  
DN: cn=Henry, o=Broward County, ou=EPGMA,  
c=US, email=hsniek@broward.org, ou=Users, cn=HENRY  
SNEIEK  
Date: 2014.09.18 08:53:32 -0400

**SUBJECT:** Broward County Land Use Plan  
*Review of Proposed Amendment – Fort Lauderdale PCT 15-1*

The Broward County Planning and Redevelopment Division (PRD) staff has reviewed proposed amendment PCT 15-1. The subject site is located in downtown Fort Lauderdale's Regional Activity Center (RAC) consisting of approximately 749 acres. The amendment proposes:

**Current Designations:** Regional Activity Center (RAC):  
11,060 residential units  
Commercial: Floor Area Ratio (FAR) of 4  
Industrial: FAR of 4  
Community Facilities: No Limit  
Park-Open Space: 8.5 acres, minimum

**Proposed Designation:** Regional Activity Center (RAC):  
16,060 residential units  
Commercial: FAR of 4  
Industrial: FAR of 4  
Community Facilities: No Limit  
Park-Open Space: 8.5 acres, minimum

**Estimated Net Effect:** Increase of 5,000 residential units

Broward County Board of County Commissioners  
Sue Gunzburger • Dale V.C. Holness • Kristin D. Jacobs • Chip LaManna • Martin Davis • Kian Stacy Ritter • Tim Ryan • Barbara Sharief • Lois Wexler  
www.broward.org

**Item 8 - Affordable Housing**

Amendments which propose to add 100 or more residential dwelling units to the existing densities approved by the Broward County Land Use Plan (BCLUP) are subject to the requirements of BCLUP Policy 1.07.07. This policy requires the involved municipality to provide those professionally accepted methodologies, policies, and best available data and analysis, which the municipality has used to define affordable housing needs and solutions within the municipality. The net effect of the amendment will be an addition of 5,000 residential units; thus, Policy 1.07.07 does apply.

To address Policy 1.07.07, the City's application proposes to include 750 units, or 15%, of the requested 5,000 units as affordable housing. Staff supports the proposed 15% component, but notes that there is no assurance that development of the 5,000 units will proceed under a unified development plan. In relation to Policy 1.07.07, staff notes that the Policy is normally applied to land use plan amendments involving unified residential development proposals that address any affordable housing component as part of the unified plan.

For the Fort Lauderdale Downtown RAC, allocation of the 5,000 units may proceed on a piecemeal basis with numerous developers and smaller projects spread throughout the RAC area. Without a plan to ensure the phasing in of affordable housing on a consistent basis over time, a resulting build-out scenario could be 4,250 units are allocated before the 1<sup>st</sup> affordable unit is allocated. In this light, County staff requests that the City consider offering a phasing plan to ensure compliance with Policy 1.07.07. A potential phasing commitment could be an adjustment to the proposed text amendment reflecting that 75 units of every 500 units be affordable.

It is also noted for the record that the City's application, in describing previous allocations of affordable housing in the Downtown RAC (please see attached), indicates 167 affordable units for the Pinnacle at Flagler Pointe (Reliance) project. Please note that this property is now county-owned and has not been developed.

**Item 10 - Hurricane Evacuation Analysis**

The Broward County Land Use Plan's "Natural Resource Map Series Eastern Broward County: Hurricane Evacuation Zones" indicates that the easternmost portion of the amendment site is located in a Plan B, Category 3 and above, Hurricane Evacuation Zone. The closest hurricane evacuation shelter is Arthur Ashe Middle/Rock Island Elementary located at 1701 NW 23<sup>rd</sup> Avenue in Fort Lauderdale, just more than two miles from western boundary of the downtown RAC.

The application states that "The majority of the amendment site is not located in a hurricane evacuation zone. A small portion of the amendment area is located east of US 1, which is designated an evacuation zone". The application does not provide a hurricane evacuation analysis that considers the availability of hurricane shelter spaces for the occupants of the additional residential units or the impact on hurricane evacuation times.

**Item 11 – Redevelopment Analysis**

The northern one-third, approximately, of the amendment site is located within the Northwest-Progresso-Flagler Heights Community Redevelopment Area. The application states that this portion of the CRA is generally known as the Flagler Village area and that the CRA has committed 10 million dollars for infrastructure and streetscape improvements on NE 6<sup>th</sup> Street and allocated 1.5 million dollars for property acquisition. Planning and Redevelopment staff reviewed the

Barbara Blake-Boy, Broward County Planning Council  
PCT 15-1  
September 18, 2014  
Page 3

Northwest/Progresso/Flagler Heights Implementation Plan and finds this amendment consistent with the Plan.

Item 12 – Intergovernmental Coordination

There are a number of County-owned facilities/properties located within the proposed amendment site, including the Broward County Government Center and the County Courthouse. There are no anticipated conflicts with the proposed amendment. The site is not located adjacent to other municipalities or unincorporated areas.

If you have any questions, please contact Maribel Feliciano, Planning Administrator, of the Planning and Redevelopment Division staff at 954-519-1424 or [mfeliciano@broward.org](mailto:mfeliciano@broward.org)

cc: Ralph Stone, Director of Finance and Community Development Division

Attachment

HS/kf,mf

**VIII. AFFORDABLE HOUSING**

Describe how the local government is addressing Broward County Land Use Plan Policy 1.07.07.

**The City currently addresses Affordable Housing with a variety of programs. The City provides for the administration and coordination of several community service programs intended to improve the character of existing neighborhoods and to provide quality housing for its citizens. These programs focus primarily on providing homeownership opportunities for very low and low-moderate income families. Some of the services provided by the City's Housing and Community Development Division**



include administration, management, and coordination of Community Development Block Grant activities; Rental Rehabilitation Programs; Emergency Shelter Grant Program, and other federal and state programs.

The City has a history of actively finding solutions to the shortage of workforce housing. Between 2004 and 2005, the City of Fort Lauderdale held several workshops focusing on this issue. As a result of the workshops, a Workforce Housing Study was prepared for the City, which identified existing conditions, trends, and workforce housing needs.

In 2006, the City increased the dwelling unit threshold in the Downtown RAC by three thousand (3,000) units via a land use plan amendment (LUPA PCT 05-3). Of the three thousand (3,000) units approved, the City voluntarily recommended that 450 units (15%) be restricted to affordable housing as defined by the Broward County Land Use Plan. Since this amendment, 455 affordable housing units have been allocated in the Downtown RAC, thereby satisfying the 15% affordable housing set-aside requirement.

As shown in the table below, the City of Fort Lauderdale has allocated 551 affordable housing units in the Downtown RAC since 2005. Most recently, the City Commission approved the Pinnacle at Tarpon River project, which will contain a total of 100 affordable housing units.

<b>AFFORDABLE HOUSING UNITS INVENTORY - DOWNTOWN RAC</b>		
<i>Development Name</i>	<i>Date Approved by City</i>	<i># of Affordable Housing Units</i>
Brickell Hts (The Eclipse)	4/19/05	96
Pinnacle at Flagler Pointe (Reliance)*	6/20/06	167
Pinnacle at Tarpon River*	5/7/13	100
Progreso Point*	8/17/10	76
Village Place (formerly Flagler Village I)*	7/10/12	112
<b>Total</b>	-	<b>551</b>
Source: City of Fort Lauderdale		
* = Projects that contribute toward the 15% affordable housing set-aside requirement as per LUPA PCT 05-3.		

Over the past few years, a number of new affordable housing developments have been successfully constructed or approved throughout the city. As shown in the following table, at least 1,122 affordable housing units have been approved since 2008 outside of the Downtown RAC. Some of these developments, such as Artspace and Kennedy Homes, are located within close proximity to the Downtown RAC and its basic services (i.e. parks, grocery stores, etc.).

<b>APPROVED AFFORDABLE HOUSING DEVELOPMENTS LOCATED OUTSIDE DOWNTOWN RAC (SINCE 2008)</b>		
<i>Development Name</i>	<i>Year Placed in Service</i>	<i># of Affordable Housing Units</i>
Artspace Sailboat Bend Lofts	2008	37
Dixie Court I	2008	122
Dixie Court II	2008	32
Dixie Court III	2009	100
Dr. Kennedy Homes	2012	132
NW Gardens I	2011	143
NW Gardens II	Pending	148
NW Gardens III	2012	150
NW Gardens IV	Pending	118
Riverbend Pointe	Pending	140
<b>Total</b>	<b>-</b>	<b>1,122</b>
<b>Sources: Broward County Housing Authority; Housing Authority of Fort Lauderdale; City of Fort Lauderdale</b>		

The City has worked with non-profit groups, such as the Housing Authority of the City of Fort Lauderdale (HACFL), to meet its affordable housing needs. The HACFL has received City approval for approximately 945 affordable housing units since 2008 (included in the above table), totaling over \$200 million in investments in affordable housing. One of these projects, Northwest Gardens located in the Northwest RAC, was the first community in the State to achieve LEED for Neighborhood Development Certification and recently received an honorable mention for the 2012 National Award for Smart Growth Achievement given by the U.S. EPA. The revitalized Dr. Kennedy Homes on Broward Boulevard is anticipated to receive LEED Silver Certification. In addition, the City has approved six Housing Authority projects totaling 270 units over the past 18 months, while the HACFL currently has plans to replace about 300 more affordable housing units throughout the City.

Consistent with Broward County Land Use Policy 1.07.07 and with the City's 2006 land use plan amendment that increased the dwelling units threshold in the Downtown RAC, the City is proposing a 15% affordable housing set aside as part of the proposed land use plan amendment. This set aside would result in 750 affordable housing units of the 5,000 total units requested under the proposed land use plan amendment.



## ATTACHMENT 24

Environmental Protection and Growth Management Department  
**PLANNING AND REDEVELOPMENT DIVISION**

115 S. Andrews Avenue, Room 329k • Fort Lauderdale, Florida 33301 • 954-357-6634 • FAX 954-357-8655

DATE: December 3, 2014

TO: Barbara Blake Boy, Executive Director  
Broward County Planning Council

**RECEIVED**

DEC - 3 2014

FROM: Henry Sniezek, Director  
Planning and Redevelopment Division

**BROWARD COUNTY  
PLANNING COUNCIL**

SUBJECT: *Review of Proposed BCLUP Amendment – Fort Lauderdale PCT 15-1*  
*UPDATED COMMENTS - Affordable Housing*

On November 3, 2014, the City provided a response (please see attached) to our comments of September 18, 2014. City staff disagreed with County staff's request that the City offer a phasing plan for affordable housing to avoid the scenario where all of the units first allocated were market rate units, or where units are allocated at a rate which results in less than 15% of the units being affordable until most of the pool of 5,000 units is allocated.

**County staff continues to recommend that the City offer an affordable housing phasing plan to ensure compliance with Policy 1.07.07.**

It is felt that the points made by the City in its correspondence of November 3, 2014, supports why there should be a phased approach. First, the City's correspondence states that "an affordable housing phasing plan is not needed" due to "development trends over the past decade and current market demand for affordable housing." In addition, the City states that the Wave Streetcar may further create a demand for affordable housing. As the City acknowledges that there is a market demand for affordable housing, and anticipates additional demand, a phasing plan would either document that the construction of affordable housing is occurring over time within the RAC, or will ensure that such demand is being proactively accommodated within the RAC via support of the City. Currently, there is a backlog of over 45,000 units for families at 60% of area median income in Broward County. Future employment trends project the bulk of new jobs will be service wage jobs. Therefore, without a phased approach the City may not develop affordable units until the end of the development program. In regard to the "market driven" supply of affordable units that have been developed, the City has not to date been an active factor. The County almost exclusively provides the tax credit match for the projects listed. In the early years this match was

\$250,000. As a result of the County's initiative, the match has been reduced to \$100,000. The County continues to request this tax credit match be \$0 dollars. Several years ago, because the County was the only agency providing this match (without which no application could attain a high score and therefore would not be funded), the county requested all developers to first seek the match from other "entitlement" Cities where the project would take place. After several developers remarked that none of the Cities would provide the match and that the County was "losing units," the County once again provided the local match for ALL developments filing an application throughout the County.

In regard to the Table provided by the City to demonstrate approved affordable housing projects in the RAC, all of these projects are State 9% tax credit projects. It is our opinion that, currently, this is the only business model that can finance low income affordable new construction and maintain these units over time. The Broward County Housing Finance Authority (HFA) has annual state bond allocation for 4% tax credit deals. But the current financing gap is approximately \$5 million for a 100 unit project. If the city phases the development requirement for affordable housing and works toward collecting gap financing, a project could be financed by the HFA in almost any given year.

Also, the Table provided by the City indicates 167 units of the 656 affordable units previously allocated in the RAC are for the Pinnacle at Flagler Pointe project. Please note that both Reliance and Pinnacle could not execute a new affordable housing project on this site. As a result, the property currently has no developer for this property. At this time the County is not marketing this property for any use. Therefore the City total should actually be 489 units.

The City also states that a phasing commitment would single out Fort Lauderdale as the only municipality in the County with such a requirement. It is County staffs' opinion that a phasing plan would actually ensure that the City is treated similarly to others in the County who offer a 15% set-aside under the new rules adopted by the County Commission on April 22, 2014. As stated in our September 18, 2014, correspondence, Policy 1.07.07 "is normally applied to land use plan amendments involving unified residential development proposals that address any affordable housing component as part of the unified plan." To date, the Broward County Land Use Plan amendments that have been subject to the revised rules have been limited to single development parcels and proposals. County staff suggested a phasing plan to ensure that affordable units are available on a consistent basis as units are built within the RAC, recognizing that the "allocation of 5,000 units may proceed piecemeal basis with numerous developers and smaller projects spread throughout the RAC area."

If you have any questions, please feel free to contact me at 954-357-6670 or [hsniezek@broward.org](mailto:hsniezek@broward.org).

cc: Ralph Stone, Director  
Broward County Housing Finance and Community Development Division

Todd Okolichany, Principal Planner  
City of Fort Lauderdale

Attachment: City of Fort Lauderdale correspondence dated November 3, 2014

**--Referenced attachments included in Attachment 6--**

## ATTACHMENT 25

**Cabrera, Ivan**

---

**From:** Todd Okolichany <TOkolichany@fortlauderdale.gov>  
**Sent:** Monday, December 15, 2014 5:25 PM  
**To:** Cabrera, Ivan; John Milledge (john@jmmmpa.com)  
**Subject:** RE: Public outreach  
**Attachments:** Presentation to DDA\_131010.pdf

Hi Ivan –

A major component of the Wave Streetcar public outreach was that the Downtown RAC is a growing area and that the continued growth of the Downtown would ensure sufficient density to support the Wave. At the meetings for the Wave, the public was made aware of the need for density in the Downtown RAC and that the City's Downtown Master Plan (adopted in 2003, updated in 2007 and again in 2014 to incorporate transit oriented development guidelines) also envisions additional dwelling units and density in order to support a vibrant, pedestrian-oriented Downtown. Although this project is indirectly related to the Downtown Units LUPA, the theme of increased density in the Downtown was an important element of public outreach.

Another effort that is indirectly related to the Downtown Units land use plan amendment, but that supports the increased density in the Downtown, is the February 2014 update of the City's Downtown Master Plan to incorporate transit oriented development (TOD) guidelines. As part of the public outreach for this project, City staff gave the following presentations:

Downtown Development Authority: 10/10/13  
Open House Workshop at Department of Sustainable Development: 12/4/13  
Northwest CRA: 1/29/14  
Central City Advisory Board: 3/5/14

I have attached a presentation that City staff gave to the Downtown Development Authority. As you can see on page 3, one of the purposes of the TOD guidelines is to support the continued growth of the Downtown.

For the Downtown Units LUPA, the following public meetings were held:

City of Fort Lauderdale Planning & Zoning Board: 7/17/13  
City Commission: 10/1/13

John –

Please feel free to add anything regarding the public outreach conducted for the Wave.

Thanks,  
**Todd Okolichany, AICP, LEED Green Assoc. | Principal Planner**

---

**From:** Cabrera, Ivan [mailto:ICABRERA@broward.org]  
**Sent:** Wednesday, December 10, 2014 3:26 PM  
**To:** Todd Okolichany  
**Subject:** Public outreach

Hi Todd,



# DOWNTOWN MASTER PLAN

## Transit Oriented Development (TOD) Update

Presentation to Downtown  
Development Authority  
October 10, 2013



## Master Plan Update: TOD Guidelines

- Proposed update to the Downtown Master Plan Design Guidelines to include a Transit Oriented Development (TOD) element
- Phase 1: Future station area for All Aboard Florida/Broward Central Terminal/FEC commuter rail/Wave Streetcar
- Phase 2: Remaining Wave Streetcar stations in Downtown RAC
- ULDR amendments to implement TOD guidelines



## Purpose of TOD Guidelines

- Support premium transit, such as the Wave Streetcar and future commuter rail
- Guide future growth and encourage redevelopment around premium transit stations
- Create vibrant station areas
- Support continued growth of the Downtown



Rendering of Wave Streetcar in the Downtown



Planned Tri-Rail Coastal Link on FEC line

## What is TOD?



- Integrates land use and transit
- Creates compact, walkable, mixed-use neighborhoods close to transit
- Supports multimodal transportation
- Fosters economic investment
- Reduces auto dependency and associated impacts
- Preserves surrounding neighborhoods
- Helps to reduce parking demand

## TOD Place Type: Gateway Hub



Transit Core (1/4 mile radius)

## Development Framework

- TOD guidelines apply to Downtown Character Areas in Transit Core
- Includes site level "targets" for density, parking and other design guidelines
- Additional guidelines for station area: land uses, mobility, parking, station area design and "green" design
- Incentives in exchange for certain benefits



## Site Level Targets

	Downtown Core	Near Downtown	Urban Neighborhood
Min. Commercial FAR	2.0	1.5	1.0
Min. Residential Density (DUs/Net Acre)	100	50	25
Min. Street Frontage (primary street)	80%	75%	70%
Cross-Block Connection (sites w/ street frontage over 300')	15 min. pedestrian / bike connection		
Cross-Block Connection (sites w/ street frontage over 500')	25 min. vehicular / pedestrian / bike connection		



Min. street frontage helps to frame the street and improve walkability and sidewalk activity



Example of cross-block connection

## Parking



Less parking = more active uses in station area



The highest and best uses should be located adjacent to premium transit stations

- **Goal:** Reduce parking to promote highest and best uses in station area
- **Strategies:**
  - Parking is exempt in Downtown Core
  - Reduced parking requirements for Near Downtown and Urban Neighborhood
  - Maximum parking for residential and non-residential uses
  - Create active and safe multimodal transit stations

## Land Uses

Discouraged Non-Transit Supportive Uses	
Residential	<ul style="list-style-type: none"> <li>▪ Low-density single-family residential</li> </ul>
Commercial	<ul style="list-style-type: none"> <li>▪ Automotive oriented businesses</li> <li>▪ Car washes</li> <li>▪ Gas/service stations</li> <li>▪ Drive-in/drive through services</li> <li>▪ Funeral services</li> <li>▪ Strip commercial retail</li> <li>▪ Stand alone retail stores over 30,000 SF that are not part of a mixed use development</li> <li>▪ Towing services and storage yards</li> <li>▪ Indoor/outdoor storage</li> <li>▪ Surface parking lots (except pick-up/drop-off zones) within 200' of Gateway Hub transit station</li> </ul>
Industrial	<ul style="list-style-type: none"> <li>▪ Low-intensity industrial uses (non-transit related)</li> <li>▪ Warehouse/distribution</li> </ul>

## Other TOD Guidelines

- Encourage pedestrian and bike connections to transit stops
- Design and site parking consistent with TOD principles
- Incorporate Travel Demand Management measures into developments
- Create active and safe multimodal transit stations
- Encourage green buildings and infrastructure



Solar powered parking meter



Broward B-cycle bike sharing station

## Incentive for Use of Flex Units

- Residential "flexibility" and "reserve" units may be used if certain benefits are provided
- Benefit examples (choose two):
  - Building meets min. LEED Certification requirements
  - TDM Measures (e.g. bike or car sharing program)
  - Green infrastructure
  - Solar or wind power
  - Civic open space
  - Affordable or workforce housing



LEED™ Certified bank in Fort Lauderdale

ATTACHMENT 26



Public Works Department - Water and Wastewater Services

**WATER MANAGEMENT DIVISION**

2555 West Copans Road • Pompano Beach, Florida 33069 • 954-831-0751 • FAX 954-831-3285

MEMORANDUM

August 15, 2014

TO: Barbara Blake Boy  
Executive Director Broward County Planning Council

FROM: Joe Heilman  
Broward County Water Management Division

SUBJECT: LAND USE PLAN TEXT AMENDMENT  
PCT 15-1

**RECEIVED**

AUG 15 2014

BROWARD COUNTY  
PLANNING COUNCIL

I have reviewed the information in the package for the referenced Land Use Plan Text Amendment. The drainage information in the package is generally correct.

- PCT 15-1: No objection

Our office has no objections or comments for this amendment.

Respectfully,

A handwritten signature in black ink, appearing to be "J. Heilman", written over a horizontal line.

Joe Heilman  
Natural Resource Specialist II  
Broward County Water Management Division  
2555 W. Copans Road, Pompano Beach, FL 33069  
Office:(954)-831-0764  
Fax:(954) 831-3285  
E-mail: JHeilman@Broward.org

## ATTACHMENT 27

RECEIVED

JAN 20 2015

BROWARD COUNTY  
PLANNING COUNCIL

January 12, 2015

Broward County Planning Council  
115 South Andrews Avenue  
Room 422  
Fort Lauderdale, FL 33301

RE: Public Hearing Notice – Proposed County Land Use- Addition of 5,000 dwelling units

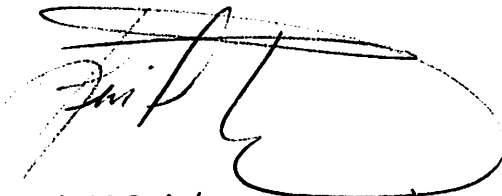
Dear Planning Council,

I am traveling out of state on the date of the hearing for the above mentioned notice. Per your notice, I am writing to advise you I am against the addition.

The traffic flow on Federal Hwy and Broward does not support the addition of this proposal. Furthermore, the streets in this area are overcrowded with resident traffic since building new apartments, condos, and market in this area.

I am oppose to adding additional dwelling units in the 710 acres in Sections 2,3, 10, and 11, Township 50 South, Range 42 East, Amendment PCT 15-1.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda M Ortiz", enclosed within a large, loopy oval shape.

Linda M Ortiz (property owner)  
111 SE 8<sup>th</sup> Avenue  
Fort Lauderdale, FL 33301



CITY OF  
**FORT LAUDERDALE**

**ATTACHMENT 28**



Jenni Morejon  
Director, Department of Sustainable Development

700 NW 19 Avenue  
Fort Lauderdale, FL 33311  
945-828-5849  
jmorejon@fortlauderdale.gov  
www.fortlauderdale.gov

January 22, 2015

**RECEIVED**

**JAN 22 2015**

Ms. Anne Castro, Chair  
Broward County Planning Council  
115 South Andrews Avenue, Room 307  
Fort Lauderdale, FL 33301

**BROWARD COUNTY  
PLANNING COUNCIL**

RE: Transmittal Recommendation – City of Fort Lauderdale Land Use Plan Text Amendment for  
Downtown Regional Activity Center (BCLUP #PCT 15-1)

Dear Ms. Castro:

Please accept this letter as part of the Broward County Planning Council's meeting record for the January 22, 2015 public hearing on the City's proposed land use plan amendment for the Downtown Regional Activity Center (RAC) (Broward County Land Use Plan #PCT 15-1). This letter is in response to the recommendations/actions listed in the Planning Council staff's Amendment Report (dated January 13, 2015). Planning Council staff specifically proposes three conditions that are recommended to be approved for transmittal to the State of Florida review agencies. While the City of Fort Lauderdale appreciates Planning Council staff's recommendation to transmit the amendment, the City objects to the conditions proposed and requests that the Planning Council recommend approval of the amendment without any Planning Council staff conditions. The City is committed to working with the County and other agencies on the following actions.

**Transportation Mitigation**

As stated in the Planning Council staff's report, the City provided a report on the anticipated traffic impacts and presented a traffic mitigation plan based on committed projects in the Downtown RAC. This approach was discussed in a meeting with County and City staff on December 4, 2014. As a follow up to the County's most recent correspondence, the City met with the County's Complete Streets team on January 12, 2015 to discuss multimodal mitigation measures. Additionally, the City is committed to coordinating with the Florida Department of Transportation (FDOT) on multimodal transportation efforts but maintains that regional analyses and mitigation of traffic impacts are the responsibility of the County and can be funded by the County's Transportation Concurrency fund.

**Affordable Housing**

The City is committed to setting aside 15% of the proposed 5,000 dwelling units (i.e. 750 units) as affordable housing, which is consistent with prior residential unit allocations in the Downtown RAC. However, the City respectfully disagrees with any additional phasing plan or development of an enforcement document to ensure the implementation of the City's commitment to set aside 15% of the proposed 5,000 dwelling units as affordable housing.


The City's Downtown Master Plan envisions an estimated long term (20-30 year) build-out of more than 23,000 dwelling units. By incrementally increasing the number of allowed dwelling units (currently 8,100 permitted by the County's Land Use Plan) and not requesting the full potential build-out for the Downtown RAC, the City is providing for affordable housing in a deliberate, systematic and proven approach that is similar to Planning Council/Broward County staff's recommended phasing approach. As a result of the City's incremental approach to increasing density in the Downtown RAC, the City's previous commitment of 450 affordable units for the 2005/2006 land use plan amendment for 3,000 additional dwelling units in the Downtown RAC (PCT 05-3) have all been allocated to approved affordable housing projects.

#### Educational Mitigation Agreement

The Planning Council staff's Amendment Report recommends that the City "...Amend the existing Educational Mitigation Agreement between Broward County, the City of Fort Lauderdale and the School Board of Broward County, Florida..." The City would like to clarify that it will work with the aforementioned agencies to update the Educational Mitigation Agreement, if necessary. Per the School Board, the Downtown RAC is anticipated to have sufficient excess capacity to support the students generated by the residential units proposed.

We are confident we can work through the staff recommendations as we proceed through the land use approval process and therefore respectfully request approval without the Planning Council staff conditions. Thank you again for the Planning Council/Broward County staff's thorough review and coordination of the City's proposed land use plan amendment. We look forward to continue to work with Broward County to ensure that Downtown Fort Lauderdale strives to be a truly livable urban center consisting of pedestrian-friendly streets, great public spaces and high-quality buildings connected by transit. Please feel free to contact me if you should have any questions.

Sincerely,



Jenni Morejon  
Director

cc: Lee R. Feldman, ICMA-CM, City Manager  
Susanne M. Torriente, Assistant City Manager  
Ella Parker, AICP, Urban Design & Planning Manager, City of Fort Lauderdale  
Todd Okolichany, AICP, LEED Green Assoc., Principal Planner, City of Fort Lauderdale  
Diana Alarcon, Director, Transportation & Mobility Department, City of Fort Lauderdale  
Debora Griner, Transportation Manager, City of Fort Lauderdale  
Deanne Von Stetina, AICP, Director of Planning, Broward County Planning Council