
Broward MPO

# 2030 Long Range Transportation Plan Update

**SAFETEA-LU Compliance**

# FINAL REPORT

**Adopted: December 2004**
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# INTRODUCTION

The Broward Metropolitan Planning Organization (MPO) Long-Range Transportation Plan (LRTP) Year 2030 Update is designed to guide the development of multi-modal transportation systems throughout Broward County for the next twenty-three years. The plan will be used to prioritize the majority of transportation spending throughout this period, and as such, it is vitally important that the plan reflects the choices and desires of the majority of Broward County's residents, workers, and visitors. In accordance with federal law, the plan is updated every five years to accommodate the changing needs of the County's population and employment.

This year 2030 update has a primary focus on the non-automobile modes of transportation. Traditionally, transportation plan updates have focused on road building to improve travel conditions for the automobile-driving public, with less attention paid to transit, bicycle and pedestrian, waterborne, and freight modes of travel. As our County becomes more densely developed, is impractical to keep expanding roads to meet the demand of suburban drivers, it is vital to plan for a more comprehensive transportation system that caters to the needs of travelers using all modes of transportation, and to provide our citizens with reasonable mobility options in the future.

This plan update has been conducted with a pro-active two-way public involvement process. Information was provided to the public via newsletters, direct mailings and public meetings, and input was received from the public via public workshops held throughout the planning process.

The MPO Board originally adopted the plan in December 2004 under the Transportation Efficiency Act of the 21 Century (TEA-21) legislation. On August 10, 2005, the President signed the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) into a law. As per Federal Highway Administration (FHWA) instructions, the plan was amended in June 14, 2007 by the Broward MPO to reflect the new SAFETEA-LU legislation. As per FDOT's request, the plan was amended in July 12, 2007 by the Broward MPO to include I-95 Managed Lanes and in March 13, 2008 by the Broward MPO to address the public/private financial partnership to implement the I-595 Corridor Improvements Project.

# 1.0 PUBLIC INVOLVEMENT PLAN

## 1.1 Introduction

The Public Involvement Plan (PIP) for the Broward County Metropolitan Planning Organization (MPO) Year 2030 Long Range Transportation Plan Update has been developed to ensure maximum public participation and to build consensus in this important planning study. The plan has been developed to be consistent with the MPO guidelines for public participation in the planning process, and places a particular emphasis on outreach to minorities, low-income groups, environmental justice, and intergovernmental coordination.

The purpose of the PIP is:

To develop early and continuing participation of the Community Involvement Roundtable (CIR), Technical Coordinating Committee (TCC), Metropolitan Planning Organization (MPO), Bicycle Advisory Committee (BAC), Broward County Coordinating Board for the Transportation Disadvantaged (BCCB), interested groups, and the public in the development of the 2030 Long Range Transportation Plan (LRTP).

## 1.2 Public Meetings and Inter-Agency Coordination

The PIP included over thirty (30) meetings, four (4) Public Workshops and eight (8) Local Meetings during the course of this project, and the participation of the following boards and groups:

- Project Management Team (MT)
- Broward County Metropolitan Planning Organization (MPO) Board
- Technical Coordinating Committee (TCC)
- Community Involvement Roundtable (CIR)
- Plan Update Steering Committee (PUSC)
- Bicycle Advisory Committee (BAC)
- Broward County Coordinating Board for the Transportation Disadvantaged (BCCB)

Presentations were made to each of these groups' at critical junctures throughout the study process to explain the issues, describe the potential solutions and the impacts associated with each, and to receive input and direction from these groups.

These presentations were made at the groups regularly scheduled meetings, as agenda items- either informational or as action items to adopt interim products in the development of the 2030 Plan. Meeting materials - including Technical Reports, tables and maps containing project recommendations and public meeting invitations – were mailed out to these groups in advance of the meetings at which the Plan information was presented. Notes were taken at each meeting to record comments and suggestions from each group.

Appendix A-1 provides a summary of the meeting notes recorded for the Public Workshops and Local Meetings.

## 1.3 Public Involvement Tools

A number of public relations tools were used to communicate with the public, provide information on the progress of the study, and generate public input into the project in an effort to develop consensus and direction in the plan update. These tools focused on notification and communication and include:

- Newsletters
- Direct Mailing
- Newspaper Articles and Advertisements
- World Wide Web
- E-mail Broadcasting
- Interactive Local Meetings and Public Workshops
- Public Surveys

Further detail on each of these techniques and how they were used as a part of the PIP for the development of the Broward County 2030 LRTP Update is provided in the following sections.

### *1.3.1 Newsletters*

Project newsletters were published to communicate the study progress and advertise the Public Workshops and Local Meetings to the public at large. Each project newsletter was mailed to previously identified and affected recipients in Broward County to provide information on the PIP, community outreach methods, and the project schedule for the 2030 LRTP Update.

A total of four newsletters were published during the study at the following junctures in the process:

- Public Involvement Process
- 2030 LRTP Goals & Objectives and Demographics
- Transportation Needs
- Cost-feasible Plan

Newsletters were printed as two-or four-page publications, depending on the amount of material that was covered in each issue. Each newsletter provided the information necessary for recipients to communicate with the study team to provide input and/or obtain additional information. The telephone number, fax number, and e-mail address of the Public Involvement Coordinator was provided in these publications, as well as on the project website.

### *1.3.2 Direct Mailing*

A mailing list consisting of over 4,000 names and addresses was developed at the outset of this study with the help of the MPO and Broward County staff. This comprehensive list included members of the public who have expressed interest in transportation projects with the MPO. In addition, the list contained numerous civic groups including homeowner associations in Broward County, minority groups, public agencies (including elected and appointed officials), and involved professionals.

The mailing list was developed by incorporating the names contained in mailing databases from the following sources:

- MPO list of Agencies for Broward County
- Planning Council's Government directory mailing list
- Broward League of Cities
- Bicycle Advisory Committee's mailing list for the Greenways Project
- A list of Transportation Advisory Boards generated by contacting the 12 largest cities in the County
- Homeowners Association Lists from the County and local Cities
- Minority Groups

Throughout the study process, correspondents and attendees at the Public Workshops and Local Meetings were encouraged to provide their addresses so that they could be added to the mailing list. The mailing list was updated on an on-going basis using the most current contact information provided at the Public Workshops and Local Meetings by attendees.

The mailing list developed for direct mailings included a wide range of public and special interest groups including:

- County Offices and Officials involved with transportation decisions
- Local government offices within the County including all Cities in Broward County
- Neighborhood Associations and Civic Groups
- Newspapers, Television and Radio Stations
- Schools within the County and the Broward County School Board
- Commercial interests including large rental apartment developments
- State Transportation Officials

Transportation operators within the County and in neighboring counties

### *1.3.3 Newspaper Articles and Advertisements*

Each of the Public Workshops and Public Hearings were advertised in the following community and minority newspapers in Broward County:

- Sun-Sentinel
- El Nuevo Heráld.
- Westside Gazette
- The Broward Times

The Sun Sentinel is a major Broward County newspaper and is the largest circulating newspaper in South Florida. The Westside Gazette and Broward Times cater primarily to people of African American and Caribbean decent and are distributed throughout Broward County. El Nuevo Herald is a Spanish-language newspaper and is distributed throughout the County.

Meeting announcements for the Public Workshops and Public Hearings were advertised by placing notices in community newspapers 7 to 10 days prior to the meeting dates. Local news

media were contacted to generate stories, articles and public service announcements for both the Public Workshops and Public Hearings.

Appendix A-2 contains a copy of the news stories, public announcements, and advertisements.

### *1.3.4 World Wide Web*

A project website was developed by the consultant to provide information and updates on the 2030 LRTP Update. Website content, including text and graphics, was developed and placed on the web page by the consultant. The following headings were used to organize the web page for this project:

- Home
- Goals
- Public Outreach
- Schedule
- Cost Feasible Plan
- Reports
- Links

### *1.3.5 E-Mail Broadcasting*

In order to conserve resources and increase efficiency, e-mail addresses were obtained for any agency personnel and members of the public. Where applicable, the newsletters and other project-specific information were broadcasted to those individuals electronically, thereby saving on printing and postage costs associated with the public involvement effort.

E-mails received by the County's Project Manager, Consultant Project Manager, and Public Involvement Specialist received a reply. Each respondent's e-mail address was saved for notification of future meetings and distribution of information.

E-mail notifications were used primarily for meeting announcements and for notifying local public agency staff, including members of the following plan review teams:

- Management Team
- Plan Update Steering Committee
- Technical Coordinating Committee
- Gold Coast ITE
- Moving Broward Group

### *1.3.6 Interactive Public Workshops and Local Meetings*

The primary objective of the Public Workshops and Local Meetings was to obtain input on public concerns relating to transportation needs in Broward County, and to assess the priorities of the community so that they might be reflected in the 2030 LRTP Update. The Public Workshops and Local Meetings were held in conjunction with the following tasks:

- Project Kickoff; Goals and Objectives

- Cost-Feasible Plan
- MPO Workshop
- Final Plan Adoption Public Hearing

The Public Workshops were held in different locations throughout the County to allow a large number of people access to the discussion and information. They were typically held between 4:00 p.m. and 8:00 p.m., spanning the business day and evening hours to allow people to attend the meetings during or after the workday.

The Local Meetings were held with specific homeowner, civic or business organizations and took place at their regularly scheduled meetings. The objective of these meetings was to obtain feedback from the traditionally underserved populations in Broward County to ensure that minority and lower-income groups have an opportunity to provide input. Also, to allow persons from the business community to give input.

The format of the Public Workshops and Local Meetings were informal, non-intimidating and interactive to allow members of the public to both ask questions and provide input on the specific agenda items for each meeting. Ample color graphics and handouts were used to illustrate the points being made. Following the presentations that were given by the project management team, attendees were given the opportunity to provide their input during a question and answer session. Table 1-1 below provides the schedule of Public Workshops and Local Meetings for the 2030 LRTP Update:

**Table 1-1: Public Workshops and Local Meetings**

| Type of Meeting | Group/Meeting Location | Date |
|---|---|---|
| Public Workshop #1 | South Florida Regional Planning Council | January 2004 |
| Public Workshop #2 | City Hall, City of Coconut Creek | January 2004 |
| Local Meeting #1 | Pembroke Pines Changer of Commerce Breakfast | February 2004 |
| Local Meeting #2 | Dorsey Riverbend Homeowner Association | February 2004 |
| Local Meeting #3 | Central Lauderhill Resident Association | March 2004 |
| MPO Workshop | Government Center, Room 301 | October 2004 |
| Public Workshop #3 | Emma Lou Olson Civic Center, Pompano Beach | October 2004 |
| Public Workshop #4 | South Regional/BCC Library, Pembroke Pines | October 2004 |
| Local Meeting #4 | Carver Ranches Homeowner Association | October 2004 |
| Local Meeting #5 | Dorsey Riverbend Homeowner Association | October 2004 |
| MPO Public Hearing | Government Center Commission Chambers | December 2004 |
| Local Meeting #6 | Lauderhill Central Resident Association | November 2004 |
| Local Meeting #7 | CHOICES | November 2004 |
| Local Meeting #8 | City of Hollywood Citizen's Transportation Committee | November 2004 |
| MPO Public Hearing | Government Center Commission Chambers | December 2004 |

### *1.3.7 Public Surveys*

At the Public Workshops and Local Meetings, a transportation needs questionnaire was distributed to all attendees to obtain input on individual priorities as they relate to transportation expenditures over the next 26 years. Attendees were asked to rank the project goals, and provide their priorities on expenditures for items such as new or wider roads as opposed to transit

projects or bicycle and pedestrian projects. The responses, handed back at the meetings or mailed, were compiled and incorporated into the process for ranking and prioritizing projects during the development of the cost-feasible plan.

The following materials were used at each Public Workshop and Local Meeting:

- Meeting/workshop/hearing advertisements
- Sign-in sheets for attendees
- Workshop handout materials (comment cards)
- Meeting notes/recorded
- Presentation materials (PowerPoint slides)
- Transportation needs questionnaire

## 1.4 Intergovernmental Coordination

The Consultant set goals to ensure the highest level of inter-agency coordination. This included coordination between various Broward County Departments, the Florida Department of Transportation (FDOT), various cities in Broward County, neighboring counties (Miami-Dade and Palm Beach), and the Federal Highway Administration.

Representatives from these agencies were included in the mailing list for this project The Project Management Team (PMT) included FDOT representatives, numerous representatives from other agencies previously mentioned, Broward County MPO board members, members of the Technical Coordinating Committee (TCC), Community Involvement Roundtable (CIR), Plan Update Steering Committee (PUS), Bicycle Advisory Committee (BAC), and the Broward County Coordinating Board for the Transportation Disadvantaged (BCCB).

Numerous means were provided to facilitate public input. These include:

- Telephone
- Fax
- Survey/Questionnaire
- E-mail
- Website Web workroom

Sign-in sheet for all public and committee meetings, contact addresses and phone numbers were provided for both the Consultant Project Manager and Public Involvement Specialist. A record was kept of all communication received from the public and what action was taken to address each communication.

# 2.0 GOALS, OBJECTIVES AND MEASURES OF EFFECTIVENESS

## 2.1 Introduction

This work effort involved the review of Goals, Objectives and Measures of Effectiveness for the Broward County adopted 2025 Long Range Transportation Plan (LRTP). To accomplish this task, the following documents were reviewed:

- The Planning Factors of the Transportation Efficiency Act of the 21st Century (TEA-21);
- Goals and Objectives of the Florida Transportation Plan;
- Broward County Comprehensive Plan Transportation Element as summarized in Chapter 1, Goals, Objectives and Policies (GOPs);
- Broward County Major Issue #6 Developing Transit Oriented Land Use Patterns (TOLUPS); and
- Goals, Objectives, Measures of effectiveness and Policies of other Florida Metropolitan Planning Organizations (MPOs).

This review focused on the following:

- Whether the goals of the 2025 LRTP were consistent with the TEA-21 Transportation Planning Factors and the goals of the Florida Transportation Plan;
- Whether the goals, objectives and measures of effectiveness for the 2025 LRTP are generally consistent with the Broward County Comprehensive Plan Transportation Element Goals, Objectives, and Policies;
- Whether the goals, objectives and measures of effectiveness for the 2025 LRTP need to be updated based on recommendations contained in the Broward County TOLUPS study; and
- Other updates to the goals, objectives, and measures of effectiveness of the 2025 LRTP based on review of other Florida MPO goals, objectives, polices, and measures of effectiveness and professional judgment.

## 2.2 Consistency of the 2025 LRTP Goals with TEA-21

A review of Table 2-1: "LRTP Goals Addressing the TEA-21 Planning Factors" of Chapter 1 of the 2025 LRTP document indicates that all of the TEA-21 Transportation Planning Factors were adequately addressed. This was confirmed by comparing the TEA-21 Transportation Planning Factors to the LRTP goal statements. Similarly, a review was performed of the Florida Transportation Plan goal statements to the Broward LRTP Goals. This review also indicates that the goals of the Florida Transportation Plan are addressed in the goal statements of the Broward LRTP.

## 2.3 Consistency of 2025 LRTP G&O with Broward County Comprehensive Plan

Goal 3.0 of the Transportation Element contains several statements that were reviewed in the context of consistency with the LRTP goal statements. The Goal 3.0 statements are paraphrased below:

Goal 3.0. Maintain and, where feasible, improve Broward County's multi-modal transportation system in a manner:

- That provides for safety, convenience and efficiency (addressed by LRTP goal 2);
- That coordinates and balances the transportation system with the orderly growth, development and sustainability of the environment (addressed by LRTP goals 1 and 4);
- That is coordinated with other transportation plans and programs (addressed by LRTP goal 4);
- That economically addresses the transportation needs of the present and future populations (addressed by LRTP goals 3 and 4); and
- That provides for the protection of the existing and the future transportation system (addressed by LRTP goals 3 and 5).

A review was undertaken of how well the LRTP objectives respond to the Broward County Transportation Element objective statements. Below is a summary of the Broward County Transportation Element Objectives (key wording paraphrased) and which LRTP objective responds to the Transportation Element objective.

- Objective 3.1. Broward County shall continue to participate in cooperative intergovernmental plans and programs that will improve safety (LRTP Objective 2.1);
- Objective 3.2. Broward County shall continue to participate in cooperative intergovernmental plans and programs. Improve convenience through an increase in transportation facilities availability (LRTP Objectives 1.1 to 1.6, 1.8 and 4.3);
- Objective 3.3. Broward County shall continue to participate in cooperative intergovernmental plans and programs. Improve energy efficiency (LRTP Objectives 1.7, 5.1 and 5.3);
- Objective 3.4. Broward County shall continue to maintain and where feasible, improve the functional relationship between the transportation system and applicable future land use maps to ensure that transportation modes and services meet the transportation needs of existing and future population densities, housing and employment patterns, and land uses (LRTP Objectives 4.1, 4.2 and 4.3);
- Objective 3.5. Broward County shall coordinate the transportation system with other entities transportation plans and programs (LRTP Objectives 4.1, 4.2, 4.3 and 5.1).
- Objective 3.6. Broward County shall improve the efficiency of public transit services by increasing operating revenue per operating expense (LRTP Objective 1.1); and
- Objective 3.7. Broward County shall ensure development does not encroach upon existing rights-of-way and shall ensure future development does not encroach upon future

rights-of-way as provided in the Broward County Trafficways Plan (LRTP Objective 4.1, 4.2 and 4.3).

The review generally indicates that the LRTP objectives respond to the objectives of the Broward County Transportation Element.

## 2.4 Review Goals, Objectives with TOLUPS

A review was made of the Broward County Major Issue #6 of the 2004 Evaluation and Appraisal Report (EAR) ", and more specifically, the goals, objectives and policy for Implementing Transit Oriented Land Use Patterns (TOLUPS). A comment on page 20 of this report indicates that "the 2030 LRTP update should include the adopted GOPs in the Comprehensive Plan." While the goals and objectives of the LRTP should certainly be consistent with the goals and objectives of the Comprehensive Plan, and more particularly the Transportation and Future Land Use Elements, the LRTP should not necessarily include the adopted GOPs of the Comprehensive Plan. As previously stated, the review performed in Section 3.0 above indicates that the LRTP objectives do respond to the objectives of the Broward County Transportation Element.

Section V of the TOLUPS Study recommends several changes to the Broward County Comprehensive Plan Transportation Element. Review of the suggested changes to the Transportation Element indicates the need for modifying some of the LRTP objectives, measures, and standards relative to transit service. These have been addressed in Section 5.0 Recommendations for LRTP Goals, Objectives and Measures.

## 2.5 Recommendations for LRTP Goals, Objectives and Measures

As part of this review, the goals, objectives and measures of effectiveness for other Florida MPO LRTPs were reviewed. This review indicates that about one-third of the MPOs have published measures of effectiveness. The Broward MPO is to be commended for developing the measures as indicated in Chapter 1 of the 2025 LRTP.

Changes to the goals, objectives, and measures of effectiveness were developed by the Consultant team and provided to the MPO staff for distribution and review. Comments were received and incorporated, as appropriate, into the following recommended goals, objectives and measures. It should be noted that each measure has a standard by which it will be evaluated.

## Table 2-1: Goals, Objectives and Measures of Effectiveness

| Objectives | Measures | Standard |
|---|---|---|
| GOAL 1. A balanced, multi-modal transportation system that serves the local and regional movement of people, freight and services and provides choices in mobility. | | |
| 1.1 Provide efficient, frequent, convenient, competitive transit service. | 1.1.1 Average transit level of service (TLOS) for each quadrant of the County. | C |
| | 1.1.2 Transit Service Coverage (1/4 mile around each route) | 80%-90% |
| | 1.1.3 Average TLOS for top six performing transit routes / corridors | B |
| | 1.1.4 Transit ridership to Tri-Rail Stations shall show an increasing trend over each planning horizon | Increasing Trend, Yes |
| | 1.1.5 Transit-to-auto travel time difference | < 15 minutes, peak hour |
| 1.2 Enhance bicycle and pedestrian mobility. | 1.2.1 Percent of arterial & collector streets with bicycle lanes | 60% |
| | 1.2.2 Percent of arterial & collector streets with sidewalks on at least one side | 100% |
| | 1.2.3 Miles of off-street pedestrian/bicycle trails. | 100 |
| | 1.2.4 Forecast auto trips of less than 5 miles in length | 25% |
| 1.3 Enhance accessibility to FIHS. | 1.3.1 Transportation modifications to improve LOS on key arterials connecting to FIHS. | 5 |
| | 1.3.2 Average V/C on FIHS route segments | < 1.0 |
| 1.4 Improve connectivity to SIS and intermodal facilities. | 1.4.1 Transportation modifications on facilities connecting to SIS and intermodal centers | 5 |
| | 1.4.2 Number of park-and-ride facilities. | 12 |
| | 1.4.3 Utilization of park-and-ride facilities shall reflect increasing trend over pervious planning time period. | Increasing Trend, Yes |
| 1.5 Examine the provision and utilization of special-use (SU) lanes. | 1.5.1 Lane miles of SU lanes provided | 50 |
| | 1.5.2 Incidence of SU lane misuse/abuse | < 15/day |
| 1.6 Improve port and airport accessibility. | 1.6.1 Transportation modifications to improve LOS on key arterials connecting to port and airport. | 5 |
| 1.7 Minimize road traffic congestion. | 1.7.1 Percent of daily VMT on roadways with V/C > 1.0 | Percent VMT > 1.0 |
| | 1.7.2 Existing Conditions Average V/C by road type (state, county, city) | < 1.0 |
| 1.8 Provide efficient hurricane evacuation routes. | 1.8.1 Average V/C on hurricane evacuation route segments (state, county, city) | < 1.0 |
| 1.9 Provide efficient truck routes. | 1.9.1 Average V/C on designated truck route segments (state, county, city) | < 1.0 |
| GOAL 2. A transportation system that is regionally coordinated and consistent with the future economic development plans of Broward County's constituent communities and neighbors. | | |
| 2.1 Support an integrated and collaborative Land Use and Transportation Planning process that ensures the community can develop in an efficient and sustainable way. | 2.1.1 Level of intergovernmental coordination | 100% |
| | 2.1.2 Coordination between MPO and Planning Agencies. | Yes |
| 2.2 Provide a transportation system that is coordinated and consistent with agency plans of Broward County, its communities and neighbors. | 2.2.1 Coordinate plan development with the Regional Transportation Authority | Yes |
| | 2.2.2 Confirm Comprehensive Plans of Broward County and Cities are consistent. | Yes |
| 2.3 Implement transportation improvement projects in a manner coordinated with orderly development within the County. | 2.3.1 Concurrency Management Plan adopted. | Yes |
| | 2.3.2 Project implementation coordinated with orderly development within the County. | Yes |
| 2.4 The ability to build alternative improvement projects will be evaluated during the plan development process. | 2.4.1 The FDOT Enhanced Transportation Decision Making Process will be used to evaluate the build-ability of projects identified in the development of the Transportation System Plan | Yes |

**Table 2-1: Goals, Objectives and Measures of Effectiveness (Continued)**

| Objectives | Measures | Standard |
|---|---|---|
| GOAL 3. A safe and secure transportation system. | | |
| 3.1 Improve safety and security for all transportation modes. | 3.1.1 Annual number of crashes by category (fatality; injury and PDO) reflects reducing trend. | Reducing Trend, Yes |
| | 3.1.2 Annual number of pedestrian crashes by category (fatality; injury and PDO) reflects reducing trend | Reducing Trend, Yes |
| | 3.1.3 Annual number of bicycle crashes by category (fatality; injury and PDO) reflects reducing trend | Reducing Trend, Yes |
| | 3.1.4 Number of reported on-board bus security incidents | < 5/day |
| | 3.1.5 Number of reported in-terminal bus security incidents | <5/day |
| GOAL 4. Preservation of Broward County's investment in transportation in a cost-feasible manner. | | |
| 4.1 Sustain transportation facility maintenance program. | 4.1.1 Facilities for all modes maintained to applicable County and State standards. | Yes |
| | 4.1.2 Maintenance life cycle for roadway facilities | 20 Years |
| 4.2 Ensure transportation system plan costs are affordable within anticipated funding levels. | 4.2.1 Adopted cost-feasible plan that supports a 20 year life cycle. | Yes |
| 4.3 Incorporate innovative, cost-effective technologies. | 4.3.1 Percent of Broward ITS Master Plan completed on schedule. | Percent of Plan on Schedule |
| GOAL 5. An aesthetically pleasing transportation system which minimizes impact on the natural and built environment. | | |
| 5.1 Develop facilities that meet aesthetic standards and minimize impact of facilities and services on the environment. | 5.1.1 Adopt xeriscape and native plant policies | Yes |
| | 5.1.2 Acres of undeveloped land impacted. | <10/year |
| | 5.1.3 Number of dwellings & businesses impacted. | Minimize |
| | 5.1.4 Air quality attainment | EPA Standards. |
| | 5.1.5 Water quality attainment | SFWMD Standards |
| | 5.1.6 Petroleum fuel consumption | Minimize |
| 5.2 Incorporate Federal Environmental Justice principles in planning activities to ensure maximum representation for traditionally under-represented and minority populations. | 5.2.1 Obtain participation and develop consensus with traditionally under represented groups affected by transportation projects. | Attendance of minority representatives at project meetings or meetings with minority groups. |

As the 2030 LRTP is developed, the various alternative transportation systems being considered will be evaluated using the above goals, objectives, measures and standards. Once closure is reached on the recommended Cost Feasible 2030 LRTP, a set of policy statements will be developed for each objective. The policies will be used to guide the achievement of the objectives.

## 2.6 SAFETE-LU Planning Factors

"Upon adoption of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the 2030 LRTP Goals and Objectives were reviewed to ensure consistency with the SAFTEA-LU Planning Factors". These planning factors are listed below:

(1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
(2) Increase the safety of the transportation system for motorized and no motorized users;
(3) Increase the security of the transportation system for motorized and no motorized users;
(4) Increase the accessibility and mobility of people and for freight;
(5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
(6) Enhance the integration and connectivity of the transportation system across and between modes for people and freight;
*(7)* Promote efficient system management and operations; and Emphasize the preservation of the existing transportation system

## 2.7 Safety

Safety deals with measures taken to either minimize or eliminate hazardous conditions in the transportation network that can cause accidents and injuries to the traveling public. As a result, safety is an important aspect that must be incorporated in to the transportation system.
The Broward MPO and the transportation implementing agencies are committed to providing a safe and efficient transportation system. The MPO and implementing agencies will continue to improve the safety of transportation in Broward County through improvements and programs for all modes of transportation. For example, the safety and efficiency of the existing transportation system may be improved through the use of Intelligent Transportation Systems (ITS), which utilizes advanced technologies to collect, analyze and disseminate real-time information. ITS investments have been identified and included in the 2030 LRTP as well as the TIP.
Furthermore, Smart-Traveler 511 may ensure the safety of transportation by providing the most up to date route and specific traffic information. Other examples of programs that promote a safe transportation system are listed in **Table 2-2.**

**Table 2-2: Broward County Safety Programs**

| Agencies | Safety Program |
|---|---|
| MPO Staff | Created database for crash information, use consultant services to recommend safety improvements for locations with high crash rate. |
| | MPO staff embarked in the Safe Routes to School (SR2S) study in FY 05/06. The study reviewed transportation projects related to Broward County School Hazardous Walking Conditions Report. The study is on going, each year additional hazard walking conditions are identified and corrected in cooperation with FDOT, |

| | |
|---|---|
| | BC Traffic Engineering, and the School Board. |
| FDOT – District 4 | Traveler Information in the counties of Broward, Miami-Dade, and Palm Beach: Provides uniform, multi-modal, real-time traveler and traffic information in the tri-county region under the Sun Guide program. Initiatives started under this project include deployment of an Interactive Voice Response telephone system, website (www.511southflorida.com ), phone # 511 for Service, and the Consumer Information Network (CIN).<br><br>Service Patrols: The Road Ranger service patrol is a free service of the FDOT. Road Rangers in FDOT District 4 currently patrol I-95, I-75, and I-595 |
| Florida's Turnpike | The Florida Turnpike operates its own Traffic Management Center and dispatches its Road Rangers to the Turnpike Mainline via 450 MHz radio and a back-up communication system provided by Nextel Direct Connect.<br><br>Traffic Management Centers (TMC): Incident management is accomplished utilizing 27 closed-circuit televisions (CCTVs), 9 highway advisory radios (HARs) and 24 dynamic message signs (DMSs) along the Turnpike's mainline. Advanced traveler information system (ATIS) Team Leaders at each facility work in close coordination with Turnpike Road Rangers. The Florida's Turnpike Enterprise is also part of the Florida Statewide/Central Florida 511. |
| Public Works Department | Emergency Vehicle Preemption: The Broward County Public Works Department currently operates an emergency vehicle preemption system along previously determined congested emergency corridors enabling vehicles traveling from fire and police stations to locations of emergency incidents and to hospitals and emergency centers. |
| Broward County TMC | Broward's Transportation Management Center (TMC): Broward's Transportation Management Center (TMC) serves as the central operations center for collection and dissemination of information regarding freeway management, incident management, regional traveler information (via 511), and emergency services management. |
| Broward County Transit (BCT) | **Hurricane Evacuation Plan.** The Plan divides the eastern part of the county into nine zones using up to 175 buses in addition to school buses. The buses are used to evacuate transit dependant, disable, and elderly residents east of the Intracoastal Waterway and east of US-1 to safe shelters mainly in public schools.<br><br>**Advance Public Transportation System (APTS) Master Plan** – This plan addresses ITS applications for mass transit services including safety initiatives. |
| Aviation | **Close circuit Television (phase I**) – The project includes design and construction for the installation of 119 Closed Circuit Television Camera System at card access entry points within the secured airfield and at security checkpoints at all terminal/concourses.<br><br>**Close circuit Television (phase II**) – This project consist of the development of a design/build criteria package for a Close Circuit Television Monitoring System for all terminal buildings and parking garages, including entrances, seating and baggage claim areas. |

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| | **North Perry Airport Perimeter Gates & Access Controls** – The scope of this work is to prepare bid specifications for the construction of seven (7) new electronic motor driven gates with key-pads access into the existing perimeter fence line |
| Seaport | **ITS applications** for Port Everglades as it relate to safety are outlined in the 2006 Port Everglades Master Plan Update, still under production. It includes close circuit television monitoring, computerized access systems and operational procedures for staged provision of ships. The staging reduces the need for truck to enter the Port at any time, thus enhancing traffic circulation and safety by reducing possible traffic conflict.<br><br>**ITS Intermodal Plan** – This project expand the work completed by the Broward Freight and Goods Movement Study to look specifically at the use of ITS to improve the safety and mobility of freight operations. In cooperation with Port Everglades this project reviewed state of the art ITS applications for freight operations and developed a recommended alternative/strategy for Broward County as it relate to the movement of cargo to, from, and thru the County and the Port. |

Additional safety measures will be built on the existing programs and agencies that make Broward transportation safe including:

- Bicycle and pedestrian safety
- Safety with information technology systems
- Safe school transport
- South Florida Regional Transportation Authority

## 2.8 Security

Providing a secure transportation system involves planning and implementing programs that protect people, freight, and the transportation infrastructure itself from both natural and manmade disasters. Broward County's transportation system is a vital component in national defense, outreach to people in need before and after disasters, the well-being of commerce and the economy of the region. As a result, it is essential to maintain and enhance the security of the transportation system across all modes. The Broward MPO and its implementing agencies are committed to providing a highly secure transportation system, working continuously to improve the security for motorist, bikers, pedestrians, transit riders, aviation, and seaport.

The Broward MPO recognizes that security measures implemented here can potentially affect the transportation infrastructure northward through the state and into the nation in cases of state and national disasters. In order to ensure optimal communications and mobility following such events, the Broward MPO's goal is to conduct security planning that incorporates defensive measures for the immediate transportation network that will interconnect with the larger scale network.

A key component in this effort is ITS. The ITS component of security entails maintaining the control and monitoring capabilities of the transportation infrastructure in the event of terrorist attacks, natural disasters and other unforeseen events. Broward County ITS projects and

investments are identified in the 2030 LRTP and are an integral part of the State of Florida ITS Architecture. The TIP contains programmed ITS investments that are financially feasible.

Additional security measures will be built upon current programs and agencies that provide security for the Broward transportation system

The approach to handling potential security/disaster incidents is divided into the following six elements:

1. ***Prevention***: This has several components, ranging from the actual stopping of an attack before it occurs, to providing improved facility designs that prevent large-scale destruction. Surveillance, monitoring, and sensing technologies play an important role in the prevention phase of an incident.
2. ***Response***, reducing the harmful impact of an attack as it occurs and in the immediate aftermath. This entails identifying the most effective routing for emergency vehicles as well as for the evacuation of large numbers of people, as well as providing effective communication systems among emergency response teams and for general public information.
3. ***Monitoring***, recognizing that an incident is underway, characterizing it, and monitoring developments. Clearly, surveillance, monitoring, and sensing technologies are critical to this phase of incident response, as would public information.
4. ***Recovery***, facilitating rapid reconstruction of services after an incident. Depending on the degree of damage to the community and/or transportation system, regaining some level of normalcy will require bringing the transportation system back to adequate levels of operation.
5. ***Investigation***, determining what happened in an attack, how it happened, and who was responsible. This is primarily a security/police activity that reconstructs the incident and determines causality and responsibility.

***Learning,*** conducting a self-assessment of organizational actions before, during, and after an incident. This element provides a feedback to the prevention element in that by understanding what went wrong or right in response to an incident, steps can be taken to prevent possible new threats. The possible role of the MPO in addressing the six security phases is outlines in Table 2-3

**Table 2-3: Possible Broward MPO Role in Addressing Transportation Security**

| Stage of Incident | Possible MPO Role |
|---|---|
| Prevention | • Funding new strategies/technologies/projects that can help prevent events<br>• Conducting vulnerability analyses on regional transportation facilities and services<br>• Secure management of data and information on transportation system vulnerabilities<br>• Providing forum for security agencies to coordinate surveillance and prevention strategies<br>• Fund and as appropriate coordinate regional transportation surveillance system |

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| | that can identify potential danger prior to its occurring<br>• Coordinate drills and exercises among transportation providers to practice emergency plans<br>• Coordinate with security officials in development of prevention strategies<br>• Hazardous route planning<br>• Disseminate (and possibly coordinate) research on structural integrity in explosion circumstance and standard designs |
| Mitigation | • Analyzing transportation network for redundancies in moving large numbers of people (e.g., modeling person and vehicle flows with major links removed or reversed, accommodating street closures, adaptive signal control strategies, impact of traveler information systems), strategies for dealing with "choke" points such as toll booths)<br>• Analyzing transportation network for emergency route planning/strategic gaps in network<br>• Providing forum for discussions on coordinating emergency response<br>• Disseminating best practices in incident-specific engineering design and emergency response to agencies<br>• Disseminating public information on options available for possible response<br>• Funding communications systems and other technology to speed response to incident |
| Monitoring | • Funding surveillance and detection systems<br>• Proposing protocols for non-security/safety agency response (e.g. local governments)<br>• Coordinating public information dissemination strategies<br>• Funding communications systems for emergency response teams and agencies |
| Recovery | • Conducting transportation network analyses to determine most effective recovery investment strategies<br>• Acting as a forum for developing appropriate recovery strategies<br>• Funding recovery strategies<br>• Coordinate stockpiling of strategic road/bridge components for rapid reconstruction |
| Investigation | • Providing any data collected as part of surveillance/monitoring that might be useful for the investigation |
| Learning | • Acting as forum for regional assessment of organizational and transportation systems response<br>• Conducting targeted studies on identified deficiencies and recommending corrective action<br>• Coordinating changes to multi-agency actions that will improve future responses<br>• Funding new strategies/technologies/projects that will better prepare region for next event |

A summary of the programs implemented in Broward County to address security issues are detailed in **Table 2-4.**

**Table 2-4: Broward County Security Programs**

| Agencies | Security Program |
|---|---|
| Broward County Traffic Engineering | Traffic Management Center (TMC) is the nerve center for all ITS projects deployed in Broward County. It houses the operation center and provides space and operation consoles for transit and the Florida Highway Patrol. The TMC functions in conjunction with the Broward County Emergency Operations Center (EOC) when it is activated if a natural or a manmade disaster occurs. The two centers working together enhance the response time in an emergency and facilitate the planning and implementation of security initiatives as may be necessary for highways, airport, seaport, and transit.<br><br>Dynamic Message Sign (DMS) - The program includes dynamic message signs for the I-95, I-595, I-75, and major intersections. A PC- based remote control/monitoring system and a phone drop/single mode fiber optic communication system. The DMS can be used for security purposes according to the DOT's protocol. |
| Broward County Transit (BCT) | BCT installed video detection system on 195 of the present fleet of 285 buses. The program is still on going to make all buses equipped with video technology. The system is used with lost and found item, complaints by riders, clams of injury from incidents' and accidents on buses and assists police in many other types of activity. |
| FDOT Dist 4 | Service Patrols – The Road Ranger service patrol is a free service of the FDOT. Road Rangers in FDOT District 4 patrol I-95. I-595 and I-75 and can be deployed as necessary for security purposes |
| Florida's Turnpike (FTPK) | FTPK operates its own Traffic Management Center and dispatch its Road Rangers to the Turnpike Mainline via 450 MHz radio and a back-up communication system provided by Nextel Direct Connect. The ranger's locations are tracked via an AVL system. If a security need arises, the Turnpike emergency plan can be activated and they can be dispatched accordingly. |
| Aviation | **Terminal 4 development** - phase A – includes construction of a facility to house Transportation Security Administration (TSA) and screening machines for rechecked bags from international arriving passengers connecting to domestic flights. Phase B – includes incorporation of Explosive Device System (EDS) machines to the TSA screening equipment.<br><br>**Terminal 2 & 3 interim baggage solution** – includes three new baggage-screening areas and a conveyor system bringing the baggage to the first, a central screening point, second, to the EDS machines and third, exit to distribution carousels in each terminal.<br><br>**TSA in–line system facility** – The scope of this project is the design and construction of supporting facilities to accommodate the installation and operation of the EDS machines to support TSA operations and ensure |

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| | passenger safety and security.<br><br>**Airport Security Action Plan** – The project seek to evaluate existing potential security issues at FLL and propose suitable remedies. It will include the development of a Security Enhancement Program that will identify needed security systems, policies, and changes in operations and management. The plan will include a short and long-term components, solutions and estimated cost of proposed enhancements. |
| Seaport | **Cargo Gate Control Systems** – This project enhances the processing of cargo entering and exiting the port thru information technology application that includes automated screening and optical character recognition.<br><br>**Other ITS application for Port Everglades** – Closed circuit television monitoring, security command centers, electronic gates, computerized access systems, Portal gamma ray units to detect stolen vehicles and heavy equipment, and the latest technology. |

# 3.0 DATA COMPILATION AND REVIEW

## 3.1 Introduction

This Section describes the transportation-related data that were assembled in the development of the Year 2030 Broward County MPO Long Range Transportation Plan (LRTP) update. This is a multi-modal plan that will address the future travel needs of pedestrians, bicyclists and transit users in addition to the traditional automobile and truck modes. Future mobility needs for waterborne transportation, greenway, freight, and intelligent transportation systems (ITS) components are also addressed.

A great deal of the information compiled was used to prepare the travel demand model for use in forecasting automobile and transit travel in 2030. The Florida Standard Urban Transportation Model Structure (FSUTMS) was used to forecast these trips. This model relies on socio-economic data (population and employment) for the base year (2000) as well as forecasts for the 2030 horizon year, which were obtained from the County's Planning Services Division (PSD). In addition, special generator data (e.g. airport), external trip forecasts, and school enrollment data are used by the model in the forecasting of future travel. These components are addressed in detail in Section 4 – Travel Demand Model Development.

Extensive use has been made of Geographic Information Systems (GIS) in the compilation, evaluation, and presentation of this data. This spatial database software enables a maximum of efficiency and accuracy in data assembly and storage, particularly for the analysis of a system as extensive as Broward County. The process has involved close cooperation between the County staff and the consultant and has ensured a better product than would have been possible without it. The consultant team has utilized state-of-the-art methodologies for linking GIS databases with the FSUTMS modeling software (including the use of GIS-TM) for the post-processing of travel forecast data and presentation of results.

## 3.2 Population and Household Data (ZDATA1) for Year 2030

As in the past, the allocation of population growth to the 902 Traffic Analysis Zones (TAZs) began with the preparation of a Countywide forecast. This population forecast is then translated into housing units needed to accommodate the population and is then assigned to the TAZs. This 2030 year Zdata1 included an extra step of incorporating municipal comments on the allocation. The resultant TAZ-level forecasts are less than the countywide forecasts based on the constraints applied through this additional review process.

### *3.2.1 Countywide Forecasts*

The 2030 forecast was based on the population and its characteristics reported in Census 2000. The Broward County Population Forecasting Model (BCPFM) uses a cohort-survival methodology in which births, deaths, and net migration are projected for each age-gender-race cohort in the population. Projections are output in one-year increments for thirty years following the year 2000. The BCPFM calculates each year's population forecast using the following equation:

New Population = Base Year Population + Natural Increase (*i.e.*, births minus deaths) + Net Migration (*i.e.*, in-migrants minus out-migrants).

**Natural Increase** is calculated using birth and death rates supplied by the State of Florida's Health Department. Natural Increase is a function of birth and death/survival rates for Broward County's age/race/sex cohorts as calculated from data supplied by the State of Florida's Health Department and projected national rates from US. Bureau of Census. Local rates for the Year 2000 were determined using a decade of birth and death data. Annual adjustments are made to reflect the annual changes anticipated by the U.S. Bureau of the Census. In a similar fashion, the average survival rate is multiplied by the total number in each age, gender and race category to determine the number of persons surviving to the next forecast period.

**Net migration** includes an in-migration (people moving into the County) and an out-migration (people moving out of the County) component. The forecast for in-migration is based on the relationship between the population size of the County in the previous year and is expressed in a regression equation that extrapolates in-migration throughout the forecast period. To forecast out-migration, the historical relationship of the number of out-migrants to the number of in-migrants was estimated also through linear regression. Age, race, and gender characteristics are applied to both components of migration. Generally, studies on mobility and migration prepared by the U.S. Bureau of the Census provide a measure of the propensity of each of the age/race/sex cohorts to move from one year to the next. These probabilities are applied to the current cohort sizes; the totals of these are summed and applied to the out- and in-migration totals already calculated.

### *3.2.2 Traffic Analysis Zones (TAZ) Data Allocation*

Unlike the Countywide forecasts, the TAZ allocation process is performed annually only for years 2001 through 2010. Thereafter the allocation is performed each five years through 2030. Each forecast year, however, is based on the prior forecast year.

Assigning the 2030 population to Traffic Analysis Zones begins with determining the total number of housing units necessary to accommodate the forecast population. The additional units are then distributed to the TAZs based upon the availability of vacant residential lands (through the year 2010) and the possibility of redevelopment for the subsequent years.

**Total Housing Units (Households)** are calculated by translating population by age, sex, race into needed housing units by applying 2000 householder rates to each population cohort. These are further translated into households by size from 1 person to 7+ persons per household.

**Housing distribution through the year 2010** is primarily a function of new units added to the 2000 Census based on the availability of vacant residential lands and historic growth rates. Households are assigned according to the household size distribution exhibited in the prior forecast year. For example, in TAZs predominantly characterized by smaller households, the additional units will reflect that character. Units are assigned until the vacant capacity has been absorbed.

**Housing distribution through the year 2030** necessitated the inclusion of redevelopment. Between the years 2010 and 2015 all vacant residential lands are absorbed. To accommodate the

future housing growth, TAZs were identified that exhibited characteristics suggesting redevelopment. Redevelopment potential was calculated as the difference between the units built and those allowed by the Broward County Land Use Plan. Demolition of units and the replacement with higher density residential structures were allowed up to the amount of the redevelopment potential. Again, households were assigned in accordance with the existing household size characteristics.

**Mixed-Use Residential** was incorporated into the redevelopment process in order to add to the County's residential capacity. Commercial areas along arterial roadways, primarily east of University Drive, were targeted for this new (to Broward County) residential type. Select areas were allowed a capacity of 16 units per acre. Generally, the household sizes distributed to these areas were smaller; reflecting national marketing trends published for "downtown" residential developments.

**The City/County Population Forecast Roundtable** was created to provide a forum for municipal planners to review the TAZ-level forecasts and to suggest changes. Approximately 200 TAZ populations were changed as a direct result of the municipal review and comment. In the end, the 2030 countywide population exceeded the allocated population by more than 100,000 as a result of reductions to available lands as identified by municipal planners.

### *3.2.3 ZDATA1 Lifestyle Characteristics*

Using the households and population for each TAZ as a control total, the distribution of households, autos, workers, and population between "households with" and "households without children" for the 2030 reflect the characteristics displayed in the year 2000. 2030 "households without children" are calculated first by applying their percentage displayed in 2000 to the 2030 households. There are some TAZs with households in 2030 that had none in 2000. In those few instances, the split between those households with and without children reflected the countywide average. The 2030 "households with Children" were calculated simply by subtracting those "without children" from the total.

Both autos and workers were distributed between the two household types by first calculating the year 2000 household averages by TAZ. The averages were applied to the number households in 2030. A similar process was applied to the population but was forced to the TAZ population for 2030.

## 3.3 Employment (ZDATA2) Data for Year 2030

Like the ZDATA1 processes, the ZDATA2 (employment) forecasts for 2030 begin with a Countywide total that is allocated to the individual TAZs. For Retail and Service Employment, simple employment to population ratio is calculated from the 2000 ZDATA2 file. The Retail ratio is .128 employees per capita for Service - .218. Applying the ratio to the 2030 distributed population of 2,383,000 resulted in 2030 employment forecasts for Retail employment of 303,000 and for Service employment at 508,000. Other employment was forecast to grow at approximately .8% annually, or 230,000, between 2000 and 2030. Historically it has remained relatively stable and growth of any magnitude is unlikely. Retail employment grows by nearly 100,000 and Service employment by 165,000.

The distribution of employment among the TAZs also varies somewhat for the different industrial classifications. The one assumption that is common to all three is that the non-residential lands will be completely absorbed by 2030. First, a retail employment potential is calculated for each TAZ. This number is the sum of the existing (2000) Retail employment plus the vacant commercial acreage multiplied by the average current employees per commercial (non-vacant) acres. All TAZs are summed and each TAZ is assigned its percentage of the total. Service employees are distributed in a similar fashion utilizing the remaining vacant, non-residential land areas. Other Employees used a similar formula for distribution, but an industry average of 12 employees per acre was applied rather than the TAZ-specific average.

## 3.4 Review of Relevant Plans and Studies

As part of the development of the Broward County MPO's 2030 LRTP, a wide range of planning studies was reviewed to ensure that the plan update would be consistent with adopted land use and transportation plans in Broward County. The list of plans and studies reviewed includes the following:

- Broward County Comprehensive Plan
- Broward County MPO 2025 LRTP Update
- Municipal Comprehensive Plans
- Florida Transportation Plan
- Florida Strategic Intermodal System Plan (SIS)
- Florida's Intelligent Transportation System (ITS) Strategic Plan
- I-95/I-595 Master Plan
- Fort Lauderdale-Hollywood International Airport Master Plan
- Fort Lauderdale Airport/Seaport Multimodal Connector Major Investment Study
- Broward County Signal System Master Plan
- Broward County Transit Development Plan FY 2005 – FY 2009 (July 1, 2004)
- Broward County Transportation Disadvantaged Service Plan
- Broward County Greenways Plan
- Broward County MPO Transit "Bridge" Study
- Broward County Transit Level of Service (TLOS) Evaluation

A discussion of the consistency between the 2030 LRTP update Summaries from a number of these plans and documents are provided in the following section.

### *3.4.1 Broward County Comprehensive Plan*

The Broward County Comprehensive Plan Transportation Element goals are shown in Table 3-1.

**Table 3-1: Broward County Comprehensive Plan Transportation Element Goals**

| | |
|---|---|
| 3.1 | Increase County participation in cooperative intergovernmental programs, which will enhance safety, convenience and efficiency of motorized and non-motorized travel in appropriate locations throughout the County. |
| 3.2 | For the purposes of long range transportation planning, the level of service standard sought to be ultimately attained upon completion of the regional transportation system shall be, where possible, level of service D, except as otherwise more specifically provided within these goals, objectives and policies. |
| 3.3 | Broward County, in furtherance of and pursuant to House Bill 2315 and Broward County Land Use Plan policies that discourage urban sprawl, promote more efficient use of infrastructure, encourage economic revitalization of urban areas, help to eliminate blighted and/or obsolete urban land uses, and help to reduce development pressures on rural, semi-rural, agricultural and other low density areas in Broward County, shall provide exceptions from level of service standards to encourage new development, redevelopment and revitalization in urban areas where regional and community facilities and services exist. |
| 3.4 | Develop and maintain a level of transit service which will meet existing and future demand, and which provides safe, economical, efficient and convenient travel for all people. |
| 3.5 | Provide a safe and enjoyable bicycling environment in Broward County that meets the needs of the cyclist for utilitarian and recreational travel, while enhancing a balanced intermodal transportation system. |
| 3.6 | Develop, modify and expand Broward County's airport system in order to meet existing and future demand and enhance the County's multi-modal transportation network. |
| 3.7 | Develop Broward County's general aviation airport system in order to meet demand and enhance the County's multi-modal transportation network. |

### *3.4.2 Municipal Comprehensive Plans*

Several Broward County Cities have completed master plans in the past few years that will have significant impacts on transportation planning. With the County rapidly approaching buildout and millions of additional residents forecast, several cities have enacted comprehensive plan amendments, which allow increased density and will rely on improved transit service for mobility. A few cities with major redevelopment plans include:

- Coral Springs
- Fort Lauderdale
- Hollywood
- Margate
- Plantation
- SR 7 Collaborative (includes 14 cities)

Changes to the plans in these cities have been incorporated into the demographic projections for 2030 and their transportation projects have been incorporated into the needs assessment where possible.

### *3.4.3 Florida 2020 Transportation Plan*

The 2020 Florida Transportation Plan outlines the following goals and objectives and forms a point of reference and a requirement in terms of consistency for the Broward County 2030 LRTP.

Goal: Safe Transportation – Objectives:

- Reduce the rates of motor vehicle, bicycle and pedestrian fatalities.
- Improve the safety of highway/railroad crossings and other locations where modes intersect.

- Improve the safety of commercial vehicle operations.
- Improve the safety of seaport, rail and public airport facilities.
- Improve the safety of services, vehicles and facilities for transit, and for the transportation disadvantaged.
- Minimize response times of each entity responsible for responding to crashes and other incidents.
- Implement hurricane response and evacuation plans in cooperation with emergency management agencies.

Goal: System Management – Objectives:

- Adequately maintain all elements of the transportation system to protect the public's investment for the future.
- Increase the efficiency of the transportation system using appropriate technologies.
- Reduce the number of commercial vehicles that illegally exceed weight limits on Florida's public roads and bridges.
- Manage access on Florida's public roads to preserve capacity and enhance safety and mobility.
- Improve incident management to minimize the impact on traffic flow.

Goal: Economic Competitiveness – Objectives:

- Establish, construct and manage Florida's Strategic Intermodal System.
- Provide for smooth and efficient transfers for both passengers and freight between seaports, airports, railroads, highways and other elements of the strategic intermodal system.
- Reduce delay for people and goods movement through increased system efficiency and multimodal capacity.

Goal: Quality of Life – Objectives:

- Design the transportation system to support communities' visions, compatible with corridors of regional and statewide significance.
- Design the transportation system to include human scale, pedestrian, bicycle, transit-oriented and other community-enhancing features, where appropriate.
- Design the transportation system in a way that sustains human and natural environments and conserves non-renewable resources.
- Increase access to and use of alternatives to the single-occupant vehicle.

### *3.4.4 Florida Strategic Intermodal System Plan (SIS)*

The Florida Department of Transportation, in cooperation with its Partners, will designate this system and adopt a strategic plan for funding and managing it.

The system will be composed of corridors, facilities and services of statewide and regional significance.

It will include appropriate components of the Florida Intrastate Highway System, seaports, spaceports, airports, rail, transit, paratransit, regional freight distribution facilities, and bicycle and pedestrian accommodations.

### *3.4.5 Florida's Intelligent Transportation System (ITS) Strategic Plan*

The purpose of the ITS Strategic Plan is to provide a statewide direction and guidance for the Department, Florida's Metropolitan Planning Organizations and local governments in the planning, programming and implementation of integrated multi-modal ITS elements to maximize the safety and efficiency of Florida's Transportation System.

Florida's ITS Vision

> *"Nearly two decades into the 21st Century, travelers in Florida are seeing more and more benefits from an integrated and coordinated Intelligent Transportation System within each of its urbanized areas and along all major transportation corridors. ITS provides valuable services to travelers, business, industry and government that were unavailable just a few decades ago. Pedestrian, automobile and transit mobility have benefited from real-time information sharing, route navigation, electronic payment systems and system management activities made possible through ITS. Business and commerce are both partners and benefactors in ITS using the improved information and intermodal linkages provided by the system to improve business operations. The economic vitality of Florida has never been better aided by a statewide transportation system made safer and more efficient by ITS. All stakeholders in Florida's transportation system benefit from improved safety provided by ITS technologies in our vehicles and the network of systems assisting emergency service providers. Florida's ITS Strategic Plan, first adopted in 1999 and updated regularly ever since, assures that Intelligent Transportation Systems are considered at all levels of planning, production, operations and management, providing improvements in safety, mobility and economic vitality to maximize the investment in Florida's multi-modal transportation system."*

The emerging approach to Management and Operations–in response to new needs, available technology and emerging concepts–utilizes ITS as part of a set of related activities that differentiate it from traditional public works approaches. While potential ITS applications would vary in different settings, the essential elements of management and operations include:

- Performance Monitoring–Monitoring of transportation facilities performance on a real time basis including roads, transit or intermodal terminals to provide information for improved operations
- Incident Management–Detection, response, and management of incidents or other disruptions on a seamless regional basis to minimize delay and improve safety
- Information/Data Sharing–Aggressive information sharing, operational cooperation and joint service provision programs among agencies (across sectors), jurisdictions and private service providers for seamless coordinated service
- Facility Improvement–Institutionalizing incremental facility improvements through continuous adjustment of operations and related service features to modify user travel patterns in ways that maximize efficiency and safety

- Traveler Information–Informing the traveling public, businesses and commercial carriers about current and predicted travel conditions and viable travel options to better match travel behavior with available capacity
- Public/Private Partnerships–Supporting private provision of a variety of traveler information, logistics, security and amenity services–both free and custom–tailored consistent with the wide range of needs.
- Maintenance of Operations–Continuing maintenance of operational infrastructure to support fuller utilization of existing infrastructure investments.

These elements of Management and Operations also describe many of the essential elements of Intelligent Transportation Systems (ITS). In fact, the application of a Management and Operations program reveals the proper role of ITS within an organization. ITS is a collection of tools that enables operating entities to manage and operate the various elements of the surface transportation system efficiently.

### *3.4.6 I-95/I-595 Master Plan*

The I-595 Master Plan locally preferred alternative consists of the following elements:

- Transit: A new transit line along the southern side of the corridor, beginning in the vicinity of 136th Avenue to East of SR 7, the line would move to the median, then split into branches to serve the Fort Lauderdale-Hollywood International Airport and Tri Rail station and then head north to serve the downtown Fort Lauderdale.
- Reversible Lanes: A new physically separated two-lane reversible roadway in the median of I-595 from west of Nob Hill Road to east of SR 7 to facilitate long distance trips.
- State Road 84 Connection: This connection, east of Davie Road, would be part of a collector/distributor system to provide access to and from I-95, State Road 7, Florida's Turnpike, Davie Road, and State Road 84.
- Widened and Braided Ramps: A total of nine on and off ramps widened to two lanes, plus braided ramps at five locations to minimize weaving conflicts.
- Intelligent Transportation Systems (ITS): improvements including service patrols, installation of variable message signs, loop detectors, closed circuit television, ramp improvements, and the implementation of an Intelligent Corridor System.

### *3.4.7 Fort Lauderdale-Hollywood International Airport (FLL) Master Plan*

Enplanements at FLL are expected to more than double, from 7.6 million in 2000, to 16.6 million by the year 2020 according to the FAA. In response, the County's plan is to nearly double the size of the terminal complex, from the present 39 to more than 70 gates. In addition, work has begun and is largely complete in tasks to add a 9-gate concourse in the new terminal scheduled, increase parking from 9,061 to 19,000 spaces and improve airport roadways, including new entrance roadway. Construction is underway on a multi level Consolidated Rental Car Facility which will be a combined public parking and rental car garage, scheduled to be completed in 2004.Further tasks include:

- Lengthen runway 9R/27L from 5,300 feet to 9,000 feet to accommodate air carrier aircraft.
- Build new air cargo and maintenance center on the west side of the airport.

- Preserve future People Mover right of way, between airport and Port Everglades.

Project costs to the year 2015 are more than $1 billion funded by Federal and State grants, Passenger Facility Charge, and Airport Bond Revenues with no property tax or other general tax revenue used.

### *3.4.8 Port Everglades Master Plan/ Airport/Seaport Multimodal Connector Study*

The following transportation-related elements are contained in the Master Plan for Port Everglades:

NORTHPORT:

- Realignment of Eisenhower Boulevard as required.
- Relocation of Northport Security gate as required.
- Implementation of mass transit ground transportation (bus system) between FLL airport and Port Everglades Northport Cruise Complex.
- Incorporation of the planned Port-wide security program.

MIDPORT:

- Incorporation of the planned Port-wide security program.

SOUTHPORT:

- Erection of Eller Drive overpass.
- Incorporation of the planned Port-wide security program.

### *3.4.9 Broward County Signal System Master Plan*

The objective of the Broward County Signal System Master Plan was to define and analyze alternative approaches for meeting the existing and future traffic control system needs in Broward County. It was recognized that the Broward County Signal System Master Plan should account for the fact that a location and design study for a new Transportation Management Center (TMC) was ongoing (anticipated construction in 2006). Another major consideration in the Broward County Signal System Master Plan was the fact that most of the existing controllers in Broward County were either obsolete or were no longer supported by the manufacturer, making maintenance and expansion of the existing system difficult.

In conducting the system evaluation, it was assumed that the central hardware and software, field hardware, and communication costs were common to all the alternatives. The major factors considered in the evaluation were the capability to offer many timing plans (greater than 32), the ability to control NEMA and Type 170 controller technology simultaneously, and the ability to utilize the existing communications network. Based on those factors, a microcomputer based central traffic control system was recommended.

Due to the expense associated with the need to replace most of the existing controllers in Broward County (the County plans to implement the Type 170 controller throughout), the planned Traffic Management Center, and the fact that the existing controllers would limit any new traffic control system, the recommendation was also made to keep using the existing traffic

control system and accelerate the controller replacement program as the best use of available funds. A central traffic control system designed specifically for the Type 170 controller could then be later implemented after the replacement program to be consistent with the planned TMC and to improve the efficiency and capability of the system.

Each of these plans, among several others, has been reviewed and their goals and other relevant components included in the development of the Broward County 2030 LRTP wherever possible.

## 3.5 Pedestrian and Bicycle Facilities

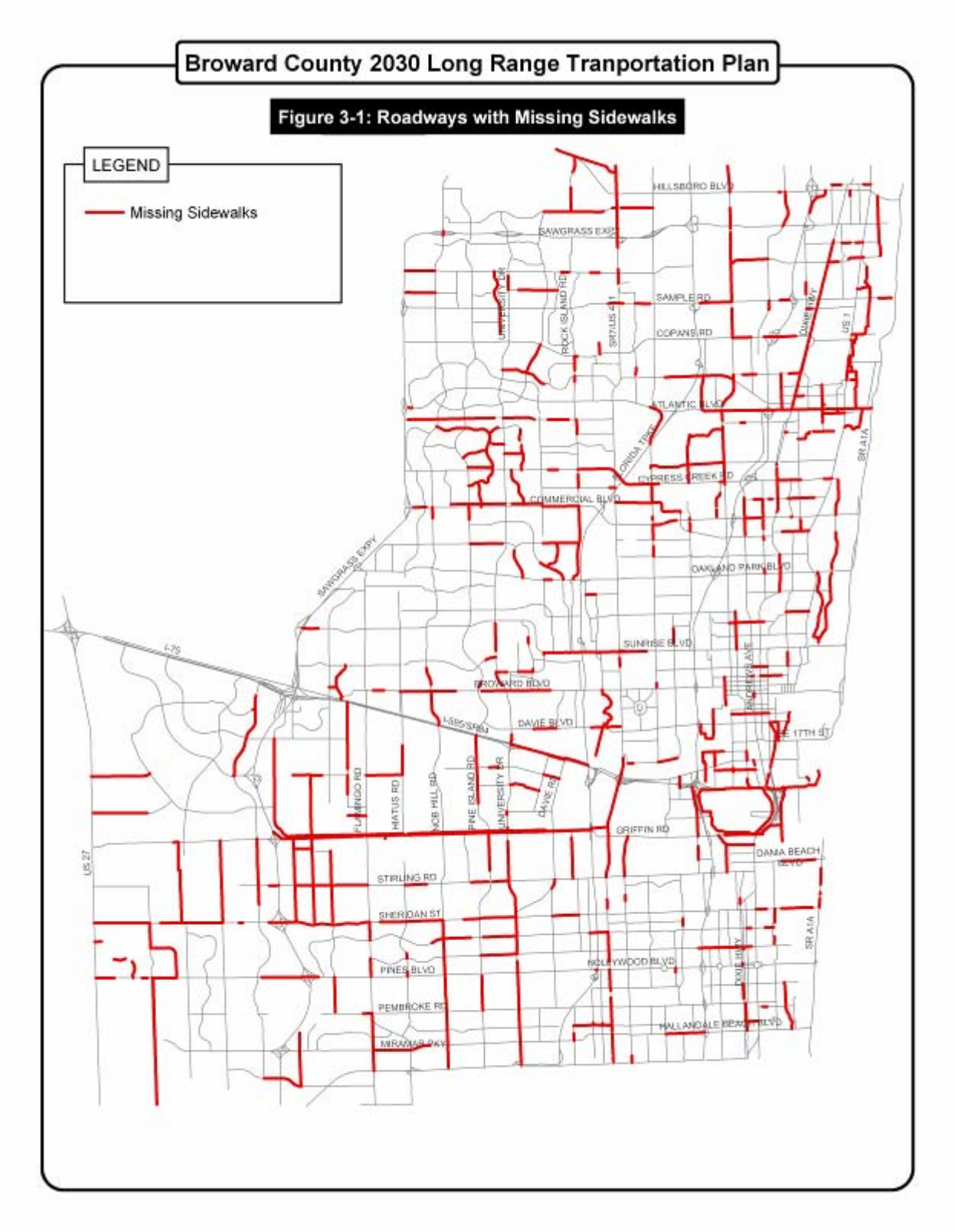
### *3.5.1 Pedestrian Facilities*

Broward County's pedestrian facilities are comprised primarily of sidewalks. These were historically not very well provided in many of the developments constructed before the late 1980's, and a great deal of infill sidewalks are required on the County's arterial and collector streets to provide safe, comfortable drained walkways for pedestrians. This point is particularly important when access to transit is considered.

As part of the development of this Long Range Plan Update, a sidewalk inventory was completed for over 400 miles of sidewalks in ten pedestrian study areas identified by MPO's Pedestrian Focus Group. This group identified areas of existing or future pedestrian and transit activity. Approximately 370 miles of this inventory was completed along arterial and collector streets, while the remainder included local streets that either carry transit buses, or serve as primary pedestrian routes accessing transit stops. Of the roads that were inventoried, 70 percent are in good or fair condition, but almost 20 percent – or almost 80 miles – are missing sidewalks altogether.

In addition to these pedestrian focus areas, sidewalk conditions for state highways were obtained from FDOT's Roadway Characteristics Inventory (RCI) database and videolog records, and an additional 140 miles of County and Municipal roadways were inventoried in July 2004 as part of this study. The combined results of these data inventories for missing sidewalks is shown in Figure 3-1.

**Figure 3-1: Roadways with Missing Sidewalks**



### *3.5.2 Broward County Greenways*

In the spring of 1999, the Broward County Board of County Commissioners identified the creation of a countywide system of greenways and trails as a priority goal. A vision was identified to lead the project development:

"Broward County's Greenways System will be a fully funded, countywide network of safe, clean, bicycle and equestrian paths, nature trails and waterways. Greenways will connect each neighborhood, from the Everglades to the Atlantic Ocean to conservation lands, parks and recreation facilities, cultural and historic sites, schools and business areas. The system will provide opportunities for recreation, restoration and enhancement of native vegetation and wildlife habitat, and alternative modes of transportation."

The County's Department of Planning and Environmental Protection began developing the plan to achieve this goal. Numerous public meetings were held around the County to seek public input at various stages in the development of the Greenways plan. Public support was enthusiastic and a wide variety of interests participated at the meetings including municipal officials, bicyclists, equestrians, boaters, developers, environmentalists, state and regional governmental representatives and others.

Planning for the greenways corridors was initiated with a request to Broward's municipalities to submit Greenways corridor proposals for inclusion in the plan. Approximately 20 municipalities submitted proposals. Several cities had on-going Greenways programs and some, including the Town of Davie, already had developed local Greenways systems. County staff also began assembling information on canal rights-of-way, wide road rights-of-way, utility easements, waterways and other potential Greenways corridors. This information along with other planning information was utilized to draft a conceptual Greenways system plan.

Based upon the public's input and planning considerations, five priority corridors were selected for more detailed planning. Detailed right-of-way information was collected on the five corridors and draft plans were prepared. Five public meetings were held in the spring of 2001 at locations around the County to seek public comment on the detailed corridor plans. Following endorsement by the Broward County League of Cities Technical Advisory Committee, the Broward County Commission approved an amendment to the Broward County Comprehensive Plan to incorporate the conceptual Greenways system plan.

There are over 370 miles of regional Greenways, land trails and water trails delineated on the Conceptual Master Plan. The regional network of Greenways depicted are essentially the regional backbone which may supplement, augment or serve as a foundation for the local trail networks, such as the trails of Davie, Plantation, Parkland and Southwest Ranches.

The following corridors have been selected to represent the "phase one" corridors of the Broward County Greenways System. They include:

- Dixie Highway,
- C-14, Cypress Creek,

- New River-SR 84,
- Flamingo Rd Trail,
- Hiatus Rd, C 42 Canal,
- SR A1A (was added in 2002)

These Phase-One corridors were identified as those with the highest priority for development. These corridors effectively form a framework that traverses all parts of the County, and provide a good representation of differing types of trails, from wide paved and unpaved trails through natural and rural areas, to wide sidewalks through urban areas. This approach provides opportunities for all types of trail users and interests. The Greenways corridors are shown in Figure 3-2.

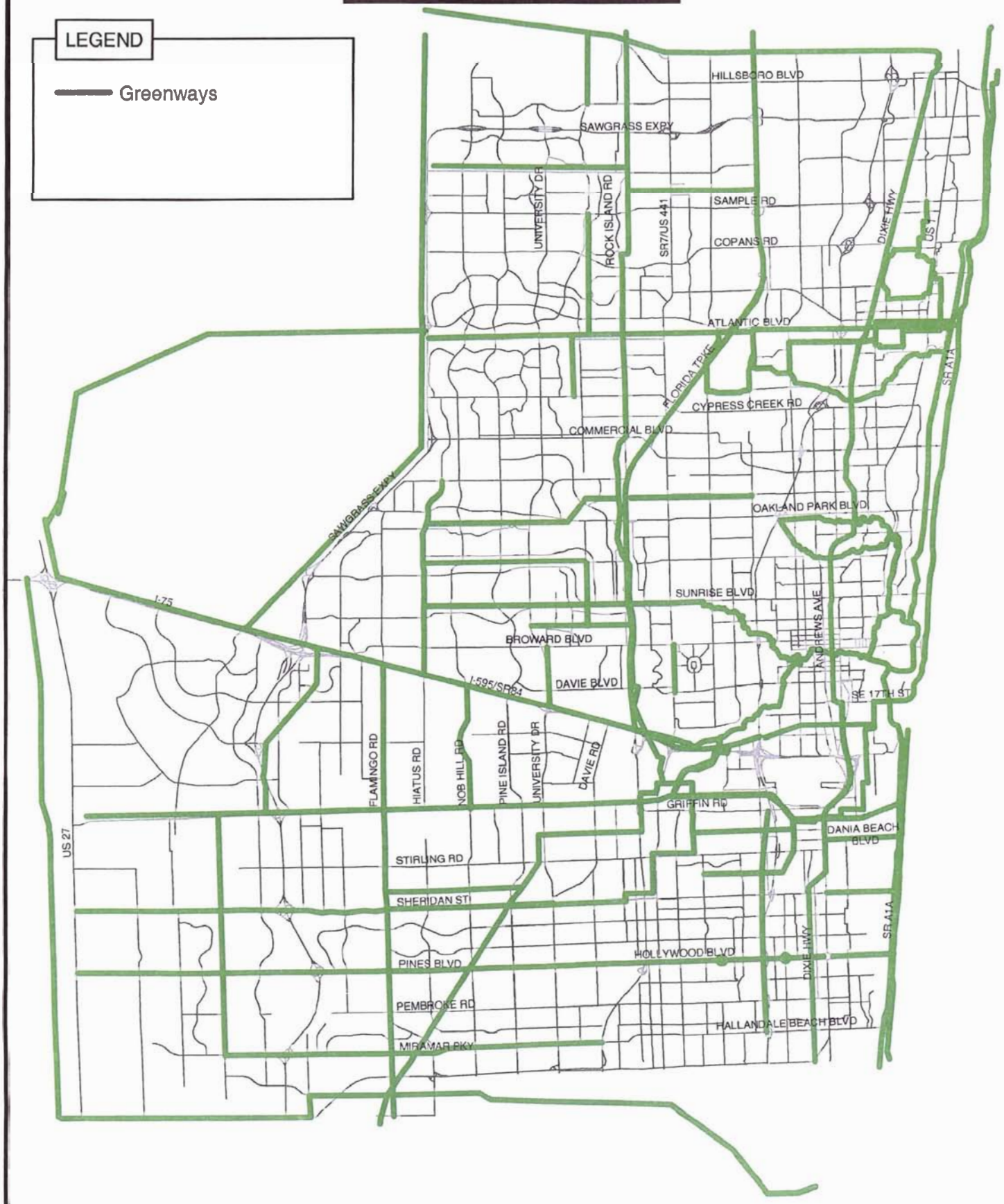
### *3.5.3 Bicycle Facilities*

Bicycle is a low-cost and effective means of transportation that is quiet, non-polluting, extremely energy -efficient, versatile, healthy, and fun. Bicycles also offer low-cost mobility to the non-driving public, including the young and young in heart. In the United States, bicycles were a popular means of transportation in the pre-automobile age. As the automobile became more popular, bicycles lost their advantage as well as their place on the road. Now, as cities work to create more balanced transportation systems and make streets a safe place for all modes of transportation, the bicycle is making a comeback.

Broward County's bicycle facilities consist of a limited but growing number of marked on-street lanes, unmarked shoulder lanes, wide outside travel lanes and a number of multi-purpose off-street paths, which accommodate cyclists, pedestrians and other non-motorized traffic including rollerbladers. Figure 3-3 shows the existing bicycle facilities throughout the County as well as bicycle lanes included in funded road improvement projects.

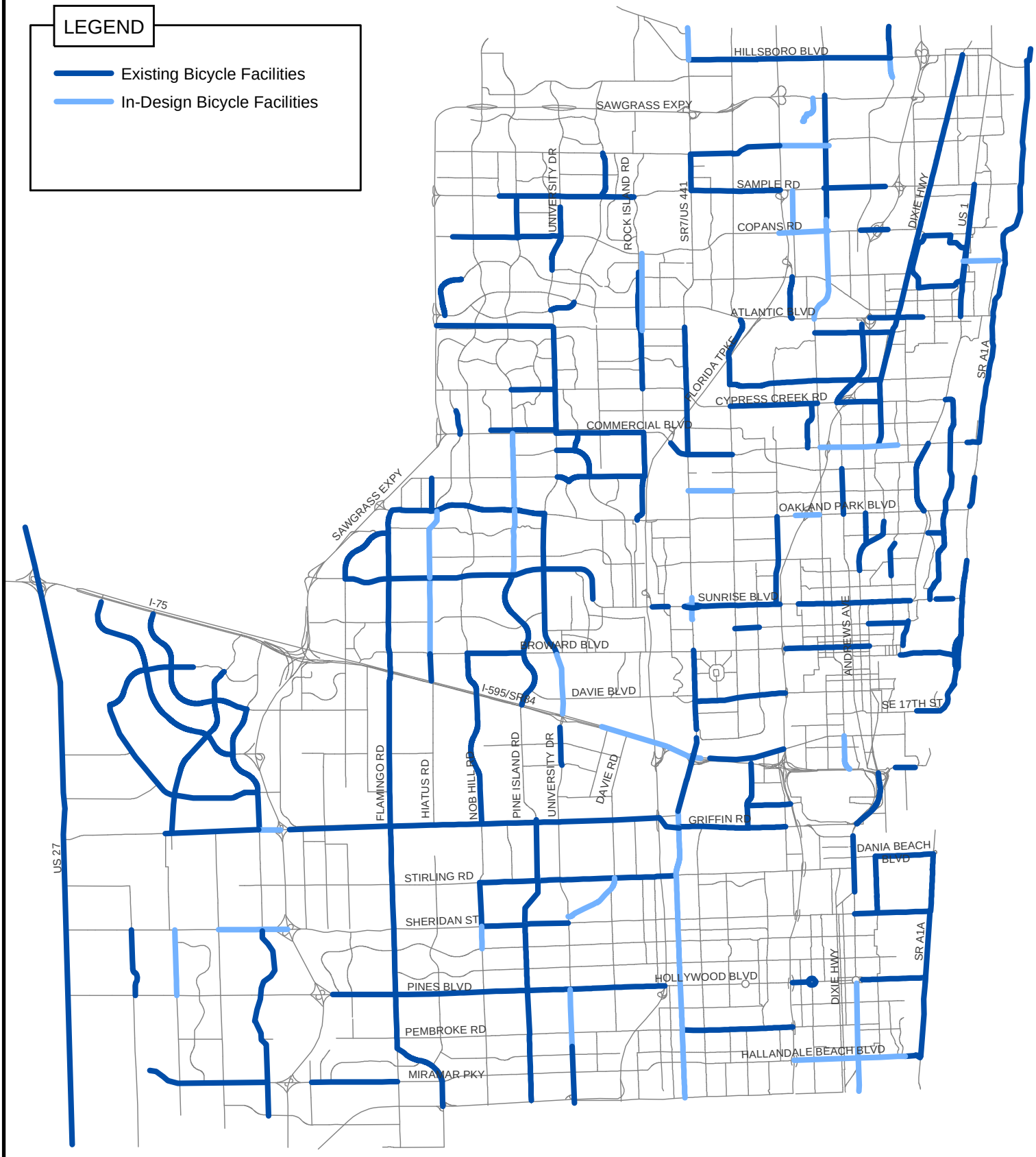
In addition, the County has calculated a Bicycle Suitability Rating for all arterial and collector roadways, which provides an idea of how comfortable a cyclist can expect to feel on that roadway depending on the traffic volumes on the road and the pavement provided. The County also provides a map – available on-line – that indicates marked routes where wide paved shoulders exist and provide some safety for cyclists.

## Figure 3-2: Greenway Corridors



# Broward County 2030 Long Range Tranportation Plan

## Figure 3-3: Exisiting Bicyle Facility



## 3.6 Waterborne Transit Network Data

With the City of Fort Lauderdale known as the "Venice of America" and with the Intracoastal Waterway (ICWW) extending along the entire length of Broward County's coastline, serving as the backbone to over 300 miles of navigable canals, waterborne transportation has the potential to address congestion concerns in the eastern portions of the County, and to enhance the mobility of residents and visitors alike.

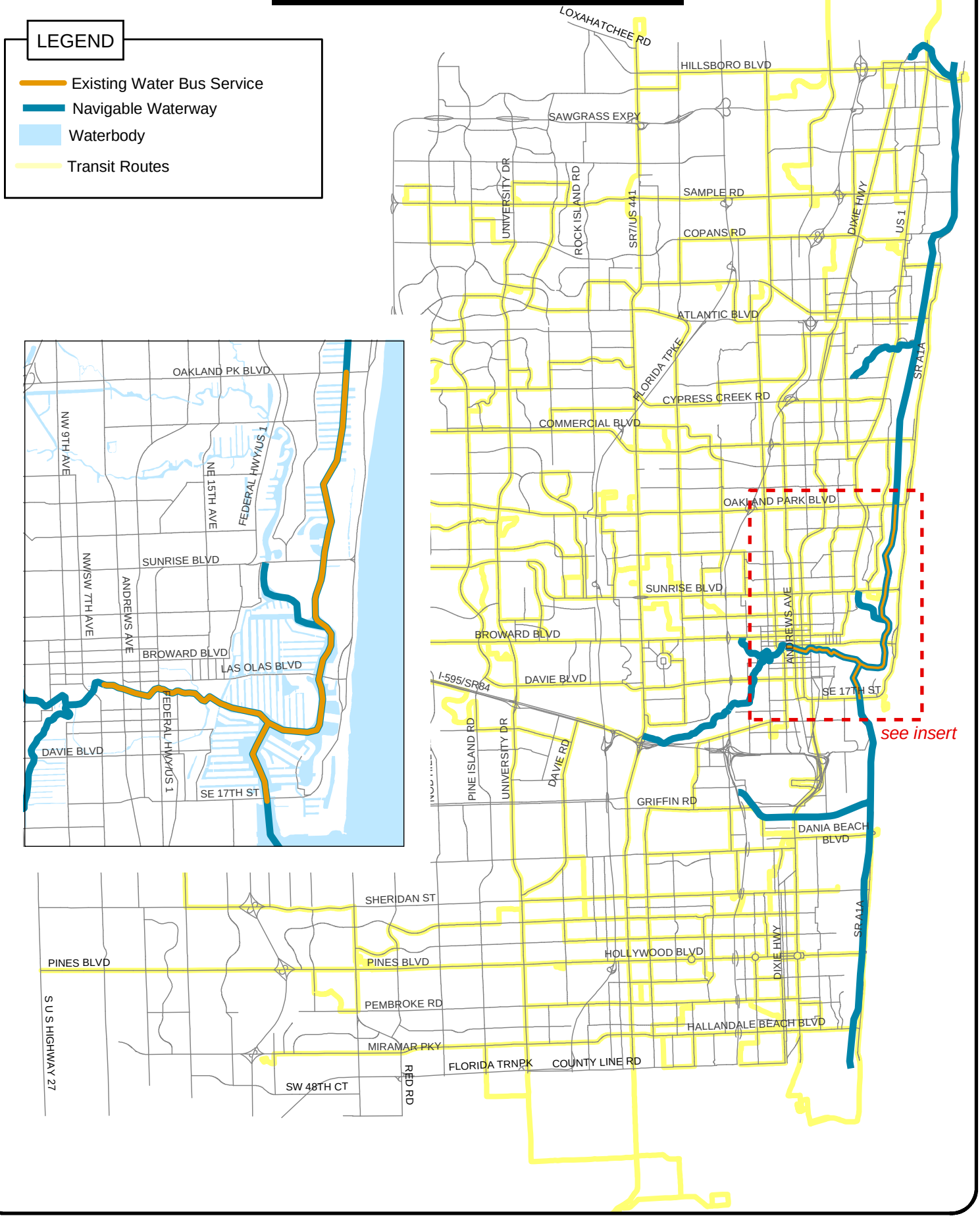
Water Taxi Inc. has served Fort Lauderdale with an on-demand ferry service for several years. In November 2001, the company teamed with Broward County Transit (BCT) to provide regularly scheduled Waterbus service with 20 stops in the central city area, many of which connect with regular bus service. Weekly, monthly and annual transit passes are honored on the Waterbus. Service is provided using 70-passenger vessels, which are air-conditioned and run on biodiesel fuel.

Figure 3-4 shows the existing waterborne transportation network that can serve the Waterbus vessels, which require a little less than 10 feet of vertical clearance under a bridge.

The Waterbus service currently runs between Oakland Park Boulevard and Southeast 17th Street along the Intracoastal Waterway, and west along the New River into downtown Ft. Lauderdale as far as River House, immediately west of the FEC rail corridor. These services target both commuter and recreational trips, with half hour headways during peak morning and evening periods and one-hour headways during the day and on weekends. The waterbus hours of service are from 6:30 am to 12:30 am. Service is provided by a fixed route schedule. Special services also include the Thursday Night Pub Crawl and Saturday South Beach Shuttle Service.

# Broward County 2030 Long Range Tranportation Plan

## Figure 3-4: Waterborne Transit Network



## 3.7 Broward County Transit System

Broward County provides a "Family of Services" providing transportation to the County's residents, business people and visitors. The services provided include:

- Fixed Route System (comprises 95% of ridership),
- Community Bus Services,
- Paratransit (TOPS) Service,
- Emergency/Evacuation Services,
- Free On-Demand Minibus Service,
- Water Bus Service (addressed in Section 3.6) and
- Special Events transportation

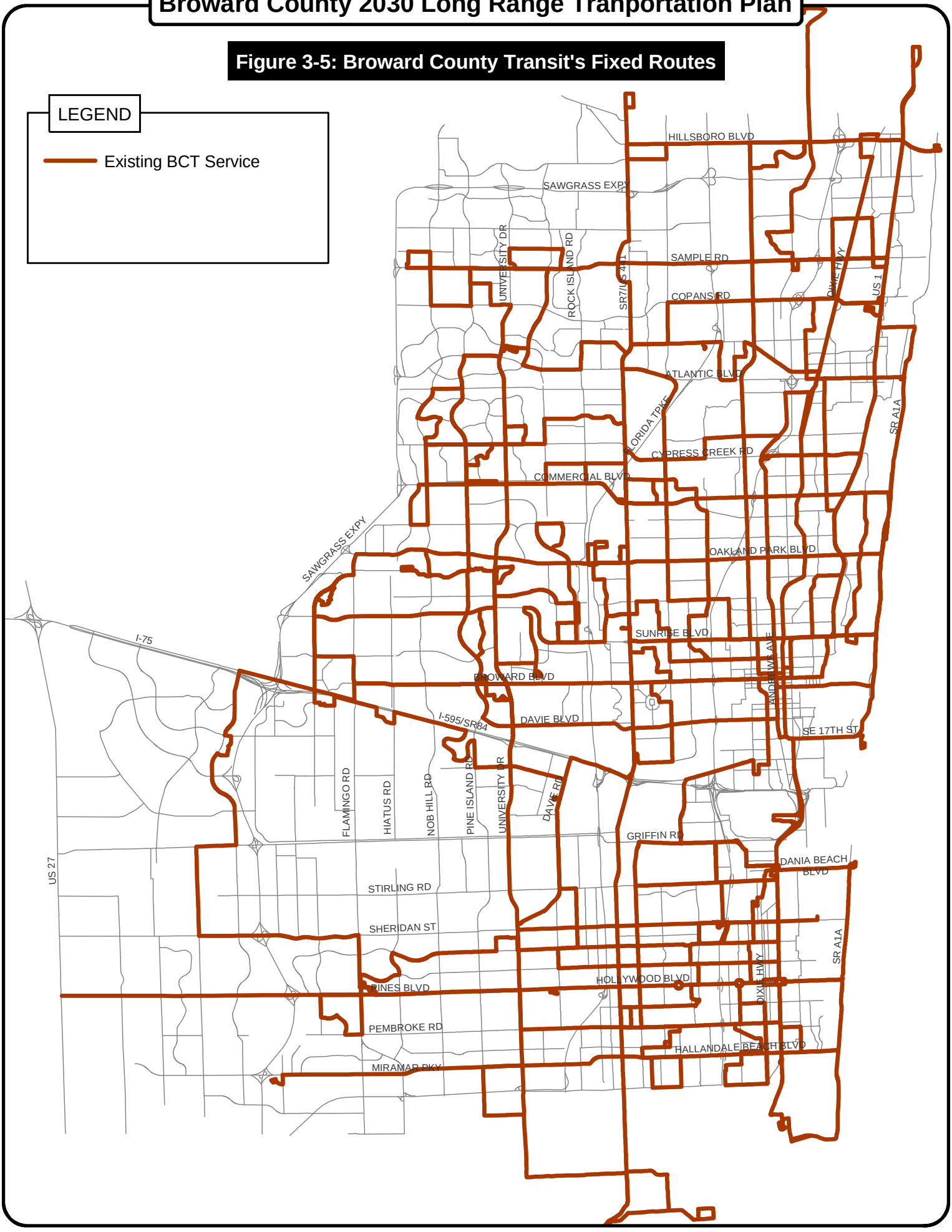
### *3.7.1 Fixed Route Bus Service*

Broward County Transit (BCT) is a service of the Broward County Mass Transit Division, which currently operates 40 fixed-route bus lines utilizing 260 full-size transit buses. Figure 3-5 shows existing fixed route bus services provided throughout the County. Services connect at multiple locations with transit services in Palm Beach County to the north and Miami-Dade County to the south. In addition, several routes connect with Tri-Rail stations to enhance opportunities for regional travel.

In 2004, BCT provided annual passenger trips of about 36 million on its fixed route, an average of over 100,000 daily boardings. The annual budget in FY 2002 was $87.5M, with fixed route service accounting for 73 percent. The Transit Development Plan (TDP), which is updated each year by the County, provides a great deal of additional information relating to the operation of the services including fixed-route service and community bus services.

# Broward County 2030 Long Range Tranportation Plan

## Figure 3-5: Broward County Transit's Fixed Routes



### *3.7.2 Community Bus Services*

Community bus services are provided by many municipalities within Broward County as shown in the following list.

- Coconut Creek
- Cooper City
- Coral Springs
- Dania Beach
- Davie
- Deerfield Beach
- Fort Lauderdale
- Hallandale Beach
- Hillsboro Beach
- Lauderdale-by-the-Sea
- Lauderdale Lakes
- Lauderhill
- Lighthouse Point
- Margate
- Miramar
- North Lauderdale
- Oakland Park
- Pembroke Pines
- Plantation
- Pompano Beach
- Sunrise
- Tamarac

The communities of Parkland and Hollywood are currently working to introduce community bus service while Dania Beach, Coral Springs, Miramar, Oakland Park, Pembroke Pines and Pompano Beach are all planning an expansion of service. In FY02, community bus services accounted for $4.3M of the agency's budget, approximately 5 percent.

### *3.7.3 Paratransit Services*

In addition, the County provides Paratransit and Transportation Disadvantaged services to Broward's citizens through a national-award winning program called Transportation Options (TOPS). These services are provided in conformance with the requirements of the Americans with Disabilities Act (ADA) and the Florida Commission for the Transportation Disadvantaged (FCTD), (Chapter 427, Florida Statutes). The FCTD Trust Fund provides trips for "persons who by age, or disability, or economic status..." are considered to be transportation disadvantaged. These services are coordinated with Miami-Dade and Palm Beach Counties. In 2002, more than 1.1 million paratransit trips were provided through fixed-route transit and over 1,700,000 trips provided through the coordinated system for senior citizens, persons with disabilities and other persons deemed transportation-disadvantaged via a number of contracts with service providers. In FY02, paratransit services accounted for $20M of the agency's budget, approximately 23 percent.

### *3.7.4 Other Services*

Free On-Demand Minibus Service, Special Events transportation and Emergency/Evacuation Services are all special services provided by the Mass Transit Division.

BCT offers free on-demand door-to-door minibus service. This service enables riders to connect to regular BCT routes. All residents living within boundaries of the Broward Urban Shuttle (BUS) may call to schedule a free pickup. The service area is bounded by Sunrise Boulevard to the north; N.W. 27 Avenue/Riverland Road and the Tri-Rail Station to the east; Davie Boulevard

to the south; and State Road 7/Lauderhill Mall to the west. This unique service allows riders to contact the bus by telephone for pickup times anywhere within this geographic area. All residents living within boundaries indicated may call for service between the hours of 8:30 am to 3:30 pm, Monday through Friday.

Special events and Emergency/Evacuation services are special services arranged through County government as the need arises to assist with mobility needs in the county.

The Tri-County Rail Authority (TCRA), which operates as Tri-Rail, provides commuter rail services between Palm Beach, Broward and Miami Dade Counties along the 71-mile South Florida Rail Corridor (formerly the CSX rail corridor), which parallels I-95. Tri-Rail operates 28 weekday trains between the 18 stations on the route. These services are coordinated with BCT via a number of Tri-Rail feeder buses, which provide connections to the airports and downtowns along the route. Included in the MPO's Transportation Improvement Program (TIP) is a project to complete double tracking along the entire Tri-Rail corridor, which, according to Tri-Rail, will result in 20-minute headways during peak hours by 2006.

## 3.8 Broward County Highway System

Broward County has over 1,000 miles of collector and arterial roadways serving the population's travel needs. The majority of roadway data supplied for this study was provided in the form of data files for the FSUTMS travel demand model. This included roadway classification, link lengths, number of lanes, posted speeds and a host of other information used by the model to assess capacity conditions. The details of the roadway data provided for use in the travel demand-forecasting model are contained in Section 4.

## 3.9 Freight Transportation Network Data

Recognizing the critical impacts that freight transportation can have on the Broward County region's transportation system, its economic competitiveness and vitality, and its environment and quality of life, the Broward County Metropolitan Planning Organization (MPO) has begun to develop and implement a freight transportation planning program.

Port Everglades is a major load center for both passenger and freight traffic. Port Everglades is the sole seaport within Broward County and is one of 14 state-designated deepwater ports. The Port is a major generator of bulk and containerized cargo as well as cruise passengers, all of which are expected to grow significantly over the next several decades. The Port is pursuing aggressive strategies to deal with this projected growth, including the development of a Southport Intermodal Complex to increase container capacity and the construction of a people mover to connect the Fort Lauderdale-Hollywood International Airport with cruise ship facilities at the Port.

Like most metropolitan areas, Broward County is dependent upon trucks for the movement of the majority of its freight. Trucks account for 65 percent of all freight shipments in the county by weight, with 4 percent moving by rail, 31 percent moving by water, and less than 1 percent moving by air. In addition, trucks are even more important in the transport of high-value, low-weight commodities, such as electronics and other consumer goods.

Several operational characteristics of Broward County's roadway system adversely affect freight movements. Like most urban areas, Broward County experiences highway congestion, particularly during the morning and afternoon peak periods. The County has employed several operational strategies designed to improve the flow of vehicles on its highway system during these peak hours, including the use of high-occupancy vehicle (HOV) lanes on I 95 and restricting trucks to the right lanes of I 95. Such regulations, while beneficial to passenger travel in the region, combine to hinder the safety and efficiency of truck flows. High numbers of truck crashes; at-grade rail crossings, and drawbridges also negatively impact freight moving into, out of, and through Broward County.

The Broward County region has strong access to freight rail service. Broward County is served by two freight railroads: FEC and CSX. FEC provides direct rail service to Port Everglades and is the only provider of single and double-stack intermodal service to southeast Florida. CSX is the State's largest railroad and operates transload facilities in Fort Lauderdale.

## 3.10 ITS Applications Data

The Broward County Traffic Engineering Division is responsible for assisting the motoring public in arriving at their destination safely and with minimal delay. This requires that the Division maintains and expands its physical infrastructure along with its traffic signal coordination. Signal coordination is accomplished using a centralized computer, traffic controllers and, at present, a copper cable plant for communications.

Intelligent Transportation Systems (ITS) represents the application of technologies involving information processing, communications, control, and electronics to improve Broward County's transportation system by reducing accidents and traffic jams. Technology alone cannot solve transportation problems, but in combination with sound engineering and management of capital and human resources, it can offer significant assistance, especially increasing capacity, safety, and mobility for existing facilities.

A description and status report of each ITS project in Broward County is summarized as follows:

- I-595 Dynamic Message Sign System - Twenty-two Dynamic Message Signs are being constructed along the I-595 corridor between I-75/Sawgrass Expressway and US 1. Construction also includes three microwave detection stations and fiber optic communications.
- I-95 Dynamic Message Sign System - Thirteen Dynamic Message Signs are being constructed along the I-95 corridor within the vicinity of interchanges that share a common arterial linkage with the Turnpike in Broward County. This will enable the Turnpike to be used as an effective detour route in the event of a major incident along I-95.
- Intracoastal Waterway Dynamic Message Sign System - Dynamic Message Signs are planned to be located within the vicinity of the thirteen east/west arterials, which cross the Intracoastal Waterway, and along adjacent north/south arterials (i.e., SR 5, SR A1A) within Broward County. This contract is to develop a master plan that would include Dynamic Message Signs design parameters, locations, and operational/maintenance

requirements. The initial focus for deployment of the Dynamic Message Signs is the 17th Street Causeway corridor.

- Broward County Advanced Traffic Management System - The existing Broward County Signal System was studied to determine the required upgrades to improve the efficiency of the system and to increase its capacity to accommodate additional signalized intersections. The Broward County Signal Study master plan focused on recommendations pertaining to replacement of existing controllers with new state-or-the-art equipment and replacement of the existing communications system with a fiber-optic system for all primary cable runs. The new system will also be capable of accessing video images from the field along selected arterials. The study is complete and a Request For Proposals is being developed to implement the first phase of hardware/software replacement through a design/build process.
- Advanced Traveler Information System (ATIS) Services - FDOT has issued an Invitation to Negotiate from Private firms for the purpose of providing ATIS Services as a public/private partnership. This contract will provide uniform, multi-modal, real-time traveler and traffic information in Miami-Dade, Broward, and Palm Beach counties in a cost-effective manner under the SunGuide Program.
- Additional Communication Linkages – The ITS Operations Center will provide communications linkages to the Florida Highway Patrol, Broward County Emergency Operations Center, Broward County Transit, Tri-Rail, the media, public/private sector partnerships, and other entities as deemed necessary.

The Broward ITS Operations Facility will be constructed on the 3.9-acre property located at 2300 West Commercial Boulevard in Fort Lauderdale. The facility will be a two-story structure with the ITS Operations Center on the first floor and the Broward County Traffic Engineering Division (BCTED) Offices on the second floor. The ITS Operations Facility will require approximately 20,500 square feet while the BCTED Offices will require approximately 16,900 square feet. The facility will be centered around a 3,000 square foot control center comprised of a 2-story video wall.

## 3.11 Broward County Intermodal Connectors

**SIS road connectors**

**Port Everglades,** I-95 to SR 84 to Spangler Boulevard to port entrance I-595 east straight into port entrance (Eller Drive)

**Ft. Lauderdale-Hollywood International Airport,** SIS corridor (I-595/U.S. 1 interchange) directly to passenger entrance I-95 to SR 84/SW 24th Street to SW 4th Avenue to Perimeter Road to air cargo entrance

**Ft. Lauderdale FEC Intermodal Freight Terminal,** I-95 to SR 84 to Andrews Avenue to entrance

**Ft. Lauderdale Greyhound Bus Terminal,** I-95 to Broward Boulevard to NE 3rd Avenue to 3rd Street to entrance

**Deerfield Beach Amtrak/Tri-Rail Station,** I-95 to Hillsboro Boulevard to Entrance

**Ft. Lauderdale Amtrak/Tri-Rail Station,** SIS corridor (I-95 ramps) directly to entrance

**Hollywood Amtrak/Tri-Rail Station,** I-95 to Hollywood Boulevard to entrance

**Cypress Creek Tri-Rail Station,** I-95 to Cypress Road to Andrews Avenue to entrance

**Ft. Lauderdale-Hollywood International Airport Tri-Rail Station**
I-95 to Griffin Road to Ravenswood Road to Gulf Stream Way to entrance
**Pompano Beach Tri-Rail Station,** I-95 to SR 834 (Sample Road) to 8th Avenue entrance

**SIS rail connectors**
**Port Everglades,** FEC spurs from seaport property to FEC and CSX lines
**Ft. Lauderdale FEC Intermodal Freight Terminal,** on Jacksonville-Miami FEC line
**Deerfield Beach Amtrak/Tri-Rail Station** on South Florida Rail Corridor
**Ft. Lauderdale Amtrak/Tri-Rail Station,** on South Florida Rail Corridor
**Hollywood Amtrak/Tri-Rail Station,** on South Florida Rail Corridor
**Cypress Creek Tri-Rail Station,** on South Florida Rail Corridor
**Ft. Lauderdale-Hollywood International Airport Tri-Rail Station,** On South Florida Rail Corridor
**Pompano Beach Tri-Rail Station** on South Florida Rail Corridor

**SIS waterway connectors**
**Port Everglades,** on Atlantic Intracoastal Waterway

# 4.0 2030 MODEL DEVELOPMENT AND REVIEW

## 4.1 Introduction

This section presents the methodology used to develop the travel demand model data sets for analysis of transportation deficiencies in the Broward County Metropolitan Planning Organization's (MPO) 2030 Long Range Transportation Plan Update. The following text details the development of several key data sets required for the analysis including:

- Base year model
- Existing-plus-committed highway and transit networks,
- Year 2030 socio-economic data,
- External trip growth,
- Results of the year 2030 deficiency analysis.

The Florida Department of Transportation (FDOT) District Four Planning Office recently completed a study to develop and validate a new set of travel demand models for the base year 2000 in Broward County. FDOT documentation, prepared as part of this separate study, should be consulted for details on base year model development and validation.

## 4.2 Base Year Model

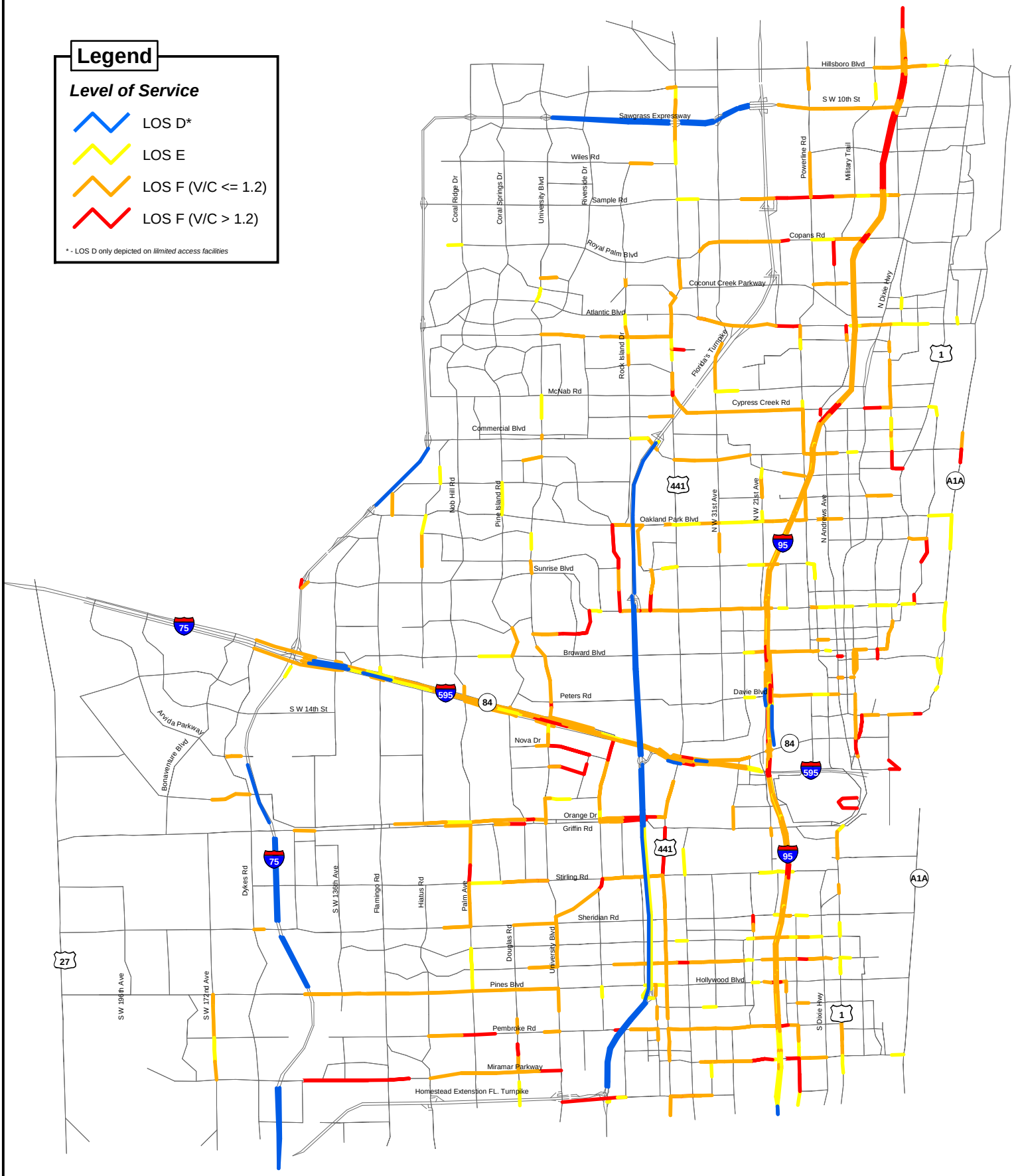
The base year 2000 validated travel demand model was provided by FDOT. This updated model for Broward County incorporated new data from Census 2000 and an updated network editing and storage process that used TransCAD software for network editing, along with utilities for exporting the networks to TRANPLAN for model execution. Planning staff from FDOT District 4 and the MPO approved the model for use in the LRTP in May 2004. Most screenlines fall within acceptable ranges of model accuracy, the ratio of model volumes over counts is 0.99, and total root mean squared error (RMSE) is 26.85 percent.

Subsequent applications of the model identified some concerns regarding validation of the transit model components, requiring some off-model analysis to fully account for future transit ridership.

Figure 4-1 depicts 2000 level-of-service (LOS) deficiencies based on data estimated from the base year model. This map is provided for comparison with later LOS maps for the year 2030 as a way of showing how congestion is expected to increase over time. This map can also be compared against available data on existing LOS based on traffic counts to ensure that all deficient corridors are identified.

# Broward County 2030 Long Range Transportation Plan Update

## Figure 4-1
## Year 2000 Network LOS Deficiencies



## 4.3 Existing Plus Committed Networks

The development of the existing-plus-committed (E+C) highway and transit networks began with updating the base year 2000 Broward County FSUTMS model networks to the year 2004 (the "existing" component). Next, the networks were updated to reflect all projects "committed" to construction by the year 2009, according to the MPO's Transportation Improvement Program (TIP). Two different sets of procedures were used, one for the highway network and one for the transit network.

### *4.3.1 Highway Network Development*

Since the base year of the highway network was 2000, the network had to be updated to the current year of 2004. All new roadway projects completed or under construction in the years 2000-2004 that provide connectivity in the network were added to the E+C highway network (excluding non-regionally significant roads). Once the network was updated to 2004, the MPO's FY 2003/2004 - FY 2008/2009 TIP was used to identify roadway capacity projects that had construction funding identified in the 5-year period of the program. The MPO's TIP contains all local and state roadway projects anticipated for completion of project phases in the MPO area for the 5-year period. Once identified, the projects were added to the E+C network.

Table 4-1 lists the projects included in the E+C highway network completed during the years 2000-2004. Table 4-2 is a listing of projects from the 2004-2009 TIP that were included in the E+C network based on commitments to construction.

**Table 4-1: Roadway Improvements Completed 2000 – 2004**

| Project Name | Limits | Type of work |
|---|---|---|
| Bass Creek Rd | SW 172nd Ave to I-75 | New 2 lanes |
| Douglas Rd | Dade County Line to Pembroke Rd | Add 2 lanes |
| Flamingo Rd | HEFT to Miramar Pkwy | Add 2L (4LD) |
| Griffin Rd | Bonaventure Blvd to Dykes Rd | Add 2L (4LD) |
| +Griffin Rd | W of 100 Ave to E of University Dr | Add 4L (6LD) |
| Hallandale Beach Blvd | Hallandale Beach Blvd @ SR A1A & Bridge of ICWW | Intersection Improvements/ Bridge Replacement |
| Hiatus Rd | Commercial Blvd to McNab Rd | New 4 lanes |
| Hiatus Rd | I-595 to Broward Blvd | New 6 lanes |
| McNab Rd | Pine Island Rd to University Dr | Add 2L (6LD) |
| Miramar Pkwy | E. of I-75 to Flamingo Rd | Add 4 lanes |
| Miramar Pkwy | Red Rd to Palm Ave | Add 2L (6LD) |
| NE 6 Ave | NE 28 St to Oakland Park Blvd | Add 1L (3L) |
| NW 21/23 Ave | Sunrise Blvd to NW 19 St | Add 1L (3L) |
| NW 44 St | NW 44 St to Rock Island Rd | Add 1L (3L) |
| NW 6 St | NW 31 Ave to NW 27 Ave | Add 2L (4LD) |
| Pembroke Rd | SW 184 Ave to SW 172 Ave | New 2 lanes |
| Pine Island | Sheridan St to Stirling Rd | New 4 lanes |
| Powerline Rd | Sample Rd to SW 10th St | Add2L (6LD) |
| Sample Rd | Powerline Rd to Military Trail | Add 2L (6LD) |
| SE 17 St Causeway | Eisenhower Blvd to 23 Ave | 4L Bridge replacement |
| SR 7 | Riverland Rd to Broward Blvd | Add 2L (6LD) |
| Sunrise Blvd (*) | Sunrise Blvd @ SR 7 | Interchange Improvements |
| SW 172 Ave | Bass Creek Rd to Miramar Pkwy | New 2 lanes |
| SW 172 Ave | Honey Hill Rd to Bass Creek Rd | New 2 lanes |
| SW 36 St | US 27 to S. Post Rd | New 2 lanes |
| Wiles Rd | SR 7 to Lyons Rd | New 4 lanes |
| Wiles Rd | Lyons Rd to Powerline Rd | New 4 lanes |

(*) 3 lanes in east/west and north/south, a single point interchange.

## Table 4-2: Committed Roadway Improvements 2004-2009

| TIP No | Project Name | Limits | Type of work | Miles | Cost 1,000 |
|---|---|---|---|---|---|
| 135 | Andrews Ave Ext. | N Approach RR Bridge to NW 18 St. | New 4LD | 1 | $3,264 |
| 136 | Andrews Ave Ext. | Bridge over CSX RR and Roadway Approaches | New 4LD | 0.2 | $22,605 |
| 351 | Andrews Ave Ext. | S. of Atlantic Blvd to S of RR Bridge Approach | New 4LD | 0.5 | $13,153 |
| 1023 | Bailey Rd | NW 64 Ave to SR 7 | Add 2L (4LD) | | $4,925 |
| 773 | Banks Rd | Cullum Rd to Wiles Rd | New 4LD | 0.2 | $250 |
| 865 | Banks Rd | NW 40 St to Cullum Rd | New 4LD | 0.2 | $100 |
| 774 | Banks Rd | Sample Rd to NW 40 St | Add 2L (4LD) | 0.2 | $250 |
| 773 | Banks Rd | NW 40 St to Wiles Rd | New 4LD | 0.5 | $1,100 |
| 774 | Banks Rd | Sample Rd to NW 40 St | Add 2L (4LD) | 0.2 | $100 |
| 815 | Blount Rd | Copans Rd to Sample Rd | New 2 lanes | 1.1 | $2,299 |
| 165 | Commercial Blvd (**) | Commercial Blvd @ FTPK | Interchange Improvements | 0.4 | $16,635 |
| 235 | Copans Rd | E. of FTPK to Powerline Rd | Add 2L (6LD) | 0.9 | $4,071 |
| 793 | Davie Rd Ext. | University Dr to Sterling Rd | Add 2 (4LD) | 1.6 | $4,154 |
| ~~801~~ | ~~Dania Bch Blvd~~ | ~~East of US-1 to Cambridge St~~ (*) | ~~From 6 to 4 lanes, resurface~~ | ~~1.8~~ | ~~$5,300~~ |
| 27 | Dixie Hwy | Palm Beach County Line to Hillsboro Blvd | Add 4 lanes | 0.5 | $32,586 |
| 427 | Flamingo Rd | Honey Hill Rd to HEFT | Add 2L (4LD) | 1.0 | $1,800 |
| 88 | FTPK | N. of Atlantic Blvd to Sawgrass Expressway | Add 2L (8LD) | 5 | $131,572 |
| 67 | FTPK | N of Sunrise Blvd to N. of Atlantic Blvd | Add 2L (8LD) | 8 | $183,495 |
| 52 | FTPK | Griffin Rd to N. of Sunrise Blvd | Add 2L (8LD) | 5 | $195,147 |
| 55 | FTPK | HEFT to Griffin Rd (includes replacing 6L Sheridan St Bridge) | Add 2L (8LD) | 6 | $204,880 |
| N/A | Griffin Rd | E. of Nob Hill to Flamingo | Add 4L (6LD) | 2.0 | Underway |
| 4 | Griffin Rd | Flamingo Rd to E. of I-75 | Add 2L (4LD) | 1.9 | $4,209 |
| 357 | Hiatus Rd | Broward Blvd to Sunrise Blvd | New 4LD | 1.8 | $5,153 |
| 358 | Hiatus Rd | Sunrise Blvd to Oakland Park Blvd | New 4LD | 1.2 | $5,307 |
| 72 | Hollywood Blvd | Hollywood Blvd @ FTPK | Interchange Improvement | | $56,901 |
| 473 | Miramar Blvd | Flamingo Rd to Hiatus | New 2L (4LD) | 0.5 | $3,240 |
| 373 | Miramar Blvd | Hiatus to Palm Ave | Add 2L (4LD) | 1.1 | $3,000 |
| 769 | Miramar Pkwy | Flamingo Rd to Red Rd | Add 2L (6LD) | 1 | $3,000 |
| 206 | NW 21 Ave | NW 19 St to Oakland Park | Add 1L (3L) | 1 | $2,943 |
| 779 | NW 49 Ave | NW 26 St to NW Oakland Park | Add 2L (4LD) | 0.4 | $605 |
| 266 | Pembroke Rd | Dykes Rd to SW 136 Ave | New 4LD | 2.1 | $13,000 |
| 873 | Pembroke Rd | SW 172 Ave to Dykes Rd | New 2L | 1 | $1,500 |
| 818 | Pembroke Rd | Flamingo Rd to Douglas Rd | Add 2L (4LD) | 3 | $8,498 |
| 271 | Pine Island Rd | I-595 to Nova Dr | Add 2L (6LD) | 1.0 | $1,744 |
| 154 | Pine Island Rd | Oakland Park Blvd to Commercial Blvd | Add 2L (6LD) | 1.7 | $9,968 |
| 813 | Ravenswood Rd | Stirling Rd to Griffin Rd | Add 2L (4LD) | 1 | $5,664 |
| 175 | Sawgrass Expressway | Sunrise Blvd to Atlantic Blvd | Add 2L (6LD) | 7.3 | $14,796 |
| 288 | Sheridan St | NW 196 Ave to SW 172 Ave | Add 2L (4LD) | 2 | $6,500 |

| TIP No | Project Name | Limits | Type of work | Miles | Cost 1,000 |
|---|---|---|---|---|---|
| 131 | Sheridan St | N 64 Ave to N 61 Ave | Add 2L (6LD) | 1 | $1,238 |
| 6 | SR 7 | Dade County Line to N. of Hallandale Bch Blvd | Add 2L (6LD) | 1.1 | $51,750 |
| 15 | SR 7 | N. of Hallandale Bch Blvd to N of Hollywood Blvd | Add 2L (6LD) | 1.7 | $26,675 |
| 919 | SR 7 | S of Griffin to S of Farragut Rd (N. of Sheridan St) | Add 2L (6LD) | 0.6 | $15,963 |
| 382 | SR A1A Southbound | S. Beach Parking Lot to Las Olas Blvd | Add 2L (4LD) | | $3,400 |
| 209 | Sunrise Blvd | Hiatus Rd to Pine Island Rd | Add 2L (6LD) | 1.9 | $8,307 |
| 98 | Wiles Rd | Rock Island Rd to SR 7 | Add 2L (6LD) | 1.2 | $8,758 |

(*) July 13, 2006 Amendment

(**) Add EB to SB direct access lane, and add a second NB to WB

Source: Broward County MPO Transportation Improvement Program, FY 2003/2004- FY2008/2009

### *4.3.2 Transit Network Development*

The base year of the transit network is also 2000, and as such, the network had to be updated to the current year of 2004. Any transit service that was added, deleted or modified in the years 2000-2004 was appropriately coded into the E+C transit network. Once the network was updated to 2004, the Broward County Transit Development Plan (TDP) 2005-09 was used to identify service additions, deletions, and improvements. The County's TDP contains all transit service modifications proposed for MPO area. Table 4-3 depicts bus route changes expected over the next five years. Though these projects are considered to be unfunded, the new routes and realignments were coded into the E+C network.

## 4.4 Year 2030 Socio-Economic Data

The socio-economic data development for population and employment was previously documented in Section 3. This section will discuss the updating of the special generator file (ZDATA3) and the school data file.

The special generator file is used to adjust the number of attractions or productions for a specific traffic analysis zone (TAZ). These adjustments might be necessary if the trip generation rates applied to the socioeconomic data in the ZDATA1b or ZDATA2 files do not produce the correct number of trip ends. The types of land use that typically need adjustments include:

- Colleges or universities,
- Regional airports, large regional shopping malls,
- Military bases, group quarters (dormitories, barracks), and
- Recreational areas.

**Table 4-3: Bus Route Changes 2005 – 2009**

| Route Number | Type of work |
|---|---|
| **New Routes, Route Realignment** | |
| 4 | Route will travel from Galleria to Aventura Mall with 30 min. headway. Route will travel east on Sunrise Blvd, south on A1A, west on 17th St Causeway, south on US-1, east on Dania Beach Blvd, south on A1A into Miami-Dade County. |
| 12 | This route service will be straightened and extended. The route will provide east/west service along Sheridan Street from Anne Kolb Nature Center (west of A1A) to NW 172 Ave. The headway will be improved to 30 mins. |
| 18 LS | Pre-Transit Bridge Service, a new express service with limited stops will alternate with the existing service. |
| 31 | Route will be straightened by discontinuing east/west portion along Coconut Creek Parkway, Martin Luther King Jr. Blvd, and Atlantic Blvd. Exclusive north/south service will be provided along NW 31 Ave/Lyons Road to Hillsboro Blvd. Headway will be improved to 15 mins. |
| 35 | Route will travel east/west on Atlantic Blvd from University Drive (Coral Springs Mall) to SR A1A with 30 min. headway. |
| 44 | Route will travel from Atlantic Blvd and SR-7 to Sawgrass Mills Mall. Route will travel west on Atlantic Blvd, south on Rock Island Rd, west on NW 44 St, south on Hiatus Rd, west on Sunrise Blvd, and north on NW 136 Ave to Sawgrass Mills Mall. Headway will be 30 mins. |
| 83 | Route will be straightened; the route will remain on Copans Rd/Royal Palm Blvd and provide east/west service from Pompano Square Mall in the east to Coral Springs Mall in the west. Headway will be improved to 20 mins. |
| 88 | This route will provide north/south service on Pine Island Rd from Coral Springs Mall to Dade C/L and the headway will improve to 30 mins. The route will travel south on University Dr, west on Atlantic Blvd, south on Pine Island Rd into Miami-Dade County. |
| 89 | Route will travel Hillsboro Blvd from SR 7 to SR A1A with 30 min. headway. |
| 201 | Route will travel east/west on Stirling Rd from US-1 to I-75 with 30 min. headway. |
| 202 | Route will travel east/west on Griffin Rd from US-1 to NW 172 Ave with 30 min. headway. |
| **Shuttle Service** | |
| 106 | Route continues up Andrews Ave to Central Bus terminal. |
| 119 | Route ends at Copans Rd and SR 7. |

Source: Broward County Transit Development Plan

For this study, only the Fort Lauderdale - Hollywood Airport entries in ZDATA3 were modified from the base year numbers. This is because there are no specific plans to expand or add new substantial shopping malls or recreational areas. Furthermore, there are no military bases located within Broward County. Adjustments were made to the college and university special generators by factoring trip estimates according to the growth rate present for school enrollment in ZDATA2 from 2000 to 2030. The college special generators might merit reevaluation should additional data become available.

The APO (Aviation Policy and Plans) Terminal Area Forecast Detail Report, available from the Federal Aviation Administration, was used to evaluate enplanements to the year 2030. Historic enplanements at the Airport were available from the APO Report for the years 1976 through 2002 and forecasted enplanements were available for the years 2003 through 2020. Annual enplanement data were first adjusted to an estimate of daily enplanements and average annual

growth rates were used to extrapolate enplanements from 2020 to 2030. An initial review of these estimates by MPO staff determined that this methodology would result in an overestimate of enplanements, based on the 2025 LRTP and other considerations. Therefore, the projection methodology was modified to make use of population growth factors from the Bureau of Economic and Business Research (BEBR). The modified BEBR approach resulted in an estimate of 51,378 daily enplanements in the year 2030 versus a base year 2000 estimate of 21,000.

The spreadsheet used to calculate year 2030 enplanements is depicted in Appendix A-3.

## 4.5 External Trip Growth

There are three files in the Broward County FSUTMS model stream that control external trips for the model area:

1. EETRIPS – Contains the External to External Trips for the area
2. ZDATA4 - Contains the External to Internal and Internal to External Trips for the area
3. TRIE – Contains estimates of external Tri-Rail trips

The FDOT District 4 Planning Office provided a spreadsheet containing cross county trips for the Miami-Dade/Broward and the Palm Beach/Broward County line trip interchanges. Projections were provided from a variety of different sources, years, and models. A teleconference was subsequently held with staff from FDOT District 4 and MPO staff. Each of the different sources and scenarios was discussed and an agreement was reached on external control totals for each zone. The final recommended external trip volumes for E+C and 2030 LRTP conditions are provided in the last two columns of Appendix A-4.

The trips at the external stations were then updated into EETRIPS and ZDATA4 files. The EETRIPS file was provided by FDOT. The ZDATA4 file was updated in an iterative process until the trips at the external stations matched the targets provided by FDOT. This iterative process was necessary because the FDOT District Four Planning models assume external trip productions and attractions are related to internal trips by purpose. When attractions are balanced to productions, network external-internal trip attractions are adjusted as well. The external trip estimates were different between the E+C and other 2030 alternatives because some new facilities were proposed for 2030 that will cross the Broward-Palm Beach County line (University Drive and Coral Ridge Drive) that presently terminate within Broward County.

External transit trips are provided in the model for Tri-Rail, using a file called “TRIE,” which is used to build an external transit trip matrix of both IE and EE trips. Through comparisons with existing Tri-Rail ridership estimates and forecasts from the Southeast Florida Regional Planning Model (SERPM), it was discovered that the TRIE estimates for base year 2000 were lower than expected. In order to increase 2030 external Tri-Rail trips to a reasonable level, Tri-Rail external trips were factored from the base year using growth rates in proportion to the external highway trips along I-95. This methodology assumes a consistent rate of growth for all modes along the I-95 corridor.

During alternatives testing, a number of new transit corridors were proposed that would cross the Miami-Dade and Palm Beach County lines. When it was discovered that these corridors were not yet coded in the Southeast Florida Regional Planning Model (SERPM) and that an insufficient

number of "dummy" external zones were available for all corridors, efforts to simulate year 2030 external transit travel were shifted to off-model procedures. Final transit ridership estimates reflect available data from other studies such as Broward Transit Bridge, existing ridership estimates and growth rates from BCT, and highway growth at external zones.

Future year external transit trips should further be revised at some point in the future through testing of these corridors in SERPM, expansion of the external zone system in the Broward model, and the development of a new process for distributing external transit trips that does not require the estimation of trips by origin and destination zone for each transit trip crossing the County lines. This process should also result in reduced levels of highway trips at each external zone to account for mode shifts to transit that cannot currently be addressed in the model.

## 4.6 Year 2030 Deficiency Analysis

Using the newly created year 2030 socio-economic data, special generator estimates, external trip forecasts, and the E+C highway and transit networks, a model run was performed to estimate the volume to capacity (v/c) ratios and levels-of-service (LOS) for all roadway segments in the Broward County FSUTMS model. Figure 4-2 shows the resulting LOS deficiency analysis.

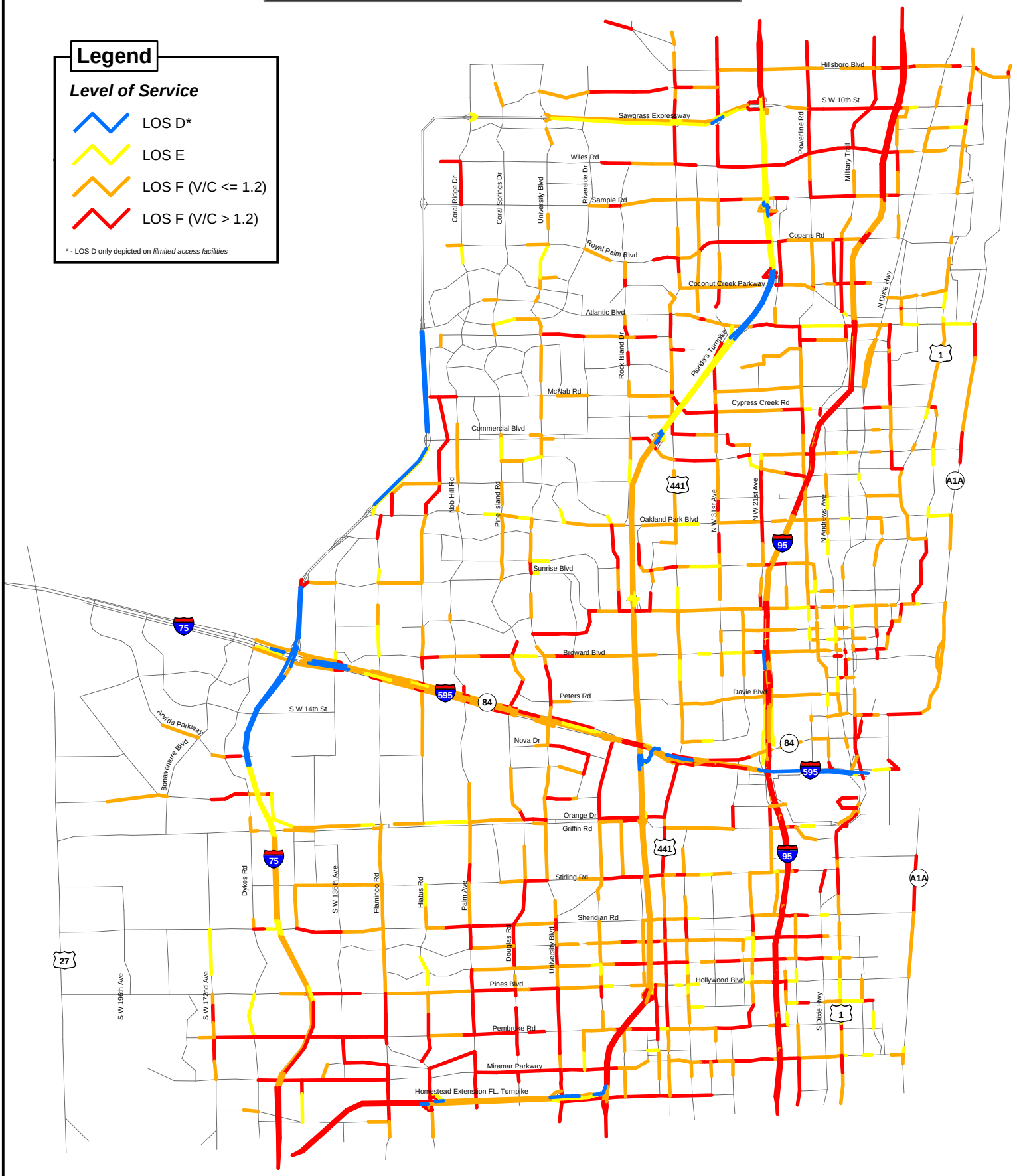
Table 4-4 depicts a statistical comparison between the base year 2000 model and 2030 E+C network conditions. As can be expected, the lowering of congested speeds over time is consistent with dramatic increases in time spent traveling (vehicle-hours traveled) and vehicle delay (vehicle hours delay). The number of vehicle-hours traveled (VHT) more than double, going from 822,000 in 2000 to 1,930,000 in 2030. Furthermore, the number of vehicle hours of delay increases by nearly a factor of eight, going from 110,000 to 858,000. These increases coincide with a more than 25 percent increase in the amount of the highway network operating at level-of-service (LOS) F. This increase in the percentage of LOS F facilities from 28% to 35.15% demonstrates a significant degradation in the performance of the highway network in Broward County without additional needed transportation facilities. Statistical comparisons provided in subsequent reports of this series indicate improvements in VHT, LOS, congested speed, and vehicle hours of delay through the introduction of new highway and transit Needs Plan alternatives.

**Table 4-4: Statistical Comparison between Base Year and 2030 E+C**

| Model Year | VMT (1000's) | VHT (1000's) | Percentage LOS-F | Congested Speed | Vehicle Hours Delay (1000's) |
|---|---|---|---|---|---|
| 2030 E + C | 51,593 | 1,930 | 35.15 | 31.53 | 858 |
| Base Year - 2000 | 34,051 | 822 | 28.00 | 37.8 | 110 |

# Broward County 2030 Long Range Transportation Plan Update

## Figure 4-2:
## Year 2030 E+C Network
## Level of Service Deficiencies



# 5.0 NEEDS ASSESSMENT

## 5.1 Introduction

This Section describes the multimodal transportation needs assessment conducted for Broward County year 2030 planning horizon. The needs are divided into a number of individual modal elements:

- Pedestrian
- Greenways
- Bicycle
- Waterborne transportation
- Transit
- Roadway
- Freight, and
- Intelligent Transportation Systems

The needs assessment was conducted by evaluating horizon year (2030) travel conditions on the transportation network that has current funding commitments. The existing-plus-committed (E+C) transportation network included improvements in the MPO's five-year Transportation Improvement Program (TIP) covering the period between 2005 to 2009 and also included all projects under construction or completed since the base year 2000. Future travel demand for the year 2030 was estimated based on the forecasted increase in population and employment in the County for the same period. Future transportation needs are those improvements that would be required to maintain the currently adopted roadway standards under future travel demands. Section 3 (Data Compilation and Review) and Section 4 (Model Review and Development) contain detailed information on existing conditions for the travel modes addressed in this plan, and Section 4 describes the preparation of travel demand forecasts for roadway and transit modes.

For the pedestrian and bicycle systems, no such widely accepted planning tool exists, so a number of other planning methods were used to determine future needs. These included a composite countywide sidewalk inventory, the County's Bicycle Suitability Map, Bicycle Level of Service (BLOS) analysis, and input from the Bicycle Advisory Committee and the Technical Advisory Committee. Waterborne transportation needs were assessed in close coordination with Water Taxi, the operator currently providing Waterbus service and a review of navigable waterways and current and future ferry trip opportunities, which are based on land uses and development plans. Freight needs – primarily truck and rail travel – were assessed based on commodity flow patterns and future seaport, airport and railroad plans. Intelligent Transportation Systems needs were assessed based on industry advancements and in cooperation with Broward County Traffic Engineering and the FDOT District 4 Traffic Operations office.

For the transit and roadway systems, the needs analysis was performed using the Florida Standard Urban Transportation Model Structure (FSUTMS) travel demand modeling. Input variables include 2030 socioeconomic data that is comprised of population, housing data, employment projections, schools, hotels, and other special generators.

A number of alternatives were developed to address the identified roadway and transit deficiencies.

- One alternative emphasized roadway improvements
- Another emphasized transit improvements
- A third alternative was developed to incorporate the best elements of the first two alternatives and to include ideas provided by the public as part of the public involvement plan of this study.

Each alternative was evaluated with respect to the baseline conditions and the adopted Goals, Objectives, Policies, and Evaluation Criteria for this plan (see Section 2). This approach is an attempt to identify the efficient transportation infrastructure needs to accommodate future travel demand without regard to economic, local, or political considerations.

## 5.2 Pedestrian Needs Assessment

In recent years it has become more widely recognized that providing for safe and convenient foot travel is an essential part of creating a vibrant community, neighborhood commercial area, or downtown district. Pedestrian access is also vital to a successful and accessible transit system. The 2025 Transportation Plan Update was the first update to include the pedestrian as a transportation mode for evaluation. This 2030 Update continues that effort, in addition to adding other mode such as waterborne transportation, as the demand rises.

In 1989, the Broward County MPO Resolution #89-8 set in motion the process to ensure that a pedestrian-oriented plan be incorporated into the multimodal planning approach to transportation. As a result, the County adopted a long-range pedestrian facilities plan in 1992 which led the way for numerous pedestrian improvements Countywide, including requiring sidewalks along all new arterial and collector streets. The pedestrian plan developed for this 2030 update is based largely on the guidelines presented in the pedestrian facilities plan. More specific needs have been identified through other local plans and additional analysis, including:

- Analysis of missing sidewalks on arterial and collector roadways
- Analysis of missing sidewalks around school districts
- Broward Greenways Plan
- Sidewalk and transit access conditions analyses in pedestrian focus areas of the county

The following sections describe each of these in detail. Together with the committed improvements in the MPO's 5-year program, a final list of pedestrian system needs has been developed.

### *5.2.1 Existing Conditions*

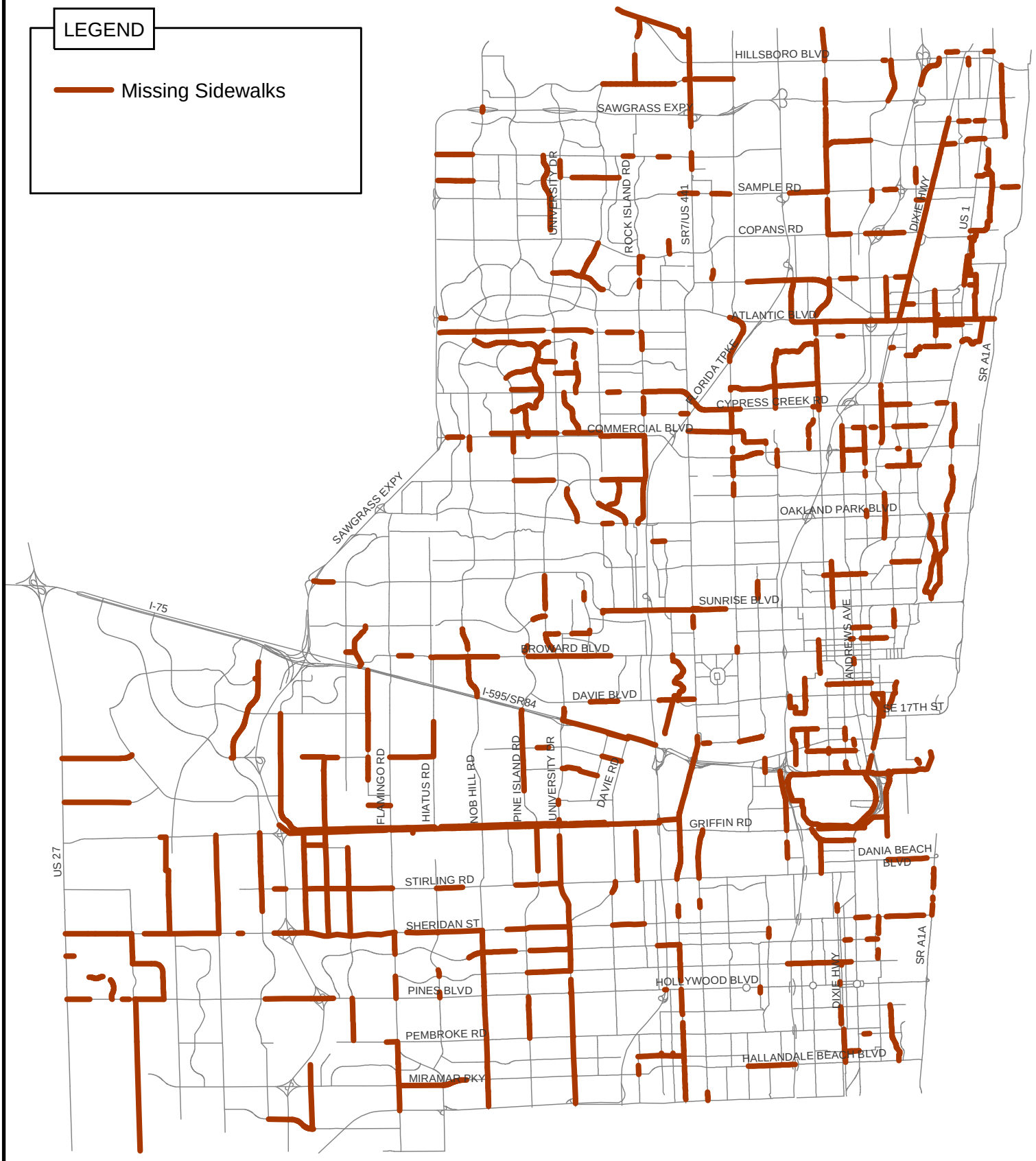
Existing Broward County and FDOT roadway design standards call for all classified (collector and arterial) roadways to provide a sidewalk of at least five feet in width. Historical development in Broward County did not always include the provision of sidewalks along such roadways, with the result that many of these roads are currently sub-standard and require that sidewalks be retrofitted.

The County's database includes information from 1999 through 2003 on missing sidewalks. However, this database was not complete at the outset of this project. As part of the project, the sidewalk inventory was completed for 184 of arterial and collector roads. The information obtained was incorporated into the County's database files to provide a complete picture of missing sidewalks Countywide. As shown on Figure 5-1, there are 376 miles of roadways, which have sidewalks missing on one or both sides. This constitutes approximately 27 percent of the County's classified roadway system. Notable sections of arterial and collector roadways, which have missing sidewalks, are listed below.

- Atlantic Boulevard
- Bayview Drive
- Broward Boulevard
- Commercial Boulevard
- Coral Hills Drive
- Dixie Highway
- Eller Drive
- Flamingo Road
- Griffin Road
- Holmberg Road
- Johnson Street
- Loxahatchee Road
- McNab Road
- Middle River Drive
- Miramar Parkway
- Pine Island Road
- Pines Boulevard
- Powerline Road
- Prospect Road
- Rock Island Road
- Sample Road
- Sheridan Street
- Southgate Boulevard
- State Road 7
- Stirling Road
- Sunrise Boulevard
- Taft Street
- University Drive
- Weston Road

# Broward County 2030 Long Range Tranportation Plan

## Figure 5-1: Primary Roadways with Missing Sidewalks



### *5.2.2 Committed Improvements*

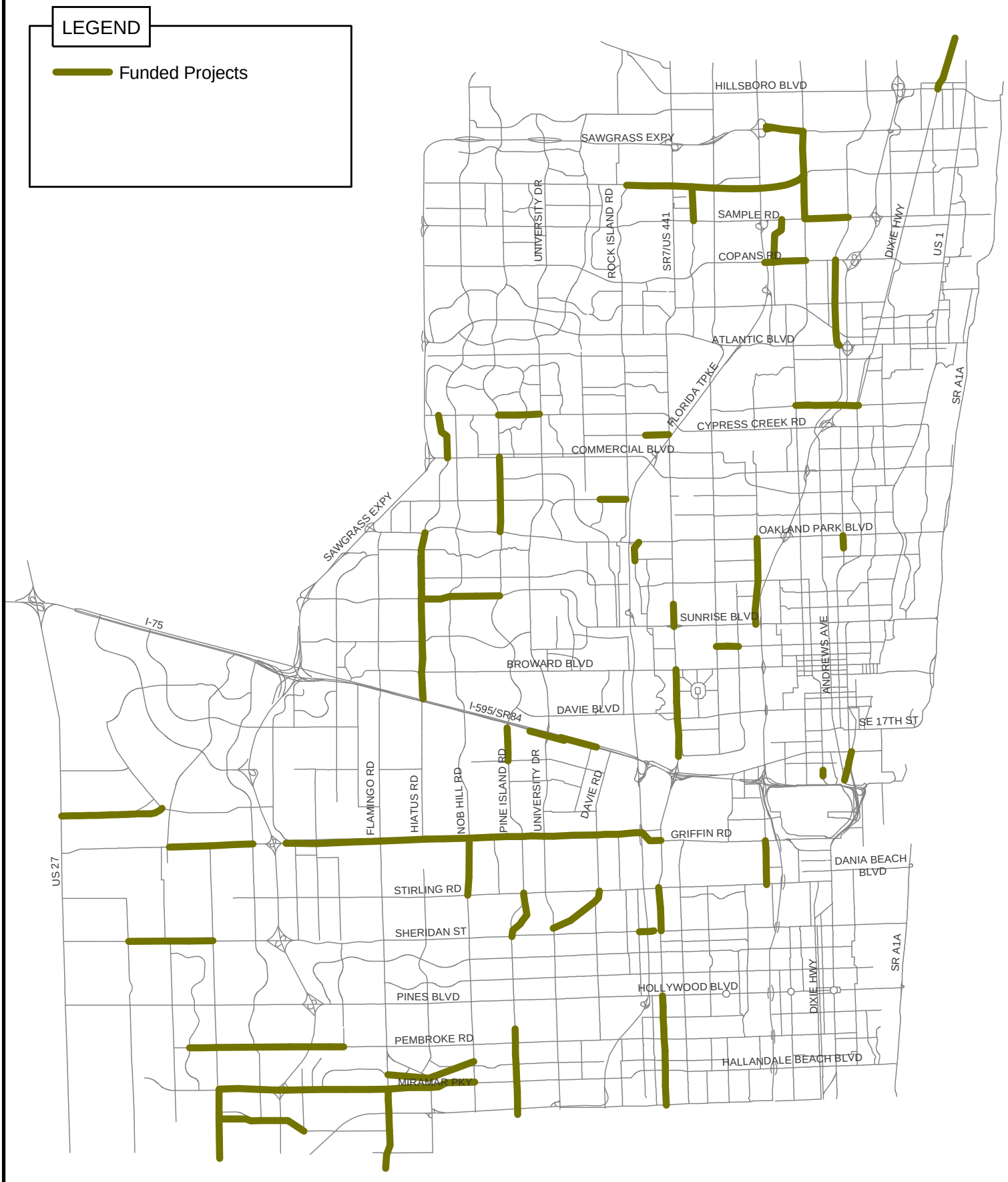
A number of these missing sidewalks will be completed as part of committed roadway projects in the MPO's 5-year Transportation Improvement Program (TIP). They are shown together with funded bicycle projects in the Table 5-1. The pedestrian improvements shown in Figure 5-2 include those funded in the TIP and other sources.

**Table 5-1: Pedestrian Projects Identified in the TIP**

| Project Name | Limits | Type of work |
|---|---|---|
| Bailey Rd | NW 64 Ave to SR 7 | Add 2L (4LD) |
| Davie Rd Ext | University Dr to Stirling Rd | Add 2 (4LD) |
| Griffin Rd | E of Nob Hill to Flamingo | Add 4L (6LD) |
| Griffin Rd | Flamingo Rd to E of I-75 | Add 2L (4LD) |
| Miramar Blvd | Flamingo Rd to Hiatus | New 2L (2LD) |
| Miramar Blvd | Hiatus to Palm Ave | Add 2L (4LD) |
| Miramar Pkwy | Flamingo Rd to Red Rd | Add 2L (6LD) |
| Pine Island Rd | I-595 to Nova Dr | Add 2L (6LD) |
| Pine Island Rd | Oakland Park Blvd to Commercial Blvd | Add 2L (6LD) |
| Sheridan St | NW 196 Ave to SW 172 Ave | Add 2L (4LD) |
| SR 7 | Dade County Line to N of Hallandale Bch Blvd | Add 2L (6LD) |
| SR 7 | N of Hallandale Bch Blvd to N of Hollywood Blvd | Add 2L (6LD) |
| SR 7 | S of Griffin to S of Farragut Rd (N of Sheridan St) | Add 2L (6LD) |
| Sunrise Blvd | Hiatus Rd to Pine Island Rd | Add 2L (6LD) |
| Wiles Rd | Rock Island Rd to SR 7 | Add 2L (6LD) |

# Broward County 2030 Long Range Tranportation Plan

## Figure 5-2: Funded Pedestrian Improvements



### *5.2.3 Missing Sidewalks near Schools with Hazardous Walk Conditions*

Pedestrian system needs for Broward County are focused on safety and on accessibility to schools and parks. The Broward County School District has classified schools by whether or not they have hazardous walking conditions. Using GIS, an analysis was completed to identify where existing sidewalks are missing within a 2-mile radius buffer around each one of these schools. These missing sidewalks are a priority for completion to provide safe walking access to these schools and were included in the pedestrian needs analysis. Figure 5-3 shows the missing sidewalk segments relative to the elementary school locations.

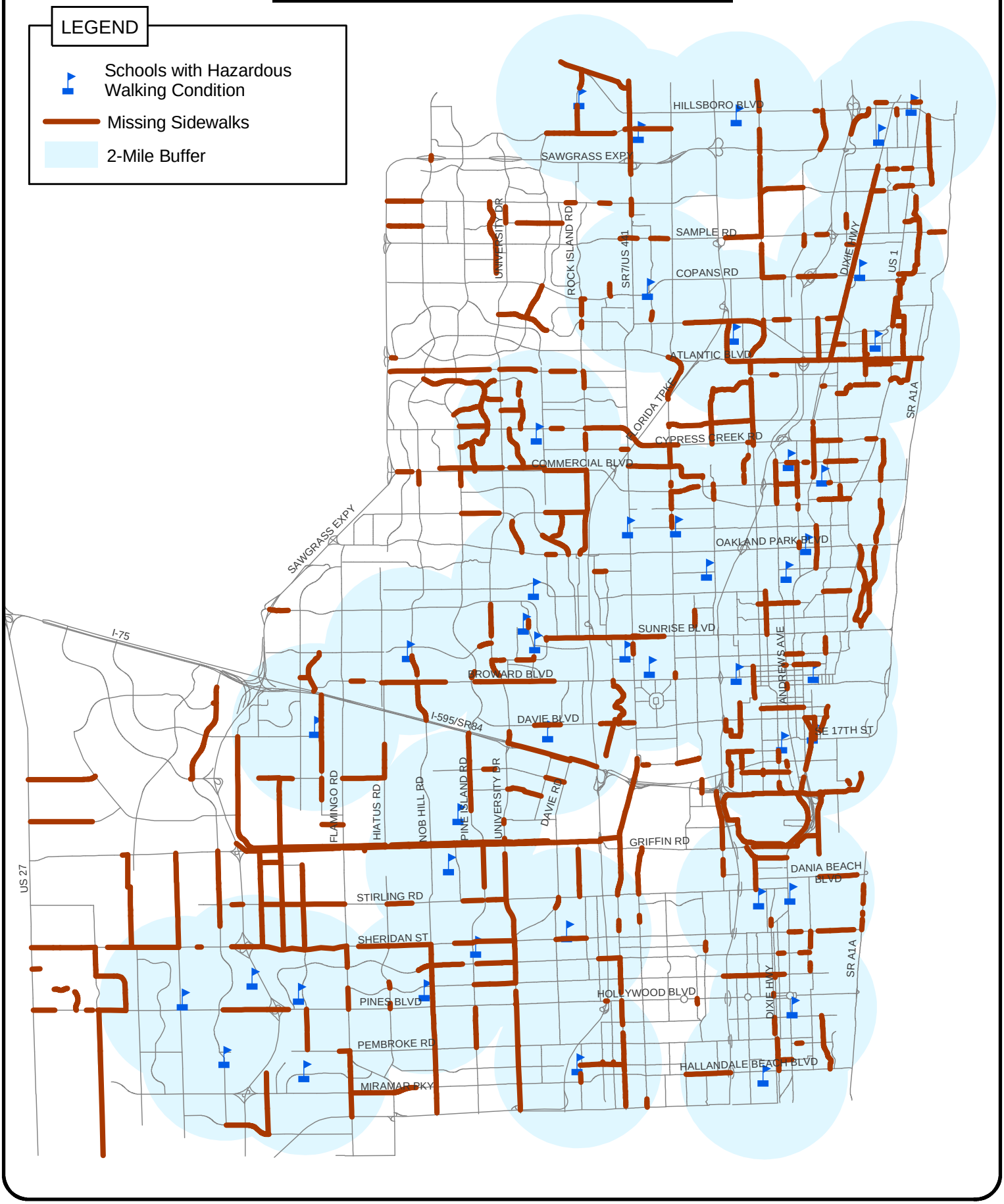
### *5.2.4 Sidewalk and Transit Access Conditions in Pedestrian Focus Areas*

The Sidewalk Conditions and Transit Amenities Inventory is part of a program by the Broward County Metropolitan Planning Organization (MPO). This is an effort to assemble a countywide GIS database of existing conditions along transit routes for pedestrians and transit users. The information is used to identify deficiencies in the transportation network for these modes so that improvements can be programmed consistent with this year Multi-modal Long Range Transportation Plan, and the County Commission's initiative to enhance livability, particularly through improved facilities to support alternative transportation. The inventory is consistent with the Pedestrian Plan for the Broward County Urban Area, meets the requirements of the Transportation Equity Act of the 21st Century (TEA-21) of 1998, and is in accordance with the provisions and specifications therein.

The studies included an evaluation of the following: identifying where sidewalks exist, assessing the physical conditions of sidewalks, assessing access conditions along the sidewalks, and identifying the existence and the quality of street lighting at bus stops. The study areas are shown in Figure 5-3.

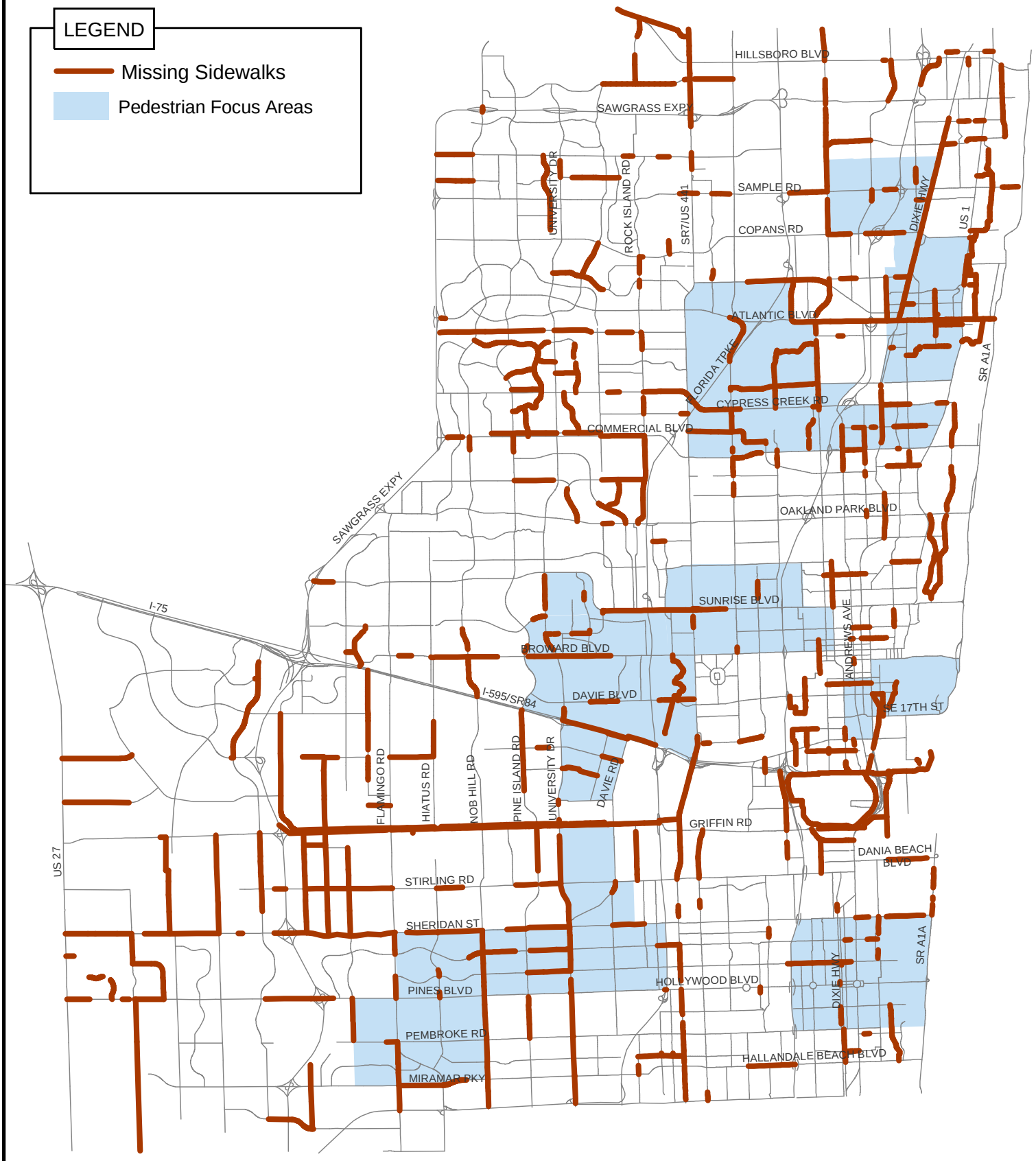
# Broward County 2030 Long Range Tranportation Plan

## Figure 5-3: Missing Sidewalks near Schools with Hazardous Walk Conditions



# Broward County 2030 Long Range Tranportation Plan

## Figure 5-4: Broward County Pedestrian Focus Area Studies



### *5.2.5 2030 Pedestrian System Needs*

The 2030 pedestrian needs plan was developed through a prioritizing process during which the followings were considered:

- Schools with hazardous walking conditions
- High pedestrian traffic generators including parks and libraries
- Dangerous mid-block crossings

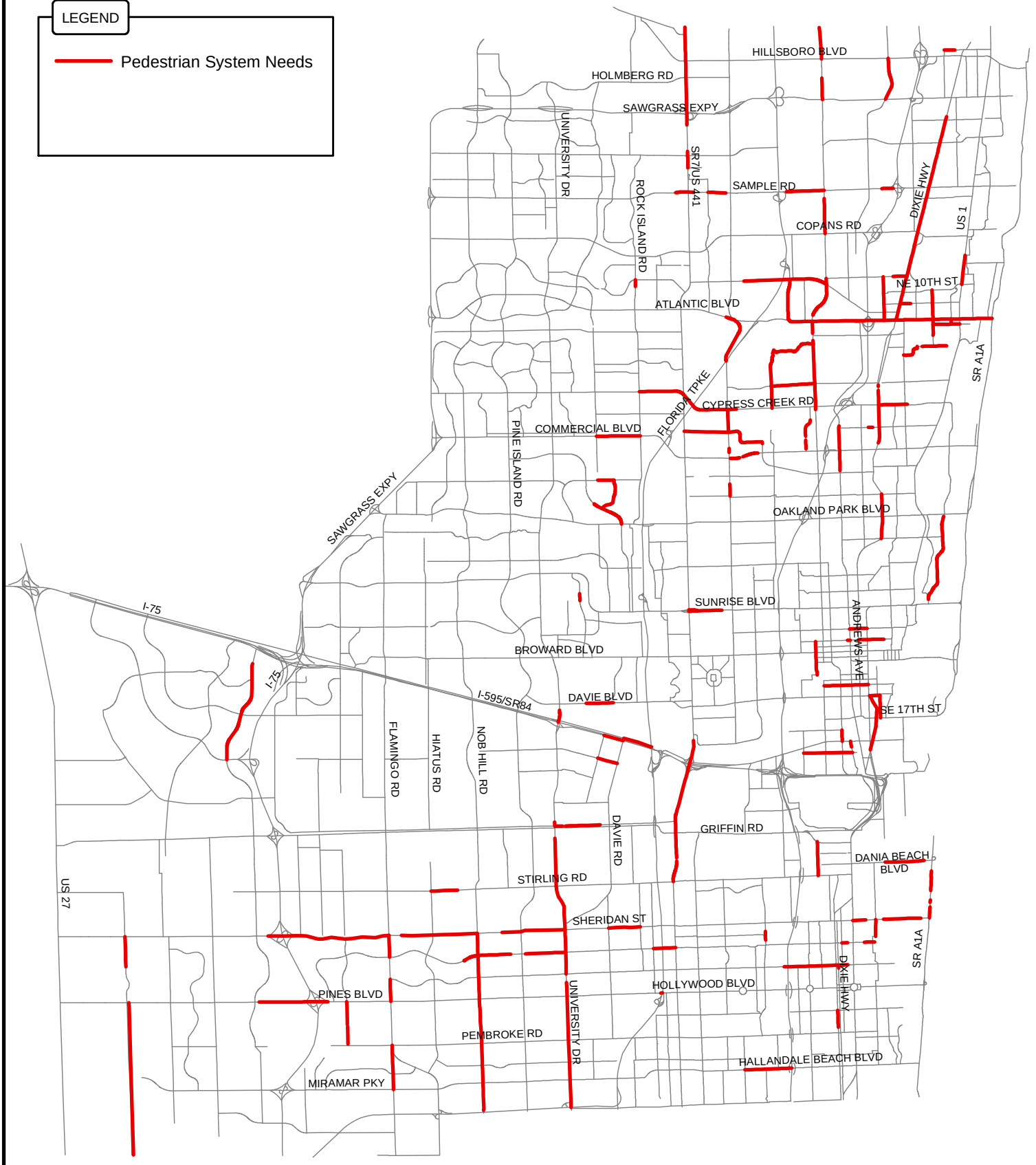
The 2030 pedestrian system needs plan is comprised of over 100 miles of missing sidewalks, as shown in Figure 5-5. They have been grouped by roadway classification in Table 5-2 below. The cost of these pedestrian system needs was estimated at $22.7 million. More discussions on prioritizing these projects is including in Chapter 8.

**Table 5-2: 2030 Pedestrian System Needs Summary**

| Functional Classification | Length (miles) | Cost ($000) |
|---|---|---|
| Principal arterial | 26.7 | $6,044 |
| Minor arterial | 29.2 | $6,624 |
| Collector | 30.2 | $6,859 |
| Local road | 14.2 | $3,218 |
| **TOTAL** | **100.3** | **$22,745** |

# Broward County 2030 Long Range Tranportation Plan

## Figure 5-5: Pedestrian System Needs



## 5.3 Broward Greenways Plan

This plan, developed in 2001, identifies a system of connected Greenways corridors throughout the County, making use wherever possible of existing "green" rights-of-way like canals and linear parks. A number of corridors have been selected to represent "phase-one" of the Broward County Greenways System. They include:

- Dixie Highway,
- C-14, Cypress Creek,
- New River-SR 84, and
- Flamingo Rd Trail
- Hiatus Rd, C 42 Canal
- SR A1A (added in 2002).

These Phase-One corridors were identified as those with the highest priority for development. These corridors effectively form a framework that traverses all parts of the County, and provide a good representation of differing types of trails, from wide paved and unpaved trails through natural and rural areas, to wide sidewalks through urban areas. This approach provides opportunities for all types of trail users and interests.

The greenways identified as priorities from this planning effort are shown in Figure 3-2. The majority of facilities addressed are focused along canals, riverbanks and utility easements, and where possible incorporated into linear parks. The identified greenways tie in at numerous locations with the sidewalk system, and provide for pedestrians who are more comfortable walking in a quieter off-road setting. These proposed greenways have been considered in the 2030 Pedestrian needs plan.

## 5.4 Bicycle Needs Assessment

The bicycle plan developed for the 2030 update has been identified after consideration of local conditions and plans, including:

- Analysis of Existing Conditions
- Committed Improvements
- Bicycle Suitability Map (2001)
- Broward Greenways Plan
- Bicycle Level of Service (BLOS)
- Bicycle Facilities Network Plan Update, 2003

The following sections describe each of these in detail. Together with the committed improvements in the MPO's 5-year program, a list of bicycle system needs has been developed and is provided at the end of this section.

### *5.4.1 Existing Conditions*

Broward County currently has in excess of 50 miles of dedicated bicycle facilities – either on-street bike lanes, or bike paths. In addition, a significant number of bicycle lane improvements are included currently in design plans for roadway improvements. The Existing and Committed Bicycle Facilities Network is shown in Figure 3-3.

### *5.4.2 Committed Improvements*

A number of bicycle system improvements are included in the Transportation Improvement Program (TIP). They were addressed in Section 3.

### *5.4.3 Relevant Bicycle Studies*

Bicycle Facilities Network Plan

This plan updated by the MPO in 2003 has two goals:

- Provide a safe and convenient network of connected bicycle facilities, and
- Encourage increased use of the bicycle facilities network

The plan was developed based on existing conditions in the County, characteristics of bicyclists, current transportation system demands, projected future conditions and requirements for development of the future network. The plan also addresses funding sources, and lays out an implementation plan in short range (10 year) and long range (25 year). Implementation is divided into the following facility types:

On-road facilities, as defined in the Broward County Bike Plan, include:

- Bike Lanes – Striped lanes of at least four feet wide with a diamond pavement marking indicating lane dedicated for bicycle travel.
- Paved Shoulders – Shoulders outside the travel lane available for bicycle use.
- Wide Curb Lane – A vehicular lane that is wider than the adjacent travel lanes to provide more room for the motorist to pass a bicyclist.
- Wide Curb Lanes with lane stripe – Some roads in this category will have a lane stripe similar to a bike lane, but will not have a diamond symbol or bike lane signs. These lanes will be at least three feet wide.
- Bicycle Boulevard Facilities
- Support Facilities
- Support Programs for school and non-school education and encouragement

In addition, the MPO produced a reference booklet outlining best practices for providing end of trip facilities at existing and new developments in the county – including bicycle parking, shower and locker facilities, and maintenance facilities.

### *5.4.4 Bicycle Suitability Map (2001)*

The revised bicycle suitability map (2001) shows where on street bicycle facilities exist (bike lanes; paved shoulders; wide curb lanes and wide curb lanes with lane stripe) and what level of interaction with motorized traffic would be encountered by cyclists using roadways (least;

moderate; moderate to high; and highest interaction). The bicycle suitability map is shown in Figure 5-6.

This bicycle suitability map is intended to serve as a reference for bicycling in Broward County. The primary factors considered in evaluating bicycle facilities were traffic speed, volume and outside lane width; however other factors including number of driveways, pavement condition, and adjacent land use were considered. Each roadway's characteristics were collected and then rated according to a computer model developed at Auburn University and adapted for Broward County. The streets that are color-coded were categorized according to how they scored on over 20 factors that affect bicycling. The preliminary results were field-tested and the model was adjusted as necessary by local cyclists and transportation professionals.

### *5.4.5 2030 Bicycle Needs Assessment*

Based on a review of the existing conditions, the committed improvements and the other information presented above, and working with the Broward County Bicycle Advisory Committee, a year 2030 prioritized Bicycle System Needs list was developed. This is shown in and in Figure 5-7 in this section. The cost of bicycle system needs was estimated at $101.6 million.

By the year 2030, with the completion of the projects contained in this needs list, a number of cross-county bicycle routes will allow cyclists to traverse the county in a north-south or east-west in a safe and convenient manner. The following routes will provide for this travel need:

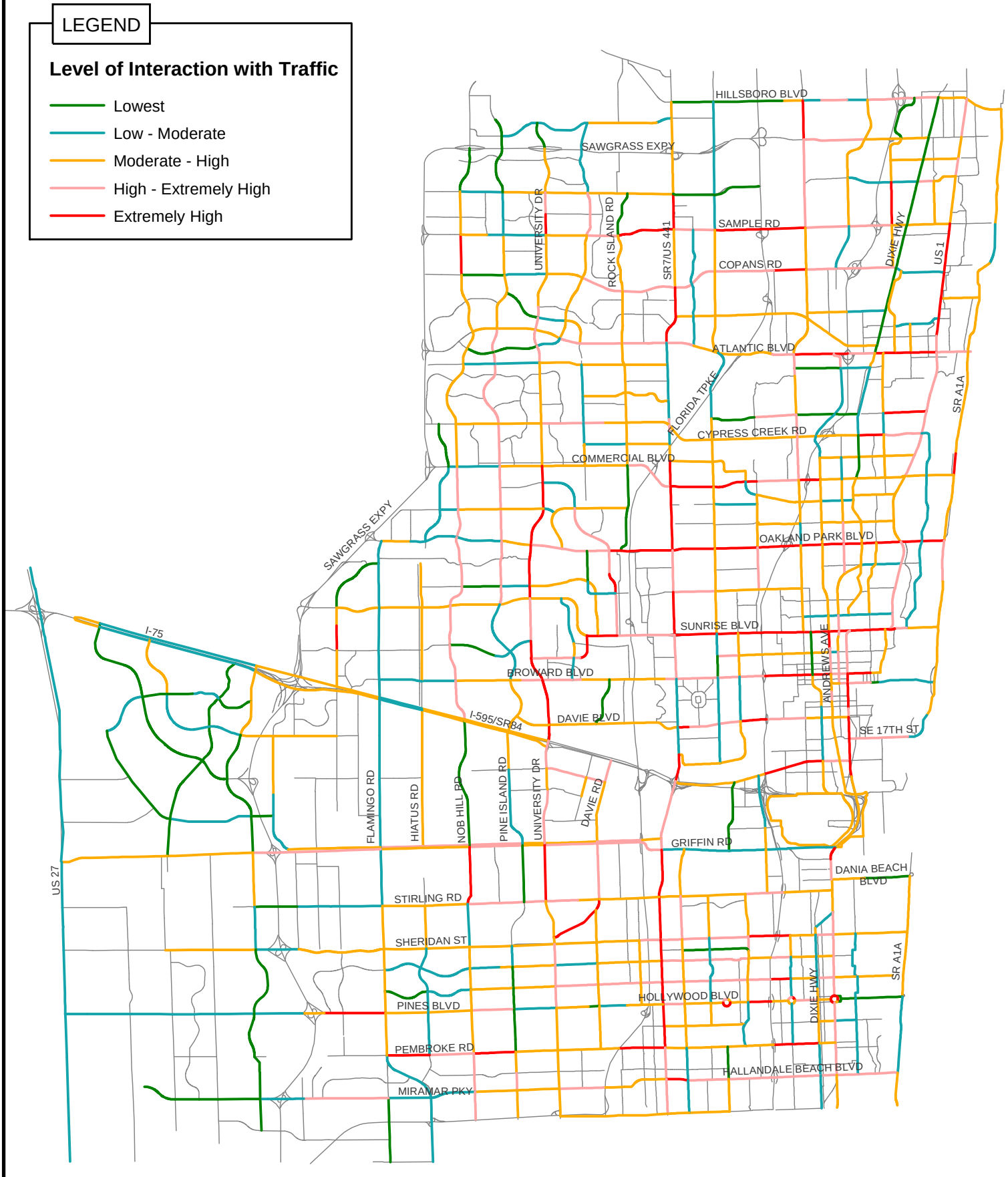
- Andrews Avenue
- Atlantic Boulevard
- Broward Boulevard
- Copans Road
- Federal Highway
- Hiatus Road
- Park Road
- Pembroke Road
- Peters Road
- Prospect Road
- Rock Island Road
- Royal Palm Boulevard

**Table 5-3: 2030 Bicycle System Needs Summary**

| Functional Classification | Length (miles) | Estimated Cost ($000) |
|---|---|---|
| Principal arterial | 58.0 | $34,578 |
| Minor arterial | 51.8 | $30,882 |
| Collector | 56.5 | $33,684 |
| Local road | 2.0 | $1,192 |
| **TOTAL** | **168.3** | **$100,336** |

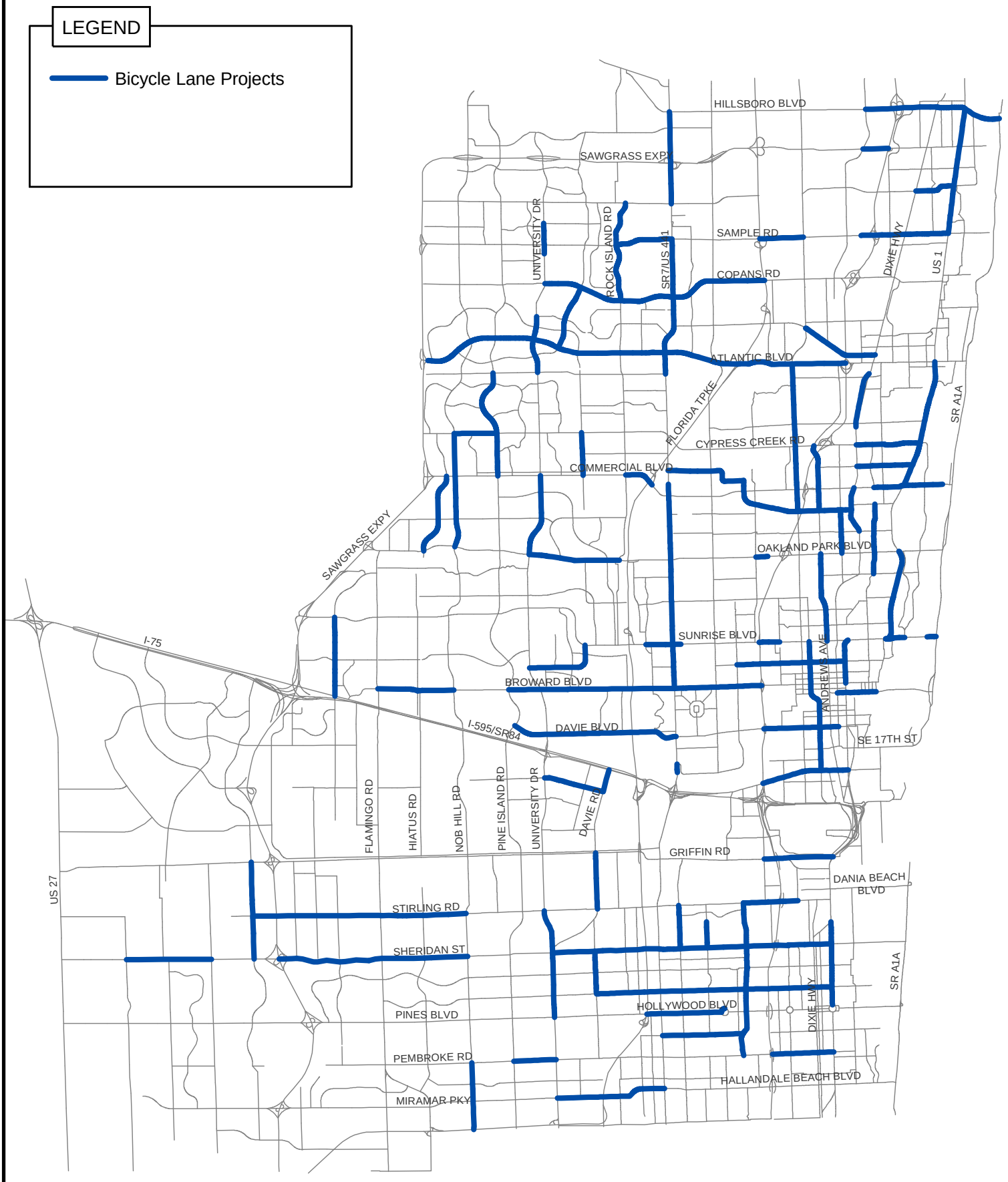
# Broward County 2030 Long Range Tranportation Plan Update

## Figure 5-6: Bicycle Suitability



# Broward County 2030 Long Range Tranportation Plan

## Figure 5-7: 2030 Bicycle System Needs



## 5.5 Waterborne Transportation Needs

### *5.5.1 Existing Conditions*

Fort Lauderdale's Waterbus service, which started as Water Taxi, currently runs between Oakland Park Boulevard and Southeast 17th Street along the Intracoastal Waterway, and west along the New River into downtown Ft. Lauderdale as far as River House just west of the FEC rail corridor. These services target both commuter and recreational trips and run on a fixed route schedule with 30-minute headways during peak morning and evening periods and one-hour headways during the day and on weekends. Hours of service are from 6:30 am to 12:30 am.

The Water Bus service and Broward County Transit (BCT) have collaborated to provide more convenient connections between BCT's bus stops and Water Bus stops along the Intracoastal Waterway and New River. BCT and Water Bus 31-Day passes are interchangeable and are accepted by both BCT and Water Bus.

### *5.5.2 Committed Improvements*

In September 2004, the Broward County MPO voted to extend funding the Waterbus service for one more year using CMAQ funds.

### *5.5.3 Waterborne Transit Needs*

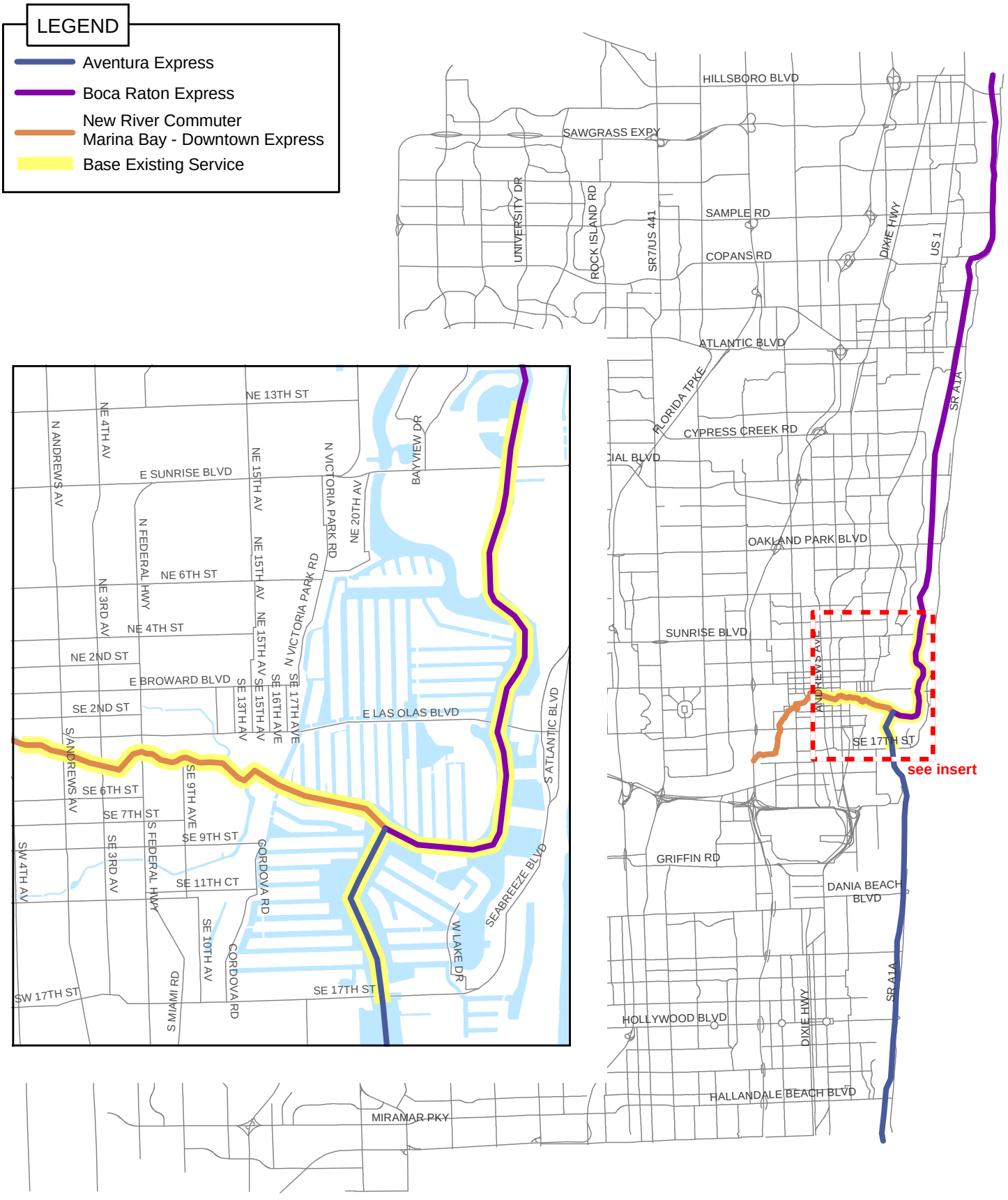
The LRTP study team worked closely with Water Taxi representatives to assess the future needs for the system. Two primary goals are:

- Support of Fort Lauderdale's "Venice of America" image by continuing to provide a ferry travel service to visitors and local residents
- Connectivity and coordination with the Broward County Transit bus system

The 2030 needs for the waterborne transportation system are shown in Figure 5-8. The cost of these needs for capital and operating expenses was estimated at $58 million.

# Broward County 2030 Long Range Tranportation Plan

## Figure 5-8: 2030 Waterborne Transportation Needs



## 5.6 Transit and Roadway Needs Assessment

The identification of future transportation needs for Broward County's roadway and transit system for 2030 was developed in a comprehensive manner through the review of a number of relevant plans and policies in order to ensure consistency between the 2030 plan and previously adopted plans. The plan was also developed with the assistance of a significant amount of public involvement obtained through the public meetings and workshops and other outreach activities. Finally, input received from the Broward County Metropolitan Planning Organization (MPO) and its advisory committees, which stimulated a great deal of interest and research into transit options, had a significant part in the shaping of this section of the plan. The evaluation of transit and roadway needs was performed using the FSUTMS transportation demand model, which addresses both of these modes. The previously adopted 2025 Long Range Transportation Plan was the starting point for this effort.

The Needs Assessment is not a plan but an identification of infrastructure needs to accommodate future travel demand at the currently adopted level of service standards without consideration of economic, environmental, physical, and political constraints. The transit and roadway needs are added to the assessed needs for the other modal element needs to estimate the costs required to develop the ideal future transportation system for the county. The assessment was evaluated in terms of the identified financial resources so that a Cost Feasible Plan can be developed.

The development of a needs assessment for the transit and roadway systems was developed in a multi-step process, which involved developing alternatives focused on the highway system and transit system respectively, and using the travel forecast model to evaluate these alternatives. A balanced needs assessment was then developed, which employed the most efficient and most publicly acceptable elements of each alternative. The process is further described below.

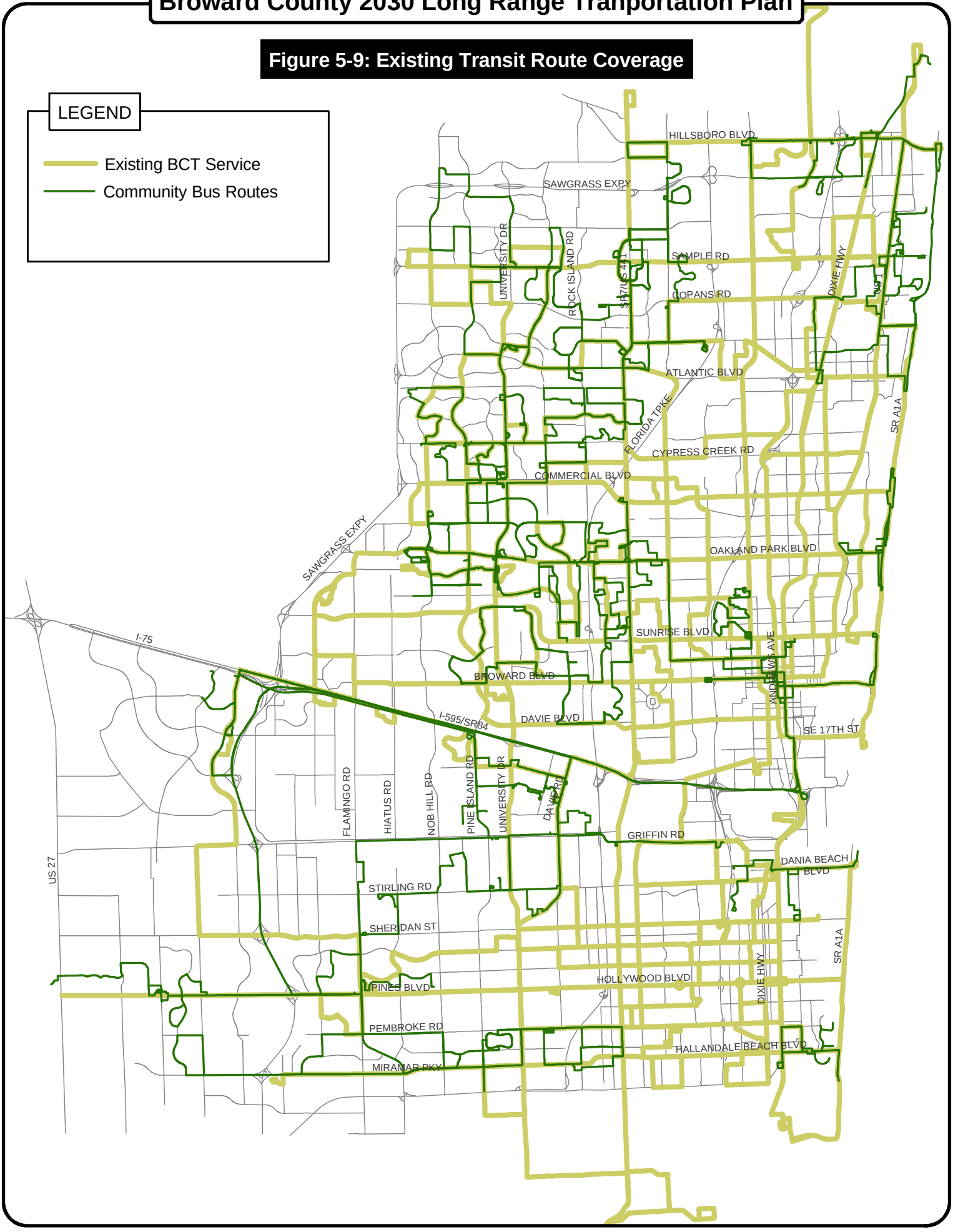
### *5.6.1 Existing Transit Conditions*

Transit services are provided in Broward County by the Broward County Mass Transit Division (BCT), and consists of mainly fixed-route and paratransit services. As of June 1, 2004, BCT's fixed-route fleet consisted of over 260 full-size transit buses with seating of 39 to 43 persons each. Each of these vehicles is air-conditioned, equipped with wheelchair lifts and bicycle racks, and is ADA-compliant. Average age for the fleet was 5.72 years and average mileage was 302,869 miles. The system carries over 100,000 passengers daily and over 30 million annually. The existing route coverage is shown in Figure 5-9. The figure shows Broward County's community bus routes currently operating in 13 communities, which feed into the BCT trunk routes.

The system operates with two dedicated fixed facilities – the downtown terminal on Broward Boulevard, and the West Regional Terminal at the Broward Mall. Other transfer locations include major shopping malls (Sawgrass Mills, Lauderhill Mall) and on-street transfer points. BCT operations centers are located in Pompano Beach adjacent to the Turnpike, and in the City of Dania Beach at Ravenswood Road. The first of five new neighborhood transit centers are being developed in Pompano Beach (Dixie Highway at Atlantic Boulevard), in Margate and at the South Florida Education Center. These centers will allow for interchange of trips between BCT routes, provide amenities such as shopping and child-care, and serve as regional hubs for smaller community buses.

# Broward County 2030 Long Range Tranportation Plan

## Figure 5-9: Existing Transit Route Coverage



Currently, there are approximately five thousand bus stops in Broward County. Of these, approximately 40 percent have benches, 8 percent have shelters, and 6 percent have bus bays. One of the focuses of improving the quality of transit service from the user's point of view is to increase the provision of these facilities to provide shelter for waiting transit riders.

Other elements of quality of service for transit include hours or span of service and frequency and may be defined in terms of level-of service (LOS). For span of service, a LOS "A" corresponds to 19-24 hours of service per day; while a LOS "F" corresponds to service that operates only for up to 3 hours a day. For service frequency, a LOS "A" represents systems with at least 6 vehicles per hour, while a LOS "F" represents systems with only one bus per hour.

The majority of BCT service has good spans of service corresponding to LOS B or C (14 to 18 of service daily), but poor frequencies with LOS D or E (only 1 to less than 4 buses per hour) Paratransit services are provided by BCT directly and by contract with service providers. Door-to-door transportation is provided to people unable to access public or private transportation because of age, functional disability or socioeconomic disadvantage. These services are funded in part by the Florida Commission for the Transportation Disadvantaged (FCTD). The services are coordinated with Miami-Dade and Palm Beach Counties due to the number of inter-county trips.

### *5.6.2 Existing Roadway Conditions*

The existing roadway conditions in Broward County, including the number of lanes and the level of congestion in 2000, the base year of this analysis, are covered in Section 4 – Model Development and Review.

### *5.6.3 Committed Improvements*

#### Transit Development Plan

The Transit Development Plan (TDP) is an annually updated short-range plan, which addresses public transportation needs over the next five years. The improvements include new bus routes; headway developments; realignment of routes and service extensions; development of Community Transit Centers; and Community Bus expansion.

#### Existing Commuter Transit Demand

A further resource used to determine future transit needs was an assessment of major home-based-work trip interchanges between super zones in Broward County as shown in Figure 5-10. This figure was produced from outputs from the FSUTMS travel demand model to determine the number of daily home-to-work trips between major concentrations of population and employment.

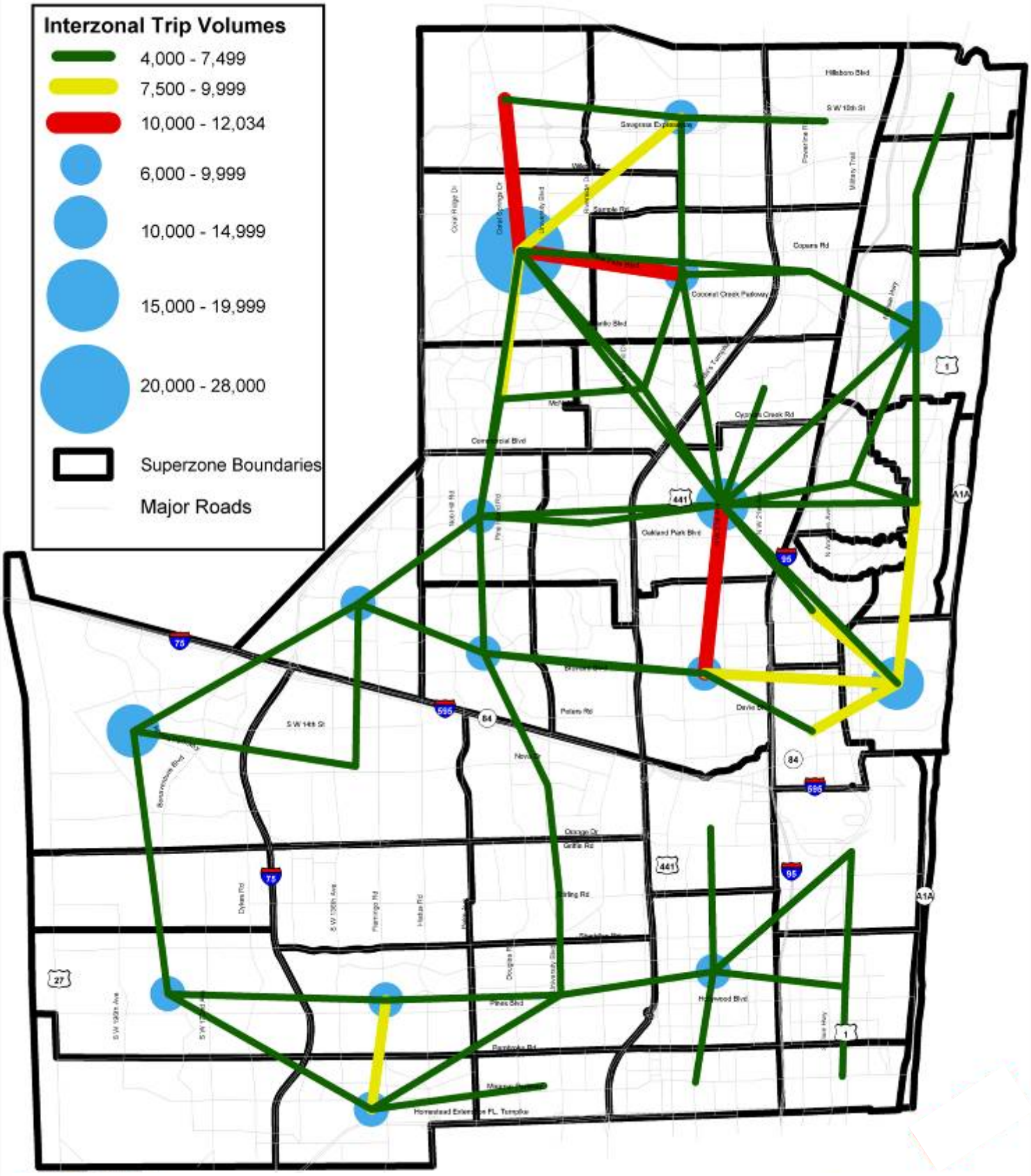
The County's traffic analysis zones are divided into 15 super zones. Therefore, there are 225 two-way trip interactions between these super zones. The figure shows the top thirty interchanges of home-to-work trips to indicate where transit service would be most likely to impact commute traffic.

## Committed Roadway Improvements

The current Transportation Improvement Program (TIP), adopted by the MPO in 2004 was used to update the base-year (2000) network to reflect the existing plus committed condition. This

# Broward County 2030 Long Range Transportation Plan Update

Figure 5-10: Major Home Based Work Trip Interchanges



Multimodal list of projects has committed funding sources and is therefore "in the pipeline" for implementation in the near-term, so those projects should not be considered as part of the long-range needs.

### *5.6.4 Development of Alternatives*

An important phase in the development of the Broward 2030 Long-Range Transportation Plan update is the development of Needs Plan alternatives. Alternative projects were developed and tested using the travel demand model. Two alternatives were initially developed using travel demand models; subsequently, the best projects were selected from these alternatives for a third alternative. The first alternative is known as the "highway emphasis alternative" which emphasizes alternative attempts to correct future traffic congestion primarily through additional roadway capacity with a limited number of transit enhancements. The second alternative is called the "transit emphasis alternative." This alternative also includes important roadway capacity projects but emphasizes enhanced mobility through a series of transit improvements. The third alternative is called "balanced alternative" which was proposed as the recommended Transportation System Needs for the year 2030.

Inputs to the development of the Needs Assessment alternatives included year 2030 travel demand model runs based on the existing-plus-committed (E+C) highway network. LOS deficiencies were mapped out, as shown in Figure 4-2, and evaluated in recommending specific improvements. The 2025 Needs and Cost Feasible Plans were also used as input since these represent existing adopted MPO plans. The draft Goals, Objectives, and Policies (contained in Section 2) for the 2030 Plan Update was used as guidance. The Broward County Trafficways Map was used to identify available roadway rights-of-way for all major corridors in the County.

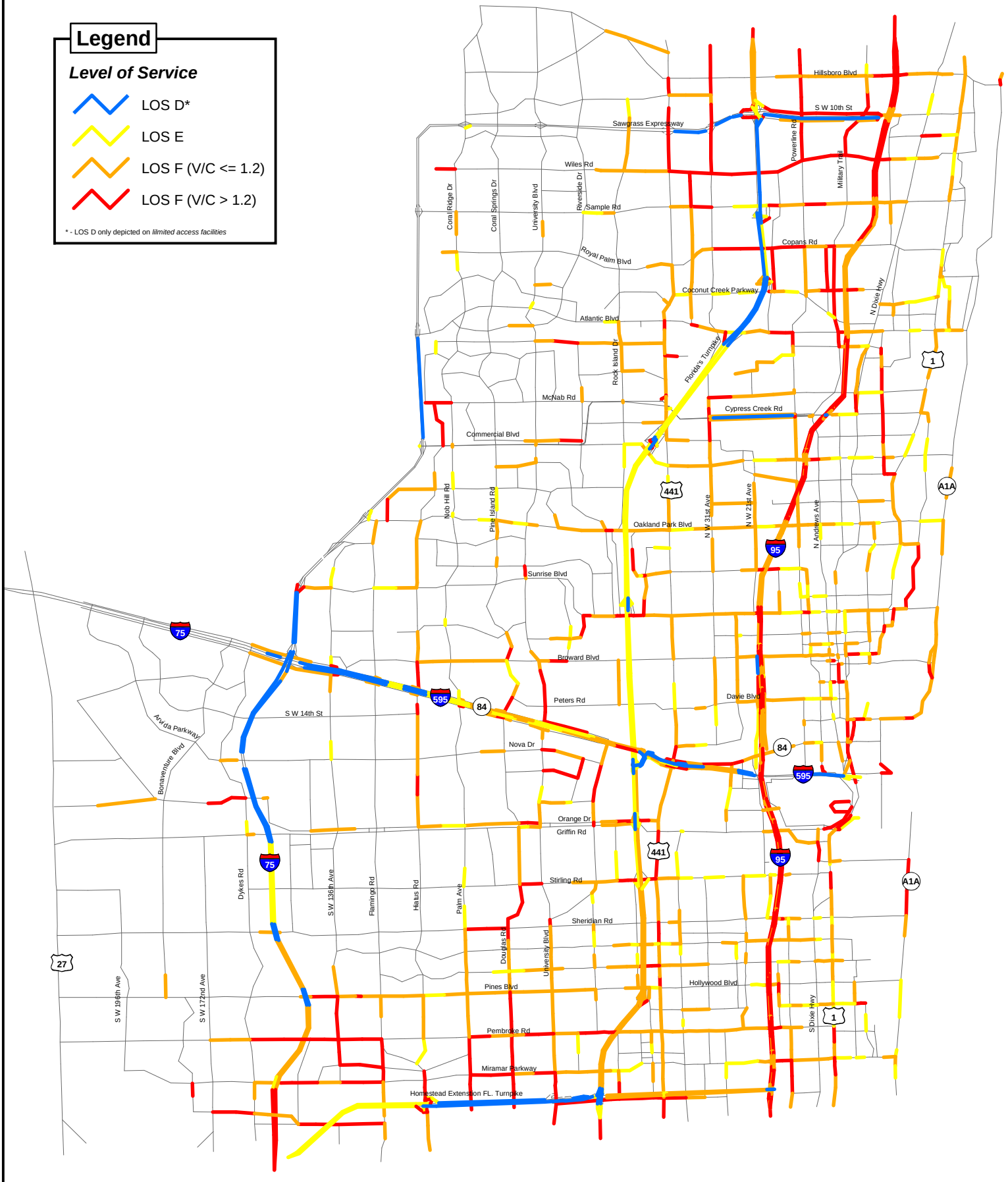
### *5.6.5 2030 Highway Emphasis Needs Alternative*

Development of the 2030 Highway Emphasis Needs Alternative consisted of three highway components and two transit components. The three highway components are the E+C network, the 2025 Needs projects, and a list of recommended projects based on additional growth anticipated beyond the 2025 horizon. The two transit components used as input are the Transit Development Plan (Transit E+C) and the 2025 Transit Cost Feasible Plan, which included several new high performance transit routes. A key difference from the 2025 highway emphasis alternative included further extension of the Cypress Creek/McNab Expressway westward to connect with the Sawgrass Expressway in the 2030 alternative.

The congestion results of this alternative subjected to Year 2030 travel demand are shown in Figure 5-11.

# Broward County 2030 Long Range Transportation Plan Update

## Figure 5-11
## Year 2030 Highway Emphasis Alternative
## LOS Deficiencies



### *5.6.6 2030 Transit Emphasis Needs Alternative*

The 2030 Transit Emphasis Needs Alternative consists of two highway components and three transit components. The two highway components are the E+C network and selected high priority projects in the 2025 Cost Feasible Plan. The three transit components are the Transit Development Plan, the 2025 Transit Cost Feasible Plan, and a series of additional premium transit enhancements beyond what is found in the 2025 Cost Feasible Plan. With an emphasis on transit, this alternative includes fewer highway capacity projects. Therefore, this alternative is limited to highway projects found in the 2025 Cost Feasible Plan. In other words, this alternative does not include 2025 Needs Plan projects that did not make the 2025 Cost Feasible Plan listing and it does not include the new highway projects recommended in the highway emphasis alternative to address needs beyond the year 2025. Furthermore, this alternative limits 2025 Cost Feasible highway projects to those most needed (i.e., projects with volumes barely over LOS thresholds were not included). Figure 5-12 displays 2030 LOS deficiencies based on the transit emphasis network alternative.

## 5.7 2030 Balanced Transit and Roadway Needs

An analysis of the information presented above was used to develop the 2030 balanced project needs for the transit and highway modes for Broward County.

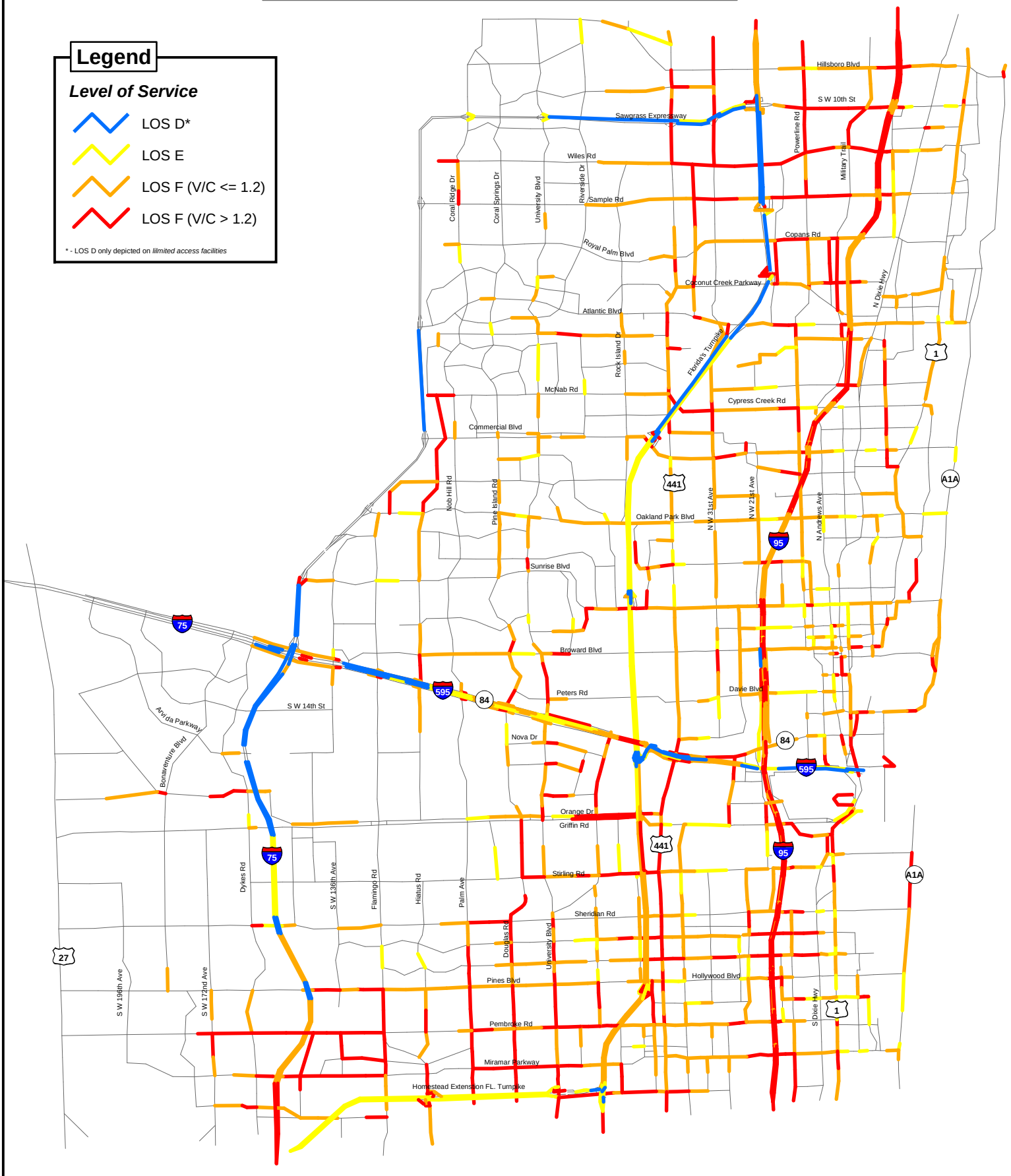
### *5.7.1 2030 Transit System Needs*

The first priority in developing transit system needs was a focus on improvements to existing BCT local bus services. Additional premium transit enhancements included in the balanced needs network were slightly scaled back from the transit emphasis alternative because of the cost implications of that alternative. The balanced transit network includes:

- The premium transit enhancements include:
  - SR 7/US 441 light rail
  - East-West Transit Corridor light rail
  - FEC commuter rail
  - Downtown Fort Lauderdale light rail
  - Airport/Seaport People Mover automated guideway
- Eight new Bus Rapid Transit (BRT) routes along primary north-south and east-west corridors including:
  - University Drive
  - Powerline Road
  - Oakland Park Boulevard
  - Sunrise Boulevard
  - Broward Boulevard
  - Hollywood-Pines Boulevard

# Broward County 2030 Long Range Transportation Plan Update

## Figure 5-12
## Year 2030 Transit Emphasis Alternative
## LOS Deficiencies



- Sample Road
- Atlantic Boulevard

The BRT routes link major activity centers and connect with other premium transit facilities and are assumed to provide a higher level of transit than either local bus or arterial-level express buses. It is anticipated that portions of the BRT may operate in exclusive guideways such as roadway medians. The BRT system would also include exclusive queue-jumper lanes approaching selected intersections giving buses priority over autos at stoplights. The BRT system would also likely include attractive transit stations or plazas for boarding and alighting of vehicles.

- A number of express buses with limited stop services on high demand corridors
- A number of new local bus routes including a Central Circulator loop from Tri-Rail and Downtown Ft. Lauderdale to the beaches
- Community Bus service expansion
- New Community Transit Centers
- 20-minute headways on Tri-Rail

Figure 5-13 shows 2030 transit system needs. Table 5-4 operational and capital costs for the Transit System Needs projects, which are estimated at $5 billion.

**Table 5-4: 2030 Balanced Alternative - Transit System Needs Summary**

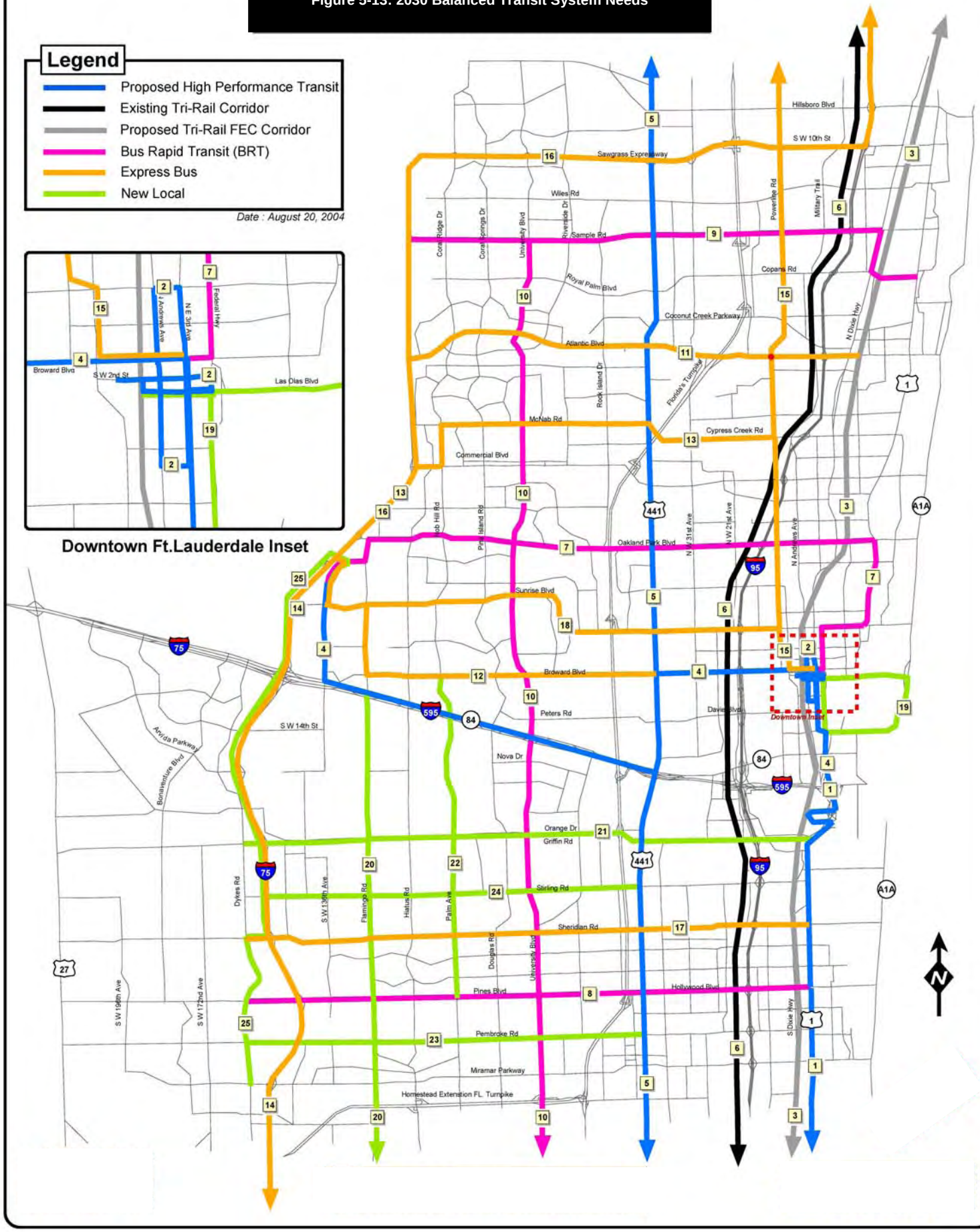
| Type of Service | Operational Cost ($000) | Capital Cost ($000) |
|---|---|---|
| Regular Service | $1,131,690 | $26,150 |
| Premium Transit | $886,061 | $2,963,016 |
| **TOTAL** | **$2,017,751** | **$2,989,166** |

### *5.7.2 2030 Roadway System Needs*

The Florida Standard Urban Transportation Modeling System (FSUTMS) model was used to evaluate all links for roadway improvement needs for the 2030 horizon year. This model focuses on classified roadways – i.e., collectors and above roadways within the county. These also include limited access roadways like I-95, I-75, I-595, Florida's Turnpike, and the Sawgrass Expressway. The model identifies roadway links that are shown to operate at unacceptable levels of service (E and F) in the future based on the distribution of new population and employment countywide by 2030. Improvements identified include roadway widening (lane additions), new interchanges, and some new roadways (generally connections of missing segments between existing roadways).

# Broward County 2030 Long Range Transportation Plan Update

## Figure 5-13: 2030 Balanced Transit System Needs



Criteria used to develop roadway system needs for Broward County for year 2030 included the following:

- Safety,
- Congested roadways (identified to be LOS E and F roadways),
- Air quality compliance,
- System continuity, and
- Transit-reliant links

Figure 5-14 illustrates the roadway needs projects for Broward County for 2030. The numbers shown on the figure correspond with the project numbers in Table 5-5.

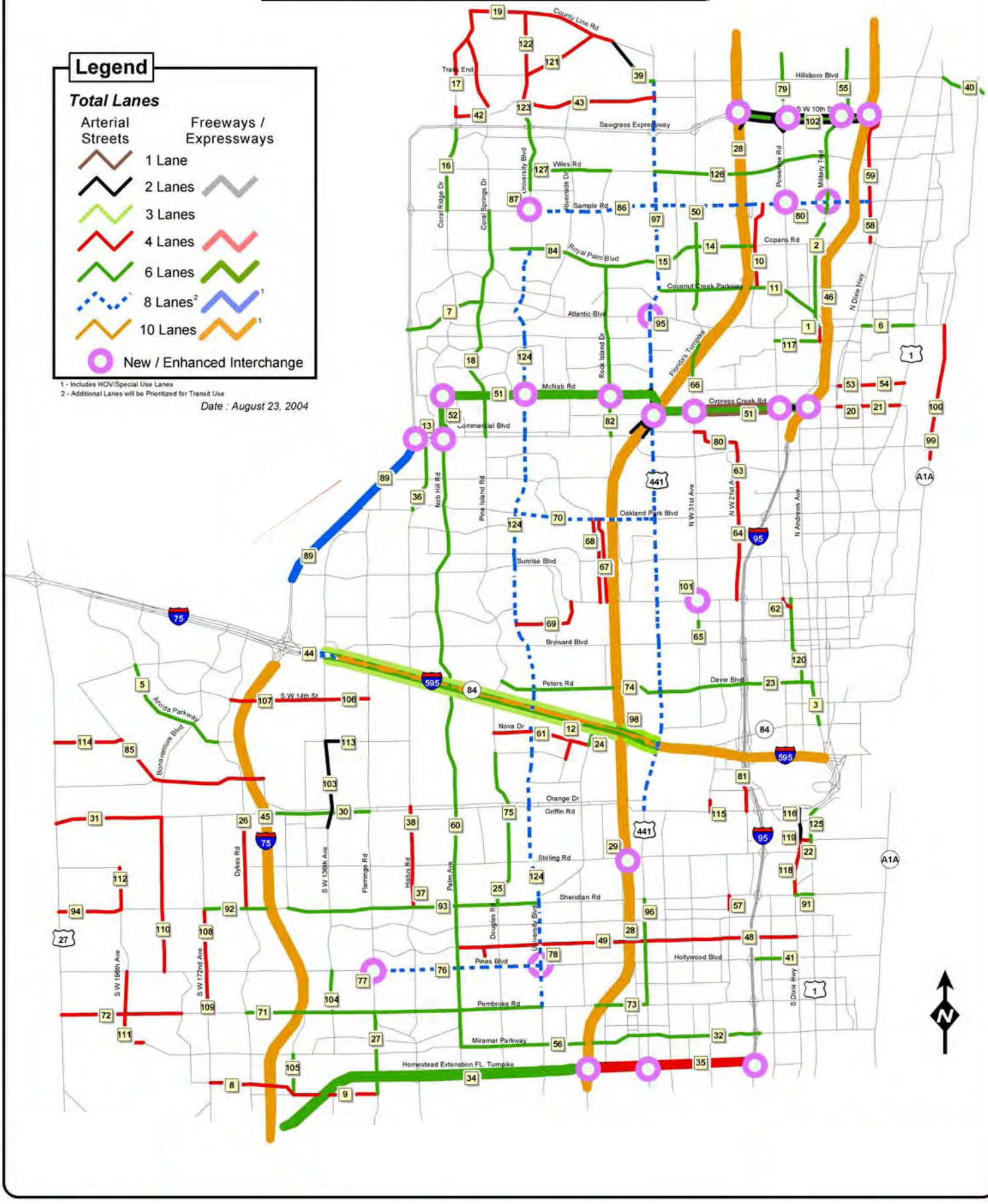
Roadways widening have been minimized in accordance with MPO Board direction, but are retained where determined to be critical to safety and mobility. The cost of these needs was an estimated $4.06 billion.

Major roadway improvements include additional lanes on sections of Florida's Turnpike, the Sawgrass Expressway, I-95, I-75, and I-595. A new cross county expressway is proposed along the Cypress Creek, McNab, and Commercial Boulevard corridors. Further study on an extension of the Homestead Extension of Florida's Turnpike is proposed between Florida's Turnpike and I-95. SW 10th Street is proposed for upgrading to a limited access corridor between the Turnpike/Sawgrass interchange and I-95. New connecting links are also assumed to adjacent counties and missing segments of collector and arterial streets in Broward County are proposed to create more of a grid street pattern in areas that are still under development.

**Table 5-5: 2030 Roadway Needs Assessment Summary**

| Project Type | Length (miles) | Estimated Cost ($000) |
|---|---|---|
| Corridor Improvements | | $512,861 |
| Lanes Addition | 300.5 | $3,103,603 |
| New Construction | 23.9 | $288,299 |
| New Interchanges | | $155,100 |
| **TOTAL** | | **$4,059,863** |

# Figure 5-14: 2030 Balanced Roadway System Needs



### *5.7.3 Evaluation of System Performance*

Comparisons of vehicle-miles traveled, vehicle- hour of delay, and percent of LOS F are provided graphically in Figure 5-15 to assess the performance of each alternative on an aggregate, system wide basis.

Each of the three alternatives has the similar number of vehicles-miles traveled. However, the Balanced Needs alternative provides the lowest vehicle-hour delay of the three alternatives, which all are significantly better than the 2030 E+C. Similarly, the 2030 Balanced Needs Plan performed best in terms of percent of roadways performing at level of service F. Therefore, the Balanced Needs was used as the basis of determining the Cost Feasible Plan.

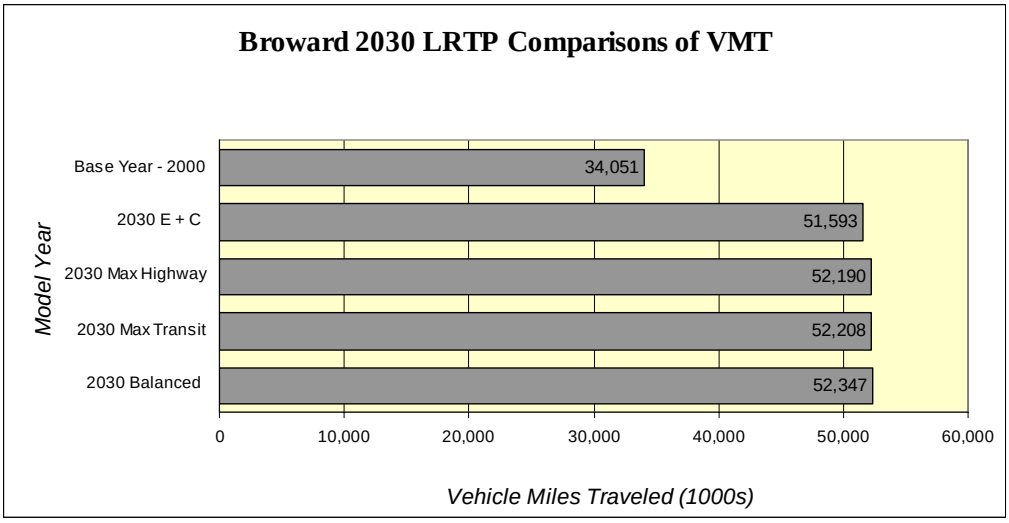
## 5.8 Freight Transportation Needs

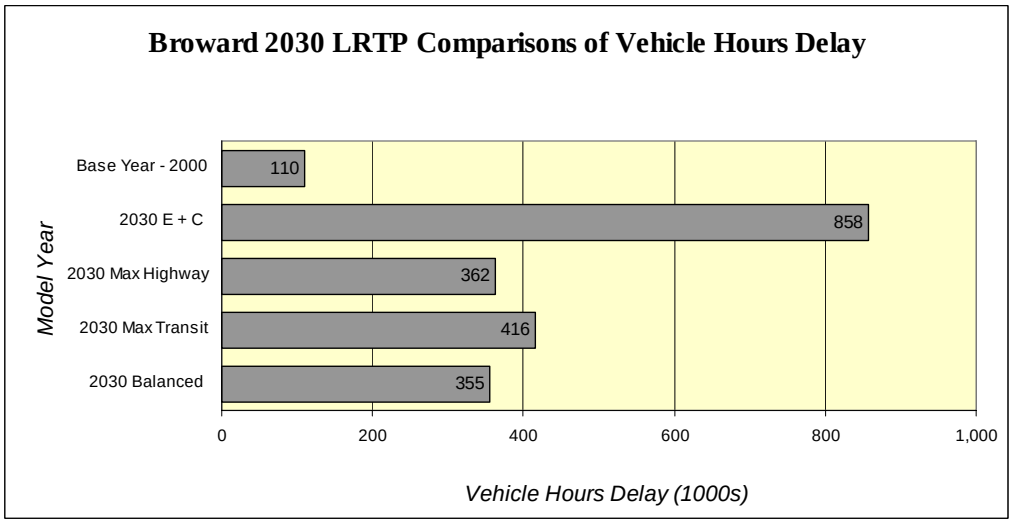
### *5.8.1 Broward County Freight Needs and Deficiencies*

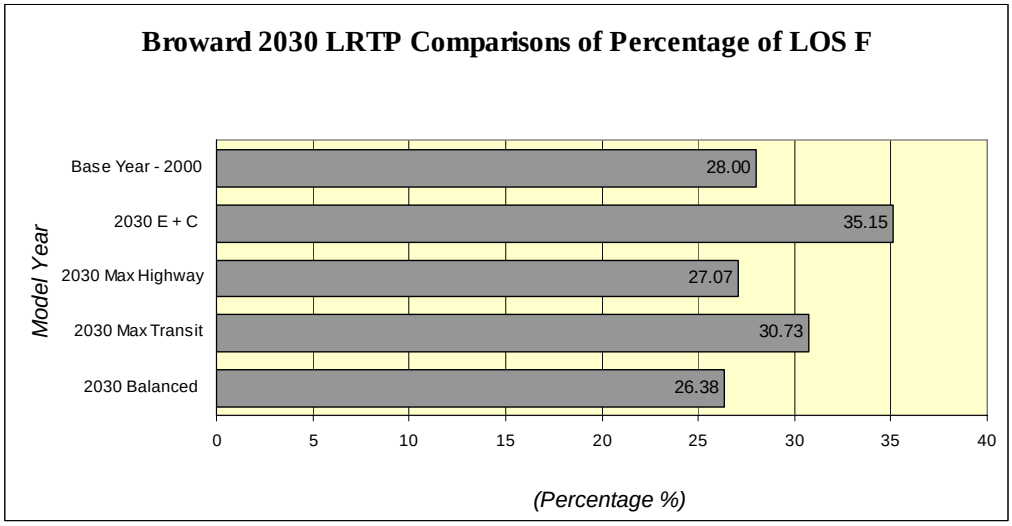
Geographical constraints and fast population growth pose challenges to freight mobility in Southeast Florida. Despite a relatively young transportation infrastructure, the tri-county region is experiencing rapid growth, causing congestion on key roadways. The region's roadway network includes significant capacity on north-south facilities, with I-95 and Florida's Turnpike. However, there is very little opportunity for expansion as future growth can essentially only occur in Palm Beach County and points northward. Growth of this type would likely increase northbound truck traffic in the tri-county region. East-west traffic poses a different problem, as freeway capacity is very limited, forcing truck traffic to use arterials. In addition, there are major load centers (e.g., three major seaports, three major international airports, and several rail yards) located throughout the tri-county region that generate truck traffic on the roadway network.

Critical challenges and deficiencies, concerning the movement of freight in Broward County, include: significant congestion in key freight corridors; limited access for freight movements; balance of freight operations and security; freight-specific management issues; need for improved regional communications and coordination; infrastructure limitations; and political and institutional barriers to freight mobility. These challenges and deficiencies are described below.

**Figure 5-15: Measures of Effectiveness for LRTP Alternatives**



### *5.8.2 Significant Congestion in Key Freight Corridors*

On June 19, 2002, the Palm Beach Post reported that the southeast Florida region (Miami-Dade, Broward, and Palm Beach counties) had the second fastest congestion growth rate in the United States. Stakeholders interviewed as part of the FGMS reported that all major highways in the region are congested and that the lack of east-west freeways is causing an over reliance on east-west arterials. Peak hours are spreading beyond the traditional a.m. and p.m. periods, and these problems are being compounded by the fact that the major freeways attract a wide array of users, including tourists, commuters, and heavy trucks. Expected population growth and increased freight volumes will further strain the transportation system in the future.

### *5.8.3 Limited Access for Freight Movements*

The region boasts three seaports, two major rail corridors (South Florida Rail Corridor [SFRC] and FEC), three major airports and four general service airports providing a multimodal network for moving freight. Although access in general is a regional advantage for southeast Florida, several deficiencies were identified.

- Port Access. Port Everglades is known for premier access to the Interstate system. As such, preservation of this access is critical to the Port's continued prosperity. Currently, projects are underway to improve the geometrics of the intersection at I-595/Eller Drive, including elimination of an at-grade rail crossing, and to secure the port with new checkpoint gates. The Broward County MPO should monitor the progress of these projects to ensure traffic queues and delays are minimized.
- Airport Access. Fort Lauderdale/Hollywood International Airport also boasts excellent highway access. However, the local connectors to Port Everglades and the air cargo facilities are limited. The highway infrastructure provides direct eastbound access from Fort Lauderdale International Airport (FLL) to Port Everglades, but westbound access from Port Everglades to FLL is indirect, requiring vehicles to traverse local and industrial roads. Poor access from air cargo terminals to I 595, I 95, and U.S. 1 also is a concern.
- Signage. There are few directional signs directing truck and cruise-related traffic in and out of Port Everglades, which often impedes the smooth flow of traffic in the Port area. Stakeholders cited a similar problem at Fort Lauderdale International Airport.
- Downtown Deliveries. Most truck traffic is comprised of local deliveries, and access for trucks making downtown deliveries is complicated by inadequate loading/unloading zones and other restrictions such as low-hanging trees.

### *5.8.4 Balancing Freight Operations and Security*

The events of September 11, 2001 had a profound impact on freight operations nationwide. The challenge faced by freight stakeholders in Broward County is to balance security needs with the need for fast, efficient freight movements. For example, new security requirements, while increasing safety and security within the Port Everglades complex, reduce the overall efficiency of port movements and cause bottlenecks along the main port entrance at Eller Drive. Only one truck is allowed dockside to serve a cruise ship at any one time, but large cruise ships require multiple deliveries prior to setting sail. This causes large queues of delivery trucks just as passengers are arriving for cruises. In addition, there is a need to keep cruise ship passengers separated from sensitive parts of the port complex.

### *5.8.5 Freight-Specific Incident Management Issues*

The State of Florida ranks third in the United States for the number of fatal truck crashes. Incidents, fatal or otherwise, impede freight operations. Issues include:

- Inadequate Equipment. The salvage equipment operated by the Turnpike is not sufficient to move heavy trucks, causing longer incident-related delays and a greater likelihood for secondary incidents.
- Liability. Further delaying clean-ups, on-scene commanders are often hesitant to clear truck accidents for fear that they would be liable for any losses incurred during that operation. Unlike in other states (e.g., Minnesota and Washington), on-scene commanders in Florida are not absolved of responsibility for such moves.
- Incident Response on Rail Corridors. Incidents on the South Florida Rail Corridor (SFRC) right-of-way can take as long as two to three hours to clear. Tri-Rail is working with various County Sheriff's departments to address this problem.
- Coordinated Response to HAZMAT and Other Emergency Incidents. A major issue is the coordination of incident command responsibilities among many different agencies, including county and local police, fire, rescue, and others. Gaps and jurisdictional overlaps in the system can cause confusion concerning which agency is responsible for the response.

### *5.8.6 Need for Improved Regional Communications and Coordination*

The lack of adequate communication and coordination may impede freight movements in a number of respects. Issues include:

- Regional Coordination and Multiple Jurisdictions. The southeast Florida region is divided among several large MPOs (Miami-Dade, Broward, and Palm Beach) and three FDOT districts (4, 6, and the Turnpike Enterprise). As neither freight nor passengers acknowledge jurisdictional boundaries during their trips, transportation planning in the region, including ITS deployments should occur at a regional level. However, ITS and freight priorities vary considerably among the six agencies, making regional planning difficult. Creation of the Regional Transportation Authority (RTA) is anticipated to assist in resolving regional transportation issues by facilitating regional planning activities. In addition, Florida is a participant in the Commercial Vehicle Information and Systems Network (CVISN) program, which was designed to improve the efficiency of commercial vehicle enforcement efficiencies across regions.
- Public versus Private Planning Horizons. Long-range planning horizons in the private sector freight industry typically are between 6 and 18 months, whereas the government is required to generate "short-term" five-year Transportation Improvement Plans (TIP) as well as a 20-year outlook. Although the government's long-range plans directly impact the private sector, it has trouble persuading the private sector to fully participate in the planning process, as some private sector freight stakeholders do not have the time, resources, or patience to participate in the 20-year long-range planning process. By reaching out to the private sector freight community as well as executive-level decision-makers, planners will be better able to understand the needs and concerns of freight carriers in the region and develop programs and strategies designed to keep them engaged in the long-range planning process.

### *5.8.7 Infrastructure Limitations*

Roadway and railroad transportation infrastructure characteristics impede the efficient flow of freight and goods in the region. As with most areas, general freight infrastructure issues include low clearances, intersection geometrics, ramp design, and pavement condition. More specific issues include:

- Few Limited Access Highways. The low number of limited access highways in Broward County forces trucks to maneuver along signalized roadways for large portions of their trips. High volumes of trucks on east-west roadways cause conflicts with passenger cars and strain the roadway infrastructure.
- Lack of Truck Service Facilities. There are a limited number of truck service facilities within Broward County for trucks to consolidate or transfer loads, forcing the use of rest areas, truck stops, other facilities, and even neighborhoods, as de facto staging areas. A new truck stop currently is being developed along I-595 at the intersection of Route 441 that will help improve the existing conditions, but the region as a whole will still be lacking in adequate facilities.
- Rail Capacity. Rail also has infrastructure-related limitations. The SFRC is used by Tri-Rail, Amtrak and CSX, constraining schedules for both passenger and freight services. An initiative to double-track this corridor will help mitigate the problem. Numerous at-grade rail crossings in the region also are a concern, especially given future growth in the region, which pose a serious safety concern.

### *5.8.8 Policy and Institutional Barriers to Freight Mobility*

Freight-specific transportation planning and investment is limited by the established political and institutional environment in southeast Florida. Local politicians are driven by public demands for safer, more efficient transportation systems that provide a high level of personal mobility. The movement of freight, although critical to sustain life, as we know it, interferes with this demand for personal mobility. Issues include:

- All funding should be spent on transit. Transportation planning agencies have been directed by local politicians to focus funding and resources on the development of new and enhanced transit service. This limits the funding available for freight-specific mobility projects. However, an improved transit system can benefit freight movements by reducing highway congestion; a fact recognized by the freight industry.
- Truck operations should be limited. There is a common desire throughout southeast Florida to restrict truck operations. This includes lane assignments as well as time of day programs. The motivation behind these recommendations is to improve passenger mobility and safety during peak hours.
- Public funds should not be spent on freight-specific improvement projects. Policy-makers and politicians struggle with the belief that investing in the freight transportation infrastructure equates to helping private industry be more profitable. As a result, there is resistance by many to spend public funds on improvement projects that directly benefit the freight industry.
- Multiple jurisdictions limit a regional approach. Southeast Florida has several planning agencies, each responsible for its own jurisdiction. This restricts regionalism, which is

critical to industry because the region represents one marketplace for them. Currently, the three MPOs in southeast Florida are addressing regionalism as part of their Long-Range Transportation Plan updates. This will provide further opportunities for enhancing freight mobility in the region.

### *5.8.9 2030 Freight Needs*

Broward County's 2030 freight needs have been summarized in Table 5-6.

**Table 5-6: 2030 Freight Needs Summary**

| Project Type | Cost ($000) |
|---|---|
| Infrastructure | $30,000 |
| Intelligent Transportation System (ITS) | $3,543 |
| Studies | $670 |
| **TOTAL** | **$34,213** |

## 5.9 Intelligent Transportation System Needs

Intelligent Transportation System (ITS) technology offers the opportunity to significantly enhance operations and safety at lower cost than traditional capacity improvements like road widening. Drawing on modern information and communications technologies, ITS can provide real time information to enhance the efficiency of operations of a transportation facility, and can be used to manage incidents and events on the network.

The process followed to assess ITS needs for the 2030 LRTP is summarized below.

- Coordinate with stakeholders
- Review previous plans and programs
- Broward County ITS needs assessment

### *5.9.1 Stakeholder Coordination*

The assessment of year 2030 needs for intelligent transportation systems was completed in cooperation with the Broward County Traffic Engineering Division (BCTED) and the FDOT District 4 Traffic Operations offices. Through the regular MPO advisory process including the Technical Coordinating Committee (TCC) regular meetings and additional discussions and meetings, the ITS component of the plan – which in many cases is embedded with the highway, transit and freight components of the plan – was presented, discussed and enhanced through the efforts of the local stakeholders.

### *5.9.2 Plans Review*

Integrating ITS in the development of Long Range Transportation Plans is a trend that is becoming more mainstream with MPO's around the country. The ITS component of the Broward County LRTP has been guided by several recent efforts nationally, in the state of Florida and locally. These efforts resulted in guidance that addresses priorities and deployment plans,

planning and institutional integration processes, and regional architecture. An overview of the documents referenced and incorporated into the ITS component are described in this section.

### *5.9.3 Florida's Intelligent Transportation System Strategic Plan, Final Report (August 23, 1999)*

The ITS Strategic Plan was prepared as a guide for the Florida Department of Transportation (FDOT), Florida Metropolitan Planning Organizations (MPOs) and local governments in the planning, programming and implementation of integrated multimodal ITS elements to maximize the safety and efficiency of Florida's Transportation System. The ITS Strategic Plan includes the FDOT's statewide vision for ITS as well as a set of guiding principles to assist in the long range planning and project development needed to achieve that vision. An ITS Business Plan is included that details the recommended steps for FDOT's ITS program development and deployment over the next 5 years.

The ITS Strategic Plan provides the management and operational guidance to assist all Modal Plans encompassed by the Florida Transportation Plan achieve their goals more efficiently. Although this is a statewide plan, the Strategic Plan provides the FDOT's District offices and local government officials with the overall guidance necessary for the development of regional and local ITS programs, strategic plans and architectures that will lead to ITS deployment plans.

### *5.9.4 Integration of ITS Into the Transportation Planning Process: Florida's ITS Planning Guidelines (June 2000)*

Due to recent initiatives at the Federal level and within the Florida Department of Transportation (FDOT), the mainstreaming of ITS into the transportation planning process is occurring. Issues and general direction to achieve this mainstreaming were developed in cooperation with the FHWA Division Office in Tallahassee and the Metropolitan Planning Organization Advisory Council and are presented in FDOT's ITS Strategic Plan and in the Integration of ITS into the MPO Transportation Planning Process issue papers. The ITS Planning Guidelines represent a further effort to refine the previous work providing direction to integrate ITS into all aspects of Florida's transportation planning and growth management processes. The purpose of the ITS Planning Guidelines is to provide general direction to local and state planners on why, when, and how to consider ITS, or even what ITS applications to consider. The benefits of ITS integration into the planning process are anticipated to lead to an increase in the likelihood of successful transportation projects, and improvement in overall transportation system efficiency through successful ITS applications.

### *5.9.5 Florida's ITS Integration Guidebook, (October, 2002)*

The guidebook addresses potential interactions, dependencies, and commonalities of the ITS functional areas and user services to help maximize the benefits of technology and information. This is particularly helpful at this time when limited transportation funding and resources are available. The guidebook serves as an informational tool in defining the ITS integration context technically and institutionally. This guidebook recommends an iterative process to achieve overall ITS integration that involves planning, institutional, and technical integration processes. The guidebook outlines the suggested process and provides the necessary steps to attain integration in planning and implementing ITS. At the core of the suggested approach is the iterative process of developing, using and maintaining a Regional ITS Architecture, RIA, as part of an ITS strategic plan, considered the focal activity in planning and implementing ITS integration.

### *5.9.6 Broward County ITS Intermodal Plan (2003)*

The Broward County ITS Intermodal Plan built on the findings and conclusions of the 2002 Freight and Goods Movement Study by identifying potential ITS applications to assist in the management of the freight transportation system. The findings of that study have been largely incorporated into the freight component of this 2030 multimodal transportation needs assessment.

### *5.9.7 Broward County ITS Needs Assessment*

ITS needs are related to the needs of most modes of transportation in Broward County including transit, highway, and freight. The consolidated list of ITS needs for 2030 is summarized in Table 5-7.

**Table 5-7: Broward County 2030 ITS Needs**

| Ref | Project Description | Cost ($000) |
|---|---|---|
| 1 | ATMS Design Group 3 | $8,000 |
| 2 | Traffic Signal Preemption/Priority along CMS Corridor | $2,000 |
| 3 | Video based vehicle detection systems along CMS Corridors | $2,000 |
| 4 | ATMS Design Group 4 | $10,000 |
| 5 | ATMS Design Group 5 | $12,000 |
| 6 | ATMS Design Group 6 | $12,000 |
| 7 | Crash Data Center | $500 |
| **TOTAL** | | **$46,500** |

## 5.10 Conclusion

This Section has described the needs assessment conducted for Broward County for the year 2030 planning horizon. The eight modes of transportation assessed are: Pedestrian, Greenways, Bicycle, Waterborne Transportation, Transit, Roadway, Freight, and Intelligent Transportation Systems.

The needs assessment included the following activities: the evaluation of the transportation needs by the year 2030 using the travel demand forecasting; the identification of the funded projects included improvements in the MPO's five-year Transportation Improvement Program covering the period until 2009; the evaluation of a transit emphasis network alternative, a highway emphasis network alternative, and a balanced network alternative; and the development of cost estimates based on the historical project costs. Table 5-8 summarizes the Needs Assessment by mode:

**Table 5-8: 2030 Needs Assessment Summary**

| Mode | Length (miles) | Cost ($000) |
|---|---|---|
| Pedestrian | 100.3 | $22,745 |
| Greenway | 67.9 | $53,200 |
| Bicycle | 168.3 | $100,336 |
| Waterborne Transportation | 6 projects | $58,131 |
| Transit | 80 projects | $6,163,459 |
| Roadway | 146 projects | $ 4,144,444 |
| Freight | 27 projects | $34,213 |
| Intelligent Transportation Systems | 7 projects | $46,500 |
| **TOTAL** | | **$10,623,028** |

# 6.0 ETDM

The Efficient Transportation Decision Making (ETDM) Process creates linkages between land use, transportation and environmental resource planning initiatives through early, interactive agency involvement, which is expected to improve decisions and greatly reduce the time, effort and cost to effect transportation decisions. Efficiency is gained by two screening events built into the current transportation planning process. An Environmental Technical Advisory Team (ETAT), consisting of planning, consultation and resource protection agencies, will be established with each agency appointing a transportation representative with responsibility to coordinate transportation reviews within their respective agency. They will then provide agency response to the transportation agency (FDOT and MPO). This response will be advisory and will include input about the agency's regulatory and planning program.

The list of ETDM projects that was reviewed are shown on Table 6-1.

**Table 6-1: Selected ETDM Projects**

| Project # | Project Name | From | To | Length (miles) | Project Description | Total Cost ($000) |
|---|---|---|---|---|---|---|
| Projects already in the system from the 2025 LRTP | | | | | | |
| 9 | Bass Creek Rd | SW 148 Ave | W. of Flamingo Rd | 2.0 | New 4 lanes | 24,942 |
| 56 | Miramar Pkwy | Palm Ave | SR 7 / US 441 | 4.6 | From 4 to 6 lanes (6LD) | 44,822 |
| 72 | Pembroke Rd. | SW 200th Avenue | US Hwy 27 | 1.5 | New (4LD) | 11,015 |
| 133 | Pembroke Rd. | SW 184th Avenue | SW 200th Avenue | 1.0 | New (4LD) | 7,342 |
| 134 | Pembroke Rd. | SW 160th Avenue | SW 184th Avenue | 1.9 | New (4LD) | 13,950 |
| 83 | Rock Island Road | McNab Rd. | Royal Palm Blvd | 3.1 | From 4 to 6 lanes (6LD) | 36,128 |
| 82 | Rock Island Road | Commercial Blvd | McNab Rd | 1.0 | From 4 to 6 lanes (6LD) | 11,345 |
| 93 | Sheridan St | SW 148th St | Douglas Road | 5.0 | From 4 to 6 lanes (6LD) | 33,496 |
| 110 | SW 184th Ave | 4th Street | Sheridan Street | 1.5 | From 2 to 4 lanes (4LD) | 3,899 |
| 135 | SW 184th Ave | Sheridan Street | Griffin Road | 2.2 | New (4LD) | 16,155 |
| 144 | SW 184th Ave | Pines Blvd | Bass Creek Road | 2.5 | New 4 lanes | 20,000 |
| New Projects from the 2030 LRTP Plan to be added to the system | | | | | | |
| 7 | Atlantic Blvd | Sawgrass Exwy | Coral Springs Dr | 1.9 | From 4 to 6 lanes (6LD) | 15,514 |
| 17 | Nob Hill Rd | N. of Trails End | County Line Rd | 1.6 | New (4LD) | 11,969 |

## 6.1 Environmental Issues and Mitigation Strategies

The environmental provisions of SAFETEA-LU require that the Long Range Transportation Plan (LRTP) describe the types of potential environmental mitigation activities, and potential locations for these activities, to restore and maintain environmental functions that could be affected by the transportation improvements included in the LRTP. The Plan's potential effect on the environmental resources was evaluated using Florida's ETDM process.

In addition to the ETDM, during LRTP development, considerable consultations occurred with land-use management agencies through a review of socioeconomic projections, density, land use

plan, and a discussion of the natural barriers such as wetland and environmental sensitive areas. These consultations were conducted as part of the review by the Technical Coordinating Committee (TCC), Broward County Environmental Protection Department, and the clean air agencies. Further review was conducted of historic preservation, environmental and natural resource planning activities. A sketch layout was created for each project with quarter mile buffer, which was superimposed on a Broward County map showing wetland location to evaluate the potential impact on the various environmental issues.

This section describes the mitigation opportunities associated with the LRTP's potential impacts to wetlands, water resources, and protected species habitat.

### 6.1.1 Wetlands Mitigation

Impacts to wetlands are controlled under federal, state, regional and, in some cases, local laws. Common requirements of all these regulations include:

- Avoiding wetland impact to the greatest extent practicable,
- Minimizing the impacts to wetlands that are not avoidable, and
- Mitigating the impacts due to transportation projects.

Mitigation for wetland impact may take multiple forms including the creation of new wetlands, restoration of historic wetlands, and enhancement/preservation of existing wetlands. The Broward County Code Section 27-338 requires developers and implementing agencies to provide assurances that lost ecological functional values will be compensated for by providing a mitigation plan for the Environmental Protection Department (EPD) approval prior to the license being issued. The mitigation plan must include, at a minimum, the following:

1. Identification of the hydrology of the mitigated area, including the length of time flooding or saturation to the soil/air interface occurs, and the depth of flooding during the wet season as described by water management district or county maps.

2. Identify a connection to other surface waters or wetland areas, if appropriate.

3. Characterization of existing and proposed soils in the mitigation area and the extent of earthwork proposed for the mitigation site.

4. Where enhancement is proposed, an analysis of the existing vegetative association must be provided showing dominant taxa and wetland designations; a description of modifications proposed to the plant association that will provide the wetland benefits lost in the subject wetland.

5. Where creation is proposed, a listing of the plants proposed to be installed in the created wetland along with size and total number of each taxa; a description of how the selected plants will provide the wetland benefits lost in the subject wetland.

6. Wetland creation or enhancement may be licensed only where EPD has determined that the created or enhanced wetland will provide the identified values comparable to or greater than that of the subject wetland. EPD will require a management plan to assure the long-term survival of the mitigation area.

7. Mitigation for wetland impacts may include upland areas or buffers for habitat where it can be demonstrated that the upland areas provide or improve the overall wetland ecological functional values originally provided by the subject wetland area.

8. Final success of any compensatory mitigation project will be determined by EPD based upon the actual functions performed by the mitigation area, and compliance with general and specific license conditions. Monitoring reports shall be submitted by the applicant, and independent field verification and analysis will be performed by EPD.

9. The responsible entity(s) for wetland mitigation projects are as follows, in order,

    a. Original applicant.
    b. EPD-approved successor.
    c. Landowner where subject wetland impact occurs.
    d. Landowner where mitigation occurs if off-site mitigation provided.

10. Evidence of financial resources necessary to complete a mitigation project shall be provided to the county attorney and may include, but not be necessarily limited to:

    a. An approved letter of credit.
    b. A bond for the proposed mitigation.
    c. Other security approved by Broward County Risk Management as to adequacy and the Broward County Attorney's Office as to form.
    d. Proof of financial resources are not required if the mitigation occurs prior to reference wetland impacts and the mitigation is approved as an interim successful project.

11. Evidence of technical and scientific resources necessary to complete the mitigation project shall be provided to EPD and may include, but not necessarily be limited to:

    a. Certification by an appropriate professional environmental association;
    b. Registered professional engineer or surveyor and experience in ecological or biological projects;
    c. Demonstrated scientific or technical experience in biological or ecological fields of study; or
    d. Other similar evidence as required by EPD.

12. Mitigation banking shall be encouraged by the identification of sites suitable for banking and through the utilization of the wetland benefit index to establish a credit system for potential mitigation banking areas. The application of a habitat mosaic credit 0.9 shall be utilized in multiple-habitat banks approved by EPD to encourage the use of mitigation banks when such uses would offset project related wetland impacts.

    a. A mitigation bank license shall be issued by EPD following the successful demonstration by the applicant that all of the requirements of this section 27-338 are met and that a credit system and long-term maintenance plan ensuring persistence of this bank have been put in place.
    b. Specific mitigation bank credits will be assigned by assessing the existing wetland values through the wetland benefit index (WBI) and applying the habitat mosaic credit (HMC) of 0.90 by the following formula:
    WBI × HMC = Mitigation Bank Value
    1.0 – MBV = Mitigation Bank Credit
    c. Additional mitigation bank credits may be established based upon the affirmative demonstration by the banker that the following conditions will be provided by the bank:
        - The bank will provide a corridor to or with other environmentally significant lands that are protected.
        - The bank will provide critical type habitat for listed species (threatened, endangered, or species of special concern).
        - The bank will provide additional lands for preservation that are not, or have not previously been, preserved.
        - The bank shall be constructed prior to credit use.
        - Wetland benefits as identified in the mitigation bank proposal are provided prior to credit use.
        - The mitigation bank license shall be binding on the bank applicant, successors and bank landowners as identified in section 27-338 of Broward Code.

Examples of mitigation options associated with the potential wetland impacts from transportation improvements included in the LRTP are described below.

### *a) Provide Mitigation Funds to Water Management District*

For projects proposed by the Department of Transportation or any transportation authority, established wetlands mitigation may be accomplished by providing funding to the appropriate Water Management District (WMD). The WMD may then utilize these funds for acquisition, preservation, restoration or enhancement, and the control of invasive and exotic plants in wetlands and other surface waters, to the extent that such activities comply with the mitigation requirements adopted in State Regulations. Broward County is located within the South Florida Water Management District (SFWMD). The SFWMD typically provides mitigation under chapter 373 FS.

### *b) Create, Restore, or Enhance Wetlands on Publicly Owned Lands*

The creation, restoration and/or enhancement of wetlands on publicly owned lands may be a viable mitigation option for projects located within the same drainage basin as the publicly held lands. However, the ability to utilize public lands can be affected by multiple factors including: Funding sources used to acquire the property, any encumbrances on the property, and Types of improvements proposed on the property.

### *c) Acquire Privately Owned Lands*

In the past, the acquisition of privately owned lands was often used for the creation, restoration/ enhancement of wetlands to offset wetland impacts. This option is still viable; however, this mitigation strategy can be very expensive. The land acquisition, design and construction, as well as the maintenance and monitoring that comprise the developed mitigation strategy are costly undertakings. As a result, this mitigation option is generally the least preferable and only used when other options have been exhausted.

There are limited lands available within Broward County that can be acquired for use in the development of a wetlands mitigation plan. For the reasons stated above, however, this option should be considered a solution of last resort.

### *d) Acquire Credits from Private Mitigation Banks*

The use of state and federally approved wetlands mitigation banks is a mitigation strategy that has been utilized by private industry for many years for mitigating wetland impacts associated with roadway improvements. Utilization of a private mitigation bank generally consists of the acquisition of wetland mitigation credits at a predetermined price. These credits are then used to "mitigate" for wetland impacts associated with a specific project.

## 6.1.2 Water Resource Mitigation

Water quality and quantity are regulated through the WMDs and the Florida Department of Environmental Protection (FDEP). While there are differences in the regulations between the regional WMDs and FDEP, water quality and quantity must be addressed overall in order to obtain permits.
Water quality requirements generally include capture and treatment of the first flush volume of water from a project site. Water quality requirements may also include the attenuation of a specific design frequency storm (e.g. 25 year/ **3** day storm) and the replacement of 100-year floodplain volume. In addition, for projects that will result in the disturbance of one acre of land or greater, a National Pollution Discharge Elimination System (NPDES) permit will be required pursuant to chapter 40, Code of Federal
Regulations (CFR), parts 122-123. In the state of Florida, the NPDES program is administered by the FDEP. Under chapter 62-25, Florida Administrative Code (FAC), an NPDES General Storm Water Permit for Construction Activities would be required for project construction. Specific options for meeting these requirements may include:

### *a) Creation of Treatment/Attenuation Ponds*

To meet the first flush treatment and attenuation requirements, a storm-water pond is typically created as part of the roadway design. The first flush is considered the first 0.5 - 1.0 inch of rain during a storm event that runs off the road. As part of roadway construction, attenuation ponds are created to treat the first flush volume through retention (in-place treatment and volume containment) or detention (in-place treatment and temporary volume containment). Additionally, these ponds are designed to attenuate (hold) the volume from a design storm event (50 or 100 year storm event). The attenuated and treated volume is released through a control structure, such as a weir, to a downstream receiving body of water.

***b) Creation of Floodplain Compensation Areas***

WMD regulations generally require a "cup for cup" replacement of 100-year floodplain volume lost because of the placement of fill material during a project's construction. To meet WMD regulations, an area of equal volume is typically dug to an elevation below the 100-year floodplain elevation to match the volume that was lost during the project's construction.

***c) Sediment and Erosion Control Plans and Best Management Practices***

To prevent the discharge of pollutants from a project site during construction, a sediment and erosion control plan is developed. This plan includes Best Management Practices (BMPs) to control storm-water runoff, sediments, and other pollutants from exiting a project site. This sediment and erosion control plan comprises the majority of the material needed to acquire a NPDES permit; the plan is submitted to the FDEP as part of the permit application.
Broward County is located within the South Florida Water Management District (SFWMD). As a result, the county must address all three water-quality mitigation requirements.

1. Treatment of first flush volume
2. attenuation of a 25 year/ 3 day design frequency storm
3. Replacement of 100-year floodplain volume

In order to meet these regulations, the use of existing, or the acquisition of additional, right-of-way will be required. In addition, a sediment and erosion control plan utilizing BMPs, as well as a NPDES permit will be required for each project proposed for construction.

### 6.1.3 Protected Species Habitat Mitigation

Within Florida, threatened and endangered state species are protected by the Florida Fish and Wildlife Conservation Commission (FWC) for animals and the Florida Department of Agricultural (FDA) for plants, while federal listed species are protected by the US Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS). Under existing regulation, any potential project impacts to protected species must first be reviewed by the appropriate regulating agency(ies). As part of the project approval process, the regulating agency(ies) may require multiple types of conservation measures to be undertaken to prevent or offset impacts to protected species.
These conservation measures include:

### *a) Avoidance of Impact*

In specific instances, impacts to protected species may be avoided through such actions as restricting or minimizing construction within areas near a protected species during specific times (e.g., breeding season). Additional measures may include implementing specific construction guidelines used by contractors to avoid impacts to the target species (e.g., manatee or indigo snake construction guidelines).

### *b) Relocation of Protected Species*

If specific species are found within the proposed project area, it may be possible to relocate these species to an off-site location. Methods of removal and relocation are typically agreed upon by the regulating agency(ies) prior to construction. Publicly held lands or privately held lands under conservation easement generally serve as the receiving sites for protected species.

### *c) Mitigation for Lost Habitat*

When construction of a project results in the destruction of habitat utilized by a protected species, it may be possible to replace the lost habitat at a different location. These locations may include publicly held properties that are being managed for the target species or privately held conservation banks, which have been developed and approved for use by the appropriate regulating agency(ies). In addition, privately held lands may be donated to a public agency for management or for use in the development of a conservation bank.

Avoidance of protected species should be considered first in selecting a location for project construction. If avoidance is not possible, use of publicly held lands in the formation of a conservation bank or as a receptor site for the relocation of protected species should be considered.

The acquisition of privately held lands and the transfer of these lands to a public agency for management should be also considered as a strategy in replacing lost habitat. While the creation of a conservation bank using acquired private lands is an option, the approval process required to use such a bank is lengthy and difficult to implement on project-by-project basis.

# 7.0 FINANCIAL RESOURCES

## 7.1 Introduction

The analysis of financial resources is an important element of the Broward County 2030 Long-Range Transportation Plan (LRTP). The purpose of this section is to provide an overview of transportation funds that will be available for Broward County through the period 2010-2030. Once these estimates are in place, one can determine which improvements on the Transportation Needs Plan are financially feasible. Sufficient funds are not typically available to meet all transportation needs. Therefore, the Financially Feasible Plan serves as an implementation tool for policy and decision-makers.

Section 1023 of the Transportation Equity Act for the 21st Century (TEA-21) indicates that metropolitan planning organizations (MPOs) are responsible for preparing "a financial plan that demonstrates how the LRTP can be implemented, indicates the revenues from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends additional financing strategies for needed projects that would be included in the adopted LRTP if reasonable resources beyond those identified in the financial plan were available." For the purposes of developing the LRTP, the MPO and the Florida Department of Transportation (FDOT) cooperatively develop estimates of funds that will be available to support plan implementation.

This Section provides information for the 2030 Cost Feasible Plan by presenting a summary of traditional revenue sources, alternative revenue sources, and forecasts of revenues anticipated for the Broward County Urbanized Area through 2030. This report outlines existing Federal, state, and local revenue sources available to fund transportation projects. The report documents the procedures to estimate future revenues and provides a forecast of anticipated revenue amounts from existing sources. In addition, alternative revenue sources for transportation investments are identified and potential revenues are estimated.

## 7.2 Existing Federal and State Sources of Revenue

This section contains a description of existing revenue sources available for financing the 2030 LRTP projects. The primary sources of information are FDOT; the publication *Local Government Financial Information Handbook* (December 2003), prepared by the Florida Legislative Committee on Intergovernmental Relations; and the publications *Revenue Forecast Handbook* (February 2001) and *Florida's Transportation Tax Sources, A Primer* (January 2004), published by FDOT.

### *7.2.1 Federal Funding Sources*

Federal funding for transportation in Broward County consists primarily of distributions from the Federal Highway Trust Fund. The Federal government imposes taxes on gasoline, diesel fuel, special fuels, neat alcohol, compressed natural gas, gasohol, tires, truck and trailer sales, and heavy vehicle use. Revenues from these Federal taxes are deposited into either the Highway Account or the Mass Transit Account of the Federal Highway Trust Fund. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) then distribute funds in

the Highway Account and the Mass Transit Account, respectively, to each state through a system of formula grants and discretionary allocations.

Federal taxes on fuel used in highway travel have been adjusted several times over the past 50 years. Currently, the Federal motor fuel tax on gasoline is 18.4 cents per gallon. Tax on diesel fuels currently is set at 24 4 cents per gallon, and gasohol is taxed at a rate of 13.2 cents per gallon. The collected funds are deposited into the Federal Highway Trust Fund, which is administered by the FHWA. Not all the Federal motor fuel tax is available for projects typically associated with roadway construction. For instance, pursuant to Title 26, U.S. Code (U.S.C.), mass transit and other special projects require precedence over highway subsidies. There is a charge of 2.86 cents per gallon of fuel that is directed towards the mass transit fund. An additional 0.1 cent per gallon is taxed for the cleanup of leaking underground fuel storage tanks. Finally, 2.5 cents per gallon of gasohol goes into the Federal General Fund. From the gasoline, diesel, and gasohol taxes, 15.44, 21.44, and 7.74 cents per gallon, respectively, go into the Highway Account for actual roadway construction and maintenance projects. Table 7-1 provides further detail on tax rates and distributions of these funds.

### *7.2.2 State Fuel Taxes*

The state highway fuel tax was initiated in 1921 at the rate of one cent per gallon. Periodic increases occurred until 1971, when the rate changed to eight cents per gallon. The proceeds of this state fuel tax were shared equally between FDOT and local governments at four cents per gallon. In April 1983, FDOT's share of state fuel tax was restructured. The remaining four cents per gallon continue to be distributed to the counties (three cents per gallon) and municipalities (one cent per gallon).

### *7.2.3 Fuel Sales Tax*

In place of the restructured FDOT share of state fuel tax, a "sales tax" was applied on all gasoline and diesel fuels. The revenue generated by the "sales tax" has been distributed to FDOT since the early 1980s. The state fuel sales tax was applied at the State's general sales tax rate of five percent. The application of this tax to fuel sales, however, differs considerably from the method used on all other eligible sales. Whereas a sales tax is typically applied against the total actual amount of a retail sale at the time of purchase, the "sales tax" on fuel is applied at the wholesale point of distribution against a legislated retail price per gallon.

**Table 7-1: Federal Highway User Fees**

| User Fee | Tax Rate (Cents per Gallon) | Distribution of Tax (Cents per Gallon) | | | |
|---|---|---|---|---|---|
| | | Highway Trust Fund | | Underground Storage Tanks | Deficit Reduction |
| | | Highway Account | Mass Transit | | |
| Gasoline | 18.4 | 15.44 | 2.86 | 0.1 | |
| Diesel Fuel | 24.4 | 21.44 | 2.86 | 0.1 | |
| Fuels | 18.3 | 12 | 2 | | 4.3 |
| Liquefied Petroleum Gas | 13.6 | 11.47 | 2.13 | | |
| Liquefied Natural Gas | 11.9 | 10.04 | 1.86 | | |
| Other Special Fuels | 18.4 | 15.44 | 2.86 | | |
| Compressed Natural Gas | 4.3 | 3.44 | 0.86 | | |
| Gasohol: | | | | | |
| 10% Gasohol made with Ethanol | 13.2 | 7.74 | 2.86 | 0.1 | 2.5 |
| 7.7% Gasohol made with Ethanol | 14.396 | 8.936 | 2.86 | 0.1 | 2.5 |
| 5.7% Gasohol made with Ethanol | 15.436 | 9.976 | 2.86 | 0.1 | 2.5 |
| **Tires (All proceeds to Highway Account)** | | | | | |
| 0 to 40 pounds | No Tax | | | | |
| More than 40 to 70 pounds | 15 cents per pound in excess of 40 pounds | | | | |
| More than 70 to 90 pounds | $4.50 plus 30 cents per pound in excess of 70 pounds | | | | |
| More than 90 pounds | $10.50 plus 50 cents per pound in excess of 90 pounds | | | | |
| **Tractor and Truck Sales (All proceeds to Highway Account)** | | | | | |
| More than 33,000 pounds gross vehicle weight | 12% of retail sale price | | | | |
| Heavy Vehicle Use | Annual tax, all proceeds to Highway Account | | | | |
| Trucks 55,000 to 75,000 pounds gross vehicle weight | $100 plus $22 for each 1,000 pounds (or fraction thereof in excess of 55,000 pounds) | | | | |
| Trucks more than 75,000 pounds gross vehicle weight | $550 | | | | |

Source: FHWA Office of Highway Policy Information, *Highway Statistics 2002*, Table FE-21B. November 2003.

The legislative average price of all motor and special fuel was initially set at $1.148 per gallon. This resulted in a tax of 5.7 cents per gallon. The legislated price is adjusted in proportion to annual changes in the Consumer Price Index (CPI). The 1985 Legislature installed a "floor" beneath the tax, preventing it from being reduced below the initial 5.7 cents per gallon, despite changes in the CPI. The 1990 Legislature adjusted the floor upward to 6.9 cents per gallon. The new figure reflected the result of applying the State Fuel Sales Tax rate of six percent to the legislative price of $1.148. Currently, the State Fuel Sales Tax is 10.3 cents per gallon.

FDOT District 4 provided estimates of the state and Federal transportation funding for Broward County for 2010 through 2025. Revenue projections for the FY 2026-2030 period were estimated by extrapolating FDOT revenue projections using the methodology developed for the *2020 Florida Transportation Plan Update – Development of the 2020 Revenue Forecast (May 2001).* The forecast categorizes FDOT's major programs into capacity and non-capacity programs. Each category is described below.

### *7.2.4 Capacity Programs*

Funding revenues from the capacity programs are used to expand the capacity of existing transportation systems. The capacity programs support two main goals: economic competitiveness and quality of life. Funding revenues are distributed among the following categories:

**Economic Competitiveness**

- Florida Intrastate Highway System (FIHS) **–** Eligible activities under this program include construction, improvement, and associated right-of-way (ROW) for roads that are classified as part of the FIHS. Examples of roadways that are part of the FIHS include I-75, I-95, I-595, U.S. 27, Florida's Turnpike, and SR 869 (Sawgrass Expressway).
- Aviation – Financial and technical assistance to Florida's airports in the areas of safety, capacity improvements, land acquisition, planning, economic development, and preservation.
- Rail – Funding is provided for acquisition of rail corridors and assistance in developing intercity passenger and commuter rail services, development of fixed-guideway systems, rehabilitation of rail facilities, and rail safety.
- Intermodal Access **–** This program provides financial assistance for improvement of access to intermodal facilities, and acquisition of associated ROWs.
- Seaport Development **–** Funding assistance in the development of eligible deepwater ports for activities such as land acquisition, dredging, construction of storage facilities and terminals, and acquisition of container cranes and other equipment used for moving cargo and passengers.

**Quality of Life**

- Other Arterial Construction/ROW **–** This program provides funding for improvements on the State Highway System (SHS) roadways that are not designated as FIHS. Activities funded through this program include capacity and traffic operations improvements, and land acquisition.
- Transit **–** Funding assistance for operations and capital investments of transit, paratransit, and ridesharing programs.

### *7.2.5 Non-Capacity Programs*

Non-capacity programs are FDOT programs that support, operate, and maintain the state transportation system. They include: Safety; Resurfacing; Bridge; Product Support; Operations and Maintenance; and Administration.

### *7.2.6 Funding Summaries*

Table 7-2 details the level of funding estimated by FDOT to be available to Broward County in each of the capacity program categories.

**Table 7-2: Federal and State Revenues Forecast (FY 2030)**

| Capacity Program Emphasis Areas | Revenue Forecast Update (Millions, 2000 Dollars) | | | | |
|---|---|---|---|---|---|
| | 2010-2015 | 2016-2020 | 2021-2025 | 2026-2030 | Year Total |
| **Economic Competitiveness** | | | | | |
| FIHS Construction/ROW | $228.6 | $190.5 | $190.5 | $190.5 | $800.2 |
| Aviation | $42.5 | $35.6 | $35.8 | $35.9 | $149.8 |
| Rail | $44.5 | $37.1 | $36.9 | $36.6 | $155.1 |
| Intermodal Access | $27.8 | $25.3 | $28.8 | $22.3 | $104.2 |
| **Quality of Life** | | | | | |
| Other Arterial Construction and ROW | $444.6 | $406.5 | $392.1 | $389.0 | $1,708.5 |
| Transit | $76.3 | | | | |
| Total Capacity Programs | $864.3 | $695.0 | $684.1 | $674.2 | $2,917.6 |

Sources: FDOT District 4; Cambridge Systematics, Inc.

## 7.3 Strategic Intermodal System

In 2003, Florida's Governor signed legislation that proposed the implementation of a Strategic Intermodal System (SIS). The development of the SIS was initially proposed in the 2020 Florida Transportation Plan, which "*envisions a transportation system that will enhance Florida's economic competitiveness.*"[1] The SIS includes transportation hubs, corridors, and connectors, which meet a set of criteria developed to identify those transportation facilities and services that are critical to Florida's economic development. Several transportation facilities in Broward County have been designated as SIS facilities, including:

- Fort Lauderdale-Hollywood International Airport;
- Port Everglades;
- Greyhound Intercity Bus Terminal at Fort Lauderdale;
- Tri-Rail;
- Planned High-Speed Rail – Phase II;
- FEC Lines and Intermodal Terminals;
- Interstates: I-95, I-595, and I-75;
- Florida's Turnpike and Homestead Extension;
- Sawgrass Expressway; and
- U.S. 27.

[1] Florida Department of Transportation. *The Strategic Intermodal System* brochure. August 2003

Recently, the Florida Legislature passed CS/SB 1456. This bill was signed into law by the Governor on June 24, 2004, and includes several key elements to support SIS investment:

> *"Identifies the SIS and Emerging SIS as [FDOT's] highest priority for transportation capacity improvements;*
>
> *Makes all SIS and Emerging SIS facilities eligible for state funding;*
>
> *Repeals the Transportation Outreach Program (TOP) and reallocates TOP funding to support the SIS; and*
>
> *Allocates at least 50 percent of new discretionary funding to the SIS, with a minimum of $100 million beginning in the FY 2004/2005 work program."*[2]

The impact of this bill on Federal and state funding available to the MPOs is still uncertain; therefore, the funding projections from Federal and state sources included in this report do not account for funding changes and reallocation of revenue sources as a result of SIS implementation. Funding projections, including the SIS, were to be available by the end of August 2004 but, as of release date of this report, no information has been made available.

## 7.4 Taxes for Local Government Distribution

As stated above, the remaining four cents per gallon of the state fuel tax continues to be distributed to local governments and consists of the three distinct elements. These include the following:

### *7.4.1 Constitutional Gas Tax*

The Constitutional Gas Tax currently is set at two cents per gallon. The proceeds are distributed to Florida counties, based on a formula contained in the State Constitution. The first priority of the Constitutional Gas Tax is to meet the debt service requirements, if any, on local bond issues. Any remaining sources are credited to the counties' transportation trust fund, which are divided into 80 percent and 20 percent portions. After debt service is covered, Constitutional Gas Tax levies are used for acquisition, construction, and maintenance of roads. Based on discussions with the Broward County Budget Office, it was inferred that after covering debt service, 80 percent of the proceeds generated by the Constitutional Gas Tax are available for roadway capacity projects in the Broward County area, and 20 percent are used for roadway maintenance.

The *Local Government Financial Handbook* (December 2003) provides the estimated distribution of the Constitutional Gas Tax levies by county for FY 2004. Annual Revenues from the Constitutional Gas Tax are estimated at $15.1 million for Broward County, accounting for 7.66 percent of the total revenues distributed to Florida counties.

### *7.4.2 County Fuel Tax*

The County Fuel Tax is distributed by the same formula as the Constitutional Gas Tax. The rate is set at one cent per gallon. Pursuant to Section 206.41(1)(b) of the Florida Statutes, revenues

[2] Florida Department of Transportation. *Strategic Intermodal System Status Report*. July 2004.

from the County Fuel Tax may be used for transportation-related expenses. According to Broward County Budget Office staff, the County Fuel Tax revenues are used solely for operation and maintenance of county roadways.

FY 2004 annual revenue projections from the *Local Government Financial Handbook* forecast County Fuel Tax distributions of $6.78 million for Broward County.

### *7.4.3 Municipal Fuel Tax*

The Municipal Fuel Tax is levied under Section 206.41(1)(c) of the Florida Statutes. Revenues from this one-cent per gallon tax are transferred into the Revenue Sharing Trust Fund for Municipalities. The Revenue Sharing Trust Fund receives 1.0715 percent of the sales and use tax levies, 12.5 percent of the state alternative fuel user decal fee collections, and the net collections from the one-cent Municipal Fuel Tax. Municipal Fuel Tax revenues may be used for transportation-related expenditures, including ROW acquisition, and construction and maintenance of municipal roads. According to the *Local Government Financial Handbook*, the Department of Revenue indicated that "municipalities may assume that 35.6 percent of their estimated 2003-2004 fiscal year distributions is derived from the municipal gas tax." Thus, at least that proportion must be used for transportation-related expenditures. Therefore, municipalities in Broward County must spend at least $13.21 million from the $37.09 million allocated in the Revenue Sharing Trust Fund in FY 2004. The Broward County Budget Office indicated that the funds from this gas tax are limited to operations and maintenance of municipal roadways.

### *7.4.4 State Comprehensive Enhanced Transportation System Tax*

The Florida Legislature enacted an additional state tax in 1990. The State Comprehensive Enhanced Transportation System (SCETS) Tax has a rate in each county equal to two-thirds of all local option fuel taxes. For example, in counties where six cents of Local Option Gas Tax is levied, the SCETS tax will equal four cents (i.e., 2/3 x 6 = 4). While the proceeds of the SCETS tax are not shared directly with local governments, they must be spent in the respective FDOT district and, to the extent feasible, in the county in which they were collected. Like the fuel sales tax, the SCETS tax is adjusted with fluctuation in the CPI. Currently, the SCETS tax rate in Broward County is 5.7 cents per gallon.

### *7.4.5 Other State Fuel Taxes/Fees*

Additional State Fuel Taxes and fees exist in Florida as well. These include the following.

### *7.4.6 Aviation Fuel Tax*

The State of Florida imposes 6.9 cents per gallon tax on aviation fuel. This fuel is used in aircraft, and includes aviation gasoline and aviation turbine fuels and kerosene. The revenues generated from this tax are limited to aviation projects only. The funds are deposited into the Fuel Tax Collection Trust Fund, and then distributed to the State Transportation Trust Fund.

### *7.4.7 Motor Vehicle License Tax*

The Motor Vehicle License Tax charges an annual fee for operating motor vehicles, mopeds, motorized bicycles, and mobile homes. These fees vary according to weight and type of each vehicle. These revenues are deposited into the State Transportation Trust Fund to support the Florida Seaport Transportation and Economic Development Program.

Additionally, a one-time fee of $100 is charged throughout the State of Florida for first-time registration of newly purchased vehicles. Thirty percent of these revenues go into the General Revenue Fund. The remaining proceeds are directed toward the State Transportation Trust Fund.

**Title Fee**

A $24 fee is charged to all motor vehicles when issuing a certification of title. The majority of the revenues generated from this fee are deposited into the State Transportation Trust Fund.

**Rental Car Surcharge**

A $2.00 per day surcharge exists throughout Florida on car rentals. Seventy-five percent of these proceeds are deposited into the State Transportation Trust Fund.

### *7.4.8 Other Fuel Taxes*

The State of Florida requires a series of "special purpose" additional Fuel Taxes and fees, as well. The following elements make up the total of 2.2 cents per gallon charged to consumers:

**Coastal Protection Tax –** Pursuant to Section 206.9935(1) of the Florida Statutes, resources are set aside to provide assistance in Coastal Protection. This fund requires a tax of two cents per barrel on diesel, gasoline, and gasohol.

**Water Quality Tax –** An additional five cents per barrel of diesel, gasoline, and gasoline purchased is directed toward the Water Quality Fund.

**Inland Protection Tax –** The Inland Protection Tax collects 80 cents per barrel of diesel, gasoline, and gasohol purchased, pursuant to Section 206.9935(3) of the Florida Statutes.

**Agricultural Inspection Fee –** Finally, an Agricultural Inspection Fee exists in the State of Florida. All diesel, gasoline, and gasohol purchases are taxed at $0.00125 per gallon, pursuant to Section 525.09 of the Florida Statutes.

Table 7-3 shows a summary of all fuel and vehicle taxes that are collected at the state level.

**Table 7-3: Summary of State Taxes and Fees**

| Source | Rate |
|---|---|
| Fuel Sales Tax | 10.3 cents/gallon |
| Local Government Taxes | |
| Constitutional Tax | 2.0 cents/gallon |
| County Tax | 1.0 cent/gallon |
| Municipality Tax | 1.0 cent/gallon |
| SCETS Tax | 5.7 cents/gallon |
| Other Fuel Taxes/Fees | |
| Aviation Fuel Tax | 6.9 cents/gallon |
| Motor Vehicle License Tax | Varies |
| Title Fee | $24.00/title |
| Rental Car Surcharge | $2.00/day |
| Coastal Protection Tax | 0.048 cents/gallon |
| Water Quality Tax | 0.12 cents/gallon |
| Inland Protection Tax | 1.9 cents/gallon |
| Agricultural Inspection Fee | 0.125 cents/gallon |

### *7.4.9 Summary of Federal and State Revenue Sources*

Existing state and Federal fuel taxes can be summarized as follows:

| | |
|---|---|
| **Federal Highway Fuel Taxes** | |
| Gasoline | 18.4 cents per gallon |
| Diesel | 24.4 cents per gallon |
| Gasohol | 13.2 cents per gallon |
| **State Highway Taxes** | |
| Local Government Taxes | 4.0 cents per gallon on gasoline, gasohol, and diesel |
| Fuel Sales Tax | 10.3 cents per gallon on gasoline, gasohol, and diesel |
| SCETS Tax | 5.7 cents per gallon on gasoline, gasohol, and diesel |
| Other Fuel Taxes/Fees | 2.2 cents per gallon on gasoline, gasohol, and diesel |
| | 6.9 cents per gallon on aviation fuel |
| | Varying charges on motor vehicle licenses |
| | $24.00 fee on motor vehicle certificate of title |
| | $2.00 per day fee on car rentals |

Therefore, the potential total state and Federal taxes per gallon of gasoline, not including diesel or gasohol, is 40.6 cents. These taxes supply most of the revenue for transportation improvements and maintenance throughout the State. However, local governments may now play a larger role than before in providing revenue for transportation improvements.

## 7.5 Optional Local Revenue Sources

Beyond the traditional Federal and state fuel taxes, several optional revenue sources are available for funding transportation improvement projects. These alternative revenue sources are the First Local Option Gas Tax, the Second Local Option Gas Tax, and the Ninth-Cent Gas Tax. Additional sources consist of the Local Government Infrastructure Surtax, Toll Revenues, Bond Issues, Impact Fees, Municipal Services Taxing Units, the Transportation Outreach Program, and the County Incentive Grant Program. These options have been made available due to explosive population growth in the State of Florida and the inability of state and local governments to keep pace with growing capital improvement demands using only Federal and state tax allocations. These optional revenue sources are presented here.

### *7.5.1 Local Option Gas Taxes*

The 1983 Florida Legislature provided local governments with two major new sources of revenue called the Local Option Gas Taxes (LOGT). Up to 11 cents per gallon may be levied to help fund a variety of transportation projects. These include the First LOGT (six cents), and the second LOGT (five cents).

### *7.5.2 First LOGT (Six Cents)*

A Local Option Gas Tax of up to six cents per gallon may now be levied for a maximum duration of 30 years. Implementation of one to six cents per gallon tax requires only a simple majority vote of the county commissioners. The proceeds of the tax must be shared with municipalities, either by a mutually agreed-upon distribution scheme or, if agreement cannot be reached, by using a formula contained in the Florida Statute. The formula requires the distribution tax proceeds to be based on the transportation expenditures of each local government for the preceding five fiscal years, as a proportion of the total of such expenditures for the county and all municipalities within the county.

Local governments may pledge revenues from any portion of the Local Option Gas Tax to repay state bonds issued on their behalf. In addition, a local government must use Local Option Gas Tax revenues for transportation expenditures on the state or local highway systems or transit-oriented capital purchases, or operations. Transportation expenditures include ROW activities, roadway maintenance, and the construction of roads. Broward County currently collects six cents per gallon on diesel, gasoline, and gasohol. The municipalities within Broward County receive 37.5 percent of the proceeds generated by this tax, while the County receives the remaining 62.5 percent. In FY 2004, the First LOGT is expected to generate almost $48 million in Broward County, from which about $18 million will be distributed to the municipalities and the remainder will go to the County Transportation Trust Fund.

The county portion of this gas tax is pledged to support debt service of gas tax bonds, major road construction, and Mass Transit operations. In 1991, Broward County issued $66.5 million in gas tax bonds, which were refinanced in 1998. The bonds will be retired in 2010. The debt service payment on these bonds for FY 2004 is estimated at $5.6 million, as reported in the Broward County Budget. Therefore, about $24.4 million will be available for road construction and Mass Transit operations.

### *7.5.3 Second LOGT (Five Cents)*

The 1993 Florida Legislature extended the scope of the Local Option Gas Tax to include an additional fuel tax of up to five cents per gallon of motor fuel. Diesel fuel is not subject to this tax. Implementation of the second tax of one to five cents per gallon requires a majority plus one vote of the county commissioners. The proceeds of the tax must still be shared with municipalities, either by mutually agreed-upon distribution scheme, or by using the state formula. Pursuant to Section 336 of the Florida Statutes, local governments may only use revenues from the tax for transportation expenditures needed to meet the requirements of the capital improvements element of an adopted comprehensive plan.

The Second LOGT is being collected in Broward County at the maximum rate of five cents per gallon. According to the *Local Government Financial Information Handbook*, the Second LOGT is expected to generate $36.5 million in FY 2004. An interlocal agreement currently divides the tax into three categories, described as follows:

**1994 Second LOGT (Three Cents) –** The 1994 LOGT is distributed among the various municipalities within Broward County. The municipalities receive 45 percent of these funds, while the County receives 55 percent. The County share goes into the County Transportation Trust Fund, and is used for transportation capital improvements.

**1998 Second LOGT (One Cent) –** The 1998 LOGT is administered directly to the County. The revenues levied from this gas tax are used for transportation expenditures. According the FY 2004 Broward County Budget, the 1998 LOGT will sunset in December 2004; but the County plans to extend the life of this local option gas tax.

**2000 Second LOGT (One Cent) –** The 2000 LOGT is shared between the county and municipalities at a 74/26 split. The revenues collected from this gas tax are dedicated to the fixed-route transit system and the community shuttle program.

### *7.5.4 Ninth-Cent Gas Tax*

The Ninth-Cent Gas Tax was initially authorized in 1972 by the Florida Legislature. The tax is limited to one cent per gallon on highway fuels. Originally, the tax could be proposed by a county's governing body, but it had to be approved by the electorate in a countywide referendum. The 1993 Florida Legislature allowed a county's government body to impose the tax by a majority plus one vote of its membership, without holding a referendum.

Counties are not required to share revenue from the Ninth Cent Gas Tax with municipalities; however, the proceeds of the tax may be shared with cities in whatever proportion is mutually agreed upon, and used for county or municipal transportation purposes. The tax has no time limit imposed on it by state statutes. As of January 1, 1994, the Ninth Cent Tax on diesel fuel is no longer optional. The 1990 Legislature decided to realize all optional taxes on diesel fuel so that interstate truckers, who pay fuel taxes based upon miles driven in the State, would be subject to standard tax rates. Broward County levies the maximum one cent of the Ninth-Cent Gas Tax on all motor and diesel fuels, and dedicates its revenues to Mass Transit operations. According to the *Local Government Financial Information Handbook*, the Ninth-Cent Gas Tax will generate $8.62 million in FY 2004.

### *7.5.5 Local Government Infrastructure Surtax*

The Local Option Sales Tax (a.k.a. Local Government Infrastructure Surtax) can be levied by county governing bodies at a rate of 0.5 percent or one percent for a period of up to 15 years. It is typically put in place through a countywide referendum. The tax applies to all purchases subject to the regular six percent sales tax, except for sale amount purchases exceeding $5,000. Tax proceeds can be expended only to plan and construct infrastructure, or to acquire land for public recreation, conservation, or for the protection of natural resources. Under certain conditions, municipalities representing a majority of the county's population may provide for the levy of the infrastructure surtax in lieu of its authorization by the county governing body. The 1993 Legislature deleted the 15-year limit on the imposition of the tax. The Local Option Sales Tax may now be extended beyond 15 years by approval in a countywide referendum. However, Broward County has not chosen to implement this tax.

### *7.5.6 Charter County Transit System Surtax*

The Charter County Transit System Surtax can be enacted at a rate of up to one percent, under the provisions of F.S. 212.055(1). This sales tax is eligible only in charter counties that adopted a charter prior to January 1, 1984, or county governments that have consolidated with one or more municipalities. Implementation of this sales tax is subject to voters' approval through a referendum. Broward County meets the eligibility requirements to levy this sales tax. Sales tax levies are used for the development, construction, operation, and maintenance of fixed-guideway rapid transit systems and bus systems. In 2003, the authorized uses of this sales tax were expanded to include roads and bridges. Although Broward County has chosen not to implement this tax, county staff acknowledges that the implementation of this sales tax is the best approach to fund the significant expansion envisioned for Broward County's mass transit system.

### *7.5.7 Toll Revenues*

Tolls may be collected on highways, bridges, and tunnels and can provide support for street and highway budgets. Revenues generated by tolls are normally sufficient to cover capital improvements and maintenance for the facilities where tolls are being collected. After bonds are retired, tolls may continue to provide funds that could be applied to other construction. In other cases, tolls are reduced to cover only the maintenance expenses of the facility.

Advantages of tolls include the equitable, user-based nature of the charge and the fact that substantial revenue can be produced. Advances in technology have created additional advantages with electronic toll collection, debit toll accounts, transponders, bar code readers, etc. These innovations reduce the need for large toll collection plazas and have the ability of to keep traffic moving through the toll plaza at a high rate of speed, in some cases up to 55 mph. However, it may be difficult to implement tolls in urban areas because of the short intervals between access points. Florida's Turnpike operates several toll facilities in Broward County; however, Broward County has not implemented their own tolling authority.

### *7.5.8 Bond Issues*

Local governments are given the authority to issue General Obligation and Revenue Bonds. General Obligation bonds are secured by full faith and credit of the issuer (a pledge of the issuer's ad valorem taxing power). Revenue bonds are payable from a specific source of revenue and do not pledge the full faith of the issuer. These bonds must be approved by popular vote and

can be used to fund major transportation projects. In 1991, Broward County issued gas tax revenue bonds for $66.5 million. These bonds were refinanced in 1998, and will be paid off by 2010. The annual debt service from these bonds is about $5.6 million.

### *7.5.9 Impact Fees*

Transportation impact fees and performance standards place the burden of improvements on new developments. Impact fee ordinances require new developments to pay a fair share for costs of improving existing roads or constructing new roads made necessary by developments. An impact fee schedule is typically based on trip generation, the cost of additional lane construction, trip length, percent of new trips added to the system, and existing lane capacity.

Advantages of impact fees include equitability in that new developments will pay in relation to their impact. In other words, the greater the impact a new development has on the roadway system, the higher the impact fee it will pay. Impact fees also are flexible, because fees can be used for both on-site and off-site improvements and are relatively easy to adjust.

Limitations include the fact that impact fees can only be applied to new construction, roadway widening, and operational improvements. Revenue may be insufficient for the required improvements. The revenue from impact fees can only be used for future deficiencies caused by new development, not on existing deficiencies. Broward County currently collects a developer contribution fund, which is derived from impact fees that are charged to local developers. Road impact fees are levied west of I-95 and Florida's Turnpike, whereas transit impact fees are levied in the area designated as the "Urban Infill/Redevelopment Area" in east Broward County. In FY 2004, Broward County has budgeted $5.3 million in impact fees for road capital projects.

In 2001, the Broward County Commission proposed to change the existing impact fee system, which supports both roadway and transit improvement, to a fee system oriented toward transit improvements. This proposal calls for dividing the County into 10 Concurrency Districts. Two of these districts would keep the existing roadway impact fee system, whereas the remaining eight would become Transit-Oriented Concurrency (TOC) Districts. The Transit Concurrency fee for each district is estimated based on the number of new trips generated by transit improvements included in Broward County's *FY 20052009 Transit Development Plan* and the capital and operating costs of these improvements. Table 7-4 shows the proposed fees by district and by land use. According to Broward County staff, annual revenues under this new fee system are estimated at $3.8 million (2004 dollars). The proposed amendments to the County's Comprehensive Plan regarding TOC was considered by the County Commission in August, and the new fee system was expected to be adopted at the end of 2004.

**Table 7-4: Transit Concurrency Fees by District (cost per Peak Hour Trip)**

| District/ Land Use | North East | North Central | Central | Eastern Core | South East | South Central | Sawgrass | Port Airport |
|---|---|---|---|---|---|---|---|---|
| Residential | $579 | $861 | $646 | $890 | $663 | $758 | $901 | $948 |
| Office | $507 | $753 | $565 | $779 | $580 | $664 | $788 | $829 |
| Industrial | $658 | $978 | $734 | $1,012 | $753 | $862 | $1,024 | $1,077 |
| Commercial | $428 | $636 | $477 | $658 | $489 | $560 | $666 | $700 |

Source: Broward County, Department of Planning and Environmental Protection. *Proposed Amendments to the Broward County Comprehensive Plan to Establish Transit-Oriented Concurrency*. March 2004. The document can be found at http://www.broward.org/dmi00145.pdf.

### *7.5.10 Municipal Services Taxing Units*

Municipal Services Taxing Units can be used to fund specific capital improvements, such as road and bridge maintenance, by means of additional millage on taxable property. Initially, the costs of the proposed improvements are estimated, then the millage rate required to generate the revenue is determined. Municipal Services Taxing Units exemptions are the same as those for the regular ad valorem tax, including the $25,000 homestead exemption. Benefit districts are often delineated for Municipal Services Taxing Units rather than applying the Municipal Services Taxing Units millage rate countywide. Municipal Services Taxing Units can be levied by a simple majority vote of the Board of County Commissioners. To date, Broward County has not implemented this taxing option for the purposes of funding road capacity-related improvements.

### *7.5.11 Transportation Outreach Program*

The 2000 Florida Legislature created the Transportation Outreach Program to fund transportation projects of a high priority based on the principles of preserving the existing transportation infrastructure, enhancing Florida's economic growth and competitiveness, and improving choices to ensure mobility. This program was planned to provide $1.0 billion statewide over a 10-year period, averaging to approximately $100.0 million per year. Broward County tried numerous times to take advantage of this program with very limited success. The program was repealed by the 2004 Legislature with the approval of CS/SB 1456. The new legislation provides that funding previously dedicated to the Transportation Outreach Program to be used for the SIS implementation.

### *7.5.12 County Incentive Grant Program*

The 2000 Legislature created the County Incentive Grant Program within FDOT to provide grants to counties to improve transportation facilities located on the SHS or that relieve congestion on the SHS. About $490 million is provided over a 10-year period. Broward County received fund allocations through this program in FY 2002. However, the future of this program is unclear after the passage of CS/SB 1456; therefore, it was not included in the revenue forecast for this LRTP Update.

### *7.5.13 Summary of Local Revenue Sources*

The primary purpose of this section is to present optional funding sources available to local governments within Broward County for carrying out transportation improvements. Some of these optional taxes already are in place locally, while others are not. The next section describes

the forecasting of funds expected to be available to the Broward urban area for funding transportation improvements.

The available optional transportation revenue sources are as follows:

| **Local Option Gas Taxes** | |
|---|---|
| First LOGT | 6.0 cents/gallon |
| Second LOGT | 5.0 cents/gallon |
| **Other Option Taxes** | |
| Ninth-Cent Gas Tax | 1.0 cent/gallon |
| Local Government Infrastructure Surtax | 0.5 cents to 1.0 cent/dollar |
| Charter County Transit System Surtax | up to 1.0 cent/dollar |
| Toll Revenues | Varies |
| Bond Issues | Varies |
| Impact Fees | Varies |
| Municipal Services Taxing Units | Varies |
| Transportation Outreach Program | N/A |
| County Incentive Grant Program | Varies |

## 7.6 Potential Revenue Sources

Several tax leverage opportunities exist for local government, as presented previously. However, only a portion of these revenue sources has been implemented in Broward County. Therefore, this section will examine the potential revenues of the taxes that are not in place, as well as the potential funds that can be generated for imposing the maximum leverage of existing taxes. A discussion of innovative financing techniques also is provided.

Currently, a total of 12 cents in optional fuel taxes per gallon of gasoline are collected in Broward County. This tax amount includes the six cents per gallon of the First LOGT, the five cents per gallon of the Second LOGT, and the one cent per gallon of the Ninth-Cent Gas Tax. Broward County also has enacted transportation impact fees. Opportunities to levy additional revenues for transportation improvements exist with the implementation of sales taxes to support either roadway or transit improvements, or both. Table 7-6 identifies which taxes are in place and to what level are being imposed in Broward County.

**Table 7-5: Existing and Potential Taxes for Transportation in Broward County**

| Tax Description | Maximum | Levied | Remaining |
|---|---|---|---|
| First Local Option Gas Tax (cents/gallon) | 6 | 6 | 0 |
| Second Local Option Gas Tax (cents/gallon) | 5 | 5 | 0 |
| Ninth-Cent Gas Tax – motor fuel (cents/gallon) | 1 | 1 | 0 |
| Constitutional Gas Tax | 2 | 2 | 0 |
| County Fuel Tax | 1 | 1 | 0 |
| Municipal Fuel Tax | 1 | 1 | 0 |
| Local Government Infrastructure Surtax | 1% | 0% | 1% |
| Charter County Transit System Surtax | 1% | 0% | 1% |

### *7.6.1 Local Option Sales Tax*

Table 7-5 shows that Broward County could levy additional revenues for transportation improvements through the implementation of the Local Government Infrastructure Surtax (up to 1.0 percent) and the Charter County Transit System Surtax (at 0.5 or 1.0 percent). Revenue estimates from the sales tax levy of 0.5 percent were estimated using the base projections of sales tax revenues for FY 2003-2004 from the *Local Government Financial Information Handbook* (December 2003)[3], and assuming an annual growth rate of 5.2 percent, based on taxable sales forecasted through 2015 developed by the University of Florida[4]. The implementation of a 0.5 percent local sales tax in Broward County would generate $3.1 billion (2000 dollars) in the 21-year period encompassed between FY 2010 and FY 2030; the implementation of the maximum local sales tax (i.e., 2.0 percent) would generate $12.4 billion (2000 dollars). Table 7-6 displays the possible revenues of implementing a local option sales tax in Broward County, assuming a rate of both 0.5 percent and 1.0 percent.

**Table 7-6: Potential Local Sales Tax Revenue (2000 Dollars)**

| Fiscal Years | Local Sales Tax (0.5 Percent) | Local Sales Tax (1 Percent) |
|---|---|---|
| 2010-2015 | $774,582,652 | $1,549,165,304 |
| 2016-2020 | $712,305,182 | $1,424,610,364 |
| 2021-2025 | $777,599,705 | $1,555,199,410 |
| 2026-2030 | $849,083,308 | $1,698,166,616 |
| Total | $3,113,570,847 | $6,227,141,694 |

[3] Florida Legislative Committee on Intergovernmental Relations. *2003 Local Government Financial Information Handbook.* December 2003. Pages 184-198.

[4] University of Florida, Bureau of Economic and Business Research. *Florida Long-Term Economic Forecast 2002: Counties.*

### *7.6.2 Innovative Financing*

In addition to the potential revenues from local option gas and sales taxes that have not yet been implemented in Broward County, the MPO and local governments in the area may consider implementation of innovative finance techniques. The FHWA in its *Innovative Finance Primer*[5] (April 2002) defines innovative finance as the "combination of specially designed techniques that supplement traditional highway financing methods." The objectives of innovative finance are to:

> "*Maximize the ability of states and other project sponsors to leverage Federal capital for needed investment in the nation's transportation system;*
>
> *More effectively utilize existing funds;*
>
> *Move projects into construction more quickly than under traditional financing mechanisms; and*
>
> *Make possible major transportation investments that might not otherwise receive financing."*

Therefore, innovative finance techniques do not necessarily generate new sources of funding, but are effective vehicles to manage existing funding sources and to advance future revenue surpluses. In addition, many of these techniques are only applicable to projects on Federal-aid highways, limiting their application to other locally funded facilities.

The *Innovative Finance Primer* classifies innovative finance techniques into four categories: 1) Innovative Management of Federal Funds; 2) Debt Financing; 3) Credit Assistance; and 4) Tolling. The information provided below contains excerpts from this publication.

### *7.6.3 Innovative Management of Federal Funds*

The innovative management of Federal funds provides states with flexibility in managing Federal-aid highway funds. It encompasses four innovative finance techniques: advanced construction/partial conversion of advance construction; tapered match; flexible match; and toll credits.

### *7.6.4 Advanced Construction/Partial Conversion of Advance Construction*

Under this innovative finance technique, a state may begin the construction of Federal-aid projects even if there is insufficient Federal-aid obligation authority to cover the Federal share of these projects. The FHWA has to approve the implementation of this innovative finance technique based on the following criteria:

> *"The project(s) are funded through any of the following Federal funding categories: NHS; Interstate Maintenance; Interstate Construction; STP; CMAQ; BRR; State Planning and Research; or Metropolitan Planning.*

[5] U.S. Department of Transportation, Federal Highway Administration. *Innovative Finance Primer*. April 2002. Publication Number FHWA-AD-02-004.

*With the exception of projects using NHS, Interstate Maintenance, and Interstate Construction fund, the state has to meet one of the following criteria:*

- *the state has obligated all the funds apportioned or allocated for the specific program;*
- *the state has used all of its obligation authority for the current fiscal year; or*
- *the state can demonstrate it will consume all of its obligation authority before the end of the fiscal year."*

### *7.6.5 Tapered Match*

Tapered match allows "the project sponsor to vary the non-Federal share of a Federal-aid project over time, as long as the Federal contribution toward the project does not exceed the Federal-aid limit." For instance, Federal-aid projects are generally funded 80/20, and Federal funds are reimbursed based on the 80 percent share of expenditures incurred on a given year. With a tapered match, even though the total cost of the project will be funded using the 80/20 share formula, the state may schedule Federal-aid reimbursements such that project expenditures are covered with 100 percent Federal funds at the beginning of construction, and then the state/local share is applied to the project at later stages. The FHWA approval is required for the implementation of this financing technique. Most projects are eligible to use this technique, with few exceptions, such as:

- Advance construction projects;
- STP projects for which the non-Federal match is being provided on a program-wide basis; or
- Projects financed with GARVEE bonds.

### *7.6.6 Flexible Match*

"Flexible match allows a wide variety of public and private contributions to be counted toward the non-Federal match for Federal-aid projects." Previously, project contributions other than state and local funding were not considered part of the non-Federal share. Instead, the project cost was lowered accounting for these contributions, which consequently lowered the Federal-aid amount. For instance, a $100 million project is expected to receive $80 million in Federal funds, with the remainder coming from state/ local sources. Assuming that the projects receive a $10 million contribution from the private sector, the Federal and state/local shares are reduced to $72 million and $18 million, respectively. With this innovative technique, donations in the form of funds, land, materials, and/or services are eligible to be counted toward the non-Federal share of the project costs. Using the previous example, the Federal share remains at $80 million and the state/local share is reduced to $10 million when flexible match is applied. As with the techniques discussed above, the FHWA has to approve the implementation of flexible match to any project.

### *7.6.7 Toll Credits*

If a state spends toll revenues on public roadway projects, the state receives toll credits for the unused eligible Federal share of the project. For instance, a $100 million facility is funded using toll revenues, but it was eligible for Federal-aid funding. The state receives an $80 million on toll credits that may be used as soft match for other Federal-aid projects. This innovative finance technique has been used in Florida since 1993. Toll credits are used as a soft match in many

highway projects, "so that most of [Florida's] Federal highway program is 100 percent federally funded." In addition, toll credits have been transferred to match FTA funds for transit projects. For instance, the capital program of Broward County Transit is 100 percent federally funded using a soft match.

### *7.6.8 Debt Financing – GARVEE Bonds*

Grant Anticipation Revenue Vehicle (GARVEE) bonds allow states to issue bonds that would be repaid by using future Federal revenues. According to the *Innovative Finance Primer*, GARVEE bonds are usually used for large projects that meet the following criteria:

"[The projects] are large enough to merit borrowing rather than pay-as-you-go grant funding, with the costs of delay outweighing the costs of financing;

They do not have access to a revenue stream (such as local taxes or tolls), and other forms of repayment (such as state appropriations) are not feasible; and

The sponsors (generally state DOTs) are willing to reserve a portion of future-year Federal-aid highway funds to satisfy debt service requirements."

### *7.6.9 Credit Assistance*

The Federal credit assistance program provides project sponsors with tools that ease borrowing. The innovative finance techniques within this category take two forms: loans and credit enhancement tools. Credit Assistance encompasses three innovative finance techniques: Section 129 loans; State Infrastructure Banks (SIB); and Transportation Infrastructure Finance and Innovation Act (TIFIA) loans.

### *7.6.10 Section 129 Loans*

This innovative finance technique "allows states to use regular Federal-aid highway apportionments to fund direct loans to projects with dedicated revenue streams." Project sponsors, who can be public or private entities, may borrow from the state up to 80 percent of the project cost, "provided that the state has sufficient authority to fund the loan." The repayment period begins five years after construction is completed. States determine the interest rates, which should be at or below market rates. Eligible projects include toll roads that are eligible for Federal-aid funding or non-toll projects that have a dedicated source of revenue to support such projects. According to the *Innovative Finance Primer*, the use of Section 129 loans has been limited mainly because projects that are eligible to use this financing mechanism are generally eligible also for TIFIA loans (see below). Therefore, Section 129 loans become useful when projects either do not meet the total project cost threshold of $100 million for a TIFIA loan or do not meet any of the TIFIA criteria.

### *7.6.11 State Infrastructure Banks*

"State Infrastructure Banks (SIB) are revolving infrastructure investment funds for surface transportation that are established and administered by states. SIBs may be capitalized with regular Federal-aid highway apportionments and state funds and can offer a range of flexible financial assistance, including loans and various forms of credit enhancement." Currently, TEA-

21 provides authority to four states to establish SIBs, including Florida. The Florida SIB6 uses Federal and state "seed" money to issue loans to project sponsors.

As of January 2004, the Florida SIB has loaned $642.19 million, which has advanced 48 projects, for a total capital investment of $4.4 billion. Broward County has received a SIB loan for the construction of an interchange at the Fort Lauderdale-Hollywood International Airport, which will repaid with levies from the Passenger Facility Charge. In addition, the South Florida Regional Transportation Authority (RTA) received a SIB loan of $10.0 million that will be repaid with Federal STP funds. The total cost of these projects is $472.2 million. Broward County and the South Florida RTA have received $40.07 million in SIB loans, which accounts for about 8.5 percent of the total cost of both projects. Whether Broward County will continue to use this innovative finance technique will depend on several factors, including:

Availability of SIB "seed" money to issue loans every fiscal year;

- Availability of local resources to repay the loans; and
- Value of the proposed project in comparison to other competing projects, which would lead the SIB to determine what loan applications will be approved in a given fiscal year.

### *7.6.12 TIFIA – Direct Federal Credit*

TIFIA "allows U.S. DOT to provide direct credit assistance to sponsors of major transportation projects. Credit assistance can take the form of a loan, loan guarantee, or line of credit." Projects applying for TIFIA assistance should meet the following criteria:

- Highway (U.S.C. Title 23), transit (U.S.C. Title 49), passenger rail, and certain intermodal projects (with the exception of seaports, airports, or facilities that are not adjacent to NHS routes).

Any public or private entities; however, "intermodal freight transfer facilities must be publicly owned to receive TIFIA assistance."

Project cost should be at least $100 million, except for ITS projects, for which the threshold is $30 million. This threshold "can be waived if the cost of the project amounts to at least 50 percent of the state's annual apportionment of Federal-aid highway funds."

Projects "must be consistent with the state's long-range transportation plan and appear in the … STIP."

- Project must comply with all Federal regulations that also are required for similar grant-funded projects (i.e., NEPA process).

Senior debt obligations should have a rating of Baa3/BBB or higher, and the application should include a preliminary opinion letter from one of the national credit rating agencies (i.e., Moody's, Standard and Poor's, and Fitch).

TIFIA assistance should not exceed 33 percent of the project costs.

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6 Information on the Florida SIB was obtained from FDOT's web site, http://www.dot.state.fl.us/ financial/planning/finance/sib.htm.

The TIFIA agreement "must include terms that offer sufficient assurance to U.S. DOT of repayment."

The project sponsor should pledge a dedicated revenue source – i.e., tolls, user fees, special assessments, or other non-Federal sources – to repay the debt.

In Florida, TIFIA assistance is being used for the construction of the Miami Intermodal Center. The TIFIA loans will be repaid with state motor fuel tax revenues and rental car fees.

#### *7.6.13 Innovative Uses of Tolling*

As mentioned previously, the Florida Turnpike Authority operates several toll facilities in Broward County. This section briefly defines three innovative uses of tolling that are discussed in the *Innovative Finance Primer*:

**Tolling Federal-aid Highways –** Provides states the discretion to levy tolls on most non-Interstate Federal-aid highways. The state or toll authority must execute a toll agreement with the FHWA "to use Federal-aid funds for construction or improvements of a toll facility or to convert an existing free Federal-aid facility to a toll facility."

**Interstate Reconstruction and Rehabilitation Pilot Program –** "This pilot program allows up to three projects to convert reconstructed or rehabilitated free Interstate highway segments into toll ways."

**Value Pricing Pilot Program –** "Sponsors the testing and evaluation of road and parking pricing concepts designed to achieve reductions in traffic congestion." Value pricing has been implemented at the Midpoint and Cape Coral Bridge in Lee County, Florida.

### 7.7 Forecasting Revenue Sources

The following section details the forecasted results of forecasts of various existing revenue sources for Broward County. Federal and state estimates were obtained from information provided in the *Revenue Forecast Handbook* (February 2001), the *2020 Florida Transportation Plan Update, Development of the 2020 Revenue Forecast* (May 2001), and consultation with the staff from FDOT District 4. Local proceeds were based on estimates generated for the County in the *2003 Local Government Financial Information Handbook* (December 2003) and projected into the future using fuel consumption projections developed by FDOT in March 2004. Year-of-expenditure projections were adjusted to constant 2000 dollars using the adjustment factors provided in Appendix D of FDOT *Revenue Forecast Handbook (February 2001)*[7]

#### *7.7.1 Federal and State Fuel Tax Revenues*

This section contains estimates of state and Federal revenues for the Broward County metropolitan area for 2010 through 2030. The base estimates through 2025 were prepared by FDOT using a statewide estimate of revenues that fund the state transportation program. Revenue projections for 2026 through 2030 were extrapolated based on input from FDOT District 4 staff,

[7] The *Revenue Forecast Handbook* says that "MPOs are encouraged to express project costs and revenue estimates…in 2000 dollars."

and conservative assumptions on historical receipts of Federal and state funds in Broward County. FIHS revenue projections were obtained from the 2003 Update of FDOT's *Florida Intrastate Highway System – 2025 Cost Feasible Plan (August 2003)* and data provided by the FDOT District 4 staff. Revenues post-2025 were assumed to remain at the same level of the revenues projected for the FY 2021-2025 period.

Estimates of tax revenues are based on the 2020 Revenue Forecast Update prepared in September 2000. Please refer to the *Revenue Forecast Handbook* for additional details on these estimates.

Table 7-7 contains metropolitan area estimates at several time periods for state programs that affect the capacity of the transportation system to move people and goods. The estimates are expressed in millions of 2000 dollars and are organized by the relationship of the programs to state goals documented in the 2020 Florida Transportation Plan (FTP). A total of $2.92 billion are expected to be available by 2030.

**Table 7-7: Federal and State Revenues Forecast (Millions, 2000 Dollars) – FY 2030**

| Capacity Program Emphasis Areas | Revenue Forecast Update (Millions, 2000 Dollars) | | | | |
|---|---|---|---|---|---|
| | 2010-2015 | 2016-2020 | 2021-2025 | 2026-2030 | 21-Year Total |
| **Economic Competitiveness** | | | | | |
| FIHS Construction/ROW | $228.6 | $190.5 | $190.5 | $190.5 | $800.2 |
| Aviation | $42.5 | $35.6 | $35.8 | $35.9 | $149.8 |
| Rail | $44.5 | $37.1 | $36.9 | $36.6 | $155.1 |
| Intermodal Access | $27.8 | $25.3 | $28.8 | $22.3 | $104.2 |
| **Quality of Life** | | | | | |
| Other Arterial Construction and ROW | $444.6 | $406.5 | $392.1 | $389.0 | $1,708.5 |
| Total Capacity Programs | $864.3 | $695.0 | $684.1 | $674.2 | $2,917.6 |
| Transit | $76.3 | | | | |

Sources: FDOT District 4; Cambridge Systematics, Inc.

Of the $2.92 billion in state and Federal revenue, about $1.21 billion is dedicated toward the Economic Competitiveness programs, including the FIHS. This leaves $1.71 billion to be allocated to other capacity-related projects, which may include any mode of transportation.

### *7.7.2 Constitutional Gas Tax*

As mentioned previously, Broward County's Constitutional Gas Tax receipts for FY 2004 are estimated at $15.1 million. Revenue projections through 2030 were calculated assuming an annual growth rate of 2.33 percent based on the average annual growth of fuel consumption projections developed by FDOT (Florida's Revenue Estimating Conference, March 2004). Year-of-expenditure projections were adjusted to constant 2000 dollars using the adjustment factors provided in Appendix D of FDOT *Revenue Forecast Handbook*. The total revenue generated by the Constitutional Fuel Tax amounts to approximately $239 million (2000 dollars) over the 21-year period. Only 80 percent of this revenue can be applied toward capacity-related projects. The other 20 percent of the funds pertain only to maintenance and operational activities. The total

amount that is expected to exist for capacity-related projects by 2030 is therefore about $191 million (2000 dollars).

### *7.7.3 County Fuel Tax*

Revenues from the County Fuel Tax are used solely for operations and maintenance of county roadways.

### *7.7.4 Local Option Gas Taxes*

The total revenue generated from the combined LOGT is approximately $1.33 billion (2000 dollars) from FY 2010 through FY 2030. These taxes include the First LOGT and the Second LOGT. The local option gas tax revenues are shared with the municipalities and used for a variety of transportation-related programs and projects. The local municipalities receive approximately 35 percent of these revenues, with the remaining 65 percent going to the County Transportation Trust Fund.

The First LOGT (six cents) is estimated to generate almost $48 million in FY 2004, from which $30.0 million goes to the County Transportation Trust Fund and $18.0 million transferred to the municipalities. Revenue projections through 2030 were estimated assuming an annual growth of 2.33 percent based on the average annual growth of fuel consumption projections developed by FDOT (Florida's Revenue Estimating Conference, March 2004). Year-of-expenditure projections were adjusted to constant 2000 dollars using the adjustment factors provided in Appendix D of FDOT *Revenue Forecast Handbook*. The County portion is estimated at 62.5 percent of the total revenues generated through 2030.

The County portion of the First LOGT is pledged to support debt service of gas tax bonds, road construction, and Mass Transit operations. Broward County debt service for 2004 is estimated at $5.6 million. Gas tax bonds will be retired in 2010, which is the first year of the revenue projections. Debt service payments in 2010 are estimated at $4.0 million (2000 dollars). Debt service payments were discounted from the First LOGT revenues in 2010 to estimate the actual amount available for road construction and Mass Transit operations for that year.

The Second LOGT is expected to generate $36.5 million in FY 2004, which is about $7.3 million per penny. The 1994 LOGT (three cents) is expected to generate $21.9 million in FY 2004; 55 percent of the total revenues go to the County and the remainder is distributed to the municipalities. The 1998 LOGT (one cent) is expected to generate $7.3 million in FY 2004; revenues from this tax are not shared with the municipalities. The 2001 LOGT (one cent) is expected to generate $7.3 million in FY 2004; revenues are shares between the County and municipalities at a 74/26 split. Revenue projections through 2030 were estimated using the same growth assumptions used for the First LOGT revenue projections.

Table 7-8 breaks down the local option revenues generated for FY 2010 through FY 2030. It is anticipated that the Municipal Fund will generate about $470 million (2000 dollars) by 2030. The County Fund revenues through 2030 are estimated at approximately $865 million (2000 dollars).

**Table 7-8: Local Option Fuel Tax Totals Forecast (Millions, 2000 Dollars) – FY 2010-FY 2030**

| Local Option Gas Tax | Municipality Share | County Share | Total |
|---|---|---|---|
| Six-cent LOGT | $284.5 | $474.2 | $758.7 |
| 1994 LOGT (Three Cents) | $155.7 | $190.3 | $346.0 |
| 1998 LOGT (One Cent) | $0.0 | $115.3 | $115.3 |
| 2000 LOGT (One Cent) | $30.0 | $85.3 | $115.3 |
| Total | $470.2 | $865.1 | $1,335.3 |

### *7.7.5 Ninth-Cent Gas Tax*

The Ninth-Cent Gas Tax also is in place in Broward County. This tax charges one cent on all motor fuel and an additional one-cent on all special fuels. Revenue projections through 2030 were calculated assuming an annual growth rate of 2.33 percent based on the average annual growth of fuel consumption projections developed by FDOT (Florida's Revenue Estimating Conference, March 2004). Year-of-expenditure projections were adjusted to constant 2000 dollars using the adjustment factors provided in Appendix D of FDOT *Revenue Forecast Handbook*. The total amount expected to be available by 2030 is $5.9 million (2000 dollars). Cumulative revenues from FY 2010 through FY 2030 are estimated at $136.4 million (2000 dollars). It is assumed that these funds are dedicated to Mass Transit operations.

### *7.7.6 Transit Concurrency Fees*

Broward County has implemented a Transit Concurrency Fees that will replace the existing impact fee system. The new fee system is now in place. Broward County staff projections of revenues are estimated at $3.8 million (2004 dollars) during the first year. Revenue projections through 2030 were not available during the preparation of this report. This revenue source will provide additional funding needed to pay for several transit improvements proposed in the *FY 2005-FY 2009 Transit Development Plan*.

### *7.7.7 County General Fund*

Broward County dedicates a portion of its General Fund revenues to support the Mass Transit operating costs. According to the Broward County Transit Development Plan FY 2005-FY 20098, the General Fund revenues for operations are estimated at $23.6 million (2000 dollars) for FY 2005, and remain constant through FY 2009. Therefore, it is assumed that the General Fund contribution will remain constant through 2030. The total revenues transferred from the General Fund to Mass Transit are estimated at $496.7 million from 2010 through 2020.

### *7.7.8 FTA Section 5309 New Starts Funding*

The Section 5309 New Starts funding Program, administered by the FTA, provides capital assistance for construction of new fixed-guideway systems, or extensions to existing fixed-

8 According to the *Broward County Transportation Development Plan*, General Fund revenues for transit operation are $25,989,360 in 2003 dollars. This amount was adjusted to 2000 dollars, using the adjustment factors developed by FDOT.

guideway systems. A fixed-guideway system is defined as a transit system that uses exclusive or controlled ROW, such as heavy rail, light rail, commuter rail, and bus rapid transit.

Projects requesting Section 5309 New Starts funding go through a project development process that leads to a Full Funding Grant Agreement (FFGA). Transit agencies applying for New Starts funding are required to submit documentation that provides information on project justification and local financial commitment. Projects are reviewed annually based on these criteria. The project justification criteria include: 1) mobility improvements; 2) environmental benefits; 3) operating efficiencies; and 4) cost effectiveness. In addition, grantees are required to submit a financial plan that evidence the grantee's financial capacity to build and operate the proposed project, in addition to meeting other capital commitments and providing for operating and maintenance of the existing transit services.

Similar to other Federal funding programs, the statutory match for New Starts funding is 80 percent Federal and 20 percent local. However, given the limited funding available and the high volume of projects that enter the New Starts process, grantees should assume a maximum New Starts funding share of 60 percent. Projects requesting a New Starts funding share of more than 60 percent are assigned a "not recommended" rating.

The transit element of Broward County LRTP includes various projects that are eligible for Section 5309 New Starts funding. Assuming a 50 percent New Starts share, Broward County could receive a total of $769.3 million through 2030 for transit capital projects.

**Transit Concurrency Fees**

Revenues derived from the levy of transit concurrency fees on new development are estimated at $3.8 million (year-of-expenditure dollars) for FY 2004. Assuming that the annual levies will remain constant until the County reaches build-out conditions, the total revenues generated from transit concurrency fees through 2030 are estimated at $42.3 million (2000 dollars).

**Paratransit Revenues**

The paratransit service operated by the Broward County Mass Transit Division is expected to receive $285.5 million in revenues for the 2010 through 2030 period that will be used to fund its operations and capital program. Funding to cover operating expenditures will come from local funding sources (e.g., Broward County General Fund), whereas capital expenditures are funded with Federal Transit Administration appropriations and toll credits.

**Broward County Aviation Department**

The Broward County Aviation Department will provide $1,150.0 million for the construction of an automated people mover between the Fort Lauderdale International Airport and Port Everglades.

**Fort Lauderdale Downtown Development Authority**

The Fort Lauderdale Downtown Development Authority is expected to provide $95.2 million for the construction and operations of the second phase of the downtown Light Rail system, serving Andrews Avenue and Third Avenue.

## Summary of Total Revenues

This section summarizes total transportation-related revenues anticipated to be available through the period 2010-2030. Maintenance reductions are included in the overall figures. These reductions are based on information developed by FDOT. The Department has identified an increase in the cost of annual maintenance costs due to the local desire to have additional amenities included in normal maintenance activities. These amenities include bicycle and pedestrian facilities, construction and beautification of medians, and traffic calming treatments.

The Florida Turnpike Authority has programmed funds for several projects within Broward County for the period between FY 2010 through FY 2030. The total funding for these projects is estimated at $288.2 million (2000 dollars). According to these estimates, approximately $6.51 billion is expected to be available for transportation capacity-related projects, including transit, between FY 2010 and FY 2030.

**Table 7-9: Summary of Total Capacity Revenues FY 2010-FY 2030 (Millions, 2000 Dollars)**

| Revenue Source | Fiscal Year | | | | 21-Year Total |
|---|---|---|---|---|---|
| | 2010-2015 | 2016-2020 | 2021-2025 | 2026-2030 | |
| FIHS [(1)] | $228.6 | $190.5 | $190.5 | $190.5 | $800.2 |
| Turnpike | $82.3 | $68.6 | $68.6 | $68.6 | $288.2 |
| Arterial/ROW and Transit | $520.9 | $406.5 | $392.1 | $389.0 | $1,708.5 |
| Section 5309 New Starts | $192.3 | $192.3 | $192.3 | $192.3 | $769.3 |
| LOGT – County (CTTF)[(2)] | | | | | |
| Transit | $147.3 | $116.6 | $111.1 | $105.8 | $480.8 |
| Capacity Projects | $155.6 | $126.3 1 | $120.3 | $114.6 | $516.8 |
| LOGT Municipalities | $144.1 | $114.0 | $108.6 | $103.5 | $470.2 |
| Constitutional Fuel Tax | $58.6 | $46.4 | $44.2 | $42.1 | $191.1 |
| Transit Concurrency Fees | $15.2 | $10.6 | $9.0 | $7.6 | $42.3 |
| Paratransit Revenues | $81.6 | $68.0 | $68.0 | $68.0 | $285.5 |
| Aviation Department | 0.0 | 0.0 | 0.0 | $1,150.0 | $1,150.0 |
| Downtown Development Authority | 0.0 | 0.0 | 0.0 | 95.2 | $95.2 |
| Maintenance Reductions | $(81.4) | $ (67.8) | $ (67.8) | $ (67.8) | $ (284.8) |
| Total | $1,545.0 | $1,272.0 | $1,236.9 | $2,459.5 | $6,513.3 |

(1) FIHS funds may only be programmed on FIHS projects.

(2) LOGT County, or County Transportation Trust Fund, includes revenues from the six-cent LOGT, five-cent LOGT, and the Ninth-Cent Gas Tax.

# 8.0 COST FEASIBLE PLAN

## 8.1 2030 Cost Feasible Plan

The cost of implementing the recommended multi-modal transportation needs plan is estimated at $9.425 billion, which exceeds the anticipated revenues of $6.513 billion. It was therefore necessary to prioritize the improvements included in the needs plan to ensure that those projects which most closely address the Goals and Objectives of the 2030 LRTP would be included as cost-feasible and built with available moneys.

To this end, a number of measurable criteria were identified to evaluate each project in the identified transportation needs list against the plan goals, various community values, and input from the MPO, TCC, CIR and the public. The five goals for this long-range plan study are Multi-Modalism, Economic Development, Safety, Preservation, and Environmental Sensitivity.

The results of this process are eight lists of projects for the different modes of transportation that comprise the Broward County 2030 Long Range Transportation Plan. These modes include Pedestrian, Greenway, Bicycle, Waterborne, Transit, Roadway, Freight, and ITS. Tables are provided for each of these modes in this Section. Maps for the pedestrian, bicycle, transit and roadway projects are also provided.

## 8.2 Pedestrian and Bicycle Cost-Feasible Plans

A number of measurable criteria were identified to evaluate each project in the identified transportation needs list against the plan goals and various community values. They have been arranged below by the goals of the long-range plan study. For each criterion, a value in the range between 0 and +2 was assigned to each project according to the description highlighted in the tables below.

*Goal 1. A balanced, multi-modal transportation system that serves the local and regional movement of people goods and services and provides choices in mobility.*

Following clear direction from the MPO and the County Commission, the criteria used to evaluate this goal were focused on ensuring that Broward's citizens will be provided with mobility options that limit their reliance on the private automobile, with a particular emphasis on significantly improving transit service within the County.

| Multi-Modal Criterion | Description | Score |
|---|---|---|
| Serves/improves transit system | Serves BRT/HPT route(s) | 2 |
| | Serves BCT route(s) | 1 |
| | Serves no bus routes | 0 |
| Support Household with no registered vehicles | At least 30% of total occupied HH has no vehicles | 2 |
| | 20%-30% of total occupied HH has no vehicles | 1 |
| | Less than 20% of HH has no vehicles | 0 |
| Connect to Greenway | ½ mile from a Greenway | 1 |
| | Outside the ½ mile radius | 0 |

*Goal 2. A safe transportation system.*

Ensuring, and where possible, enhancing safety and security is of paramount importance in all projects. The criteria used to evaluate projects against this plan goal include evacuation support, safety for alternative modes, safety on all streets and improved truck facilities.

| Safety Criterion | Description | Score |
|---|---|---|
| Within a Pedestrian Focus Area | Within the 10 Pedestrian Focus Areas | 2 |
| | Outside of the Focus Areas | 0 |
| Provide Safe Routes to School to School Children | Within ½ mile radius of identified hazardous schools | 2 |
| | From ½ to 1 mile radius of identified hazardous schools | 1.5 |
| | From 1 to 2 miles radius of identified hazardous schools | 1 |
| | Outside the 2 miles radius of the hazardous schools | 0 |

**Weighting of criteria:**

The priority criteria will be weighted to account for public perception of priorities in transportation funding to be indicated in feedback provided on a survey at the October 2004 workshops. The criteria were weighted as follows:

| Goal | Weight |
|---|---|
| 1 Multi Modal | 17 |
| 2 Safety | 11 |

The resulting set of Cost-Feasible projects for the pedestrian network are listed on Table 8-1 and illustrated on Figure 8-1.

The bicycle needs were reviewed by Broward County staff and the Bicycle Advisory Board. It was found that the projects that were identified on the Needs Assessment each met the goals of supporting the multi-modal transportation system and ensuring an increased level of safety for bicycle travelers. Thus, the list of Needs Assessment projects was carried forward to the Cost-Feasible Plan. These projects are listed on Table 8-2 and illustrated on Figure 8-2.

# Broward County 2030 Long Range Tranportation Plan

## Figure 8-1: Cost-Feasible Pedestrian Projects

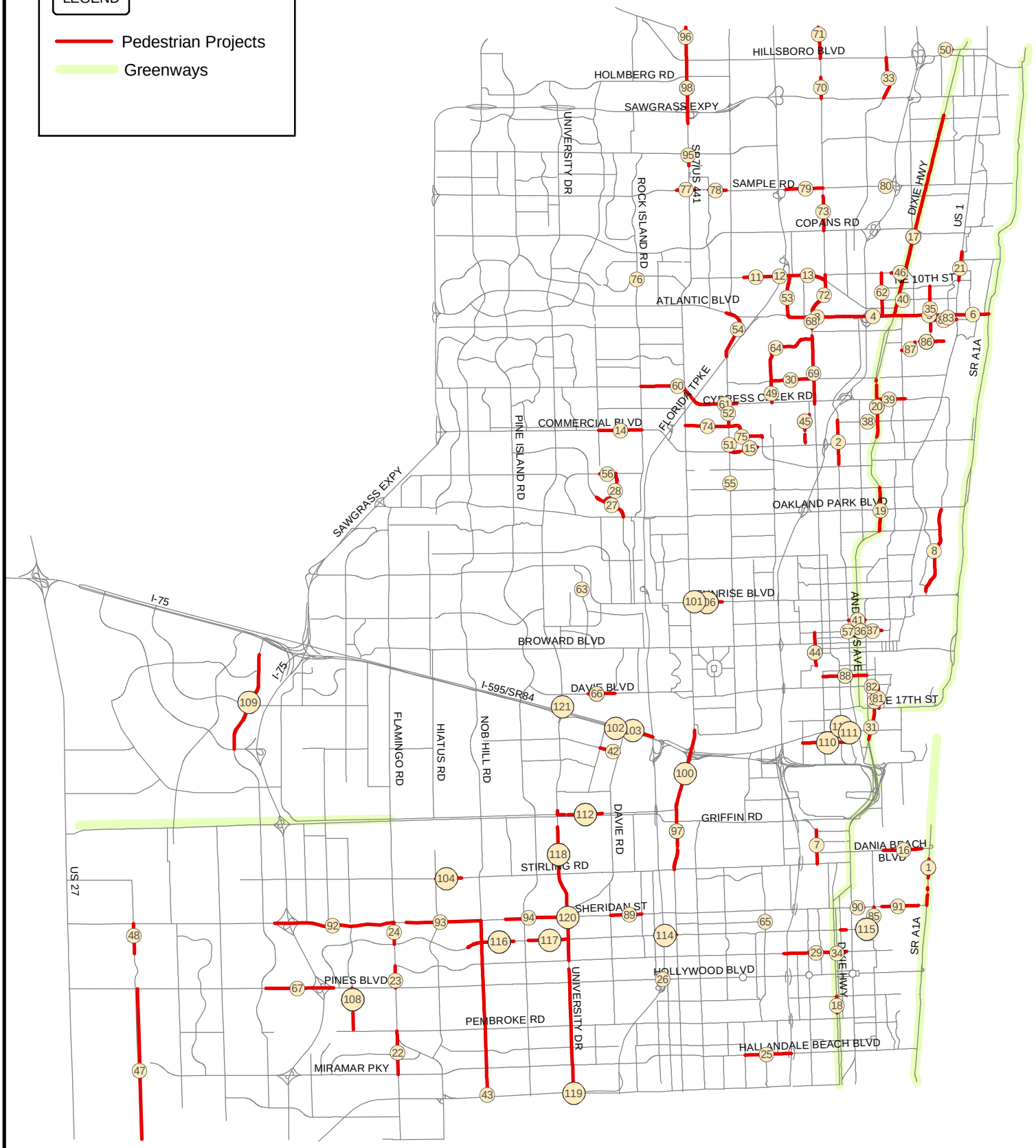


**Table 8-1: Cost-Feasible Pedestrian Projects**

| Project ID | Street Name | Limits | Length (mi) | Cost ($000) |
|---|---|---|---|---|
| 1 | A1A (HOL) | Sheridan St to S of Dania Beach Blvd | 0.7 | 169 |
| 2 | Andrews Av (OAK) | N of Prospect Rd to N of NE 56th St | 1 | 229 |
| 3 | Atlantic Blvd (POM) | NW 31st Av to NW 15th Av | 1.3 | 288 |
| 4 | Atlantic Blvd (POM) | NW 15th Av to S Cypress Rd | 1.3 | 306 |
| 5 | Atlantic Blvd (POM) | S Cypress Rd to Federal Hwy | 1.2 | 282 |
| 6 | Atlantic Blvd (POM) | Federal Hwy to A1A | 0.7 | 168 |
| 7 | Banyan Rd (DAN) | Stirling Rd to Old Griffin Rd | 0.8 | 175 |
| 8 | Bayview Dr (FTL) | N of Sunrise Blvd to S of Oakland Park Blvd | 2 | 455 |
| 11 | Coconut Creek Pkwy (CCR) | US 441 to NW 31st Av | 1 | 227 |
| 12 | Coconut Creek Pkwy (CCR) | NW 31st Av to Florida Turnpike | 0.5 | 103 |
| 13 | Coconut Creek Pkwy (POM) | Florida Turnpike to Powerline Rd | 0.9 | 193 |
| 14 | Commercial Blvd (TAM) | NW 64th Av to Rock Island Rd | 1 | 226 |
| 15 | Commercial Blvd (TAM) | E of NW 30th Terrace to W of Prospect Rd | 0.6 | 127 |
| 16 | Dania Beach Blvd (HOL) | E of SE 5th Av to W of A1A | 0.9 | 201 |
| 17 | Dixie Hwy (DFB) | Atlantic Blvd to N of NE 54 St | 4.7 | 1,060 |
| 18 | Dixie Hwy (HOL) | N of Pembroke to Washington St | 0.4 | 87 |
| 19 | Dixie Hwy (OAK) | NE 26th St to 38th St | 1 | 230 |
| 20 | Dixie Hwy (OAK) | N of Commercial to S of McNab | 1.2 | 278 |
| 21 | Federal Hwy/US 1 (POM) | NE 10th St to NE 16th St | 0.7 | 150 |
| 22 | Flamingo Rd (MIR) | Miramar Pkwy to Pembroke Rd | 1 | 227 |
| 23 | Flamingo Rd (PEM) | Pines Blvd to Johnson St | 0.5 | 114 |
| 24 | Flamingo Rd (PEM) | Taft St to Sheridan St | 0.5 | 113 |
| 25 | Hallandale Beach Blvd (PBP) | SW 40th Av to I-95 | 1.1 | 242 |
| 26 | Hollywood Blvd (HOL) | N 63rd Av to Turnpike | 0.04 | 9 |
| 27 | Inverrary Blvd (LDH) | N of Inverrary Dr to Oakland Park Blvd | 0.8 | 184 |
| 28 | Inverrary Dr (TAM) | Inverrary Blvd to NW 44th St | 0.8 | 183 |
| 29 | Johnson St (HOL) | W of I-95 to W of US 1 | 1.5 | 329 |
| 30 | McNab Rd (FTL) | Palm Air Dr to Powerline Rd | 1 | 224 |
| 31 | Miami Rd (FTL) | Federal Hwy to SE 19th St | 0.6 | 125 |
| 32 | Miami Rd (FTL) | SE 17th St to SE 12th St | 0.7 | 168 |
| 33 | Military Trail (DFB) | SW 10th Street to Hillsboro Blvd | 1 | 221 |
| 34 | N 21st Av (HOL) | Lincoln St to Johnson St | 0.1 | 15 |
| 35 | NE 11th Av (POM) | SW 6th Terrace (canal S of Atlantic) to NE 10th St | 1 | 234 |
| 36 | NE 4th St (FTL) | NE 3rd Av to Federal Hwy | 0.2 | 46 |
| 37 | NE 4th St (FTL) | Federal Hwy to NE 12th Av | 0.4 | 85 |
| 38 | NE 56th St (OAK) | NE 7th Terrace to NE 9th Av | 0.1 | 21 |
| 39 | NE 62nd St (FTL) | Dixie Hwy to NE 18th Terrace | 0.6 | 139 |
| 40 | NE 6th St (POM) | E of Dixie Hwy to NE 3rd Av | 0.2 | 49 |
| 41 | NE 6th St (FTL) | Andrews Av to Federal Hwy | 0.4 | 89 |
| 78 | North 28th Ave (HOL) | Taft St to Sheridan Rd | 0.6 | 136 |
| 42 | Nova Dr (DAV) | College Av to SW 64th Av | 0.5 | 103 |
| 43 | NW 101st Av (PEM) | Miami Dade County Line to Sheridan St | 4 | 911 |
| 44 | NW 11th Av (FTL) | SW 5th Pl to NW 4th St | 0.7 | 167 |
| 45 | NW 12th Ave (FTL) | N of Commercial Blvd to S of Cypress Creek Rd | 0.6 | 135 |
| 46 | NW 15th St (POM) | E of NW 6th Av to Dixie Hwy | 0.3 | 71 |
| 47 | NW 196th Av (PEM) | Miami Dade County Line to Pines Blvd | 3.5 | 785 |
| 48 | NW 196th Av (PEM) | Taft St to Sheridan St | 0.7 | 155 |

## Table 8-1: Cost-Feasible Pedestrian Projects

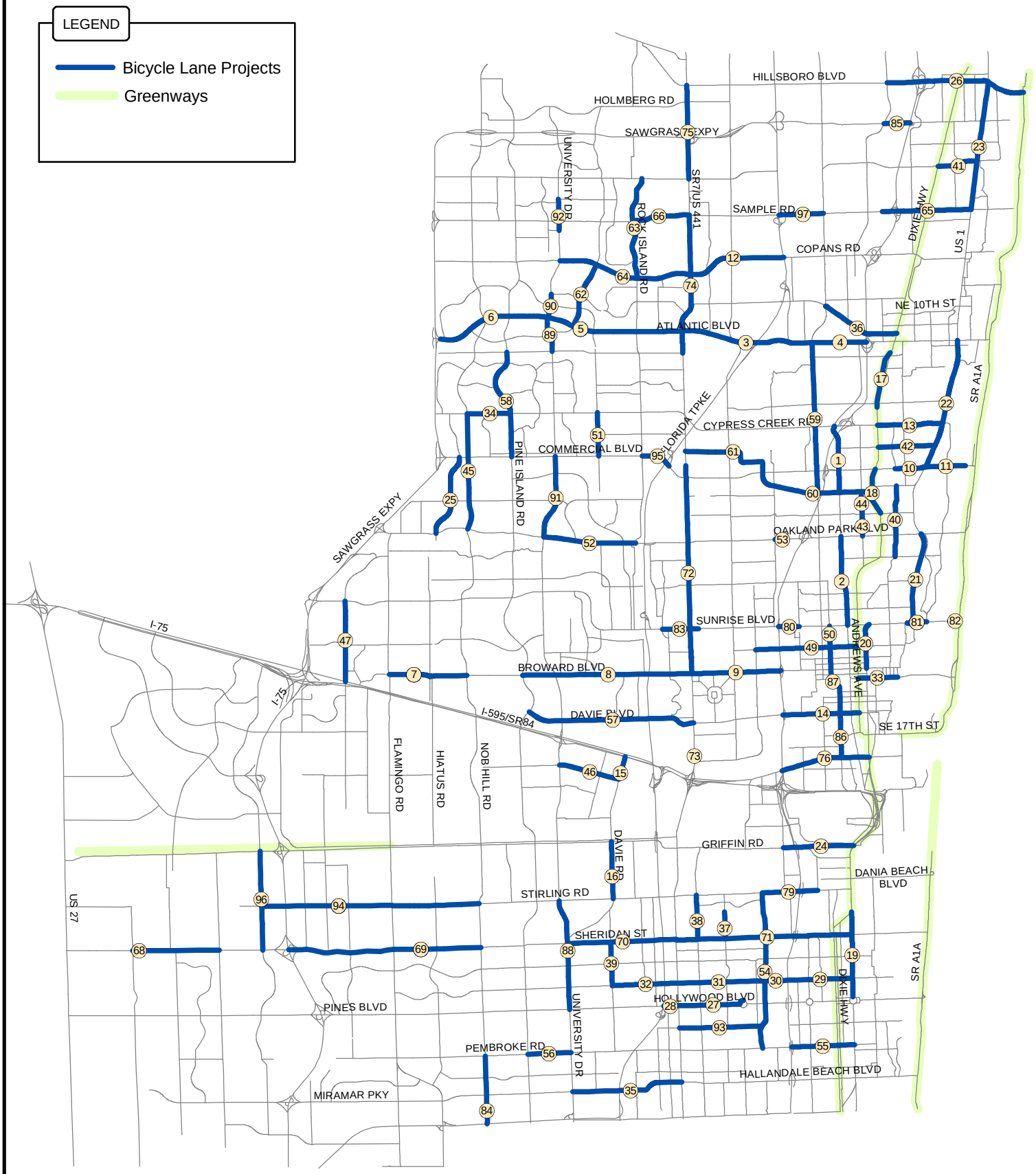
| Project ID | Street Name | Limits | Length (mi) | Cost ($000) |
|---|---|---|---|---|
| 49 | NW 21st Av (FTL) | NW 62nd St to McNab Rd | 0.5 | 113 |
| 50 | NW 2nd St (DFB) | Between NW 3rd Av and NE 1st Terrace | 0.2 | 56 |
| 51 | NW 31st Av (FTL) | B/t Commercial Blvd and Cypress Lake Dr | 0.1 | 19 |
| 52 | NW 31st Av (FTL) | Prospect Rd to NW 62nd St | 0.5 | 117 |
| 53 | NW 31st Av (POM) | Atlantic Blvd to Coconut Creek Pkwy | 1 | 219 |
| 54 | NW 31st Av/SW 46th Av (CCR) | Atlantic Blvd to Turnpike | 1.3 | 287 |
| 55 | NW 31st Ave (LLK) | NW 39th St to NW 41st St | 0.3 | 60 |
| 56 | NW 44th St (TAM) | E of Inverrary Blvd to W of Rock Island Rd | 0.4 | 83 |
| 57 | NW 4th St (FTL) | W of NW 1st Av to Andrews Av | 0.1 | 14 |
| 60 | NW 62nd St (FTL) | SW 71st Ave to NW 35th Av | 1.7 | 387 |
| 61 | NW 62nd St (FTL) | NW 35th Av to NW 29th Ave | 0.7 | 153 |
| 62 | NW 6th Av (POM) | Atlantic Blvd to NW 15th St | 1 | 224 |
| 63 | NW 70th Av (PLN) | NW 11th Pl to NW 13th St | 0.2 | 37 |
| 64 | Palm Aire Dr (FTL) | W McNab Rd to Pompano Pkwy | 1.8 | 419 |
| 65 | Park Rd (HOL) | Harding St to Lee St | 0.2 | 44 |
| 66 | Peters Rd (PLN) | SW 69th Av to SE 13th St | 0.6 | 137 |
| 67 | Pines Blvd (PEM) | E of NW 160th Av to I-75 Ramp | 1.6 | 353 |
| 68 | Pompano Pkwy (POM) | N of SW 3rd St to Atlantic Blvd | 0.3 | 61 |
| 69 | Pompano Pkwy/NW 9th Av (FTL) | S of NW 62nd St to S SW 3rd St | 1.6 | 357 |
| 70 | Powerline Rd (DFB) | SW 10th St to SW 4th St | 0.5 | 111 |
| 71 | Powerline Rd (DFB) | Hillsboro Blvd to Palm Beach County Line | 0.7 | 163 |
| 72 | Powerline Rd (POM) | N of Atlantic Blvd to NW 15th St | 0.9 | 215 |
| 73 | Powerline Rd (POM) | Copans Rd to S of Sample | 0.8 | 180 |
| 74 | Prospect Rd (FTL) | SR 7 to SW 31st Av | 1 | 227 |
| 75 | Prospect Rd (FTL) | SW 31st Av to NW 52nd Ct | 1 | 227 |
| 76 | Rock Island Rd (MAR) | NW 10th Ct to Margate Blvd | 0.2 | 34 |
| 77 | Sample Rd (CCR) | Turtle Creek Rd to W of SR 7 | 0.4 | 93 |
| 78 | Sample Rd (CCR) | Banks Rd W of Lyons Rd | 0.4 | 92 |
| 79 | Sample Rd (POM) | Florida Turnpike to S Powerline Rd | 0.9 | 194 |
| 80 | Sample Rd (UNI) | NW 5th Terrace to I-95 Ramp | 0.3 | 59 |
| 81 | SE 10th Av (FTL) | SE 17th St to Davie Blvd | 0.5 | 116 |
| 82 | SE 12th St (FTL) | S Miami Rd to SE 10th Av | 0.2 | 53 |
| 83 | SE 18th Av (POM) | SE 2nd St to Atlantic Blvd | 0.1 | 26 |
| 84 | SE 2nd St (POM) | NE 11th Av to US 1 | 0.6 | 137 |
| 85 | SE 5th Ave (HOL) | N of Taft to Sheridan St | 0.4 | 87 |
| 86 | SE 5th Ct (POM) | SE 4th Av to canal W of US1 | 0.5 | 122 |
| 87 | SE 8th/6th St/3rd Terrace (POM) | Cypress Rd to SE 5th Ct | 0.9 | 206 |
| 88 | SE 9th St (FTL) | SW 9th Av to Federal Hwy | 1 | 227 |
| 89 | Sheridan St (HOL) | 72nd Av to 66th Av | 0.7 | 164 |
| 90 | Sheridan St (HOL) | Federal Hwy to SE 3rd Av | 0.3 | 66 |
| 91 | Sheridan St (HOL) | Between SE 5th Av and A1A | 0.9 | 193 |
| 92 | Sheridan St (PEM) | W of I-95 to Flamingo Rd | 2.8 | 628 |
| 93 | Sheridan St (PEM) | S Lake Blvd to Palm Av | 1.7 | 391 |
| 94 | Sheridan St (PEM) | E of Pine Island Rd to University Dr | 1.6 | 369 |
| 95 | SR 7 (CCR) | N of Sample Rd to N of Wiles Rd | 0.4 | 85 |
| 96 | SR 7 (CCR) | Hillsboro Blvd to Palm Beach County Line | 0.8 | 173 |
| 98 | SR 7 (PAK) | S of Sawgrass Exwy and W Hillsboro Blvd | 1.5 | 329 |
| 97 | SR 7 (HOL) | Stirling Rd to Orange Dr | 1.3 | 288 |
| 100 | SR 7 (UNI) | SW 45th/Orange to S of Riverland Rd | 1.9 | 429 |

**Table 8-1: Cost-Feasible Pedestrian Projects**

| Project ID | Street Name | Limits | Length (mi) | Cost ($000) |
|---|---|---|---|---|
| 102 | SR 84 EB (DAV) | College Av to SW 64th Av | 0.5 | 103 |
| 103 | SR 84 WB (UNI) | SW 64th Av to Florida Turnpike | 0.7 | 149 |
| 104 | Stirling Rd (CPC) | Hiatus to W of Palm Av | 0.6 | 135 |
| 106 | Sunrise Blvd (LDH) | SR 7 to W of NW 33rd Ave | 0.7 | 170 |
| 108 | SW 136th Av (PEM) | Pembroke Rd to Pines Blvd | 0.9 | 208 |
| 109 | SW 160th AV (SUN) | Arvida Pkwy to S of I-595 | 2.3 | 531 |
| 110 | SW 28th St (FTL) | SW 15th St Av to SW 2nd Av | 1.1 | 252 |
| 111 | SW 2nd Av (FTL) | SW 26th St to SR 84 | 0.1 | 29 |
| 112 | SW 45th St/Orange Dr (DAV) | University Dr to W of N 64th Av | 1 | 219 |
| 113 | SW 4th Av (FTL) | SR 84 to SW 20th St | 0.3 | 58 |
| 114 | Taft St (HOL) | N 64th Av to SR 7 | 0.5 | 115 |
| 115 | Taft St (HOL) | Between N 14th Av and N 20th Av | 0.4 | 84 |
| 116 | Taft St (PEM) | W of Palm Av to W of Douglas Rd | 1.1 | 240 |
| 117 | Taft St (PEM) | Douglas Rd to University Dr | 0.9 | 204 |
| 118 | University Dr (DAV) | Stirling Rd to N of Orange Dr | 1.2 | 266 |
| 119 | University Dr (PEM) | N of Pines Blvd to HEFT | 2.8 | 642 |
| 120 | University Dr (PEM) | Johnson St to Stirling Rd | 2 | 460 |
| 121 | University Dr (PLN) | SR 84 to S of Peter Rd | 0.3 | 62 |
| | **TOTAL** | **114 Projects** | **100.3** | **22,745** |

# Broward County 2030 Long Range Tranportation Plan

## Figure 8-2: Cost-Feasible Bicycle Projects



## Table 8-2: Cost-Feasible Bicycle Projects

| Project ID | Street Name | Limits | Project Description | Length (mi) | Cost ($000) |
|---|---|---|---|---|---|
| 1 | Andrews Ave (FTL) | Prospect Rd to NE 62nd St | Add Bike Lane | 1.6 | 1,165 |
| 2 | Andrews Ave (FTL) | Sunrise Blvd to Oakland Park Blvd | Add Bike Lane | 2.1 | 1,540 |
| 3 | Atlantic Blvd (CCR) | SR 7 to Powerline Rd | Add Bike Lane | 3.0 | 2,268 |
| 4 | Atlantic Blvd (POM) | Powerline Rd to I-95 | Add Bike Lane | 1.3 | 940 |
| 5 | Atlantic Blvd (CSP) | University to SR 7 | Add Bike Lane | 3.1 | 2,318 |
| 6 | Atlantic Blvd (CSP) | Sawgrass Exp to University | Add Bike Lane | 2.6 | 1,975 |
| 7 | Broward Blvd (PLN) | Flamingo Rd to Nob Hill Rd | Add Bike Lane | 1.8 | 1,344 |
| 8 | Broward Blvd (PLN) | University to SR 7 | R/R for Bike Lane* | 3.9 | 443 |
| 9 | Broward Blvd (FTL) | SR 7 to I-95 | R/R for Bike Lane | 2.0 | 233 |
| 10 | Commercial Blvd (FTL) | NE 15th Ave to US 1 | Add Bike Lane | 0.7 | 521 |
| 11 | Commercial Blvd (FTL) | US 1 to ICWW | Add Bike Lane | 0.9 | 687 |
| 12 | Copans Rd (CCR) | SR 7 to Turnpike | Add Bike Lane | 2.3 | 1,700 |
| 13 | Cypress Creek Rd (FTL) | Dixie Hwy to US 1 | Add Bike Lane | 1.5 | 1,118 |
| 14 | Davie Blvd (FTL) | I-95 to SE 3rd Ave | R/R for Bike Lane | 1.8 | 200 |
| 15 | Davie Rd/SW 64th Ave (DAV) | Nova Dr to SR 84 | Add Bike Lane | 0.5 | 397 |
| 16 | Davie Rd/SW 64th Ave (DAV) | Stirling St to Griffin Rd | Add Bike Lane | 1.3 | 982 |
| 17 | Dixie Hwy (POM) | McNab Rd to SW 2nd Pl | R/R for Bike Lane | 1.3 | 149 |
| 18 | Dixie Hwy (DAV) | NE 38th St to Commercial Blvd | R/R for Bike Lane | 1.1 | 124 |
| 19 | Federal Hwy (DAN) | E Young Cir to Dixie Hwy | Add Bike Lane | 2.0 | 1,457 |
| 20 | Federal Hwy (FTL) | Broward Blvd to Sunrise Blvd | Add Bike Lane | 1.0 | 776 |
| 21 | Federal Hwy (FTL) | Sunrise Blvd to Oakland Park Blvd | Add Bike Lane | 2.2 | 1,620 |
| 22 | Federal Hwy (FTL) | Commercial Blvd to Atlantic Blvd | Add Bike Lane | 3.0 | 2,261 |
| 23 | Federal Hwy (DFB) | NE 36th St to Hillsboro Blvd | Add Bike Lane | 3.0 | 2,207 |
| 24 | Griffin Rd (DAN) | Ravenswood Rd to US 1 | R/R for Bike Lane | 1.6 | 185 |
| 25 | Hiatus Road (SUN) | Oakland Park Blvd to Commercial Blvd | Add Bike Lane | 1.9 | 1,455 |
| 26 | Hillsboro Blvd (DFB) | Military Trail to A1A | Add Bike Lane | 3.2 | 2,395 |
| 27 | Hollywood Blvd (HOL) | SR 7 to S Circle Dr | Add Bike Lane | 1.5 | 1,150 |
| 28 | Hollywood Blvd (HOL) | Turnpike Mainline to SR 7 | R/R for Bike Lane | 0.3 | 39 |
| 29 | Johnson St (HOL) | I-95 to US 1 | R/R for Bike Lane | 1.5 | 170 |
| 30 | Johnson St (HOL) | Park Rd to I-95 | R/R for Bike Lane | 0.5 | 60 |
| 31 | Johnson St (HOL) | SR 7 to Park Rd | Add Bike Lane | 2.0 | 1,496 |
| 32 | Johnson St (HOL) | SW 72nd Ave to SR 7 | R/R for Bike Lane | 1.5 | 171 |
| 33 | Las Olas Blvd (FTL) | SE 3rd Ave to SE 15th Av | R/R for Bike Lane | 0.9 | 104 |
| 34 | McNab Rd (TAM) | Nob Hill Rd to Pine Island Rd | Add Bike Lane | 1.0 | 745 |
| 35 | Miramar Pkwy (MIR) | University Drive to SR 7 | Add Bike Lane | 2.6 | 1,918 |
| 36 | MLK Boulevard (POM) | Powerline Rd to I-95 | Add Bike Lane | 1.8 | 1,366 |
| 37 | N 46th Ave (HOL) | Sheridan St to just south of N 35th St | R/R for Bike Lane | 0.6 | 70 |
| 38 | N 56th Ave (DAN) | Sheridan St to Stirling Rd | R/R for Bike Lane | 1.0 | 116 |
| 39 | N 72nd Ave (HOL) | Johnson to Sheridan St | Add Bike Lane | 1.0 | 746 |
| 40 | NE 16th Ave (OAK) | NE 26th St to NE 45th St | Add Bike Lane | 1.7 | 1,235 |
| 41 | NE 48th St (DFB) | NE 15th Ave to Federal Hwy | R/R for Bike Lane | 0.9 | 106 |
| 42 | NE 56th St (FTL) | Dixie Hwy to US 1 | Add Bike Lane | 1.3 | 975 |
| 43 | NE 6th Ave (OAK) | Oakland Park Blvd to NE 38th St | R/R for Bike Lane | 0.5 | 57 |
| 44 | NE 6th Ave (OAK) | NE 38th St to Prospect Rd | R/R for Bike Lane | 0.5 | 59 |
| 45 | Nob Hill Rd (SUN) | Oakland Park Blvd to McNab Rd | R/R for Bike Lane | 2.7 | 305 |
| 46 | Nova Dr (DAV) | University Dr to Davie Rd | Add Bike Lane | 1.4 | 1,058 |
| 47 | NW 136th Ave (PLN) | SR 84 to Sunrise Blvd | R/R for Bike Lane | 1.9 | 211 |

## Table 8-2: Cost-Feasible Bicycle Projects

| Project ID | Street Name | Limits | Project Description | Length (mi) | Cost ($000) |
|---|---|---|---|---|---|
| 49 | NW 6th St (FTL) | NW 27th Ave to Federal Hwy | Add Bike Lane | 2.5 | 1,891 |
| 50 | NW 7th Ave (FTL) | Broward Blvd to Sunrise Blvd | Add Bike Lane | 0.5 | 365 |
| 51 | NW 81st Ave (NLD) | Commercial Blvd to Mc Nab Rd | Add Bike Lane | 1.0 | 747 |
| 52 | Oakland Park Blvd (LDH) | University Dr to Rock Island Rd | Add Bike Lane | 2.1 | 1,587 |
| 53 | Oakland Park Blvd (OAK) | NW 21st Ave to NW 17th Terrace | Add Bike Lane | 0.3 | 212 |
| 54 | Park Rd (HOL) | Pembroke Rd to Stirling St | Add Bike Lane | 3.6 | 2,709 |
| 55 | Pembroke Rd (HAL) | I-95 to Federal Hwy | Add Bike Lane | 1.4 | 1,077 |
| 56 | Pembroke Rd (MIR) | Douglas Rd to University Dr | R/R for Bike Lane | 1.0 | 113 |
| 57 | Peters Rd (PLN) | Pine Island Rd to SR 7 | Add Bike Lane | 3.9 | 2,903 |
| 58 | Pine Island Rd (TAM) | Commercial Blvd to Southgate Blvd | Add Bike Lane | 2.6 | 1,947 |
| 59 | Powerline Rd (FTL) | Prospect Rd to Atlantic Blvd | Add Bike Lane | 3.5 | 2,585 |
| 60 | Prospect Rd (OAK) | Commercial Blvd to Dixie Hwy | Add Bike Lane | 2.7 | 2,048 |
| 61 | Prospect Rd (FTL) | SR 7 to Commercial Blvd | Add Bike Lane | 2.2 | 1,653 |
| 62 | Riverside Dr (CSP) | Atlantic Blvd to Royal Palm Blvd | R/R for Bike Lane | 1.5 | 176 |
| 63 | Rock Island (CSP) | Royal Palm Blvd to Wiles Rd | Add Bike Lane | 2.4 | 1,790 |
| 64 | Royal Palm Blvd (CSP) | University Dr to SR 7 | Add Bike Lane | 3.0 | 2,271 |
| 65 | Sample Rd (LHP) | NE 5th Ave to US 1 | R/R for Bike Lane | 2.0 | 233 |
| 66 | Sample Rd (CSP) | Rock Island to SR7 | Add Bike Lane | 1.3 | 995 |
| 68 | Sheridan Street (PEM) | SW 196th Ave to SW 172nd Ave | Add Bike Lane | 2.0 | 1,487 |
| 69 | Sheridan Street (DAV) | I-75 to Palm Ave/NW 101st Ave | Add Bike Lane | 4.4 | 3,307 |
| 70 | Sheridan Street (HOL) | University to SR 7 | Add Bike Lane | 2.5 | 1,864 |
| 71 | Sheridan Street (HOL) | SR 7 to US 1 | Add Bike Lane | 4.1 | 3,032 |
| 72 | SR 7 (LLK) | Broward Blvd to Commercial Blvd | Add Bike Lane | 4.8 | 3,575 |
| 73 | SR 7 (UNI) | North of Turnpike ramp to Riverland Rd | Add Bike Lane | 0.2 | 147 |
| 74 | SR 7 (CSP) | Southgate Blvd to Sample Rd | Add Bike Lane | 3.2 | 2,422 |
| 75 | SR 7 (CCR) | Wiles Rd to Hillsboro Rd | R/R for Bike Lane | 2.2 | 246 |
| 78 | SR 84 (FTL) | I-95 to US 1 | Add Bike Lane | 2.0 | 1,493 |
| 79 | Stirling Rd (DAN) | Park Rd to S Bryan Road | Add Bike Lane | 1.3 | 953 |
| 80 | Sunrise Blvd (FTL) | I-95 to NW 15th Ave | Add Bike Lane | 0.5 | 359 |
| 81 | Sunrise Blvd (FTL) | US 1 to Middle River | Add Bike Lane | 0.5 | 385 |
| 82 | Sunrise Blvd (FTL) | North Birch Rd to A1A | Add Bike Lane | 0.1 | 111 |
| 83 | Sunrise Blvd (LDH | NW 45th Ave to SR 7 | Add Bike Lane | 0.8 | 615 |
| 84 | SW 101st Ave (MIR) | Florida Turnpike to Pembroke Rd | Add Bike Lane | 1.6 | 1,167 |
| 85 | SW 10th St (DFB) | Military Trail to I-95 | R/R for Bike Lane | 0.6 | 68 |
| 86 | SW 4th Ave (FTL) | SR 84 to Davie Blvd | R/R for Bike Lane | 1.0 | 116 |
| 87 | SW 4th Ave/SW 7th Ave (FTL) | SW 7th St to Broward Blvd | Add Bike Lane | 1.6 | 1,202 |
| 88 | University Dr (DAV) | Pines Blvd to Stirling Rd | R/R for Bike Lane | 2.5 | 289 |
| 89 | University Dr (CSP) | Southgate Blvd to Atlantic Blvd | Add Bike Lane | 0.8 | 593 |
| 90 | University Dr (CSP) | Atlantic Blvd to Shadow Wood Blvd | R/R for Bike Lane | 0.5 | 62 |
| 91 | University Dr (LDH) | Oakland Park Blvd to Commercial Blvd | Add Bike Lane | 1.9 | 1,439 |
| 92 | University Dr (CSP) | NW 31st Ct to NW 40th St | Add Bike Lane | 0.7 | 533 |
| 93 | Washington St (HOL) | SR 7 to Park Rd | R/R for Bike Lane | 1.9 | 216 |
| 94 | Stirling Rd (CPC) | SW 160th Ave to Nob Hills Rd | Add Bike Lane | 5.0 | 3,732 |
| 95 | Commercial Blvd (TAM) | Rock Island Rd to Turnpike | Add Bike Lane | 0.7 | 539 |
| 96 | Dykes Rd (DAV) | Sheridan St to Griffin Road | Add Bike Lane | 2.3 | 1,698 |
| 97 | Sample Rd (POM) | Turnpike Mainline to Powerline Rd | Add Bike Lane | 1.0 | 769 |
| | **TOTAL** | **93 Projects** | | **168** | **100,336** |

R/R for Bike Lane = Resurface/Restripe for Bike Lane

## 8.3 Greenway and Waterborne Plans

The unfunded Greenway projects were identified in the Needs Assessment in Section 5. The Greenway network provides support for and linkages to the pedestrian and bicycle networks in Broward County. Thus, all of the unfunded projects were included in the Cost-Feasible Plan because they support a multi-modal transportation network and because they provide off-roadway corridors that enhance safety for non-motorized travel. The Cost-Feasible Greenways projects are illustrated in Table 8-3.

The Waterborne projects serve a similar role, as do the Greenway projects – because they support a multi-modal transportation network and because they provide off-roadway corridors that enhance safety for non-motorized travel. All of the Waterborne transportation projects contained in the Needs Assessment were included in the Cost-Feasible Plan except for the two inter-regional catamaran services that serve the areas of the Boca Raton (Palm Beach County) and Aventura (Miami-Dade County). To maintain a balance for funding commitments among the modes, further discussions will be held with the neighboring counties to determine if joint financial participation can be provided to support these regional projects. The Cost-Feasible Waterborne Transportation projects are illustrated on Table 8-4.

**Table 8-3: Cost Feasible Greenway Projects**

| Project Name | Limits | Length (mi) | Cost ($000) |
|---|---|---|---|
| Dixie Hwy (north) | From north Perimeter Rd to Broward Palm Beach County Line | 14.6 | 10,000 |
| Dixie Hwy (South) | From north Perimeter Rd to Broward Miami-Dade County Line | 14.0 | 10,000 |
| SR A1A | Miami-Dade County Line to Palm Beach County Line | 25.7 | 28,000 |
| C-11 | From Flamingo Rd to US 27 | 13.6 | 5,200 |
| **TOTAL** | **4 projects** | **67.9** | **53,200** |

**Table 8-4: Waterborne Cost-Feasible Plan**

| Project ID | Project Name | Project Description | Estimated Operating Subsidy [(1)] ($000) | Capital Cost ($000) |
|---|---|---|---|---|
| 1 | Base Service | Hourly Service to 22 stops on New River & Intracoastal Waterway | $31,500 | $370 |
| 2 | Increase Frequency | Thirty-minute headways commencing December 2003 | $2,709 | $0 |
| 3 | Downtown Commuters | 6:30am to 9:30am service from S.W. 7th Street to Marina Bay | $2,625 | $0 |
| 4 | I-95 Extension | West on New River from S.W. 7th Street to Marina Bay | $6,636 | $2,500 |
| 5 | New Terminal | Optional locations being considered | $0 | $2,500 |
| | | | **$43,470** | **$5,370** |
| **TOTAL** | | **5 projects** | | **$48,840** |

[(1)] Annual Operating Subsidy multiplied by 21 years. Expressed in 2004 dollars.

## 8.4 Transit Cost-Feasible Plan

Because of the emphasis that Broward County has placed on a multi-modal transportation system with connectivity to an enhanced transit system, most of the transit projects contained in the

Needs Assessment were retained in the Cost-Feasible Plan. All of the Regular Bus service improvements were retained in the Cost-Feasible Plan because these improvements are consistent with the Transit Development Plan that has previously been approved by Broward County Transit. The Regular Bus service provides the foundation for local bus service that is essential to serving the public and to supporting access to a Premium Transit system.

The Premium Transit projects that were contained in the Needs Assessment were reduced to a relatively small degree to create the Cost-Feasible Plan in recognition of financial constraints and due to concern for community impacts. The following reductions were made to the Needs Assessment projects to create the Cost-Feasible Plan:

- Light Rail service on US 441 throughout Broward County is a desired goal for future implementation. However, within the financial constraints of this plan, Bus Rapid Transit (BRT) service was judged to be a reasonable next step. Thus, the provision of exclusive lanes for peak-period transit service will build on the local bus and limited stop services that are already being provided in the US 441 corridor. As ridership builds and as new funding sources become available, this BRT service can evolve into LRT service.
- Express Bus services on Broward Boulevard and Sheridan Street were judged to be in conflict with the I-595 Light Rail Transit service and the Hollywood/Pines Boulevard Rapid Bus Service, respectively, due to the proximity of these parallel corridors. Thus, these services were deleted from the plan.
- Four Bus Rapid Transit corridors were identified in the Needs Assessment: Oakland Park Boulevard, Pines/Hollywood Boulevard, University Drive, and Sample Road. If exclusive transit lanes were to be provided along these arterial corridors in addition to the six-lane divided section for automobile traffic, the right-of-way cost and community disruption would be significant. Thus, the Cost-Feasible Plan includes the provision for Rapid Bus service instead of BRT service. Rapid Bus service provides for all of the amenities associated with BRT service in terms of station amenities, ITS and Bus Priority signal treatments, state-of-the-art vehicles, and limited stops. The only difference is that Rapid Bus service travel in mixed-flow lanes. This enhanced service will provide for an opportunity for transit ridership to increase. In the future, the option remains for implementing BRT service.

Figure 8-3 illustrates the Premium Transit portion of the Cost-Feasible Plan. Table 8-5 lists all of the Regular and Premium Transit projects in the Cost-Feasible Plan.

## 8.5 Highway Cost-Feasible Plan

The five goals for this long-range plan study are Multi-Modalism, Economic Development, Safety, Preservation, and Environmental Sensitivity. These goals were used as a basis for selecting those projects that most closely met with community values and desires. Toward this end, eight measurable criteria were selected to evaluate each project that was contained on the Highway Needs Assessment list. The eight criteria are directly related to the five goals as described below:

- Goal #1 - Multi-Modalism
  Criterion – Access to Multi-Modal Facility
- Goal #2 – Economic Development

Criteria – Supports Economic Vitality and System Continuity

- Goal #3 – Safety
  Criteria – Relieves Existing and Future Congestion
- Goal #4 – Preservation
  Criteria – Consistent with Local Plans and Minimizes Right-of-Way Costs
- Goal #5 – Environmental Sensitivity
  Criterion – Potential Impact on the Environmental

Each of the needs assessment projects were scored on each of these five criteria. Special weight was given to Preservation and Economic Development based on the input received from community meetings. The projects that scored highest in this evaluation were included in the Cost-Feasible Plan. Figure 8-4 illustrates the Cost-Feasible Highway projects. Each of these projects is listed on Table 8-6.

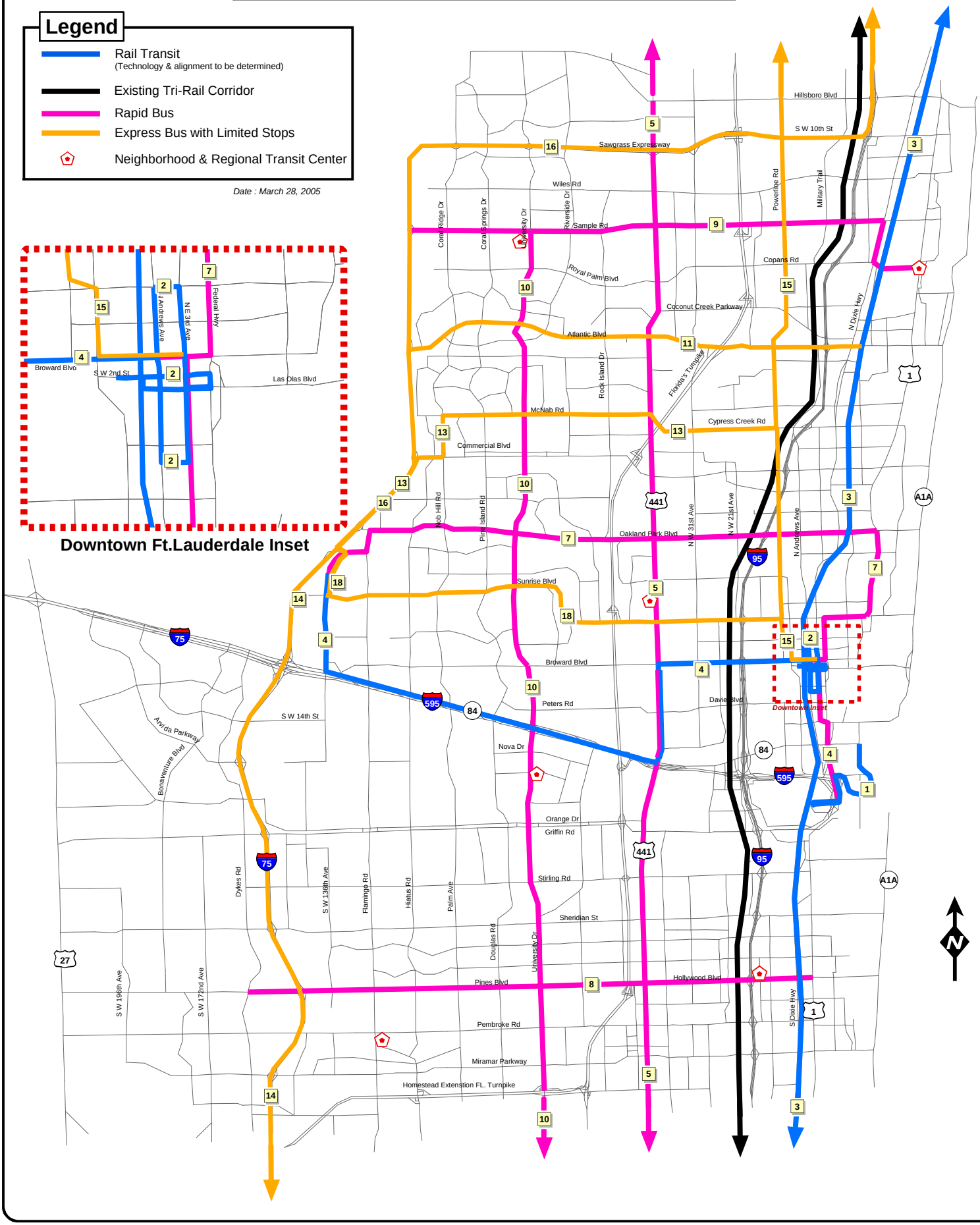
A public/private partnership (P3) approach is being used by the Florida Department of Transportation (FDOT) to implement the I-595 highway projects identified in the Cost Feasible Plan. Subsection 334.30(9), *Florida Statutes*, allows FDOT to enter into P3 agreements that include extended terms providing annual payments for performance based on the availability of service or the facility being open to traffic or based on the level of traffic using the facility.

A concessionaire will design, build, finance, operate and maintain I-595 over a 35-year period, with construction of the improvements identified in the Cost Feasible Plan expected to be commencing in early 2009 and take an estimated five years to complete. Lump sum payments will be made to the concessionaire on an annual basis for up to nine years after construction is completed. The concessionaire will be paid an annual availability payment every year after it completes construction until the end of the concession term.

The reversible express lanes component on I-595 will be operated as managed lanes with variable tolls. FDOT will retain the toll revenue and will control the toll rates.

# Broward County 2030 Long Range Transportation Plan Update

## Figure 8-3: Cost-Feasible Plan Transit Projects



## Table 8-5: Cost Feasible Transit Projects

| Project Type | Service Improvement | Route Numbers | Total Operating Subsidy (2004$ - $000) | Total Capital Cost (1) ($000) |
|---|---|---|---|---|
| Regular Transit Service | | | | |
| Local Operations | Transportation trust funds used to subsidize local transit operations, 2010 to 2030 | | $753,690 | $0 |
| Regular Bus | Weekday 10 minute headways | 1, 18, 36, and 72 | $5,171 | $7,800 |
| Regular Bus | Weekday 15 minute headways | 2, 14, 31, 40, 50, and 60 | $4,575 | $6,900 |
| Regular Bus | Weekday 20 minute headways | 7, 10, 11, 28, and 83 | $3,381 | $5,100 |
| Regular Bus | Weekday 30 minute headways | 3, 5, 9, 15, 20, 55, and 62 | $3,035 | $4,500 |
| Regular Bus | Weekday 40 minute headways | 57 | $184 | $300 |
| Regular Bus | Saturday Headway Improvements | 2, 9, 14, 15, 31, 50, and 55 | $624 | $0 |
| Regular Bus | Sunday/Holiday Headway Improvements | 6, 7, 9, 10, 11, 14, 15, 30, 40, 50, 55, 81, and 83 | $893 | $0 |
| Regular Bus | Service Expansion | 12 and 88 | $2,042 | $1,800 |
| Regular Bus | Six New Routes | Galleria to Aventura (4), Atlantic (42), Margate to Sawgrass Mills (44), Hillsboro (89), Stirling (201), and Griffin (202) | $6,545 | $7,200 |
| | | | $780,140 | $33,600 |
| | TOTAL | | | $813,740 |

| Project ID | Project Type | Project Name | Project Alignment Limits | Length (mi) | Total Operating Subsidy (2004$ - in $000) | Total Capital Cost (in $000) |
|---|---|---|---|---|---|---|
| Premium Transit Service | | | | | | |
| 3 | LRT (1) | FEC RR Transit Corridor and Crossing Improvements | From Miami-Dade County to Palm Beach County | 24.15 | $50,802 | $402,895 |
| 4 | LRT | Central Broward East-West Transit Corridor | From Sawgrass Mills to Int'l Airport via Downtown | 21.00 | $30,826 | $600,000 |
| 5 | BRT/Rapid Bus (2) | SR 7 Transit "Bridge" | Phase 1: Miami-Dade Co. to I-595; Phase 2: I-595 to Palm Beach Co. | 25.50 | $10,852 | $51,000 |
| 7 | Rapid Bus | Oakland Park Blvd | From Sawgrass Mills to Downtown via US 1 | 18.03 | $49,153 | $40,030 |
| 8 | Rapid Bus | Pines/Hollywood Blvd | From SW 160th Ave to Young Circle | 13.56 | $70,600 | $31,560 |
| 9 | Rapid Bus | Sample Road | From Sawgrass Expwy. to Pompano Square Mall via Dixie Hwy | 13.61 | $36,529 | $30,270 |
| 10 | Rapid Bus | University Drive | From Miami-Dade County to Sample Road | 21.02 | $56,427 | $34,010 |
| 11 | Express Bus | Atlantic Blvd. | From Sawgrass Expwy. to Pompano TC at Dixie | 10.94 | $10,755 | $1,890 |
| 13 | Express Bus | Cypress Creek / McNab Road | Sawgrass Mills - Tri-Rail - Downtown TC | 18.74 | $16,196 | $3,150 |
| 14 | Express Bus | I-75 | From Miami-Dade County to Sawgrass Mills | 20.67 | $32,863 | $3,150 |

| Project ID | Project Type | Project Name | Project Alignment Limits | Length (mi) | Total Operating Subsidy (2004$ - in $000) | Total Capital Cost (in $000) |
|---|---|---|---|---|---|---|
| 15 | Express Bus | Powerline Road | From Downtown Ft. Laud. to Palm Beach Co. | 15.05 | $26,556 | $4,410 |
| 16 | Express Bus | Sawgrass Expressway | Sawgrass Mills to Boca Raton Tri-Rail Station | 20.33 | $16,196 | $0 |
| 18 | Express Bus | Sunrise Blvd | Sawgrass Mills to downtown Ft Lauderdale | 12.91 | $43,220 | $4,410 |
| 20 | Paratransit | Operations and Capital | | | $285,500 | $0 |
| 21 | Tri-Rail Operations | Contribution to Tri-Rail operations | Miami-Dade to Palm Beach County Lines | | $84,000 | $0 |
| 22 | Construction | Build Neighborhood and Regional Transit Centers | At the Cities of Lauderhill, Coral Springs, Miramar, Hollywood, Pompano Beach and Davie (Educational Center) | | $0 | $8,150 |
| Project Funded by Broward County Aviation Department | | | | | | |
| 1 | Automated People Mover (APM) | Automated People Mover | From FLL Airport to Port Everglades | | 0 | 1,150,000 |
| Project Funded by Fort Lauderdale Downtown Development Authority | | | | | | |
| 2 | Light Rail Transit (LRT) | Downtown Light Rail | Downtown Ft. Lauderdale: Andrews and 3rd Ave | | $30,986 | $51,042 |
| | | | | | $851,462 | $2,415,967 |
| | **TOTAL** | | | | **$3,267,429** | |
| | **GRAND TOTAL** | | **72 Projects** | | **$4,081,169** | |

(1) Total capital cost is $775 million, only 52% is funded. As an interim step toward implementation, express limited-stop transit service will be provided on US 1.

(2) The LRTP contains sufficient funds for this project to evolve from a Rapid Bus service in mixed-traffic to a BRT service with exclusive transit lanes

Transit Unit Costs

LRT capital cost per vehicle is $2.6 million.

Rapid bus development cost is $2.0 million per centerline mile. This includes right-of-way acquisition for stations, signing, traffic signal priority, and ITS station enhancements.

Express and Local Bus capital cost per vehicle is $315,000.

Year of Implementation for Premium Transit Services

2006: State Road 7 Rapid Bus

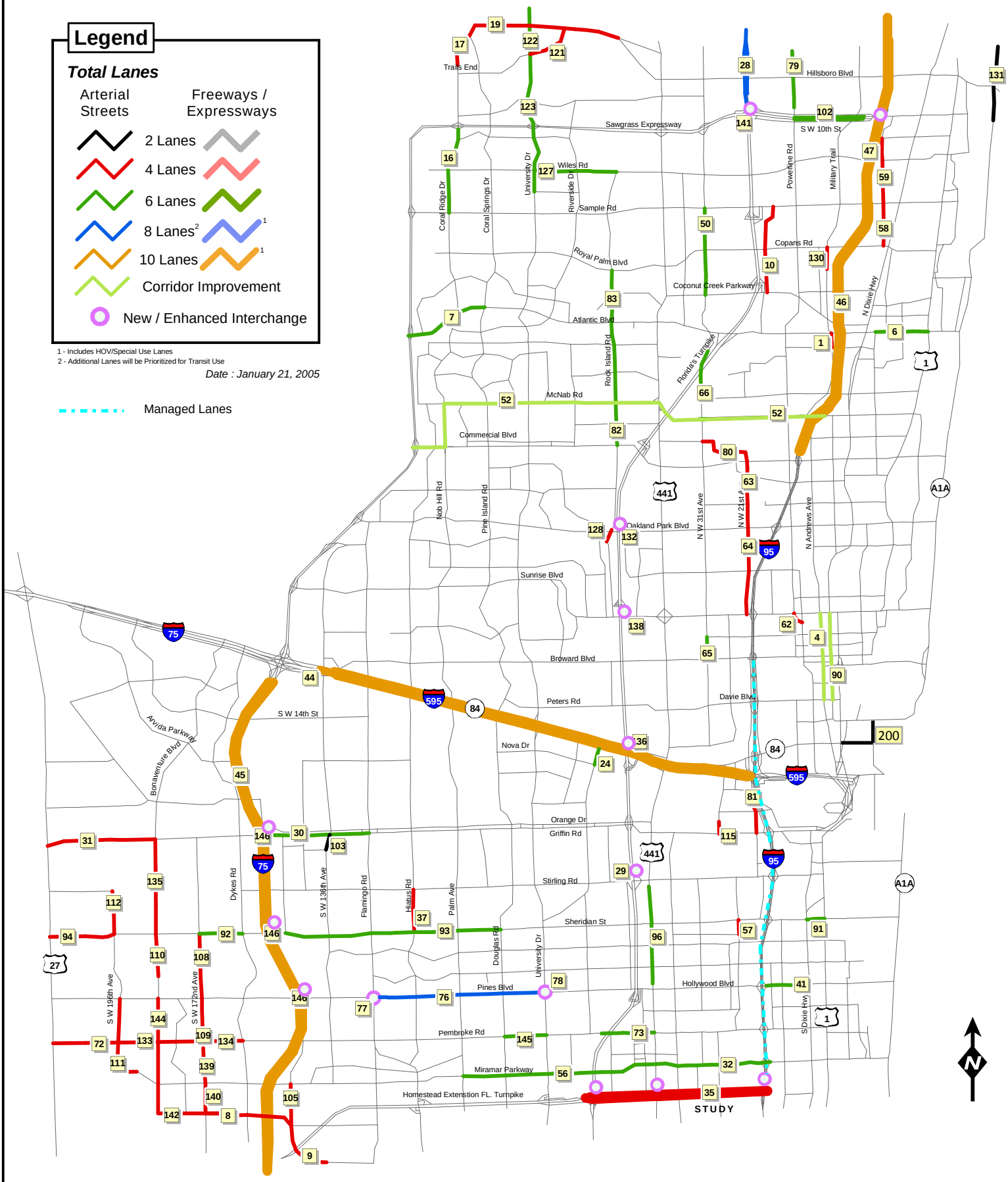
2010: Oakland Park Rapid Bus and Sunrise Express Bus

2015: Central Broward East-West Transit Corridor, Pines/Hollywood Rapid Bus, and Powerline Express Bus

2020: FEC LRT, University Drive Rapid Bus, Cypress Creek/McNab Express Bus, and I-75 Express Bus

2025: Downtown FTL LRT, Atlantic Express Bus, Sample Road Rapid Bus, and Sawgrass Express Bus

# Figure 8-4: Cost-Feasible Plan Highway Projects



## Table 8-6: Cost Feasible Highway Projects

| Project ID | Project Name | Segment | Length (mi) | Project Description | Cost ($000) |
|---|---|---|---|---|---|
| **Highway System** | | | | | |
| 1 | Andrews Ave | Pompano Park Pl to Atlantic Blvd | 0.4 | New (4LD) | 35,040 |
| 130 | Andrews Ave | NW 18 St to Copans Rd | 0.5 | New (4LD) | 19,500 |
| 4 | Andrews Ave | Davie Blvd to Sunrise Blvd | 2.0 | Corridor Improvement | 1,000 |
| 6 | Atlantic Blvd | Cypress Rd to Federal Hwy (US1) | 1.1 | Restripe for 6LD | 1,000 |
| 7 | Atlantic Blvd | Sawgrass Exwy to Coral Springs Dr | 1.9 | From 4 to 6 lanes (6LD) | 15,514 |
| 8 | Bass Creek Rd | SW 172nd Ave to SW 148 Ave | 2.3 | From 2 to 4 lanes (4LD) | 10,634 |
| 9 | Bass Creek Rd | SW 148 Ave to Flamingo Rd | 2.0 | New 4 lanes | 24,942 |
| 142 | Bass Creek Rd | SW 184th Ave to SW 172nd Ave | 1.0 | New (4LD) | 7,343 |
| 10 | Blount Rd | Hammondville Rd to Sample Rd | 1.8 | From 2 to 4 lanes (4LD) | 20,852 |
| 16 | Coral Ridge Dr | Sample Rd to Sawgrass Exwy | 2.0 | From 4 to 6 lanes (6LD) | 16,558 |
| 19 | County Line Rd | Coral Ridge Dr to Hillsboro Blvd Ext | 2.8 | New (4LD) | 20,193 |
| 24 | Davie Rd | Nova Dr to I-595 | 0.5 | From 4 to 6 lanes (6LD) | 5,672 |
| 31 | Griffin Rd | US 27 to Bonaventure Blvd | 2.5 | From 2 to 4 lanes (4LD) | 12,084 |
| 30 | Griffin Rd | I-75 to Flamingo Rd | 2.7 | From 4 to 6 lanes (6LD) | 13,122 |
| 32 | Hallandale Bch Blvd | SR 7 / US 441 to I-95 | 2.5 | From 4 to 6 lanes (6LD) | 28,361 |
| 37 | Hiatus Rd | Sheridan Street to Stirling Rd | 1.0 | From 2 to 4 lanes (4LD) | 8,209 |
| 41 | Hollywood Blvd | I-95 to S Dixie Hwy | 1.4 | Restripe for 6LD | 2,000 |
| 50 | Lyons Rd | S of Coconut Creek Pkwy to Sample Rd | 2.1 | From 4 to 6 lanes (6LD) | 23,824 |
| 52 | McNab /Commercial Blvd | Sawgrass Exwy to I-95 | 10.4 | Corridor/Transit Improve | 10,000 |
| 56 | Miramar Pkwy | Palm Ave to SR 7 / US 441 | 4.6 | From 4 to 6 lanes (6LD) | 44,822 |
| 57 | N. Park Rd | Sheridan Street to Coolidge St | 0.4 | From 2 to 4 lanes (4LD) | 4,634 |
| 58 | NE 3rd Ave | Copans Rd to Sample Rd | 1.0 | From 2 to 4 lanes (4LD) | 9,834 |
| 59 | NE 3rd Ave | Sample Rd to NE 54th St | 1.5 | From 2 to 4 lanes (4LD) | 12,023 |
| 17 | Nob Hill Rd | N of Trails End to County Line Rd | 1.6 | New (4LD) | 11,969 |
| 63 | NW 21 Ave | Oakland Park Blvd to Commercial Blvd | 1.3 | From 2 to 4 lanes (4LD) | 15,300 |
| 64 | NW 21/23 Ave | Sunrise Blvd to Oakland Park Blvd | 2.0 | From 3 to 4 lanes (4LD) | 17,377 |
| 65 | NW 31st Ave | Broward Blvd to Sistrunk Blvd | 0.5 | From 4 to 6 lanes (6LD) | 5,672 |
| 66 | NW 31st Ave | McNab Rd to N of FL Turnpike | 1.3 | From 4 to 6 lanes (6LD) | 14,748 |
| 128 | NW 55th Ave | S to N of Oakland Park Blvd | 0.5 | Align w. Rock Island Rd | 3,672 |
| 62 | NW 7th/9th Ave Connector | S of Sunrise Blvd to NW 6th St | 1.4 | New (4LD) | 40,000 |
| 73 | Pembroke Rd | W of Turnpike to SR 7 / US 441 | 1.4 | Restripe for 6LD | 1,000 |
| 72 | Pembroke Rd. | SW 200th Ave to US Hwy 27 | 1.5 | New (4LD) | 11,015 |
| 133 | Pembroke Rd. | SW 184th Ave to SW 200th Ave | 1.0 | New (4LD) | 7,342 |
| 134 | Pembroke Rd. | SW 160th Ave to SW 184th Ave | 1.9 | New (4LD) | 13,950 |
| 145 | Pembroke Rd. | University Dr to Douglas Rd | 1.0 | From 4 to 6 lanes (6LD) | 2,500 |
| 77 | Pines Blvd | At Flaming Rd | | New Interchange | 10,000 |
| 76 | Pines Blvd | Flamingo Rd to University Dr | 3.0 | From 6 to 8 lanes (8LD) | 27,142 |
| 78 | Pines Blvd | At University Dr | | New Interchange | 10,000 |
| 79 | Powerline Rd | SW 10 St to PB County Line | 1.6 | From 4 to 6 lanes (6LD) | 18,391 |
| 80 | Prospect Rd | NW 31 Ave to Commercial Blvd | 1.5 | From 2 to 4 lanes (4LD) | 17,377 |
| 81 | Ravenswood Rd | Griffin Rd to SW 36 St | 1.0 | From 2 to 4 lanes (4LD) | 11,825 |
| 82 | Rock Island Road | Commercial Blvd to McNab Rd | 1.0 | From 4 to 6 lanes (6LD) | 11,345 |
| 90 | SE/NE 3 Ave | Davie Blvd to Sunrise Blvd | 2.0 | Corridor Improvement | 1,000 |
| 92 | Sheridan St | SW 160th Ave to SW 172nd Ave | 1.0 | From 4 to 6 lanes (6LD) | 4,734 |
| 94 | Sheridan St | US 27 to NW 196th Ave | 1.4 | From 2 to 4 lanes (4LD) | 6,767 |
| 93 | Sheridan St | SW 148th Ave to Douglas Rd | 5.0 | From 4 to 6 lanes (6LD) | 33,496 |
| 91 | Sheridan St | Dixie Hwy to US-1 | 0.4 | From 4 to 6 lanes (6LD) | 19,671 |

## Table 8-6: Cost Feasible Highway Projects

| Project ID | Project Name | Segment | Length (mi) | Project Description | Cost ($000) |
|---|---|---|---|---|---|
| 96 | SR 7 | N of Hollywood Blvd to S of Stirling Rd | 2.4 | From 4 to 6 lanes (6LD) | 152,536 |
| 95 | SR 7 / US 441 | At Atlantic Blvd | | Intersection Improve | 10,000 |
| 102 | SW 10th St | Powerline Rd to Military Trail | 1.4 | From 4 to 6 lanes | 11,016 |
| 103 | SW 136th Ave | E Palomino Dr to Griffin Rd | 0.4 | New (2LU) | 3,414 |
| 105 | SW 148th Ave | Bass Creek Rd to Miramar Pkwy | 1.0 | From 2 to 4 lanes (4LD) | 14,435 |
| 108 | SW 172 Ave | Pines Blvd to Sheridan Street | 1.5 | From 2 to 4 lanes (4LD) | 7,251 |
| 109 | SW 172 Ave | Pembroke Rd to Pines Blvd | 1.0 | From 3 to 4 lanes (4LD) | 3,625 |
| 139 | SW 172 Ave | Miramar Pkwy to SW 23 Street | 0.6 | Add one NB Lane | 1,450 |
| 140 | SW 172 Ave | Miramar Pkwy to Bass Creek Rd | 0.6 | From 2 to 4 lanes (4LD) | 2,900 |
| 110 | SW 184th Ave | 4th Street to Sheridan Street | 1.5 | From 2 to 4 lanes (4LD) | 3,899 |
| 135 | SW 184th Ave | Sheridan Street to Griffin Rd | 2.2 | New (4LD) | 16,155 |
| 144 | SW 184th Ave | Pines Blvd to Bass Creek Rd | 2.5 | New 4 lanes | 20,000 |
| 111 | SW 196th Ave | Miramar Pkwy to Pines Blvd | 2.0 | New (4LD) | 14,686 |
| 112 | SW 196th Ave | S of Sheridan Street to Stirling Rd | 1.1 | From 2 to 4 lanes (4LD) | 5,317 |
| 115 | SW 30th Ave | Griffin Rd to SW 45th St | 0.3 | From 2 to 4 lanes (4LD) | 3,475 |
| 121 | Trails End | University Dr to County Line Rd | 0.7 | New (4LD) | 5,140 |
| 123 | University Dr | NW 40 St (Cardinal) to Holmberg Rd | 2.2 | From 4 to 6 lanes (6LD) | 24,958 |
| 122 | University Dr | Holmberg Rd to County Line Rd | 1.5 | From 2 to 6 lanes (6LD) | 7,251 |
| 127 | Wiles Rd | University Dr to Rock Island Rd | 1.7 | From 4 to 6 lanes (6LD) | 19,286 |
| 131 | SR A1A (Deerfield Bch) | NE 4th Street to SE 1st Street | | Intersection Improve | 11,600 |
| 200 | US-1 By-Pass | SE 17 St Causeway to US-1 | 1.2 | New 2 lanes | 22,000 |
| **FIHS/Turnpike** | | | | | 0 |
| 28 | Florida's Turnpike | Sawgrass Expwy to PB County Line | 1.9 | From 6 to 8 lanes (8LD) | 26,700 |
| 29 | Florida's Turnpike | At Stirling Rd | 0.2 | New Interchange | 60,000 |
| 132 | Florida's Turnpike | At Oakland Park Boulevard | 0.2 | New Interchange | 18,600 |
| 136 | Florida's Turnpike | At I-595 | 0.3 | Interchange Modification | 88,900 |
| 141 | Florida's Turnpike | At Sawgrass Interchange | 0.2 | Interchange Modification | 35,000 |
| 147 | Sawgrass Exwy | Sunrise Blvd to FTPK Main Line | 22.1 | Implement Open Road Tolling | 30,000 |
| 138 | Florida's Turnpike | At Sunrise Boulevard | 0.1 | Interchange Modification | 28,000 |
| 35 | County Line Rd (HEFT Ext) | FL. Turnpike to I-95 | 3.9 | Feasibility Study | 1,000 |
| 44 | I-595 | E. of I-75 to E. of State Road 7 | 10.0 | Add 2 Reversible Lanes | 84,100 |
| 44 | I-595 | I-75 to US-1 | 14.0 | Causeway Improvements | 151,800 |
| 44 | I-595 | I-75 to University Drive | 7.0 | Ramp Modifications & three cross-street overpasses | 144,000 |
| 45 | I-75 | Miami-Dade County Line to I-595 | 12.3 | Add Reversible Lanes | 214,000 |
| 146 | I-75 | At Pines, Sheridan, and Griffin | | 3 Urban Interchanges | 16,500 |
| 47 | I-95 | Sample Rd to PB County Line | 3.7 | From 8 to 10 lanes (AUX) | 58,300 |
| 46 | I-95 | Commercial Blvd to Sample Rd | 6.5 | From 8 to 10 lanes (AUX) | 131,500 |
| 148 | I-95 | Miami-Dade Co Line to Broward Blvd | 9.5 | Managed Lanes w BRT | 75,675 |
| **GRAND TOTAL** | | **84 Projects** | | | **2,187,923** |

## 8.6 Intelligent Transportation System (ITS) and Freight Cost-Feasible Plan

The ITS and Freight projects that were contained in the Needs Assessment were all considered to be consistent with the goals of the project and serve to enhance the diversity of transportation services and plans that provide for a comprehensive transportation system. The Intelligent Transportation System projects contained in the Cost-Feasible Plan are listed on Table 8-7. The Freight projects contained in the Cost-Feasible Plan are listed on Table 8-8.

**Table 8-7: Cost Feasible ITS Projects**

| Project ID | Project Description | Cost ($000) |
|---|---|---|
| 1 | ATMS Design Group 3 | $8,000 |
| 2 | Traffic Signal Preemption/Priority along CMS Corridor | $2,000 |
| 3 | Video based vehicle detection systems along CMS Corridor | $2,000 |
| 4 | ATMS Design Group 4 | $10,000 |
| 5 | ATMS Design Group 5 | $12,000 |
| 6 | ATMS Design Group 6 | $12,000 |
| 7 | Crash Data Center | $500 |
| **TOTAL** | **7 Projects** | **$46,500** |

**Table 8-8: Cost Feasible Freight Projects**

| Project ID | Project Name | Limits / Description | Cost ($000) |
|---|---|---|---|
| Infrastructure Projects - Expansion and Improvement | | | |
| Airport/Seaport Infrastructure Expansion | | | |
| 1 | FPL Canal Bridge [(1)] | Construct new bridge over FPL canal | $2,000 |
| 2 | Southport rail connector [(1)] | Rail Connector between Southport and FEC mainline | $3,300 |
| 3 | On-Port circulation Improvements [(1)] | | $4,500 |
| 4 | Advanced baggage transfer system | Between Port & Airport | $5,000 |
| 5 | Intermodal Container Terminal Facility (ICTF) | Southport | $13,500 |
| 6 | Roadway capacity expansion | At Eller Drive; Port Entrance. | $500 |
| 7 | Access Improvements | At Eisenhower Blvd; Port Entrance. | $500 |
| 8 | Access Improvements | At SW 24/ Spangler Blvd; Port Entrance | $500 |
| Parsec-Intermodal Infrastructure Improvement | | | |
| 9 | Operational improvement - turn radius | Andrews Ave./SR 84 southbound | $200 |
| [(1)] from Atlantic Commerce Corridor Study, Nov 2003 | | SUBTOTAL | $30,000 |
| Intelligent Transportation System (ITS) projects - Operational & Technology Improvements | | | |
| 10 | Directional Dynamic Message Signs (DMS) | Within Port Limits | $78 |
| 11 | Optimize Signal Timing | 7 East-West Arterials | $80 |
| 12 | Inventory Clearance Equipment | FDOT and FTPK accessible | $10 |
| 13 | Traveler Information via DMS | Port exit: inform on major incidents; security | $25 |
| 14 | Real Time Train Locations | Upgrade/expand current FEC program; add SFRC. | $22 |
| 15 | Delivery appointment system for cruise ships | Web-based appointment system | $7 |
| 16 | Database integration | Integrate Available Databases into Centralized System | $5 |
| 17 | Additional vehicle classification counts. | Key freight highways, annually | $16 |
| 18 | Outreach & Education | Each freight project includes outreach, public relations, and education purposes. | $0 |
| Annualized cost - over 21 years | | SUBTOTAL | $3,465 |

**Table 8-8: Cost Feasible Freight Projects**

| Project ID | Project Name | Limits / Description | Cost ($000) |
|---|---|---|---|
| Studies - Freight Program Enhancements | | | |
| 19 | Freight origin/destination surveys | Commodity type, pick-up and drop-off facility types, key highways, trip frequency | $90 |
| 20 | Economic impact study | Economic impact study to evaluate the impact of the industry based in Broward County. | $40 |
| 21 | Freight modeling tools | Integrate statewide freight model with local | $30 |
| 22 | Freight operations data. | Surveys carriers & shippers | $50 |
| 23 | Train volume data set | # Freight trains, length, type of equipment, etc. | $175 |
| 24 | Revise ranking/prioritization methodology | Develop freight-specific project evaluation criteria to evaluate and prioritize freight improvement projects. | $50 |
| 25 | Regional freight plan | With Palm Beach and Miami-Dade MPOs. | $100 |
| 26 | Commodity flow forecasts for the region | Utilize the statewide truck freight model to forecast truck trips for internal/external and external/internal trips. | $75 |
| 27 | Develop freight performance measures | The MPOs should develop a comprehensive set of performance measures to evaluate the Tri-County freight transportation system on an ongoing basis. | $60 |
| **SUBTOTAL** | | | **$670** |
| | **GRAND TOTAL** | **27 Projects** | **$34,135** |

## 8.7 Summary of the Cost-Feasible Plan

In aggregate, the cost for all of the projects contained in the Cost-Feasible Plan must be within the anticipated revenue that is expected to be available for these projects. The cost for each mode of the Long Range Transportation Plan is summarized in Table 8-9. The total cost of $6.513 billion over the 21 years the plan covers (years 2010 to 2030) is consistent with the anticipated revenues that are shown on Table 7-9.

**Table 8-9: Broward County 2030 LRTP Cost Feasible Summary**

| Mode | # Projects | Cost ($Million) |
|---|---|---|
| Pedestrian | 114 | 22.7 |
| Greenway | 4 | 53.2 |
| Bicycle | 93 | 100.3 |
| Waterborne | 5 | 48.8 |
| Transit | 72 | 4,081.2 |
| Highway | 83 | 2,187.9 |
| ITS | 7 | 46.5 |
| Freight | 27 | 34.1 |
| **TOTAL** | **405** | **6,574.7** |

# 9.0 AIR QUALITY CONFORMITY DETERMINATION

## 9.1 Introduction

An analysis was conducted to determine the potential impact on air quality that would result from implementation of the proposed transportation projects in the year 2030 Cost Feasible Long Range Transportation Plan (LRTP). The LRTP is in conformance with Florida's State Implementation Plan (SIP) for air quality, the Clean Air Act Amendments of 1990 (CAAA), and the corresponding transportation conformity regulations (40 CFR Parts 51 and 93) approved by the United States Environmental Protection Agency (USEPA). This effort included the air quality analysis of all conforming transportation improvement projects in the FY 2004/05 - 2008/09 Transportation Improvement Program (TIP) which was approved by the Broward County MPO on May 13, 2004. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) subsequently found the FY 2004/05 - 2008/09 TIP to satisfy conformity determination requirements for areas in Florida designated as one-hour ozone maintenance areas and the TIP was approved by the Secretary of the Florida Department of Transportation (FDOT).

To perform the air quality analysis for the LRTP, four scenarios were developed representing interim years 2005, 2015 and 2025, and horizon year 2030. The analysis results indicated that the implementation of the recommended 2030 LRTP would contribute to annual emission reductions when compared to the 1990 base year network and emission budget for 2005/2015. The same is true for the interim years and the horizon year. The interim and horizon years were selected by the MPO through consultation with the Florida Department of Transportation (FDOT) and Federal Highway Administration (FHWA). The analysis indicates a reduction of Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) from the 1990 base year (attainment year) emission levels. The emissions expected from the implementation of the LRTP are consistent with the Motor Vehicle Emissions Budgets (MVEB) for the Broward County MPO area shown in the approved Maintenance Plan (see Federal Register/Vol. 69, No. 30, February 13, 2004, pages 7127-7132) and meets the analysis requirements of 40 CFR 93.118. Emissions for each interim year and the horizon year are less than the Emission Budget for 2005/2015. These emissions are summarized on Table 9-1.

**Table 9-1: Summary of On-Road Estimated Emissions (Tons per Day)**

| Parameter | 1990 Base Year | Budget[1] | 2005 Interim | 2015 Interim | 2025 Interim | 2030 Horizon |
|---|---|---|---|---|---|---|
| Population | 1,238,763 | N/A[2] | 1,784,522 | 2,027,028 | 2,263,535 | 2,383,116 |
| VMT | 23,928,152 | N/A[2] | 40,976,464 | 48,308,072 | 54,407,164 | 58,201,444 |
| VOC (tons/day) | 132.2 | 66.1 | 52.85[3] | 29.9[3] | 23.01[3] | 23.97[3] |
| NOx (tons/day) | 117.0 | 113.0 | 90.3[3] | 38.41[3] | 22.29[3] | 20.58[3] |

1. Source: Approved Air Quality Maintenance Plan (2005-2015); see Federal Register/Vol. 69, No. 30, February 13, 2004, pages 7127-7133.

2. N/A – Not Applicable.

3. Source: EMIS.OUT.

4. VOC and NOx levels for interim and horizon years are lower than budget.

# 10.0 ENVIRONMENTAL JUSTICE

## 10.1 Introduction

The principles of environmental justice, as outlined by the Federal Highway Administration, were used and are intended to ensure that the process of transportation planning is consistent with the provisions of Title VI of the Civil Rights Act. These provisions have been incorporated into the scope development for this study, and were adhered to throughout the public involvement task of this project. These federal guidelines, which require the inclusion of traditionally under-represented groups in transportation studies, are briefly summarized below.

A 1994 Presidential Executive Order directed every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on traditionally under-represented groups, defined as "minority populations and low-income populations."

The United States Department of Transportation (DOT) environmental justice initiatives accomplish this goal by involving the potentially affected public in developing transportation projects that fit harmoniously within their communities without sacrificing safety or mobility. Environmental justice and Title VI are not new concerns. Today, because of the evolution of the transportation planning process, they are receiving greater emphasis. Effective transportation decision-making depends upon understanding and properly addressing the unique needs of different socio-economic groups.

It requires involving the public at all stages of the project. The U.S. DOT is committed to a more comprehensive, inclusive approach involving the public. This ensures that every transportation project nationwide considers the human and physical environment. There are three fundamental environmental justice principles:

- To avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Environmental justice is more than a set of legal and regulatory obligations. Properly implemented, environmental justice principles and procedures improve all levels of transportation decision-making. This approach will:

- Make better transportation decisions that meet the needs of all people.
- Design transportation facilities that fit more harmoniously into communities.
- Enhance the public involvement process, strengthen community-based partnerships, and provide minority and low-income populations with opportunities to learn about and improve the quality and usefulness of transportation in their lives.

- Improve data collection, monitoring and analysis tools that assess the needs of, and analyze the potential impacts on minority and low-income populations.
- Partner with other public and private programs to leverage transportation-agency resources to achieve a common vision for communities.
- Avoid disproportionately high and adverse impacts on minority and low-income populations.
- Minimize and/or mitigate unavoidable impacts by identifying concerns early in the planning phase and providing offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods.

## 10.2 Allocation of Project Funds to Geographic Areas

An analysis of 1990 and 2000 census data on minority and low-income populations provided by Broward County DPEP staff indicated that there are three areas of significant concern relating to environmental justice in Broward County. These areas are described below:

- Northeast: Hammondville Road between Powerline Road and Dixie Highway
- Central County: bounded by Rock Island Road, Oakland Park Boulevard, Andrews Avenue, and Peters Road
- South County: south of Pembroke Road and west of I-95.

These areas are shown in Figure 10-1. An analysis was performed to determine what level of investment these areas would receive in terms of transportation spending as part of the Year 2030 LRTP. Table 10-1 shows which projects (by transportation mode) are located within (or would serve) the three areas, and what spending would be accounted for each mode. The numbers included with the project description correspond with project numbers included in the cost feasible plan project listing. The projects included in Table 10-1 indicate that approximately $899 million will be spent directly in the areas indicated as those with the highest proportions of low income and minority populations. When considered against the total expenditure on public transportation included in this plan (approximately $5.4 billion excluding the airport people mover), it is evident that in excess of 16.6 percent of the expenditures occur directly in these low income and minority areas. In addition to the projects included in Table 10-1, there are a significant number of major projects that will serve these areas but have not been included as they cannot be described as being projects located entirely within these areas.

**Figure 10-1: Minority Population by Census Tracts**

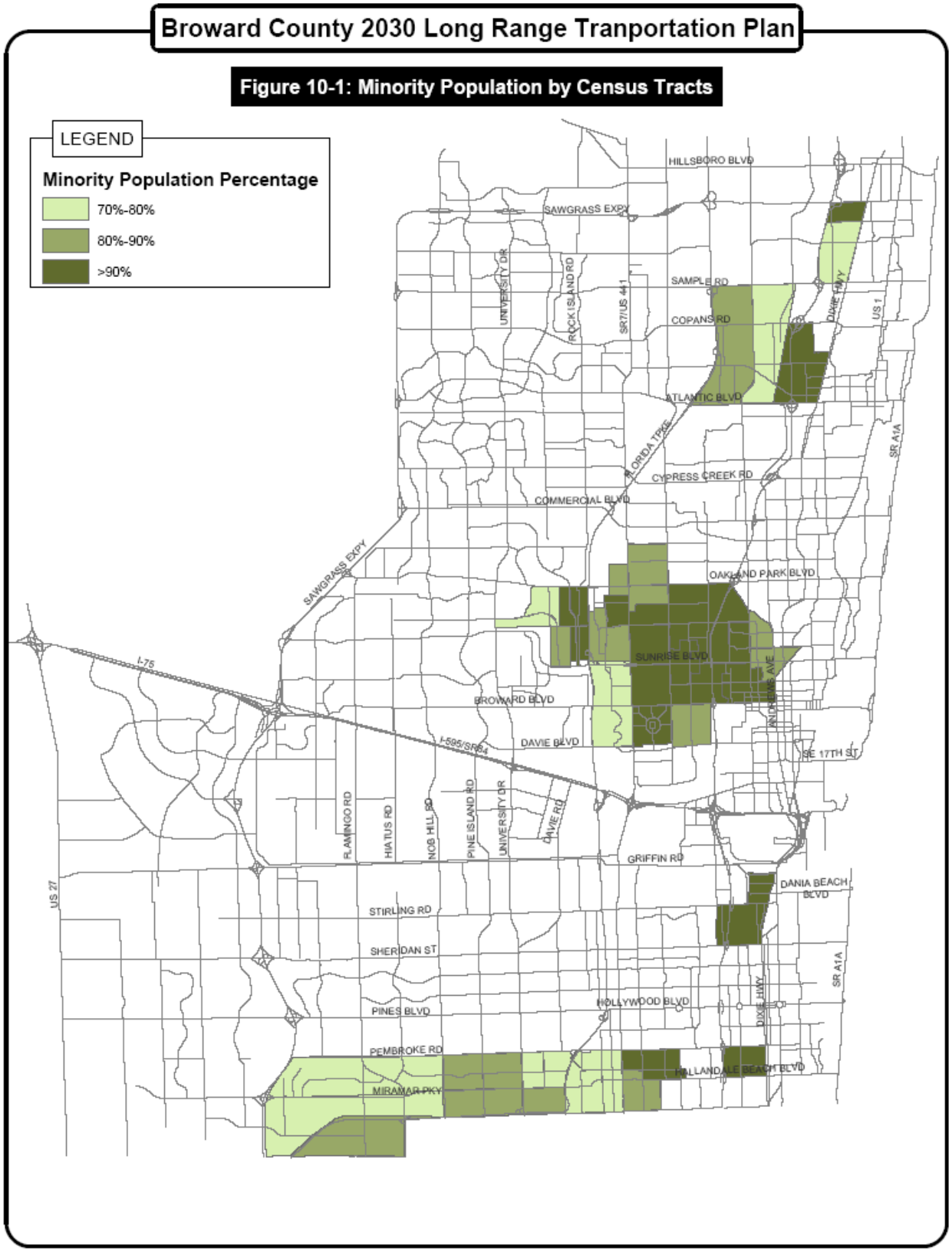


**Table 10-1: Environmental Justice Evaluation**

| Mode | Project ID | Project Name | Limits/Project Type | Project Cost (in $000) |
|---|---|---|---|---|
| Pedestrian | 3 | Atlantic Blvd | NW 31st Av to NW 15th Av | $288 |
| | 4 | Atlantic Blvd | NW 15th Av to S Cypress Rd | $306 |
| | 12 | Coconut Creek Pkwy | NW 31st Av to Florida Turnpike | $103 |
| | 13 | Coconut Creek Pkwy | Florida Turnpike to Powerline Rd | $193 |
| | 17 | Dixie Hwy | Atlantic Blvd to N of NE 54 St | $1,060 |
| | 22 | Flamingo Rd | Miramar Pkwy to Pembroke Rd | $227 |
| | 43 | NW 101st Av | Miami Dade County Line to Sheridan St | $911 |
| | 44 | NW 11th Av | SW 5th Pl to NW 4th St | $167 |
| | 46 | NW 15th St | E of NW 6th Av to Dixie Hwy | $71 |
| | 53 | NW 31st Av | Atlantic Blvd to Coconut Creek Pkwy | $219 |
| | 55 | NW 31st Ave | NW 39th St to NW 41st St | $60 |
| | 57 | NW 4th St | W of NW 1st Av to Andrews Av | $14 |
| | 62 | NW 6th Av | Atlantic Blvd to NW 15th St | $224 |
| | 72 | Powerline Rd | N of Atlantic Blvd to NW 15th St | $215 |
| | 73 | Powerline Rd | Copans Rd to S of Sample | $180 |
| | 79 | Sample Rd | Florida Turnpike to S Powerline Rd | $194 |
| | 106 | Sunrise Blvd | SR 7 to W of NW 33rd Ave | $170 |
| | 119 | University Dr | N of Pines Blvd to HEFT | $642 |
| Bicycle | 1 | Andrews Ave | Sunrise Blvd to Oakland Park Blvd | $1,540 |
| | 3 | Atlantic Blvd | SR 7 to Powerline Rd | $2,268 |
| | 6 | Atlantic Blvd | Powerline Rd to I-95 | $940 |
| | 7 | Broward Blvd | SR 7 to I-95 | $233 |
| | 37 | Miramar Pkwy | University Drive to SR 7 | $1,918 |
| | 38 | MLK Boulevard | Powerline Rd to I-95 | $1,366 |
| | 51 | NW 6th St | NW 27th Ave to Federal Hwy | $1,891 |
| | 52 | NW 7th Ave | Broward Blvd to Sunrise Blvd | $365 |
| | 54 | Oakland Park Blvd | University Dr to Rock Island Rd | $1,587 |
| | 55 | Oakland Park Blvd | NW 21st Ave to NW 17th Ter | $212 |
| | 57 | Pembroke Rd | I-95 to Federal Hwy | $1,077 |
| | 58 | Pembroke Rd | Douglas Rd to University Dr | $113 |
| | 68 | Sample Rd | NE 5th Ave to US 1 | $233 |
| | 72 | Sheridan Street | SR 7 to US 1 | $3,032 |
| | 76 | SR 7 | Broward Blvd to Commercial Blvd | $3,575 |
| | 80 | Stirling Rd | Park Rd to S Bryan Road | $953 |
| | 81 | Sunrise Blvd | I-95 to NW 15th Ave | $359 |
| | 84 | Sunrise Blvd | NW 45th Ave to SR 7 | $615 |
| | 85 | SW 101st Ave | Florida Turnpike to Pembroke Rd | $1,167 |
| | 88 | SW 4th Ave/SW 7th Ave | SW 7th St to Broward Blvd | $1,202 |
| | 69 | Sample Rd | Turnpike Mainline to Powerline Rd | $769 |
| Transit | | Regular Transit Service | New and Improvement Service | $122,446 |
| | 5 | SR 7 Transit "Bridge" | BRT/Rapid Bus | $61,852 |
| | 7 | Oakland Park Blvd | Rapid Bus | $89,183 |
| | 9 | Sample Road | Rapid Bus | $66,799 |
| | 11 | Atlantic Blvd. | Express Bus | $12,645 |
| | 15 | Powerline Road | Express Bus | $30,966 |

**Table 10-1: Environmental Justice Evaluation (Continued)**

| Mode | Project ID | Project Name | Limits/Project Type | Project Cost (in $000) |
|---|---|---|---|---|
| Transit (Cont'd) | 18 | Sunrise Blvd | Express Bus | $47,630 |
| Highway | 4 | Andrews Ave | Davie Blvd to Sunrise Blvd | $1,000 |
| | 8 | Bass Creek Rd | SW 172nd Ave to SW 148 Ave | $10,634 |
| | 9 | Bass Creek Rd | SW 148 Ave to Flamingo Rd | $24,942 |
| | 10 | Blount Rd | Hammondville Rd to Sample Rd | $20,852 |
| | 35 | County Line Rd (HEFT Ext) | FL. Turnpike to I-95 | $1,000 |
| | 46 | I-95 | Commercial Blvd to Sample Rd | $131,500 |
| | 47 | I-95 | Sample Rd to PB County Line | $58,300 |
| | 56 | Miramar Pkwy | Palm Ave to SR 7 / US 441 | $44,822 |
| | 59 | NE 3rd Ave | Sample Rd to NE 54th St | $12,023 |
| | 62 | NW 7th/9th Ave Connector | S of Sunrise Blvd to NW 6th St | $40,000 |
| | 64 | NW 21/23 Ave | Sunrise Blvd to Oakland Pk Blvd | $17,377 |
| | 65 | NW 31st Ave | Broward Blvd to Sistrunk Blvd | $5,672 |
| | 73 | Pembroke Rd | W of Turnpike to SR 7 / US 441 | $1,000 |
| | 105 | SW 148th Ave | Bass Creek Rd to Miramar Pkwy | $14,435 |
| | 128 | NW 55th Ave | S to N of Oakland Park Blvd | $3,672 |
| | 130 | Andrews Ave | NW 18 St to Copans Rd | $19,500 |
| | 138 | Florida's Turnpike | At Sunrise Boulevard | $28,000 |
| | 145 | Pembroke Rd. | University Dr to Douglas Rd | $2,500 |
| | **TOTAL** | | | $899,409 |

## 10.3 Communication with Minorities and Low-Income Groups

In keeping with the principles and objectives of environmental justice, the Broward County LRTP 2030 Update study made special efforts to reach out to minorities and low-income groups within the County. To communicate with these groups, it is acknowledged that special efforts are required. To this end, the Consultant contacted a number of local agencies in order to identify the specific groups affected, and the best means of communication for a project of this nature. These outreach efforts focused on the local community newspapers and on community radio and television stations as described below:

- Newspapers
  - Sun-Sentinel
  - The Westside Gazette
  - El Noticiero Bilingual Newspaper
  - El Nuevo Heraldo
  - El Heraldo De Broward
  - The Herald
  - The Broward Times
  - The Caribbean Today

- The Caribbean Voice
- The Haitian American Business News

- Radio Stations
  - HOT 105.1 (Urban)
  - WLRN 91.3 FM (Mix)
  - WAVS 1170 AM (Caribbean)
  - WAQI 710 AM (Spanish)
  - WBGG 105.9 FM (Classic Rock)
- Public Access Channels
  - Comcast Cable Public Access Channel
  - Channel 34 for the City of Hollywood
  - Channel 19 for the City of Lauderhill
  - Channel 18 for the City of Pompano Beach

Efforts to involve members of the Creole-speaking Haitian community and the Spanish speaking Hispanic community focused on the newspapers, radio and television stations listed above, and others as needed. Project information was provided to these media groups in English, with Spanish and Creole translations made by the media entities prior to broadcast. Members of the French-speaking Canadian (largely in southeast Broward) are understood to be largely bi-lingual, and no French-language efforts were anticipated for this community.

# 11.0 REGIONAL PLANNING

Metropolitan Planning Organizations are designated for each urbanized area with a population of more than 50,000 people, as required by Federal Law. As a result of the 2000 Census, the urbanized areas encompassing parts of Miami-Dade, Broward, and Palm Beach Counties have grown together, The three MPOs were redesignated individually due to the size and complexity of the existing MPO planning areas. However, as stated in the official redesignation letter from the State of Florida, redesignation of separate MPOs would be contingent upon the development and implementation of coordinated planning processes resulting, but not limited to, the following:

- A regional long-range transportation plan covering the combined metropolitan planning area that will serve as the basis for the Transportation Improvement Programs of each MPO,
- A coordinated project prioritization and selection process;
- A regional public involvement process and a coordinated air quality planning process.

In response to the State's request, the Three MPOs in South Florida have developed a Regional Planning Committee. The Regional Planning Committee is made up of representatives from:

- Miami-Dade MPO
- Broward County MPO
- Palm Beach County MPO
- FDOT District 4
- FDOT District 6
- South Florida Regional Transportation Authority (SFRTA)
- The other three transit operators in the region as follows: Miami-Dade Transit (MDT), Palm Beach Transit (Palm Tran), and Broward County Transit (BCT)

The Regional Planning Committee defined corridors of regional significance. A draft regional corridors are initially defined as:

- Interstate and Expressways (urban or rural Principal Arterials operate as Interstate and Expressway facilities)
- Major Regional Arterials (urban or rural Principal Arterials that cross county lines)
- Minor Regional Arterials (urban or rural Principal Arterials with two or more connections to the Interstate and Expressways Facilities)

The Regional Planning Committee also developed Regional 2030 LRTP Goals as follows:

1. Improve Regional Transportation Systems and Travel.
2. Support Regional Economic Vitality
3. Enhance Regional Social Benefits
4. Mitigate Regional Environmental Impacts
5. Integrate Regional Transportation with Land Use and Development Considerations
6. Optimize Sound Regional Investment Strategies
7. Provide for a safer and more secure transportation system for residents, businesses and visitors.

# APPENDIX A-1

## PUBLIC WORKSHOPS, LOCAL MEETINGS MEETING REPORT AND AGENDAS


**Broward County 2030 Long Range Transportation Plan**
**South Broward Workshop #1**
**South Florida Regional Planning Council**
**Wednesday, January 28, 2004 at 6 p.m.**

## *AGENDA*

| | | |
|---|---|---|
| I. | Welcome and Introduction | DCS |
| II. | Introduction to Project | Kittelson &Associates, Inc. |
| III. | Team Overview | Kittelson & Associates, Inc. |
| IV. | Schedule | Kittelson & Associates, Inc. |
| V. | Public Involvement Plan | DCS |
| VI. | Present Goals and Objectives | Kittelson & Associates, Inc. |
| VII. | Public Input | Team |
| VIII. | Closing Remarks | Kittelson & Associates, Inc. |

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN

## SOUTH BROWARD WORKSHOP #1
## MEETING REPORT

WEDNESDAY, JANUARY 28, 2004
SOUTH FLORIDA REGIONAL PLANNING COUNCIL
6:00 PM

**Welcome and Introduction**
Ossama Al Aschkar, Project Engineer for the 2030 Long Range Transportation Plan, from the Broward County Metropolitan Planning Organization (MPO), welcomed everyone. Mr. Al Aschkar introduced Peter Haliburton, Consultant Project Manager, from Kittelson and Associates, the consulting team assisting Broward County in developing the transportation system in the next 25 years.

**Introduction to Project**
Mr. Haliburton pointed out that this evening's meeting is being held to receive public input as to what is important for the study.

Presentation Overview
- Introduction to Project
- Team Overview
- Schedule
- Public Involvement Plan
- Plan Goals and Objectives
- Public Comment

Mr. Haliburton noted that some of the background information would be provided to show how the project will be conducted. At the end of the presentation, the team will receive input on the priorities.

Project Introduction
- Accommodate Growth!
- Regional Planning
- Federal Requirements
- Update Cycle
- Air Quality Attainment

Mr. Haliburton pointed out why we feel the project is important, as Mr. Al Aschkar mentioned that the Broward County is growing and there is a need to accommodate the growth. In terms of the region, with the Regional Transportation Authority has been established by the state government. Broward County is in the middle of the region. The plan is very important in coordinating with growth plans for the region. Mr. Haliburton noted that there are Federal requirements for an area like this to be prepared with a twenty-year conservation plan and to assure that funding is in place to accommodate the growth in terms of travel needs. We are on a three-year update cycle for the County and part of the requirements that relates to air quality attainment, which we have had less trouble dealing with in the last few years.

**Team Introduction**
Mr. Haliburton noted that Kittelson & Associates is the lead firm for project management and some of the project components, such as the alternate modes of transportation.

Cambridge Systematics is in charge of running the computer-based travel forecasting model and also the financial forecasts.

Dickey Consulting Services is coordinating the public involvement plan and public input.

The other two firms involved with the project are Tindale Oliver & Associates, transit planning specialists; Transportation Planning Sources, and land use allocation which are responsible in trying to anticipate where growth will take place over the next twenty-five years.

**Project Schedule**
Mr. Haliburton pointed out on this slide that the plan needs to be updated and adopted by the Broward County Commission and MPO by the end of 2004. In January, the team is involved in the first four tasks of the projects:

| | |
|---|---|
| Task 1 | Public Involvement |
| Task 2 | Developing the Goals and Objectives |
| Task 3 | Compiling the Data |
| Task 4 | Developing a Model |

<u>Background and Growth Assumptions</u>

| | |
|---|---|
| 1920 | 5,000 |
| 1950 | 85,000 |
| 1990 | 1,255,000 |
| 2000 | 1,625,000 |
| 2030 | 2,550,000 |

In reviewing the table, the population is growing from a mere 5,000 in 1920 to 1.6 million in 2000, with an anticipated 2.5 million by 2030.

- Broward County is the 15th largest county in the U.S., based on the year 2000 Census.
- Center of tri-county region.
- Approaching build out – the allocation of growth to the existing parts of the county will be very important.
- Migration is a big unknown – for people outside of the state and people from neighboring counties or other regions in Florida.
- Increasing diversity – in terms of the population and makeup of the population will create challenges.

In response to these needs, Mr. Haliburton advised that the 2030 plan is a multi-modal plan that will address people's needs and provide people with options other than a car.

Mr. Haliburton introduced Sheryl Dickey of DCS to speak about the public involvement plan.

**Public Involvement Plan**

- Education program
  - Public
  - Special interest groups
  - Elected officials

Ms. Dickey noted that the public involvement plan will be comprehensive. The team has involved the public, as well as special interest groups, elected officials, and the Metropolitan Planning Organization (MPO). We need to begin educating the public and City Planners what the long range transportation plan is about. City Planners should be informed because as things change, they will need to be updated as to what is necessary for them to get projects on the long range plan.

- Community Involvement Roundtable (CIR) participation
  - Host public meetings
  - Develop/review materials
  - Web workroom

The CIR consists of community residents who come from all aspects of occupations (such as planners, accountants, lawyers) who are involved in transportation projects. They have been appointed by elected officials throughout the county to represent the communities' aspects of concerns for what is going on with transportation initiatives. The CIR will host some of these meetings and will be involved as an active role group. This means that as information is obtained and analyzed by Kittelson & Associates and the other consultants mentioned, this information will then be placed on the website. The CIR will then be able to go in and make comments on some of the findings and what their concerns are.

- Existing resources, communications
  - Public Information Office
  - Commission's public liaison officer

Ms. Dickey noted that both the County and Commission's have a Public Information Office which will be utilized, including the Environmental Justice Initiative.

**Goals and Objectives**

There are seven transportation planning factors of the Federal Government in terms of requirements for transportation plans like the BC 2030 LRTP. The plan needs to address the following issues:

1. Supporting economic vitality for the county.
2. Ensuring safety and security for the transportation system.
3. Providing accessibility and mobility options.
4. Respects the environment.
5. A system that provides integration and connectivity.
6. Ensure that the plan meets the needs of efficient operation of the system.
7. Respect and preserve the investments already made in the transportation system.

As pointed out by Mr. Haliburton, the following is a set of five goals that were developed for the previous 2025 plan. These goals will become the starting point.

1. Provide balanced multi-model transportation system that provides choices and mobility.
2. A transportation system that is safe.
3. Preservation of Broward County's investment in transportation system in a cost-feasible manner.
4. A transportation system that is coordinated and consistent with current and future agency plans of Broward County, its communities and neighbors.
5. An aesthetically pleasing transportation system which minimizes impact on the natural and built environment.

Mr. Haliburton asked that everyone take a moment to complete the questionnaire handed out earlier in the evening. He noted that the questionnaire will form a large basis of the public's comments on what is important in the transportation system. The questionnaire can be handed in at the end of the evening, mailed in at the address noted on the back and it is also on the website www.BrowardLRTP.org.

Mr. Haliburton thanked everyone for participating in this evening's meeting and asked that they stay involved until the end of the project. Mr. Haliburton provided an e-mail address for Dickey Consulting Services -sdickey@dickeyinc.com; and a web page, www.BrowardLRTP.org for everyone's feedback.

**Public Input**
The meeting was turned over to the audience by Mr. Haliburton, asking the participants to discuss what is important in the four categories of Vision, Goals, Priorities, and Projects.

*Vice Mayor Freddie Fisikelli of Southwest Ranches*
**Comment** -Vice Mayor Fisikelli noted two problems in his county. Southwest Ranches is situated between two cities, Weston and Pembroke Pines. Southwest Ranches is a very small, rural town. Because of the layout of the schools, there is a terrific amount of cross through traffic through Southwest Ranches which is creating a safety factor. Vice Mayor Fisikelli is asking that SW 184th Avenue be constructed. This will benefit Weston and Pembroke Pines, as well as Southwest Ranches. If the street is constructed it is a direct line from I-595 to Miramar Parkway. The second problem in his county is I-75. Currently, there are plans to widen Griffin Road from I-75 to Flamingo Road. During the widening, there are plans to "urbanize" the intersection. At the present time, Weston which lies to the north of their access is all the way by Arvida Parkway. Davie is their nearest exit to I-75 and is all the way to 136th Avenue. Currently, you cannot get through this intersection. In the widening of Griffin Road, they are going to put a bridge across the C11 canal which will allow 500 homes being built north of that to have direct access to I-75. This plan will never work as you're going to have east bound traffic crossing west bound traffic to go north. You will also have the west bound traffic crossing east bound traffic to go south. What is needed is a four cloverleaf in the area for safety and traffic flow.

**Response** - Mr. Al Aschkar mentioned that the present plan includes 184th Avenue and it is the part already grandfathered in. The interchange at Griffin Road will need to be looked into with the cooperation of the Florida Department of Transportation (FDOT) to see exactly what the interchange will be beneficial to the residents in the area. There is also on the I-75 Master Plan so it is recognized and will also be in the new plan.

*Ray Summerlin, Southwest Ranches resident*
**Comment -** There are plans to build a road in Southwest Ranches in the Broward County Traffic Road Plan with the right-of-ways already in place. This road will be SW 184th Avenue going from Griffin Road to the north and Sheridan Street to the south. When completed, it will tie into existing Bonaventure Boulevard to the north and existing 184th Avenue, Pembroke Pines to the south. This will complete the missing link of a road that runs from Highway 84 to the north and Miramar Parkway to the south. The missing link is causing Southwest Ranches a huge problem with traffic on our residential streets. There are three schools to the north on Bonaventure Road; one school on SW 184th Avenue and Sheridan St., Pembroke Pines; and one being built on 190th Ave. and Sheridan. All the traffic will be coming down our residential streets as they will have no place to go. North of Griffin Road there is hundreds of homes being built. South bound traffic on Bonaventure hits a dead end to here; north bound traffic dead ends on Sheridan and all traffic must turn east or west to find a way south or north. We have contacted a traffic company to find an answer to this problem. The company has informed them that the best solution is to have SW 184th Avenue built and to put in speed bumps. The speed bumps have helped with traffic flow. However, it has just moved the traffic to other streets in the Southwest Ranches area.

*Don Levine, Citizens Transportation Committee (CTC), City of Hollywood; owns own traffic marketing company.*
**Comment -** Under his visions, he has some requests.

**Question -** Has a flow chart been determined that has shown the flow of people from Sunday to Saturday on how they move to their homes, work, downtown areas or where they go when they go inter-county? Is there some kind of a plan that gives you a pattern of what the population will be in 2025?

**Answer-** Mr. Al Aschkar advised that there was. There are surveys that are done to look into travel behavior and there was one done not very long ago. There is also something called a travel forecast model that associates economic information and also the model has to be validated using the survey. Then the model when fed with information in the future will predict the travel behavior in the future. If you input into the model the population, employment, and all the detail by 2030 it will give you the travel pattern by 2030 – where people are coming from, going to, and how much traffic will be on Hollywood Boulevard, Broward Boulevard, and so far. This is a guide in developing the plan.

**Comment** - Mr. Levine noted that eventually Broward, Miami-Dade, and Palm Beach Counties will be one metropolitan community, which is why the RTA was formed. Broward County is going to get the north-south and east-west traffic. As a note, when you widen a road, you have to get on and off. And if there is more traffic on a widened road wherever it is, it will impact neighborhoods that shouldn't be impacted.

**Question -** Does the study of impact reflect the growth in the other Counties?

**Answer -** Mr. Al Aschkar indicated that there is a model which includes all the three Counties and it is called the Southeast Regional Planning Model. To model the travel between the three Counties, we use this model for that purpose.

**Question –** Does the input include the movement of people on the west side of the County between north and south and more than just roads?

**Answer -** Mr. Al Aschkar indicated that the model will predict how people travel, and then you need to retrofit that information into modes of transportation, whether transit or highway. Then it depends on the modes of transit, the money available, what people want to see as transit, and then we start looking into specifics, i.e., bus, mono-rail, fixed guideway system, etc. The Feds have something called New Starts. New Starts will help jump start a project such as light rail and mono-rail. We have to show strong evidence that the ridership will justify a system as such.

**Question -** Would this be tied into redevelopment?

**Answer -** Mr. Al Aschkar indicated that transportation follows redevelopment in trying to meet the travel demand of people and goods. The land is usually owned by people, controlled by people and controlled by greed. This is what drives the land use. There are many measures now to control or manage the land use such as impact fees, Development Management Division, Concurrency Management, trans-impact fees.

**Question-** What is the environmental impact and how far?

**Answer-** Mr. Al Aschkar noted it is just up to US 27, the Everglades, nothing west of that. Broward County is about 1200 square miles and we are allowed to develop only 400 square miles with the 800 remaining in the Everglades.

**Question -** Would it be the same impact for Palm Beach County?

**Answer-** Mr. Al Aschkar advised that Palm Beach County is a different story and they are situated in a different way. He advised Mr. Levine to attend a Palm Beach workshop as he was not sure of the intentions of Palm Beach.

*Catondra Noye, Broward County Transit*
**Comment -** Ms. Noye noted that she visions a place where people have choices – a choice of modes to get where they want to go; and a choice of environment – a place where they want to live.

*Vice Mayor Keith Wasserstrom, Hollywood*
**Comment**- Vice Mayor Wasserstrom asked that whatever we do we do as a tri-county regional approach. What he has been looking for is using an east-west rail to get from Tri-Rail to the FEC lines. So my vision for 2030 is to have Tri-Rail have two or three stops in each County as an express line. Then you would have an east-west line to the FEC to be the local stop.

*Craig Canning, resident of Southwest Fort Lauderdale*
**Comment** - Mr. Canning indicated that he would like to see high speed rail on the FEC section where major developments would be occurring in all three counties for 2030. There should also be some form of alternative transportation heading down major arteries such as Broward Boulevard and A1A. We should also scrape the existing bus system completely and go to community buses (smaller buses) that would run in neighborhoods that mostly need buses, every five to ten minutes. These buses would then link into major east-west and north-south routes where you could then have the larger buses. These larger buses would have the ability to change traffic lights if they are running behind schedule

and run every ten minutes. In this manner, you would not have the large buses running through smaller communities every half hour. You really need smaller buses every six to seven months.

Mr. Canning noted that he would also scrap as many possible intersections as you can. The move now is to go to a circular environment (roundabouts), a throw back to the 30's and 40's, where people move in and out of traffic without stop signs and traffic signals.

*Corrine Church, Planner/City of Dania Beach*
**Comment -** Ms. Church advised that their major issue is redevelopment. They would like to see pedestrian-friendly road improvements to articulate their downtown area. They would also like to see the MPO endorse their ideas.

*Mark Gambrill, City of Hallandale Beach*
**Comment -** Mr. Gambrill mentioned that he has attended a lot of meetings like the RTO and would like to see Tri-Rail coordinate more with Dade and Palm Beach Counties. He also sees that everyone has their own agenda and there is no overlapping of coordination. Hallandale Beach is doing a lot of redevelopment and density is really compact. We really need to look at the population.

*Kevin Dick, resident of Tamarac and Work Force One*
**Comment -** Mr. Dick would like to see a grassroots community based educational and marketing campaign for travel modes. We need to explain to people why alternative transit is necessary for our environment and economy. He feels we'll have another Los Angeles on our hands.

*Sara Forelle, works for FAU and is a resident of Weston*
**Comment -** Ms. Forelle has teenage children and has to drive those places or buy them a car. She envisions greater mobility options. She stated she would like to see 10-20 minute headways in order to use public transportation. Another problem she has is with the school systems picking up children early in the morning. Her children are in magnet schools. They picked up at 5:40 a.m. instead of 6:30 a.m. This is their only option for transportation. She would like to see a mobility option for them to take a bus and visit his friends, stay after school, etc. Right now, headways are one hour, the buses drive by you and it is not safe at night for children. She would like to see more community buses, better connecting buses, and rapid transit options.

*Michael Smith*
**Comment -** Oakland Park and Commercial Boulevard are examples of a road with a large capacity of motorist. We need to go to another mode and need more rapid transit like light rail. There are already projects funded (i.e., airport people move.) We need to look at less expensive alternatives.

**Response -** Mr. Al Aschkar indicated that the rail system the County is looking at in cooperation with FDOT, is the Central Transit Corridor, which is to go along I-595 or along Broward Boulevard to connect between the east and west. It should be light rail. It might start in the beginning as bus rapid transit and then as ridership increases we will go to a light rail or mono rail system. The study should be completed sometime next year and we could go for "new starts" in the next five years or so.

*Tom Hall, Hollywood*
**Comment -** Mr. Hall recommended that whatever is done, they need to start meeting the human needs. By this, you would have ten minute headways, real seats on Tri-Rail cars, and be able to buy coffee in the morning when riding transit. He is an advocate of transit. The model coming out every five years has been great and he uses it all the time. With redevelopment going on now, he is not sure how you

can get the data on population. His vision is more interest in town centers, which will have an impact on the roads.

*George Counts, resident who lives south of Riverland Road*
**Comment -** Mr. Counts noted that he rides the bus system all the time and commends the people in Broward County for the fine job they have done within budget constraints. He is concerned that going to Tri-Rail for everything, you'll have one feed and reward other people in other districts not doing a good job to be supplemented by the people in Broward County. We do not need a high speed rail system. We need something to move people quickly. In taking two lane feeders and making them into four lane feeders, Mr. Counts did not want to wreck neighborhoods to move traffic. Stick with buses which are much more flexible. Buses are improving.

*Ruth Vaughn, Everglades Lakes Mobile Home Park*
**Comment -** Ms. Vaughn noted that they are in the area that is soon to be affected within the next ten years by the airport, the turnpike and I-595. They have been told that they will be loosing some of their homes and they do not know how much. All of this is happening within the next five to ten years, and they can't wait – they need transportation now as there is none out where they live. People living in this mobile home park are 65 and over. It is two miles from the park to Davie Road and there is no transportation. One of the problems that occurred when the study for the airport was done was that they went by zoning and the park is zoned for business. They were not counted as people. Going strictly by your zoning district to determine population when looking at studies will eliminate a large percentage of your population in mobile home parks. There are a number of parks in Hollywood, Hallandale, and Dania. Ms. Vaughn suggested going by tax rolls instead of zoning records.

*Commissioner Dorothy Ross, City of Hallandale Beach*
**Comment** - Commissioner Ross indicated that she has been attending meetings for the last five years and has been providing input, input, and input. Do you coordinate with each other? I hear people saying the same things over and over again. Commissioner Ross indicated that she was getting annoyed and that people have been told about the change. We need to take a look at parking. While in Europe, there are racks of bicycles being used as a mode of transportation. Another problem is affordable housing. Most of her employees live outside of the city and need to live in the area. We also need to keep freight on the railroad and not on trucks. She read an article where they are now putting rail cars on the back of trucks.

**Response -** Ms. Dickey indicated that the information is assembled into a document presented to the MPO. Every three years it is reviewed for the comments. Then, there is an effort to get additional thoughts or revisions to those comments.

*Veronica Boza of Fort Lauderdale*
**Comment -** With the population increasing, you can no longer focus on peak hours of traffic. You need to look at weekend and mid-day. The bike ways along the roads are not safe with all the traffic. She stated, she would like to see the sidewalks widened for both pedestrian and bicycle use. She never takes the bike ways in the road for safety reasons.

*Mike Smith*
**Comment -** Mr. Smith suggested that the bikeways be separated or divided on new roads

**Response** - Mr. Haliburton addressed the bikeways issue as he is familiar with the Broward County Bicycle Advisory Committee (BAC) which recently upgraded their bicycle plan for the future and the knowledge that bicycle lanes are needed on planning roadways. There is a need to provide safe travel. They need to develop a bicycle boulevard where you can get off the main roadways and those roadways have been selected for their connectivity, so that you can keep going.

**Question - How expensive will this be?**

**Response -** Mr. Haliburton indicated that it was not very expensive but it is a starting point and as the money is available, the bikeways will be developed.

*Mr. Michael Smith*
**Question - Will the bike lanes be separate or would there be a divider on new roads?**

**Answer -** Mr. Haliburton indicated that generally roadways are chosen for safe bicycle environment where there is no need to provide a separate lane.

*Beatrice Carcele, FDOT*
**Comment** - Ms. Carcele indicated that she felt it was not safer to have bikes on sidewalks because of driveways and pedestrians, but that we needed to keep the bike lanes as people use them as a means of transportation, as well as for recreation. She felt that we should have both – bike lanes in the roadways and on sidewalks.

*Ray Summerlin, Southwest Ranches*
**Comment** - Mr. Summerlin noted that the right-of-ways are four lanes. They would be happy if they were two lanes through their town. They do not want any entrances or exits anywhere to Griffin and Sheridan. He again reiterated they would like to see State Road 84 completed.

*George Counts*
**Comment** - Mr. Counts wanted to comment about the sidewalks. He felt that we only have so much room available and rides his bicycle on the sidewalk rather than being run over in the road. Mr. Counts indicated that what is needed is a sidewalk utilization study to find out which sidewalks are heavily used and put those off limits, especially at night time. You can also look into how many pedestrians are injured by bicyclists. However, bicyclists need to use the sidewalks. In closing, Mr. Counts asked for some type of a guideline for the politicians to follow.

*Craig Canning*
**Comment** - Mr. Canning noted that it should be looked at closing Broward Boulevard to vehicle traffic and making it a mass transit corridor for buses. You can do the same on A1A and use alternative transportation.

*Craig Collins, lives in Dade County, works in Broward County*
**Comment** - Mr. Collins suggested that maybe you should have something like riding the bus for free in order to get people into transit. Maybe then people will park their cars and ride. If you expand the lanes, you are going to take away someone's property. Something has got to give. It seems like we talk a lot and there's no action.

*Laura Driver, Miami Gardens in Broward County*
**Comment** - Ms. Driver noted that she walks five blocks from her home to take the bus to go anywhere and has to change buses several times to get where she is going. She can leave her house at 7 a.m. in the morning and get home and has wasted five hours. She cannot buy much because she is 80 years old. She cannot do much walking. She enjoys the bus but you have to wait between buses where there are no benches at the bus stops. There are a lot of drawbacks on what you have to do in order to catch a bus.

*Sara Forelle*
**Comment** - Ms. Forelle noted that we need to connect the bus stops to something. There are bus stops sitting out in the middle of no where. Some of the bus stops in Weston have no sidewalks and there is no place to stand other than in mud. We need to treat the bus rider with dignity.

*Catondra Noye, Broward County Transit*
**Comment** - Ms. Noye noted that she is a Transit Manager for Service Development with Broward County Transit and that her staff is responsible for developing a master plan for Broward County. She asked everyone to participate in their process and will be asking this team for their mailing list. She agreed that better connections are needed. There is limited services to their Route 18 along 441 has improved and there are heavy loads on it. They are looking at how to incorporate light rail and mono rail.

*Michael Smith*
**Comment** - Mr. Smith noted that in the western area of the county you have bus cutouts and shelters. This is not the case in the eastern area of the county. Development has occurred on the eastern side. More input is needed at the time of development in major corridors.

*Robert Tolan, Training Supervisor for AAA Wheelchair*
**Comment** - Mr. Tolan asked for special bus lanes on major roads like Broward Boulevard, University Drive, for both buses and vehicles transporting people with disabilities.

*Dave Marshall*
**Comment** - Mr. Marshall noted that mass transit needs to look at services and convenience improvements. To make mass transit system more competitive, it needs to be more convenient than the alternatives. It means that you can get there nearly as fast or as fast by bus as you could drive your own car, Cutouts are a good idea. He agrees with improving the bus stops. In his neighborhood, there are a large number of school children waiting for the bus on Broward Boulevard in front of The Salvation Army with no shelter and no where to stand. There needs to be more amenities for heavily used bus stops. There are some bus stops, in his opinion, which Broward County Transit needs to work hard or smarter on. One bus stop which comes to mind is along University Drive, halfway between Peters and Broward Boulevard. It is on the sidewalk and there are palms grown up around it. It was cut back, but unfortunately the palms have grown back again. In those cases, a little more effort and planning is needed.

*Don Levine*
**Comment** - Mr. Levine noted that instead of each municipality fighting for each little dime the Federal Government throws out, it would be nice if they all got together and fight for that dime as one entity. Everyone is fighting for the same money coming out of the same pot. If there is a program similar in several municipalities, put it all together and have them work together. In the end, it would be cheaper to implement. Mr. Levine noted that is the utopia vision.

Ms. Dickey asked if anyone wanted to add anything else. There were no more comments provided.

Mr. Haliburton thanked everyone for coming. Mr. Al Aschkar noted that they are developing draft plans which will available in September 2004. The plan should be completed and adopted by the MPO in December 2004.

**The meeting adjourned at 8:00 p.m.**
**Total Attendees at this meeting were = 39**


# Broward County 2030 Long Range Transportation Plan
# North Broward Workshop #2
# City of Coconut Creek, City Hall
# Thursday, January 29, 2004 at 4 p.m.
# *AGENDA*

| | | |
|---|---|---|
| I. | Welcome and Introduction | Broward County MPO |
| II. | Introduction to Project | Kittelson & Associates, Inc. |
| III. | Team Overview | Kittelson & Associates, Inc. |
| IV. | Schedule | Kittelson & Associates, Inc. |
| V. | Public Involvement Plan | DCS |
| VI. | Present Goals and Objectives | Tindale-Oliver &Associates |
| VII. | Public Input | Team |
| VIII. | Closing Remarks | Team |

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN

## NORTH BROWARD WORKSHOP #2
## MEETING REPORT

THURSDAY, JANUARY 29, 2004
CITY OF COCONUT CREEK, CITY HALL CHAMBERS
4 P.M.

**Welcome and Introduction**
Ossama Al Aschkar, Project Engineer, for the 2030 Long Range Transportation Plan (LRTP), from the Broward County Metropolitan Planning Organization (MPO), welcomed everyone. The transit system has come a long way since 1979. The 2030 LRTP is a plan that documents the transportation improvements that will take place in the future. Mr. Al Aschkar introduced Peter Haliburton, Consultant Project Manager, from Kittelson and Associates, the consulting team assisting Broward County in developing the transportation system in the next 25 years.

**Introduction to Project**
Mr. Haliburton pointed out that this evening's meeting is being held to receive public input as to what is important for study.

Presentation Overview
- Introduction to Project
- Team Overview
- Schedule
- Public Involvement Plan
- Plan Goals and Objectives
- Public Comment

Project Introduction
- Accommodate Growth!
- Regional Planning
- Federal Requirements
- Update Cycle
- Air Quality Attainment

**Team Introduction**
Mr. Haliburton noted that Kittelson & Associates is the lead firm and will be doing the project management and some of the mobile components, such as the alternate modes.

Cambridge Systematics is a national firm that is in charge of running the computer-based travel forecasting model and also the financial forecasts.

Dickey Consulting Services (DCS) is coordinating the public involvement and public input.

Oliver & Associates helps to meet the plan's goals and objectives. They are also transit-planning experts.

**Project Schedule**

Mr. Haliburton pointed out on this slide that the plan needs to be updated and adopted by the Broward County Commission and MPO by the end of 2004. In January, the team is involved in the first four tasks of the projects:

| | |
|---|---|
| Task 1 | Public Involvement |
| Task 2 | Developing the Goals and Objectives |
| Task 3 | Compiling the Data |
| Task 4 | Developing a Model |

Background and Growth Assumptions

| | |
|---|---|
| 1920 | 5,000 |
| 1950 | 85,000 |
| 1990 | 1,255,000 |
| 2000 | 1,625,000 |
| 2030 | 2,550,000 |

In reviewing the table, the population is growing from a mere 5,000 in 1920 to 1.6 million in 2000, with an anticipated 2.5 million by 2030.

- It is the 15th largest county in the U.S., based on the year 2000 Census.
- Center of Tri-County region.
- Approaching build out – the allocation of growth to the existing parts of the County will be very important.
- Migration is a big unknown – for people outside of the state and people from neighboring Counties or other regions in Florida.
- Increasing diversity – in terms of the population and makeup of the population will create challenges.

In response to these needs, Mr. Haliburton advised that the 2030 plan is a multi-modal plan that will address people's needs and provide people with options other than a car.

Mr. Haliburton introduced Sheryl Dickey of DCS to speak about the public involvement plan.

**Public Involvement Plan**

- Ms. Dickey provided a recap on Public Involvement
  - Education is the key! *We should be able to look at alternative forms of transportation*
  - Public - There are two workshops being held
  - Special Interest Group Meetings will be held (some members of the Environmental Legislation Justice will be in attendance – these members govern the funds used in transportation).
  - Elected officials

- Community Involvement Roundtable (CIR) participation (a group of individuals who are elected/appointed by Commissioners in the various cities in Broward County)
  - Host public meetings
  - Develop/review materials
  - Web workroom

- Existing resources, communications
  - Public Information Office from the County
  - Commission's public liaison officer

Ms. Dickey reported that all data would be assembled and compiled; additional workshops will be conducted. A specialized workshop will be conducted in November 2004. Sheryl explained that the final plan would be developed and presented in a public hearing forum.

**Bob Wallace from where provided information on the Goals and Objectives**
Mr. Wallace explained that his company's roles were to help, review and update the roles and objectives that are used to guide the development of the LRTP into the various stages**.**

There are seven transportation-planning factors of the Federal Government in terms of requirements for transportation plans like this. The plan needs to address these issues:

1. Supporting economic vitality of the Metropolitan Area.
2. Ensuring safety and security for the transportation system (notarized and non notarized public).
3. Providing accessibility and mobility options.
4. Respecting and protecting the environments.
5. A system that provides integration and connectivity of the various modes of transportation.
6. Ensure that the plan meets the needs of energy efficient and conscientious operation of the system.
7. Respect and preserve the investments already made in the transportation system.

A "goal" is a big picture, long-term statement that guides us to an end result. An "objective" is something that is measurable that allows us to determine whether or not we are making the progress for achieving the goals statement setting the goals.

The following is a set of five goals that were developed for the previous 2025 plan and will become the starting point for comments on.

1. Provide balanced multi-model transportation system that provides choices and mobility. *This is focused on public transportation, bicycling, pedestrian and automobiles*.
2. A transportation system that is safe, i.e., How we develop and enhance safety.
3. Preservation of Broward County's investment in transportation system in a cost-feasible manner – t*his deals with both the maintenance and operation of the system, as well as the capital facilities.*
4. A transportation system that is coordinated and consistent with current and future agency plans of Broward County, its communities and neighbors.
5. An aesthetically pleasing transportation system, which minimizes impact on the natural and built environment.
6.

**Public Input**
The meeting was turned over to the audience by Mr. Haliburton, asking the participants to discuss what is important in the four categories of Vision, Goals, Priorities, and Projects.

Mr. Haliburton turned the meeting over to both Ms. Dickey and Mr. Al Aschkar for the Question and Answer session.

Sheryl introduced her staff (Linda Postemice, Jenni Clark and Leslye Flores) and informed the group that these individuals would be their contact in this management planning process.

***Dan Glickman, Deerfield Beach***
**Comment -** None of the three speakers mentioned the magic words – Mass Transit. There's waterway and transportation. He has attended several meetings and most of the meetings are 80-90 percent non-mass transit. We are falling behind the curve even though the MPO has made it a priority. His suggestion would be to emphasize having mass transit as a focal point, a category. There are 40 routes in BCT; there are approximately 30 routes in the various community buses. We need to have volunteer route captains, assistants, or just route volunteers who lead the various groups to what the circumstances are (i.e., having to stand in water, no seat, no signage on community buses, no coordination in bus routes). We have great service in Century Village. The focal point for public involvement in his opinion is, and should be, the Internet. All communication and coordination can be done on the Internet and the Broward County Library which as an extraordinary, wonderful access to the Internet. We should focus the major aspect of the plan on the use of internet technology.

***Joe Varsallano, City of Margate, MPO member***
**Comment -** Mr. Varsallano complemented the gentleman who just spoke about transportation. It surprises me that we today on the MPO are concerned about the transportation. We are not concerned mainly with the four modes of transportation. The bottom line is we are concerned about removing the abundance of automobiles from the roadways – removing the number of automobiles from the roadways. Because no matter now many new roadways we may build as we look at the projection of this 2030 year plan, there is going to be so many more cars that it is going to be inadequate. What we have to do is look at some form of government intervention about the utilization of roadways -- when they will be utilized; how they will be utilized; and who may utilize. Please consider a second level. Why do you want to go to a second level? Some of you people here do not realize that there is a very, very strong major project along 441, State Road 7. This project does not only entail a roadway, but it entails a utilization of every piece of barren land along the way to the west and the east. We need to implement more legislation. Twenty to thirty years from now, the Federal government comes along to acquire land, land that is already developed, to get a roadway. That's not right. You have priorities for the roadways – the environment, the contamination of the environment from the abundance of vehicles on the roadway. Then we should get involved with government regulations as to the type of vehicles that will be on the roadway – will they be gas, electric. These are the things to consider. People are putting all of their efforts into this. I think the first thing to do is to stabilize Broward County. We need see what is going on with our MPO and implement those things that are positive today in order to make room for 20-30 years from now. What you plan today may be obsolete tomorrow. Mr. Varsallano made the closing comment -- The people that are involved with the roadways are at the County and State level; you will not find any part of the United States that is more devoted to bring the proper services to the people of Broward County.

***Jean Lecog, Coconut Creek***
**Comment -** Ms. Lecog is very pleased to see the goals, but feels the main goal before we do anything is get the consensus of what we want Broward County to do. Until we decide what will happen in Broward County, what is the use of planning? We have to decide if there should be a place for people to spend leisure time. Are we going to be a place for tourists? Are we going to be a place for business? If we are going to be a place where we keep developing, we want to have more business in Broward County. Our transportation needs are very different from a place where we want to be a pretty place, a place where the environment is respected. One of the questions here is the flyovers. We want people to get from one place to another quickly, surely flyovers is the answer. You have express buses to get

workers from one place to another. But, does anybody want to stay in a hotel next to a flyover? Does anybody want to ride a bike over a flyover? Until we decide what Broward County wants to be, there's almost no point to talk about transportation. Obviously, the communities have different ideas. That's true and it is seen all over America. There are places where people have had enough money and influences to keep out development. Those places are wonderful places to live in, but, if you do have diversity as we have in Broward County, you want to continue with the diversity in the County. We've got to draw up a plan on what Broward County is going to be. Our planning needs to make sure every citizen has the kind of transportation they need. We can't say ahead of time it's going to be an ecological paradise, that everybody who lives here will have a million dollar home. We can't have that. We have to decide what we are going to have and what Broward County will be in the next 25 years, before we make decisions about whether we want flyovers, or bike paths.

***Lydia Smith, resident, City of Tamarac***
**Comment -** She has been in Florida for one year. She has been all through the U.S. and Canada. This County has the best transit there is and she uses it all the time. Drives through buses are not working. You can't get to your appointments on time. People get frustrated, they are nasty. They don't care about the people; they don't care about the poor people. Buses are always late.

***Edward Portner, Commission, City of Tamarac***
**Comment -** Along with Mr. Varsallano, I want to make statements on the 441 projects. In the next 20 years, Broward County will have an additional 800,000 people moving into the County. That is why we are looking at 441 to be developed. The County or MPO does not look into what it considers to be the best mode of public transportation, such as light rail. They constantly look into buses and more traffic lanes. Every time you build a traffic lane, you go up. You don't create less traffic by building more traffic lanes. I suggest slow down; reduce your traffic lanes to force people out of their cars into mass transportation. Everyone likes to drive a car, but you need to remember what used to be built. Many of us come from major cities. I come from Philadelphia and you get around using trolley cars, subway systems, in that respect. Here, nobody wants to get out of their cars. What is the attraction of cars? You drive somewhere, wait for traffic to clear up, and try to find a parking place, walk three blocks to where you want to go, as opposed to taking mass transit which will take you to where you want to go. Thirty years from now – 800,000 more people are coming into the County. 800,000 is a whole city by itself. You have to make sure you can get around. I implore you to look at mass transit. Mass transit is cheaper in the long run, it will get you there quicker in the long run, and you'll walk a little bit instead of driving a little bit. I don't believe in flyovers and bridges. I believe in reducing traffic by reducing the traffic lanes.

***Richard Kaplan, Mayor, City of Lauderhill, Chair of MPO***
**Comment -** Mr. Kaplan mentioned that he sits on every statewide organization that exists in this area. I appreciate everyone coming down here and the input. To try to explain the situation, transportation in Broward County is a wide-ranging smorgasbord of different types of methods. As far as traveling in your car, and as far as government run subways, we have a problem. We have gridlock or just poor traffic flow. We really want to see the future of transportation within probably five to ten years. It's very simple for us to do that – you look to the south. I would say that Dade County is five to ten years ahead of where we are. Palm Beach County is five to ten years behind us. The question is: How far or how long do we wait before we take action, or do we take action as quickly as possible? It is very true the community has to decide what exactly it wants to do. I hope it doesn't take a long time, because if you wait ten years you'll be looking at what is going to the south of us. If you can decide quickly, then we can implement it quickly. One of the things we have to be looking at is a master mass transit plan to try to coordinate all transportation systems throughout the county and inter-county, and ultimately

to state plans as well. We are looking at the State Road 7 Corridor, light rail, BRT (bus rapid transit). There are a variety of systems out there with advantages and disadvantages on State Road 7 we are looking at bus rapid transit, not that we wouldn't like light rail, but bus rapid transit which is a bus that looks like a train and operates as a train, and costs approximately ten times less per mile than light rail. This system can potentially be ready for BRT in three years as opposed to fifteen. That's an advantage. The question is, will people take a bus if it looks like a train? If they're not, then we're wasting our time and money. People take buses for one of two reasons. In this area, they take it because it is the only alternative they have available to them. In other communities that I have lived in, there is a second reason and that's the reason we need to develop because it is a superior system to other alternatives. I regularly go to D.C. and they have their Metro system. I wouldn't think of renting a car in D.C. I've lived in Cleveland and out in the suburbs. The only way I would consider going downtown is via a light rail system that Chicago and New York has. We have a system we are looking at presently State Road 7. We are looking at systems on I-595, I-75, the FEC Corridor; we're looking at coordinating systems that will bring you into the airports and into the seaports. This will get people from where they live to where they want to go. The question is, what do you want? How quickly do you want to do it? Will you be willing to pay for that service to create it? That is a huge question. Because if you don't pay for it, it won't be built and you look to the south to see what will happen. These are major decisions this community, this County in South Florida have to decide upon and I'm looking forward to the response back, be it a short term plan in five years, and we also have this 2030 year plan. We need to get moving on a plan to try and deal with the problems we have today, before we can say whether we like it or not like it. The community will need to determine if there is a need for mass transit. Mass transit will may work, in that it can provide superior service to get them where they are to downtown, but they are in love with the car and they don't even want to consider it. But if you put it in, I'm sure it will work because I know of other communities in the United States with similar natures, and it worked. You have to work on perception; you have to overcome the costs and what it will do to your area with some compromising along the way. Please, part of the process is community input, community support and consensus and we look forward to that.

*Resident*
**Comment -** The gentleman noted that this might not work politically or otherwise, but would take his registration to his old 1990 Toyota Corolla, which he uses sometimes, turn it in as long as he gets a free bus pass. This would be for any 18-year or older person who does not own a car. He realizes all the problems with that including success, but the point is one way to get cars off the road is to provide people with a financial incentive. Obviously, auto drivers and their passengers are well subsidized by all federal, and local monies going toward roadways. He would be happy to not drive and take public transit. It will not be done overnight.

***Bruce Wilson, representing WaterTaxi***
**Comment -** Asking about themes, the ones on the slides that would come closest would be congestion, transit and food for thought on a couple of projects. I'd like to talk about waterbus today. Waterbus is provided by Broward County Transit and is operated by WaterTaxi, Inc., a private sector organization that has capabilities to build boats, operate and maintain a small mode of transportation and to market waterbus along the New River and intercoastal waterways. We've talked about the need to achieve a multi-modal system. Waterbus can add that component to a multi-modal system. It is in a demonstration phase right now thanks to the MPO helping provide funding. Ridership is doing well and recently we reduced headways to half an hour. You could say it would address your goal of accommodating growth, there's quite a bit of growth in the New River development and some along the intercoastal. The waterbus provides an alternate mode of transportation. The quality attainment it runs less fuel. The cost effectiveness -- certainly it will cost money to keep and expand waterbus, but

we have some things going for them. They do not have to buy right-of-ways for the most part. I'd like to think this as an articulation of what Broward County Transit has done for sometime, the family of services concept. This is just another part of the family of services. Unfortunately, it has to apply mostly in eastern Broward. Perhaps, if there's a good transfer between waterbus and surface transit that would help in most part. Some initial food for thought for the team to see what might be appropriate in their area and also looking to adjacent counties. Enhance waterborne access to the New River Development Corridor. We also have new government center employment university complexes, art and entertainment district, high-rise housing in which the waterbus can help provide transportation back and forth. One particular extension of service might be is to come up the river to Marina Bay, just west of I-95 where there will be condo complexes and to intercept some commuters coming in on I-95. Also, facilitate interval transfer to water borne transit. Once a project moving, we should consider a terminal along the intercoastal at Las Olas Boulevard for shuttles, county bus with water bus transit. We're ready to work with you on transit.

***Dave Cherry, works for City of Coconut Creek***
**Comment -** Mr. Cherry oversees the City's community bus program. As an individual, one thing he has noticed is the potential for a great transportation system. Everyone talks about the tri-county area. Seldom do they think about the communities growing out in the Fort Myers, Naples area. As the County develops our airports, our ports, people from the west coast will be heading this way in travel and to enjoy the area. There is a need for consideration of that corridor. They put a need in to improve the rail system that goes up to Orlando, this would increase tourism at Walt Disney World, but there should also be a consideration of putting a rail down Alligator Alley to reduce traffic and provide economic advantages and environmental advantages. It would be a great boom for this area.

***Beverly Cranmer, Coordinator of Disability Services at Broward Community College***
**Comment -** Ms. Cranmer requested that whatever mode of transportation is considered to please not forget about the disabled and how they are able to get around the County. We have a lot of students throughout campuses in Broward County and the transportation is not there for them.

***Resident of Deerfield Beach***
**Comment -** The resident stated that he is a transportation engineer with McMahon and Associates.
He has 37 years of transportation background. He is also a refugee of Philadelphia. In terms of transportation, his focus on is not only look at transportation. If you are going to have successful public transportation, you need to talk about redeveloping the county; you want to have to intensify density and light rail needs. A good example of how this really works well is with the Board of Transportation in Seattle .There are good opportunities. The majority of people in San Francisco do not use their car. They ride the BART. Metro Rail in Miami works very well in a corridor, but we know what happens outside the corridor.

***Mark Leaf, Planning Director for City of Pompano Beach***
**Comment -** Mr. Leaf has been in planning for 25-27 years in Broward County. We need to talk about the significance of the availability of the conversion of the FEC rail corridor. This will impact the eastern part of the County. It really means looking at what it means to have a Regional Transportation Authority and to ensure the Long Range Transportation Plan understands and works with what the alternatives are in the regional transportation to convert the FEC corridor to passenger services. It also means having the by-products of a real feeder system that feeds into that corridor at some point of time and then, coordination and overlapping of current Tri-Rail.

***Mr. Varsallone***

**Comment -** Mr. Varsallone commented that when transportation planning was put in place, the concern was with the north and south. A great deal of emphasis was put on that. But there has definitely been a change for the benefit of those that do not realize this and we are talking about the outer areas going out west or east. We do have a spider web network to work with. We have addressed the fact that the further areas going west, south and north and going east, south and north would be impacted in part by transportation created for a central hub. That is in place and we want to make sure that the people who are planning keep that in mind and keep looking at that spider web network.

Another gentleman, who did not identify himself, spoke commenting on Mr. Varsallone's comments. We really have much more grid pattern than spider web. I make this comment because the initial comment I would like to make to Mr. Wilson, are you the representative from Commissioner Parrish on the South Florida Regional Transit Authority? Mr. Wilson indicated he was a representative of the citizen's committee. What this gentleman wanted to suggest was love to see at least a demonstration project of north-south Tri-County that South Florida Regional Transit Authority (SFRTA) using the buses whether it was on the Federal Highway or State Road 7. At least, have the SFRTA take over the north-south and leave the County to talk care of the east-west initially within their Counties. It could be cost saving and strong efficiencies if the SFRTA would take into consideration the north-south mass transit. I wish people would use the term mass transit.

**Closing**

Mr. Al Aschkar thanked everyone for attending. He noted that it was a challenge in preparing the Long Range Transportation Plan. Mr. Al Aschkar noted that they are developing draft plans, which will be available in September 2004. The plan should be completed and adopted by the MPO in December 2004.

**The meeting adjourned at 6:00 p.m.**
**Total Attendees at this meeting were = 59**

**Dorsey Riverbend Neighborhood Association**

**Meeting Agenda**

**February 23, 2004 7:00 PM**

**North Fork Elementary School Cafeteria**

**Welcome and Introduction**

**Invocation**

**Approval of Agenda and Minutes**

**Old Business: Monthly Reports**

**Financial Report**

**Correspondence**

**Police Report**

**New Business: Guests and Special Presentations**

**Sheryl Dickey, Dickey Consulting Services**

**Broward County Long Range Transportation 2030 Plan**

**Tom Pearce, ACORN**

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN

## DORSEY RIVERBEND HOMEOWNERS ASSOCIATION MEETING REPORT

MONDAY, FEBRUARY 23, 2004
NORTH FORK ELEMENTARY SCHOOL
7:00 PM

Debra Fredericks, President of the Dorsey Riverbend Homeowners Association, began the meeting at 7:00 p.m.

**Welcome and Introduction**
Towards the end of the homeowners' association meeting, Ossama Al Aschkar, Project Engineer for the 2030 Long Range Transportation Plan,(LRTP) from the Broward County Metropolitan Planning Organization (MPO), provided a brief five minute presentation. Mr. Al Aschkar then introduced Sheryl Dickey of Dickey Consulting Services, to provide a brief overall of the community involvement.

Ms. Dickey advised attendees that they were provided a copy of the current Broward County Long Range Transportation Plan 2030 newsletter along with a questionnaire. They were asked to complete the questionnaire and to turn them in at the end of the evening. Ms. Dickey noted that we needed to hear from everyone as to their ideas of what they would like to see (i.e., pedestrian access to roadways, additional lanes, more transit, etc). Ms. Dickey referenced the timeline on the back of the newsletter and advised everyone that it was a twelve month study. The team is currently in their first phase which is the data computation stage of the study. After the first phase, the team will again be back in August to go over what the needs are.

This information, the needs assessment and the summary minutes will be accessible through the web page. The final report will be developed in November.

Ms. Dickey advised everyone that DCS' phone number and e-mail address were in the newsletter and welcomed them to contact us.

**Question:** What is the update on the 7$^{th}$ and 9$^{th}$ Avenue connector?

**Answer:** Ms. Dickey advised that it was a joint venture with the City of Fort Lauderdale, Broward County and FDOT and that it was now in the Federal hands for their review. The Feds will make a recommendation if they wish to move the project to the next stage, the design stage. Ms. Dickey noted that it may be six years before they see any developments. It has already been two years since the planning stage.

Ms. Dickey noted that the Long Range Transportation Plan includes projects that are long range and may take many years to complete. The plan is revised every three years and the communities are again asked for their input.

Ms. Dickey noted that the connector is not fully funded and additional funds are needed. It is included in the Long Range 2025 Plan.

**Comment:** Jasmin Shirley inquired about the Central Broward Blvd. project, connecting the east and west to some type of transit system. Ms. Shirley mentioned that there were discussions over whether or not it will go over I- 595 or Sunrise Boulevard and was concerned about the project's affect on the Dorsey Riverbend neighborhood.

**Question**: What are the plans for the project that will connect the east and the west?

Ms. Dickey noted that there are many alignments being looked at and that no definite decisions have been made and that the project is still in the planning stages.

Ms. Dickey mentioned that public hearings will be held for the community's feedback.

Mr. Al Aschkar pointed out that a transit system was being developed for Broward Boulevard. It would be bus rapid transit with consideration for rail later, if needed.

**The meeting adjourned at 8:30 p.m.**

# LAUDERHILL CENTRAL RESIDENTS ASSOCIATION(LCRA) MEETING AGENDA- MARCH 3, 2004

**1. Call To Order**

**2. Welcome**

**3. Pledge of Allegiance**

**4. Introduction of Board Members/Members**

**5. Annual Financial Report - Treasurer**

**6. Minutes from February 4, 2004 meeting- Recording Secretary**

**7. Desorae Giles-Smith- Assistant City Manager-**

**A) Update on section 8 Housing Authority for the city of Lauderhill**

**B) Update on completion date of park (56th and Sunrise)**

**C) Update on acquisition of Sandal Grove Apartments**

**8. Linda Postemice- Dickey Consulting- providing information on Broward County Long Range Transportation Plan.**

****Opportunity given to any candidate running for Lauderhill City Commission to speak.**

**9. Renewal of memberships & invitation extended to all non-members. (Membership Fees -$10 per household; T-Shirts S, M, L -$12.00)**

**Meeting Adjourned**********************************************************

***"Neighbors helping neighbors to protect each other's investments"***

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN

## LAUDERHILL CENTRAL RESIDENT ASSOCIATION MEETING REPORT

WEDNESDAY, MARCH 3, 2004
CITY HALL, CITY OF LAUDERHILL
7:00 PM

**Welcome and Introduction**
Linda Postemice, Project Coordinator, welcomed everyone to the Central Lauderhill Resident Association meeting and thanked Beryl Collins, president of the association, for having placed the Metropolitan Planning Organization (MPO) on their agenda for the night to discuss the Broward County 2030 Long Range Transportation Plan (LRTP). Ms. Postemice gave a brief overview of the BC 2030 LRTP and informed the group that the purpose of the night's meeting was to receive public input on the future transportation needs for Broward County. She informed the group that a website has been developed for the BC 2030 LRTP and the transportation needs questionnaire, which they were given, is also on the website. She then urged the group to review the website for updates and information on future meetings. She informed the group about the public involvement process and the various means by which Broward County will provide updates to the public. The newsletter that was handed out is the first of four newsletters that will be developed to provide updated information. In addition, as the plan develops additional public meetings will be held to inform the residents. She then introduced Ossama Al Aschkar, Project Engineer, and Peter Haliburton, Consultant Project Manager. Ms. Postemice then opened the floor up for any questions.

**Introduction to Project**
Ossama Al Aschkar, Project Engineer, for the BC 2030 LRTP and representative from the Broward MPO, provided a brief presentation. Mr. Al Aschkar indicated that the reason the team was present at this evening's association meeting was for their input as to what they would like to see happen in the County within the next twenty-five years. Questionnaires have been distributed to everyone attending tonight's meeting. Mr. Al Aschkar referred everyone to the website and indicated that they could also be contacted via e-mail. The team is looking for input such as: more improvements, more lanes, grade separation at the railroad crossing, more water taxi service, more bike lanes and sidewalks, were just a few named.

**Question:** Are there any plans to widen 55$^{th}$ and 56$^{th}$ Avenues?

**Answer:** Mr. Al Aschkar indicated it was up to the residents. The road carries around 50,000 when it should only carry no more than 11,000. The road is carrying more than 50 percent of what it should handle. Mr. Al Aschkar noted that four lanes could be built and the speed limit would remain at 35 mph. This could be one of the inputs provided to the team this evening.

**Question:** Are there funds available to widen 55$^{th}$ Avenue?

**Answer:** Mr. Al Aschkar noted that there is a five year program that covers all the funded improvements in the next five years. The current plan being presented tonight extends beyond the five years. The plan is for twenty-five years and the future. Residents may look at the five year plan at any time. Widening 55$^{th}$ Avenue is currently not in the plan

**Comment:** A resident noted that 56th Avenue is a problem for the City, especially for those residents living between Oakland Park and Sunrise Boulevards. The traffic is horrendous. The resident suggested realigning 55th and 56th Avenues to make the avenue a one way road.

**Question:** To what extent would this option be considered?

**Answer:** Mr. Al Aschkar advised that the realignment of 55th and 56th Avenues could be an option. There are advantages and disadvantages to one way roads. One way roads may increase traffic circulation in the area and also impact businesses. Mr. Al Aschkar noted that if accepted by the community, this could be an alternative. It would be one of the least expensive alternatives.

**Comment:** The resident noted that the reason he raised the issue is that relief is needed now. There is no relief in sight and to wait 5 to 20 years will not help residents who use 55th and 56th Avenues in the mornings.

**Comment:** The resident commented that the City of Lauderhill is building several buildings on the north side of Oakland Park. Many of the people who would take advantage of those buildings live on the south side of Oakland Park.

**Question:** What kind of pedestrian safety measures would be taken to get people across Oakland Park?

**Answer:** Mr. Al Aschkar advised that a pedestrian overpass would be needed. If you have pedestrians crossing at grade, the crossing will increase the green time for pedestrians to cross. Again, it would depend on the activity of pedestrians moving north and south.

**Comment:** The resident noted that the community would be in a position to make the decision, but wanted to know if there were things that would make it prohibitive in terms of costs and concepts. If there are, he noted that they need not be put on the table for consideration. The relief is needed <u>now</u>.

**Answer:** Mr. Al Aschkar noted that it was a good point. The widening of the road would take two years to write beyond the five year window. An instant solution, the one way, would work very well. There would be more around the block circulation. As we have had in the past, you would save on green time, improving capacity by 27 percent by previous one way ratios. It could be a relatively inexpensive alternative.

**Comment:** The MPO representative from the City of Lauderhill advised that there are two parts to the program. There is a twenty- five year plan and a 5 year plan. To get something done in the 5 year plan, it has to be in the long range plan. Even if it is in the long range, it doesn't mean that we have to wait 25 years before we get to it. Projects are put into the system and then are prioritized. That is why it is important to discuss these items, to put them on the 2030 year plan. Once the projects are on the 2030 year plan, then we will need to see how they can be placed on the 5 year plan and prioritized, which is done by the Broward County MPO. Additionally, the City of Lauderhill has it in its 5 year plan to redo 55th and 56th Avenues. The MPO is working throughout the City on many roads. 55th and 56th Avenues are coming up shortly. You will see that in the next year or two, once the roads are redone, the traffic pattern will be worked through Broward County MPO, the City, and the community as to what they would like done. The City has been able to get the County and the MPO to put the roads into the system so that they qualify for T-21 funds, which is similar to the way Inverrary Boulevard was done

ten years ago. Sometimes, the projects are put into the system and it takes years before the money is received.

**Comment:** A resident inquired about the long term funding and inquired if the funds were city, state or federal. He wanted to know how population growth would be incorporated into the long term funding. He stated that in Broward County there are 1.8 million people and that number will probably double in twenty years from now.

**Question:** How will you factor in funding and population growth?

**Question:** Are you using CRA (Community Redevelopment Area) money?

**Answer:** No. We are not using CRA money. Mr. Al Aschkar noted that most of the dollars that are used for construction of transportation comes from the gas tax. The tax that you pay at the pump, 50 cents per gallon, is spread among the federal, state and county. The County splits the money between the County and the city. The county keeps percent and the city receives 40 percent. The agency can come back to the county for more revenue – federal, state, County or city. The revenue for 55th and 56th Avenues can include any of these revenues. It doesn't mean that federal dollars cannot be used on 55th Avenues. However, 55th Avenue needs to compete against other projects such as State Road 7. The 55th and 56th Avenue option would be easier to do with revenues from the county and city, as a mix.

**Question:** What is the dollar amount for investing?

**Question:** Are you talking about 2 million?

**Answer:** Mr. Al Aschkar replied that he could not provide a dollar amount without knowing exactly what is involved in making the two roads a one way. In preparing the road for one way, it would require resurfacing and repaving.

**Comment:** A resident commented on Oakland Park and long term funding. She has an 11 year old that needs to cross Oakland Park safely.

**Question:** How are children going to get to the library safely?

**Answer:** Mr. Al Aschkar indicated that he would need to check with mass transit. Mayor Kaplan noted that there is a bus route. If you live in the area you would take shuttle bus number 2 and change over to bus number 3.

**Question:** Where is the change over?

**Answer**: Mayor Kaplan advised that the change is over at Publix.

**Comment:** The resident noted that you still had to cross over the road.

**Answer**: Mayor Kaplan indicated that presently there are five shuttles running through the City of Lauderhill. Shuttle number no.1 and no. 5 have the same route that runs in reverse. These are free shuttles. Currently shuttle no. 2 goes throughout the central resident area. Shuttles no. 1 and no. 5 go to the east side, shuttles no. 3 and no. 4 goes to the west side. The children can take the shuttle; however,

there have been problems with children misbehaving and upsetting the riders on the shuttle bus. As a result, other options are being looked at.

**Question:** How can my son take the shuttle from 56th Avenue and Sunrise?

**Answer**: Mayor Kaplan noted that the shuttle comes down 56th Avenue and runs every half hour to 45 minutes. You may take the shuttle over to Publix, and when shuttle bus no. 3 comes you would then transfer to that shuttle. The shuttle does not presently stop at the library because the library is not open at this time. The shuttle will be re-routed when the library opens.

**Comment:** A resident commented that many citizens are interested in becoming involved.

**Question:** How can citizens have an influence in the transportation problems?

**Answer:** Mr. Al Aschkar noted that residents would have an influence by doing the following:

- Complete the Transportation Needs Questionnaire tonight or on the website.
- Provide your comments using the website: *www.BrowardLRTP.org*
- Attend the public hearings which will be held in September 2004.
- Write a letter to the MPO.
- Residents can also contact the MPO through e-mail or the website, as noted on the survey.

Mr. Al Aschkar indicated that input is currently being obtained from the public. Once public input has been obtained, they will then meet with the consultant to develop a transit plan, which should be developed by September 2004. Several public hearings will be held in September; in addition, the staff will meet with the communities to present the plan for the next 25 years.

**Comment**: A resident indicated that he was inquiring into a standing citizens committee that would allow citizen's to become involved.

**Answer**: Mr. Al Aschkar commented that there is a Community Involvement Roundtable (CIR) which meets 6 p.m. the first Tuesday of the month in the Broward County Governmental Center, 115 S. Andrews Avenue., Room 430.

**Comment:** In the peak hours of the morning, 56th Avenue is extremely busy. There are problems exiting onto 55th and 56th Avenues in the morning.

**Question: Is there any way you can eliminate this problem?**

**Answer:** Mr. Al Aschkar noted that the problem is mainly due to the back-up traffic. The one way operation may move traffic smoother and faster. The other option would be a signal and Traffic Engineering would install a signal allowing traffic from the side streets to move.

**Comment:** It seems like traffic backs up on Sunrise Boulevard, heading south. Currently there are two lanes. One lane cuts off.

**Question: Is there any way to lengthen the light so more cars can go through?**

**Answer:** Mr. Al Aschkar noted that possible they could make the storage (?) longer and that would help. It is a difficult operation there because the segment, 56th Avenue, is a one way. There's not much you can do in the area. The one way option would work in this area to solve the problem.

**Comment**: The resident commented that he felt the problem would still exist because the traffic that backs up along 56th Avenue is a result of there not being two lanes.

**Comment:** You need to get rid of the stacking lane. Southbound traffic on 56th Avenue backs up.

**Comment**: Some of the streets do not have an outlet.

**Comment:** I was at that corner yesterday and there were two policemen standing there writing tickets, because a driver got out of a different lane to make a left turn. These policemen were causing traffic to stack way beyond what is normally the stacking of the cars. That is totally unfair during morning traffic. Someone needs to address this type of issue. Luckily, it wasn't the Lauderhill Police. We need to keep addressing this issue to make it stop. We should write letters to let the city to let them know how aggravating the cause of this traffic congestion is for residents in the community.

**Comment:** If we bring back the double lanes and repaint 55th and 56th Avenues, sooner it would really help. We need to make the double lanes longer.

**Comment:** We can make double lanes longer by all means, that will really help.

**Comment:** The answer lies within the traffic pattern itself.

**Comment:** There needs to be a Sun-Pass only lane or ramps added to Oakland Park Boulevard that will help eliminate some traffic. Most of the people that are stuck in traffic are trying to get to the Turnpike.

**Comment:** What you are saying makes sense and we currently have it in our plan.

**Comment:** A lot of the traffic on 56th Avenue is cut through traffic. We have to put these things on the long term plan. They are in the long term plan. You are correct. Maybe if you add the Sun-Pass only lane it will stop the cut through traffic for this part of Lauderhill. We need some empirical data, which means that we need to do a traffic count to find where people are going and where they are turning.

Mr. Al Aschkar then asked the crowd if there were any other comments or suggestions and thanked the association for its time.

Mr. Haliburton then requested that everyone provide all their contact information on the sign-in sheets. He stated that the information provided on the sign-in sheets will be used to be providing residents with updates and future meetings for the 2030 BC LRTP.

**Comment:** The feedback that we receive from the community is a continuous project; however, we need some ammunition now to develop the beginning goals and objectives. We hope to get some feedback from the communities in the next two months.

**Comment:** A gentleman stated that he just wanted to make one additional comment. It appears that it takes longer to get things done in the black communities. All neighborhoods should be held to the same standards. We need to start to develop creative ways to generate funds. He stated that he was not venting on the County, but he was venting on the process. Often times, the studies that are used take too long. It seems like nothing ever happens. We need to do something now, otherwise twenty-five years later we will be stuck in the same situation that we are in now.

**Comment:** I can certainly understand your concerns. Often, traffic problems require a widening of roads. There is a need for the study. We also have to find out from the community, what the community needs. I can assure you that your area is not less than any other area in the county.

**Comment**: The City of Lauderhill is trying to work locally to accelerate the process. We want to get the jobs done, but we don't want to wait on federal dollars. When you want things you have to do it locally. This will help accelerate the traffic problem on 55th and 56th Avenues, but as far as traffic flow and design, we have to work with the County to get these things structured properly. We hope to have the federal funds in the next two years or so.

**Comment:** When the kids on 56th and 19th Avenues press the button to cross the street, they get stuck in the middle of the street. They only get half way across.

**Question**: Is there a way to extend the walk time on both ends of the traffic signal?

**Answer:** Yes. This can be done through traffic engineering. We can mention that to traffic engineering. They control the signals.

**Question:** The funding that you mentioned for one or two years, is that for paving or widening?

**Answer:** It depends. Are you talking about the calendar year or fiscal year? The County and City plans on the fiscal year and we live by the calendar year. This project includes the rebuilding of roads, drainage and striping. We need the funding and dedicated source of revenue, so we can do things now.

In closing, Mr. Al Aschkar thanked everyone for their time.

**Meeting adjourned at 10:30 p.m.**


# BROWARD COUNTY
# 2030 LONG RANGE TRANSPORTATION PLAN UPDATE
# NORTH BROWARD WORKSHOP
## Emma Lou Olson Civic Center
## Wednesday, October 6, 2004
## 6:00 p.m. to 8:00 p.m.
## Agenda

**Workstations**
**6:00 p.m. - 6:30 p.m.**

Transit & Waterborne
John D. Zegeer, Kittelson & Associates, Inc.

Roadway
O. Al Aschkar, Broward County Metropolitan Planning Organization

Freight, Bicycle & Pedestrian
Anita Vandervalk, Cambridge Systematics Inc.
Thuha Nguyen, Kittelson & Associates, Inc.
Peter Haliburton, Cambridge Systematics Inc.

**Presentation**
**6:30 p.m. – 8:00 p.m.**

Welcome and Introduction
Dickey Consulting Services, Inc.

Introduction to Project
Broward County Metropolitan Planning Organization

Project Overview
Kittelson & Associates, Inc.

Project Needs
Kittelson & Associates, Inc.

Funding Sources
Cambridge Systematics, Inc.

Public Input
Dickey Consulting Services, Inc.

Closing Remarks

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN
## NORTH BROWARD WORKSHOP
## MEETING REPORT

WEDNESDAY, OCTOBER 6, 2004
EMA LOU OLSON/ POMPANO BEACH CIVIC CENTER
6:00 PM TO 8:00 PM
ATTENDEES (SEE ATTACHED SIGN-IN-SHEET.)

**Welcome and Introduction**
Ms. Sheryl A. Dickey welcomed everyone to the meeting. She stated that there is an exciting presentation ahead. Ms. Dickey thanked everyone for coming out and stated that there are consultants at each work station. She introduced members of the project team that were present: Mr. Peter Haliburton from Cambridge Systematics, Mr. John Zegeer from Kittelson and Associates, and Mr. Osama Al Aschkar from Broward County. Mr. Al Aschkar is the project engineer from the Metropolitan Planning Organization (MPO).Ms. Dickey informed the attendees that previous workshops were held and presentations were given to the MPO and several agencies. Ms. Dickey turned the meeting over to Mr. Al Aschkar.

**Introduction to Project**
Mr. Al Aschkar thanked everyone for attending the Broward County 2030 Long Range Transportation Plan (LRTP) workshop. He informed everyone that the LRTP is a group of transportation projects designed to meet the travel demands for the future. The LRTP accommodates the growth that the County will expect in the next 25 years. It will include all modes of transportation from sidewalks, bike lanes, mass transit, and waterborne transportation.

The LRTP was formed through collaborated efforts from the MPO staff, consultants, Kittelson & Associates, Cambridge Systematics, and sub-consultants. Mr. Al Aschkar introduced Mr. Zegeer. Mr. Zegeer began the presentation. He informed everyone that this plan is about moving people. The plan does not cover everything, such as the landscaping. These things will be on a different plan. Mr. Zegeer gave an overview of the plan.

**Workshop Outline**
- Why are we here?
- The LRTP process; tasks to date
    1. Public Involvement
    2. Assessment of Needs
    3. Financial Projections

- 2030 Cost Feasible Plan
    1. Multi-modal
    2. Pedestrian Scale
    3. Transit Innovations

Mr. Zegeer asked that all questions be held until the end of the presentation. He stated that this is a draft of the plan. The purpose of this meeting is to get your input. We will discuss:

- The importance of public input and explain the process;
- Review past public meetings;
- Future needs; and
- Cost feasible plan.

Mr. Zegeer stated that everyone should have a map, questionnaire, and agenda. It is important to take a long term look at our future transportation needs, because this County is still growing, attracting visitors, development, and employees. We have to accommodate their travel demands. The federal government requires that the plan be updated every three years. We have to monitor air quality and assure that our transportation improvements do not decrease the quality of air we have.

**Why is this plan important?**

- Accommodate Growth
- Regional Planning
- Federal Requirements
- Update Cycle
- Air Quality Attainment

We will have growth. In 2000, a census was done to identify:

- The number of housing units that existed;
- The number of people living in those units on a permanent basis;
- The number of employees; and
- The number of children that go to school.

The projections from the census showed that over the next 30 years to the year 2030, growth will be over 40% in population. We have to plan for the future growth.

**Future Growth Projections**

| Demographic | Year 2000 | Year 2030 | Increase |
|---|---|---|---|
| Dwelling Units | 654,000 | 931,000 | 42% |
| Population | 1,602,000 | 2,383,000 | 49% |
| Employment | 651,000 | 944,000 | 45% |
| School Enrollment | 224,000 | 326,000 | 46% |

The map on the slide is one of many to be shown. On the map, there are three or four pink areas that identify the traffic analysis zones for populations that are expected to decrease. The other colored zones on the map show the areas that are expected to increase in population. The less populated portions of the County are identified in dark red color. These areas are the southwestern and northwestern portions of the County. These areas can expect the most increase. We don't expect a very dense distribution of the population throughout the County. High rise canyons like in Manhattan are not expected. We expect more single and multi-family housing with the density we have thus far.

**Broward County Change in Residential Dwelling Units 2000-2030.**
**(See attached presentation)**

**LRTP Process**

- Public Involvement
- Goals and Objectives
- Data Compilation & Analysis
- Model Development
- Financial Projections
- Needs Assessment
- Cost Feasible Plan

In terms of developing the LRTP, Mr. Zegeer stated that since January of this year the following public workshops have been held:

- City of Coconut Creek
- South Florida Regional Planning Council

The input received at these workshops helped to develop the goals and objectives to move on to the technical analysis which was looked at to analyze future needs. A traffic model was developed to tell future traffic congestion. The traffic model was also used to anticipate where new transit services can be put in outside of the private automobile.

Mr. Haliburton will talk about the expected revenues that were reviewed. Mr. Zegeer stated that we expect to get money from all areas of the government and private sector to help pay for the projects. A needs assessment was done to determine what is needed to move people around. The environment and the effects on neighborhoods were considered. We considered the amount of financial resources that would be available. After the needs assessment stage, we went to the Cost Feasible Plan. This is what we are bringing to you tonight. The input we receive from the public meetings will be taken back to the MPO. The elected officials will make the final decision.

**Public Involvement**

General Public

- January Public Workshops
- Project Newsletters (3)
- Newspaper Advertisements
- Project Website www.BrowardLRTP.org
- E-mail Broadcasts
- Neighborhood Meetings, Presentations, and Business Group Meetings

Mr. Zegeer outlined the goals and objectives. He reiterated the goals plan:

1. Balance System
2. Multi-Modal System
3. Safety and Preservation
4. Coordination and Consistency

Mr. Zegeer advised that everyone should have at least received one of the newsletters since January. He also mentioned that there will be another newsletter. Information is also on the project website: www.BrowardLRTPorg. Advertisements were also placed in the Sun-Sentinel for tonight's workshop. Mr. Zegeer stated that there is a lot of information on the web page. There are

a number of boards and advisory groups that will consider this information before a final decision is made by the MPO.

Mr. Zegeer strongly advised that everyone complete and return the questionnaire they were given. The MPO wants input on the public's ideas for travel options.

The questionnaire will help provide input on which modes of travel are most important whether it is waterborne, bikes, or vehicles, etc. It will also show:

- How important safety is to you in traveling;
- Your input on preservation; and
- Your input about the environment.

He said that public input will help prioritize these concerns, which will help organize the plan.

**2030 Goals and Objectives**

- Goal 1 – A balanced, multi-modal transportation system that provides choices in mobility.
- Goal 2 – A safe transportation system.
- Goal 3 - Preservation of Broward County's investment in transportation.
- Goal 4 – A transportation system that is coordinated and consistent with Broward County's communities and neighbors.
- Goal 5 – An aesthetically pleasing transportation system which minimizes impact on the natural and built environment.

A year 2000 map was shown with the number of roadway links that are over capacity. Every roadway link shown in red is over capacity. There are projects in the County that are already funded. The funded projects are in the Transportation Improvement Program (TIP). Examples of these projects are: the widening of the Sawgrass Expressway, Turnpike, and Griffin Road. These improvements are funded. Alternative modes of transportation have to be looked at. Choices will be given. These choices would include pedestrian and bicycle paths. Some areas of the Greenways project are funded. The proposed plans will allocate funds for the unfunded Greenways.

The heart of the plan is transit. There are many options to provide additional transit around the County. Existing transit ridership has been looked at to try to find a way to provide high speed transit service that is competitive to using the private automobile. The Broward County Transit Master Plan has been viewed to try to be consistent with the County's vision for the future in terms of transit service.

Community Bus Programs were considered for Coral Springs to transport people from home to a major stop or station, so that Broward County Transit (BCT) can be taken the rest of the way. The Community Bus Programs will work in conjunction with BCT to provide effective services.

Transit concepts were discussed which included high performance transit services that move people quickly with some comfort and convenience. Some of these considerations include heavy rail service like Tri-Rail, commuter rail service such as Metro-Rail in Miami, and light rail service such as Street Cars which you can find in Baltimore and Oregon. There is also a new service being introduced around the country called Bus Rapid Transit (BRT). We want to provide more bus service in areas that are underserved.

**Alternative Modes Needs Assessment**

Bicycle & Pedestrian

- Access to Transit
- Greenways
- Missing Sidewalks
- BAC, BLOS

Transit

- Transit Ridership
- High Speed/Capacity Transit
- BCT Master Plan
- Community Bus Programs
- Waterbus Services

**Transit Concepts**

High Performance Transit

- High Speed and Capacity
- Heavy Rail, Commuter Rail
- LRT (streetcar)
- BRT

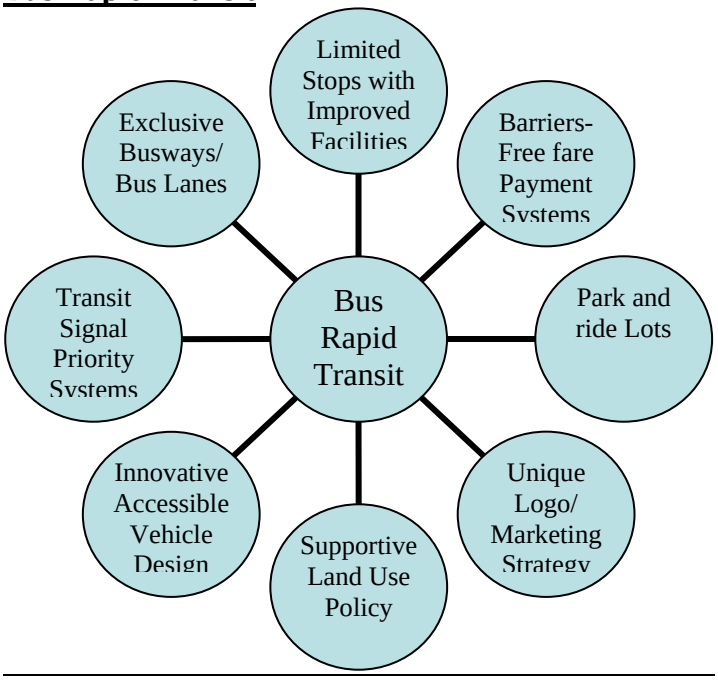
Enhanced Bus Service

- Rapid Bus
- Express Bus with Limited Stops
- New and Enhanced Local Bus
- Community Bus Service, Transit Centers, Super Stops

Express buses are to be provided to help transit within the County by using the expressways. There are a number of enhanced existing bus services in the plan. The County will coordinate all of these enhanced services with transit centers around the County.

BRT looks like a sleek light rail modern vehicle. BRT has a lot of comforts and information inside of the vehicle that tells you where the next stops are and your arrival time. Information is provided at the BRT stations. There are amenities at these stations. BRT is a fast mode of transit, with minimum waiting at the stops. The BRT are for long distance trips unlike the local buses that have more frequent stops. Mr. Zegeer stated that the maps show a lot of options that make up BRT. Many communities have taken roadway right-of-ways for usage of the BRT vehicles and will not allow automobiles to use the paved areas.

**Bus Rapid Transit**




Mr. Zegeer introduced Mr. Haliburton. He stated that Mr. Haliburton will speak on the aspects of moving around freight and goods. Mr. Haliburton stated that moving around goods is a very important component of the transportation system. The movement of goods is critical to the economic competitiveness in our region. It allows lower business costs in terms of production, to keep this region economically competitive. It allows us all cheaper consumer prices for our food and other consumer items.

**Freight and Goods Movement**

Critical to economic competitiveness of the County

- Lower Business Costs
- Lower Consumer Prices
- Regional Competitiveness

Our roles are to balance the movement of goods with the movement of people and to ensure connectivity to the regions that are producing and using the goods. The efficient movement of goods between places like the ports, airports, and manufacturing regions are important. The goal is to make sure that the system is free of bottlenecks. Bottlenecks are areas where you can get caught up in congestion. Safety and security is another one of the goals. Mr. Haliburton continued to say that a process similar to one describe by Mr. Zegeer was taken to identify the needs of freight and goods. An integrated system is needed to:

- Balance freight movement between rail and truck movement on the highways;
- Give access to loading centers; and
- Balance between freight and people movement on the rail networks.

Identifying funding for all of these needs are important, as well as the management of the F grade rail crossings that tend to hold up traffic in the eastern portion of the County.

Mr. Haliburton stated that funding is important to the freight goods movement component of the plan. We talked about gas taxes. Fifty cents of each gallon of gas that we purchase goes to the federal, state,

and local government. Funds come back to this region for the transportation needs. Agency groups fund programs that are listed, such as the Federal Funding Program and fuel taxes. Other sources that contribute to these funding programs are the taxes paid on tire purchases and commercial vehicle sales. We will look at the amount of money that is available for the implementation of this plan. The programs control to a certain extent, how the money can be spent. For example, the first item, which is the biggest item, is primarily for the use of capacity building for the arterial roadway system. There are two separate funding sources for the aviation department and the downtown transit authority for Fort Lauderdale. The total for the next 21 year lifespan of the project, which goes from 2009 to 2030, is about $5.8 billion. They also looked at additional funding sources. The identified needs are in excess of the available funding through the existing sources. The first funding source is a dedicated sales tax. Miami-Dade County recently implemented a tax to assist in paying for transit improvements. This would generate $3.1-6.2 billion for Broward County. This would double the available money for these transportation means. The next component is financing resources that are potentially available to the County. These are fairly complex. Only certain projects will qualify. There are ways for the MPO to consider the funding sources.

Mr. Zegeer clarified that they are not assuming the tax increase. We have to deal with money that we can anticipate will be available. It is anticipated that the multi-modal system (transit, bicycle, pedestrian, waterborne, and highways) are the major components of the plan. They need to make sure that they start with the pedestrian scale to make sure we have safe paths for people to take. We want to put a lot of emphasis on transit and building from our existing customer base. More ridership would occur if we provide better service. We have relatively low densities compared to some of the northeastern cities in our country. We have included the transit system to respond to that reality. We do not have a dedicated funding source for transit as compared to Miami-Dade County. Highway improvements will support our transit system. We have a good grid system of streets throughout the

County. By emphasizing those improvements, we can get better access to the park-and-ride lots for transit service. We have to be careful not to build a lot of new roadway projects that will use a lot of money that would be available for other projects. We want to be flexible so we can provide stronger modes of transportation.

Mr. Zegeer referred to the handout and slide called “Pedestrian Projects.” Map 1 shows sidewalks that are missing. The map was based on an inventory that was done by FDOT. As part of the LRTP, we also did an inventory of non-state highways. We compiled a list of 85 projects that include 75 miles of new sidewalks throughout the County. The map also shows unfunded Greenway projects. Map 2 shows the bicycle plan. They want to build on the existing bicycle network. It would connect to the Greenways and provide mobility to a lot of citizens. Map 3 shows the transit plan. The transit plan includes a number of high speed transit services. For example, the dark blue colors on the map are called Fixed Guideway Transit (light rail services in Downtown Fort Lauderdale). The system would connect the port and airport. There’s a study underway to provide east-west transit service to the middle of Broward County, near the I-595 corridor (identified by a blue line), between Sunrise Boulevard, and Griffin Road. The heavy pink lines show the proposed plans to provide rapid bus service. The north/south lines are University Drive and State Road 441. The east/west lines are Oakland Park Boulevard and Pines/Hollywood Boulevard. The service is a step above local bus service. The express bus service is shown in orange on the Sawgrass Expressway, I-75 and a number of arterial streets. It would provide limited stops and express bus service to compete with automobile travel time. An enhanced local bus service and a new local bus service are shown in green color for the southwestern section of the County. A list of projects and estimated costs to operate and build services

are shown on next sheet. Map 4 shows a list of highway projects for the northern part of County. The highway map shows the proposed highway projects to support transit and respond to serious congestion problems.

It will cost over $5 billion over the 21 year life of the project. The $5 billion in funding is estimated to be distributed among the different projects. After we receive public input from the workshops, the team will go back to the MPO and ask for their conceptual approval. The plan will be adopted in December. There are a number of neighborhood meetings scheduled to receive as much dialogue and input. The web page and newsletter are available for the public. Ms. Postemice of DCS is the contact for the consulting team. Mr. Al Aschkar is the Broward County staff member responsible for this project. He is always available. Mr. Zegeer extended thanks to everyone involved.

Ms. Dickey was asked to coordinate questions and comments. She recognized the Commissioners, City Staff and HOA members that were present.

A gentleman stated that he has lived on the beach since 1987. He read a front page article in today's Sun-Sentinel that reported that six of the most dangerous places for pedestrians are in Florida. Fort Lauderdale is number one in terms of pedestrians being killed. The lack of proper pedestrian and bicycle facilities in Fort Lauderdale is appalling. He also read that $100 million will be spent on pedestrian enhancements. He corrected his statement and said $170 million are for greenways, pedestrian improvements, and bicycle improvements. $70 million was spent on the E. Clay Shaw Bridge, which has lousy bicycle facilities. Why is FDOT getting away with giving citizens 3-foot token bike lanes? The article mentions that Mark Horowitz, the coordinator of Bicycles for Broward County, dented a car with his bike. You would have to be absolutely nuts to ride a bicycle from the Gateway Movie Theater to Sears & Roebuck in Fort Lauderdale. If you go to FDOT, they say you

have to have bike lanes and bicycles are vehicles. If you go on-line, you can probably find something that says if you take your bicycle in a lane of traffic, it will be treated like a car. If you do, you're going to get creamed. He thinks it's a lot of money wasted. He doesn't know how to communicate this to FDOT. He asked, "What are you going to do about it?" He wants user friendly, protected pathways for cyclists.

*Jack Murray of Deerfield Beach*
**Question:** Why are pedestrian projects a priority?

**Answer:** Mr. Zeeger responded that the Greenways were an initial set of priorities that were developed in conjunction with the County Staff. They are subject to change. Mr. Murray asked that the A1A Greenway be done first.

**Speech:**
*Carol Jones, President of the South Pompano Civic Association*
Good evening. My name is Carol Jones. I am the president of the South Pompano Beach Civic Association and I am speaking on behalf of my neighbors who live in the Boulevard Park Isles, Lyons Park, Lake Estates, High Ridge, and other neighborhoods along McNab Road. Although it is not funded, an extension of McNab Road across the FEC Railroad tracks is in the LRTP. I would like to give you some insight as to why creating a crossing of the FEC railroad tracks at McNab Road is not a wise move. Probably the most important reason is safety. As some people may know, there is a curve in the FEC tracks approximately 75 feet south of where the crossing would be. A northbound train approaching McNab Road would not be able to see a vehicle on the tracks in time to stop. We should all remain aware of the tragedy that happened in Fort Lauderdale, about 15 years ago, when a gas tank

was struck by a train on the A.C.L. tracks. There was no curve in those tracks. We truly do not need to risk such an incident in Pompano Beach. We understand some want to have a crossing at McNab

Road to reduce traffic on Atlantic Boulevard. In 1996, Kimley-Horn and Associates did a traffic study of McNab Road. They found that traffic on Atlantic Boulevard would be reduced from 50,600 to 50,000. That is a reduction of barely more than 1%. Traffic on McNab Road from Cypress Road to US 1 was projected to jump from 16,600 to 18,000. This is nearly a 10% increase. Why so much? According to Kimley-Horn, nearly all the increase would come from 62nd Street in Fort Lauderdale. The street traffic would drop from 19, 500 to 17,000, a 13% decrease. Traffic between Cypress Road and US 1 is already congested. We have a safety problem at Southeast 9th Avenue, at McNab Elementary School. In the morning and in the afternoon, a policeman has to direct traffic. Increasing traffic, especially tractor trailer trucks are prone to accidents. This is not a good way to keep those elementary school children safe. For those who live in Boulevard Park Isles, on the south side of McNab Road and for those who live in the apartments on Flagler Avenue, this would be a disaster. There is only one way in and one way out which is McNab Road. If widened to four lanes, Kimley-Horn predicted traffic volumes along McNab Road, between Cypress Road and Dixie Highway, to be in the range of 33,400 per day, up from 6,100. That is more than five times what it is today. This will become a quality of air disaster for the entire area. Please keep these facts in mind when you are asked to change McNab Road in a way that is of determent to residents who live along McNab Road.

**Comment*:***
*William McDonald, South Pompano Beach Resident*.
Cypress Creek Road, near Pine Crest School, was widened to three lanes some time ago. There are two areas that are being widened going east to west. Ms. Dickey clarified that Mr. McDonald wants a reevaluation of which streets are being widened.

**Comment:**
*Mike McGowan, Director of Pompano Civic Association*.
Mr. McGowan stated that if he leaves his neighborhood after 2:00 p.m., he can't get on McNab Road. He doesn't understand how they can make the road a four-lane highway. There's no other access or alternate ways to go on McNab Road. On 62nd Street from Dixie Highway to Federal Highway, residents have other access in and out of their neighborhoods besides 62nd Street.

**Question***:*
How will you widen the waterway bridge and eliminate the homes on the water in Fort Lauderdale? He had a question about safety. As Carol Jones mentioned, at Cypress Road, the road goes into one lane into Fort Lauderdale. Between 5:00 p.m. and 7:00 p.m. each day, trains block the track for more than 20 minutes. He suggested a bridge all the way to 62nd Street. People would feel safer.

Ms. Dickey clarified that his question was about safety.

**Comment**:
An unidentified woman stated that she sat on the MPO two years ago. The MPO voted to remove McNab Road from the long range funding plan. It was removed, but it's back on again, which concerns her. No one in the City has said they wanted it back on. Secondly, it's being assumed there will be a 40% growth the next 10-15 years. What happens after 2015? Millions of people will be in the area, but we're talking about widening roads and increasing bike paths. We should do something to control growth. Broward needs to control growth. Mass transit and other buzz words mean over

development. The County Commission and MPO should be aware that people don't want overpopulation. She also wants zoning changed.

Ms. Dickey clarified that a growth control policy is wanted.

**Comment:**
*Bonnie Brandon, Director of the Council of Civic Associations* - City of Fort Lauderdale citizens are not interested in more growth. There's a problem Countywide. There needs to be a point that we decide how much is too much. She wanted to ask about BRT, but felt overgrowth was more important.

**Answer:**
Mr. Zegeer responded to Ms. Brandon's concern about BRT. He referred to the transit projects map in the handout. BRT would be disruptive to the adjacent landowners and more expensive than we can afford at this time. We don't want to preclude the option of going to that technology because it has been successful in other communities. As Mr. Haliburton mentioned, there's a possibility that the MPO Board may want to consider significantly increasing the amount of money available for transit. If they decide to do that, there would be an opportunity to create the BRT line. Those alignments identified as pink on the map have moved in that direction. Rapid Bus is high technology vehicles, stops with amenities, fast on/fast off services, and is a service that will provide information about when the next vehicle will come. The goal is to generate ridership and market services that would make people more comfortable.

**Comment***:*
*Bob Hall, Businessowner on McNab Road*
Dixie Highway goes from six lanes to four lanes, dead ends at 46th Avenue in Pompano, and ends at 31st Avenue in Fort Lauderdale. The distance between Federal Highway and 46th Avenue in Pompano is 4.3 miles. For senior citizens at the intersection, this is a disaster waiting to happen. Ms. Jones stated that it went from two lanes to three lanes and will probably go to a four-lane road. No one in the association said they wanted a four lane road. The idea was proposed that they buy all the houses between Dixie Highway and Cypress Road. The homeowners felt they should be given something for their properties and homes. If the homeowners were assured they would get fair value for their homes, they might be more amiable to the project. People are worried about their homes with the additional traffic and noise.

**Comment:**
An unidentified gentleman stated they need rail service as part of Tri-Rail or other corridor services to go to terminal. He's lived in South Florida for 37 years and in Pompano for 32 years. He used to visit Chicago, which has two rail services. We need safe parking for rail service. We need to teach people to take fewer trips in their cars. People take a lot of trivial trips in their cars. It would solve the problems on the existing roads. All public transportation should pay for itself. His top concern is traffic signal automation. This will eliminate road rage, improve traffic flow, save fuel, reduce emissions, reduce trip time, and increase average vehicle speed. Sense signals well in advance of their approaching traffic signals. Speed limits need to be adjusted when road improvements are made. Dixie Highway used to be a narrow two lane road from Commercial Boulevard to Hillsboro Boulevard. It was widened to a divided four lane highway; however, the speed limit remained the same as before the project. There are so many signs that no one pays attention. For example, there's a school crossing sign next to his home that was put up backwards. More than half of the signs in his neighborhood are unnecessary.

**Question:**
*Dave Marshall*
He is concerned about transit projects, specifically the people mover at the airport. Is this a good use of taxpayer money? Perhaps there's another mechanism that could be used.

**Answer**:
Mr. Haliburton responded that it's identified in the funding source as a separate source of funding that's being taken care of by the airport. It isn't part of their available money.

**Question:**
It wouldn't be taxed to residents of Broward County?

**Answer**:
Mr. Haliburton confirmed.

**Question:**
Mr. Marshall was also distressed that some roads are over six lanes. He was under the impression that the State of Florida had a policy against that. How is that determination made?

**Answer**:
Mr. Al Aschkar responded by saying it applies to the freeway, interstate, and Turnpike.

**Comment:**
*Stewart Franz*
here's always equilibrium. He never hears that from any politician or developer. You can't continue saying everything has to keep growing. There's a finite amount of area. If Broward keeps building, people will keep coming. Pamela doesn't want to live in downtown Manhattan. Most people don't. She keeps hearing that residents have to accept this growth and pay for it. As long as County, state, and federal leaders have that impression, it's difficult for citizens to change it. There's a quality of life that people deserve. South Florida doesn't need more development. It's time for politicians to listen.

**Comment:**
*Dan Glickman*
Dan Glickman stated that he wanted to go on record as saying he is not willing to tell other people not to come here. It's un-American.

**Question:**
Has there's ever been a study to indicate whether or not there are any roads that might be candidates for one-way travel?

**Answer**:
Mr. Al Aschkar responded that there are one-way streets in Fort Lauderdale and Hollywood. There was a brief study done for the Fort Lauderdale Downtown area that would consider making Andrews Avenue and 3rd Avenue a one-way street.

**Comment:**
Mr. Glickman stated that would be a good idea for traffic, but it could be confusing for people visiting the area. It would also impact commercial establishments in the area. Mr. Glickman

recommended a study be done to see if the possibility exists. Miami-Dade, Broward and Palm Beach Counties are the fourth largest urbanized areas in the U.S. We have a lot of things to consider.

**Comment:**
*William Reid, Fort Lauderdale*
Mr. Reid wanted information regarding the five waterborne projects.

**Answer**:
Mr. Zegeer responded that there is existing waterborne transportation in Broward County. He referred to the handout that lists the five projects.

1. Extension/enhancement of service for more frequent water bus service.
2. Extension of service from west of I-95, along the New River to the marina area, and east of Southwest 2nd Street.
3. Extension that would go through waterway area to allow for more frequent pick up and drop off for people who want to make those trips.
4. New terminal that is being proposed.
5. Right now, the service is centered on A1A southbound Seabreeze portion on the beach and south of Las Olas Boulevard. They're looking for a larger, more permanent terminal for base of operation.

Ms. Dickey requested that Mr. Al Aschkar mail a copy to Mr. Reid.

**Question:**
Has a study been done regarding the hundreds of miles of sidewalks that are in need of repair? They are 50 years old or dilapidated, starting with Sunrise Boulevard, between the Gateway Movie Theater and Sears & Roebuck. If you spend $170 million out of $5 billion, that's less than 2% that's being spent on greenways, pedestrian and bicycle enhancements. He has been to advisory board meetings where they show 10 year-old plans for bicycle corridor on Commercial Boulevard, Oakland Park Boulevard, Sunrise Boulevard, Broward Boulevard, Las Olas Boulevard, and 17th Street. Eastern Broward County needs attention.

**Answer:**
Mr. Haliburton responded that the needs assessment of the pedestrian component of this plan has been done in two parts. One is a Countywide assessment of missing sidewalks. A second component that was addressed was the dilapidated sidewalks. This was done Countywide. It has been done in the 10 pedestrian focus areas. They identified all the poor conditioned sidewalks for about 400 miles. He asked that sidewalks be at least 8 feet wide.

**Answer:**
Ms. Dickey stated that the cities are dealing with smart routes now.

**Comment:**
He stated that the lack of planning has caused traffic congestion.

*Bill Eckerd, Pompano Beach*
**Comment:**
One of the purposes of the study was to preserve neighborhoods. He opposes the highway plan because it would destroy the neighborhood.

**Comment:**
*Mike McNeil*
Bike paths are lacking in his neighborhood. He also noticed there's no place to sit at the bus stops, no protection from the rain, and no protection from the sun. Residents are very discouraged about this. Most of these people have lost their ability to drive or can't afford to drive. Mr. McNeil feels they need bus stops with amenities at every possible location as quickly as possible. This would increase bus ridership.

**Comment:**
Mr. Haliburton stated that the cost estimates for transit improvements include shelters for stops that have more than 25 boarding's per day.

**Question:**
*Mike McNeil*
What is the minimal cost of a bus shelter?

**Answer:**
Mr. Haliburton estimated $7,200.00. Broward County Mass Transit said most large cities have programs in place wherein private sector advertisements pay for
the basic bus shelters.

**Comment:**
*Andrew Siva, Boulevard Park Isles*
Mr. Siva stated that part of the problem to gaining access to McNab Road is that there's head-in, back out parking along the road. People who live in Boulevard Park Isles and Lyons Park between Dixie Highway and Cypress Road are presenting a neighborhood argument. They don't take into account the regional transportation needs. He would like to see McNab Road widened with medians and landscaping.

**Comment:** An unidentified woman commented that 62nd Street goes directly to I-95. People between Atlantic Boulevard and Commercial Boulevard use those roads to access I-95. McNab Road would not go to I-95; therefore, it makes no sense to widen it.

**Comment:**
*Jack Murray*
If you don't want to access I-95, you have to go through the I-95 interchange intersection. This causes congestion. It makes more sense to drive on 62nd Street or Atlantic Boulevard to go west of I-95.
Ms. Dickey closed out the question and answer session and recognized DCS staff.

**Meeting adjourned.**
**Total Attendees: 48**


# BROWARD COUNTY
# 2030 LONG RANGE TRANSPORTATION PLAN UPDATE
# SOUTH BROWARD WORKSHOP
## South Regional/ BCC Library
## Thursday, October 7, 2004
## 4:00 p.m. to 6:00 p.m.
## Agenda

**Workstations**
**4:00 p.m. to 4:30 p.m.**

Transit & Waterborne
John D. Zegeer, Kittelson & Associates, Inc.

Roadway
O. Al Aschkar, Broward County Metropolitan Planning Organization

Freight, Bicycle & Pedestrian
Anita Vandervalk, Cambridge Systematics Inc.
Thuha Nguyen, Kittelson & Associates, Inc.
Peter Haliburton, Cambridge Systematics Inc.

**Presentation**
**4:30 p.m. to 6:00 p.m.**

Welcome and Introduction
Dickey Consulting Services, Inc.

Introduction to Project
Broward County Metropolitan Planning Organization

Project Overview
Kittelson & Associates, Inc.

Project Needs
Kittelson & Associates, Inc.

Funding Sources
Cambridge Systematics, Inc.

Public Input
Dickey Consulting Services, Inc.

Closing Remarks

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN
## SOUTH BROWARD WORKSHOP
## MEETING REPORT

THURSDAY, OCTOBER 7, 2004
SOUTH REGIONAL/ BCC LIBRARY
6:00PM TO 8:00PM
ATTENDEES (SEE ATTACHED SIGN-IN-SHEET.)

**Welcome and Introduction**
Mr. John Zegeer, Project Manager from Kittelson & Associates Inc., welcomed everyone to the Broward County 2030 Long Range Transportation Plan (LRTP) workshop. He offered to share good information and obtain input for the LRTP. He reiterated that the LRTP is a serious document. The Broward County Board of County Commissioners and the Metropolitan Planning Organization (MPO) are very interested in receiving public input. Mr. Zegeer introduced Ossama Al Aschkar, Project Engineer, from the MPO and Mr. Peter Haliburton from Cambridge Systematics as the speakers for the night.

**Introduction to Project**
Mr. Al Aschkar welcomed and thanked everyone for attending the LRTP workshop. He noted that the LRTP is a process designed to meet the travel demands and cost over the next 20 years. It will include all forms of transportation; namely, homeowners transportation, sidewalks, highways etc. He emphasized the importance of the plan and outlined that the plan was designed to accommodate future growth in the County through collaboration between the MPO, Kittelson & Associates, Cambridge Systematics, and other sub-consultants. He also outlined the areas involved in the plan such as State Road 7, Hollywood Boulevard and Interstate 595.

Mr. Al Aschkar mentioned that Mr. Zegeer was present to represent Kittelson & Associates (KAI). KAI is the firm that was chosen by the MPO to build and review the LRTP. Mr. Al Aschkar stated that he hopes to have the plan finalized and approved by the MPO in December 2004. He then introduced Mr. Zegeer from KAI.

Mr. Zegeer asked that everyone obtain a copy of the handouts, which were the maps, questionnaire and agenda. He encouraged everyone to complete the questionnaire and return it at the end of the night. He then outlined the agenda and gave a brief overview of the LRTP.

**Workshop Outline**
- Why are we here?
- The LRTP process; tasks to date
    4. Public Involvement
    5. Assessment of Needs
    6. Financial Projections
- 2030 Cost Feasible Plan
    1. Multi-modal
    4. Pedestrian Scale
    5. Transit Innovations

Mr. Zegeer outlined the importance of the LRTP. He noted that Broward County is still growing, and is attracting new residents. We need to respond to the growth by providing transportation services both for current and future residents. The LRTP is being reviewed because there are Federal Requirements in our region that requires the LRTP to be updated every 3 years. We want to maintain quality and make sure that the transportation plan does not add to the pollution.

**Why is this plan important?**

- Accommodate Growth
- Regional Planning
- Federal Requirements
- Update Cycle
- Air Quality Attainment

By the year 2006, we are expected to have about 1.6 million people living in Broward County. In Broward, Miami-Dade, and Palm Beach Counties combined, he expects a growth of over 5 million. Between the year 2000 and the year 2030, he anticipated an increase of about 2.4 or 2.5 million people living in the area.

**Future Growth Projections**

| Demographic | Year 2000 | Year 2030 | Increase |
|---|---|---|---|
| Dwelling Units | 654,000 | 931,000 | 42% |
| Population | 1,602,000 | 2,383,000 | 49% |
| Employment | 651,000 | 944,000 | 45% |
| School Enrollment | 224,000 | 326,000 | 46% |

Mr. Zegeer outlined a map that gave a visual picture of Broward County. He stated that he anticipates a change in residential dwelling units by the year 2030. He expects a lot of growth throughout Broward County. He mentioned that the Broward Transit Centers are those traffic analyses of areas where more growth is anticipated. More growth will occur in the northwest and the southwestern portion of the County, in addition to areas closer to the ocean. The green areas on the map represent the western part of the County. The pink areas represent areas that are anticipated to have a slight decrease in population. All the other areas in color show where population is expected to increase.

From the objectives, the amount of land use, decisions that have been made, and city regulations that are in place, very high density living in areas (as in Manhattan or in Chicago, where more people are spread out throughout the county) is not expected. He stated that Broward County has the power to create transportation systems where people are spread out throughout the County.

**Broward County Change in Residential Dwelling Units 2000-2030.**
**(See attached presentation)**

**LRTP Process**

- Public Involvement
- Goals and Objectives
- Data Compilation & Analysis
- Model Development
- Financial Projections
- Needs Assessment
- Cost Feasible Plan

In terms of developing the LRTP, Mr. Zegeer stated that since January of this year the following public workshops have been held:

- City of Coconut Creek
- South Florida Regional Planning Council

Many have attended these public workshops. He mentioned that the project team has been out in the community seeking advice and asking for public direction to help develop goals and objectives for the LRTP.
He emphasized that public involvement is important in developing the new transportation services, to compile data, create transit models for future transit and for future transit workshops. He anticipates having more residents in the future. He stated that we need financial projections to know how much will be spent between now and the year 2030 to improve the transportation system.

Mr. Zegeer gave an overview of the project activities and public workshops. He encouraged everyone to read the project newsletter as well. He mentioned that there is a project website with all the information that includes tonight's presentation. The web address he gave was www.BrowardLRTP.org. He stated that the project team will continue to reach out to neighborhoods, business groups, and homeowner associations to obtain input. He mentioned that there are different boards and advisory groups that will consider this information before a final decision is made by the MPO.

**Public Involvement**

General Public

- January Public Workshops
- Project Newsletters (3)
- Newspaper Advertisements
- Project Website www.BrowardLRTP.org
- E-mail Broadcasts
- Neighborhood Meetings, Presentations, and Business Group Meetings

Mr. Zegeer outlined the goals and objectives. He reiterated the five goals plan:

- Balance System
- Multi-Modal System
- Safety and Preservation
- Coordination and Consistency

He encouraged everyone to complete the questionnaire and submit their opinions.

**2030 Goals and Objectives**

- Goal 1 – A balanced, multi-modal transportation system that provides choices in mobility.
- Goal 2 – A safe transportation system.
- Goal 3 - Preservation of Broward County's investment in transportation.
- Goal 4 – A transportation system that is coordinated and consistent with Broward County's communities and neighbors.
- Goal 5 – An aesthetically pleasing transportation system which minimizes impact on the natural and built environment.

He offered to take a step back and try to explain the needs for future projects. He demonstrated on the map that back in the year 2000, there was too much congestion. The congestion created a problem for the plan; however, there are new ways to improve the situation. The green lines on the map represent the northwestern part of the County such as the Sawgrass Express Way. The blue lines in the middle of the County represent the turnpike way, south to where Dade County is located. The eastern/western parts were outlined in red line, followed by Griffin Road. We don't want to spend money to improve the transportation plan. We will be worse off by the year 2030. The plan needs to obtain future improvements beyond the year 2005 to provide for an existing transportation program.

He noted that the plan is not only for roadways. The needs improvement plan will develop alternative modes between bicycle and pedestrian traffic, and to provide safe access to transit. We need to incorporate greenways and roadway construction in the plan. There is a problem with missing sidewalks. The missing sidewalks need to be taken care of to provide safety for pedestrians to feel safe and comfortable on the sidewalks.

The Bicycle Advisory Committee (BAC) will use a procedure called the Bicycle Local Services (BLOS). The BLOS will help decide where sidewalks should be added to the LRTP. The main focus of the transportation plan is transit. Different forms of transit such as transit ridership, waterfront vehicle, and waterbuses were discussed. In addition to waterfront transportation, a community bus plan, rail, and other kinds of transit services that provide high speed capacity transits were discussed. There are communities in Broward County that have local bus services. The community local bus service need coordinate with the Broward County Transit groups to emphasize an increase in local transit services.

**Alternative Modes Needs Assessment**

Bicycle & Pedestrian

- Access to Transit
- Greenways
- Missing Sidewalks
- BAC, BLOS

Transit

- Transit Ridership
- High Speed/Capacity Transit
- BCT Master Plan
- Community Bus Plans
- Waterbus Services

The plan seeks to find ways for high-speed transit services to develop against the local services, looking at things like heavy rail, metro plans, commuter rail, tri-rail, and bike rail.

**Transit Concepts**

High Performance Transit

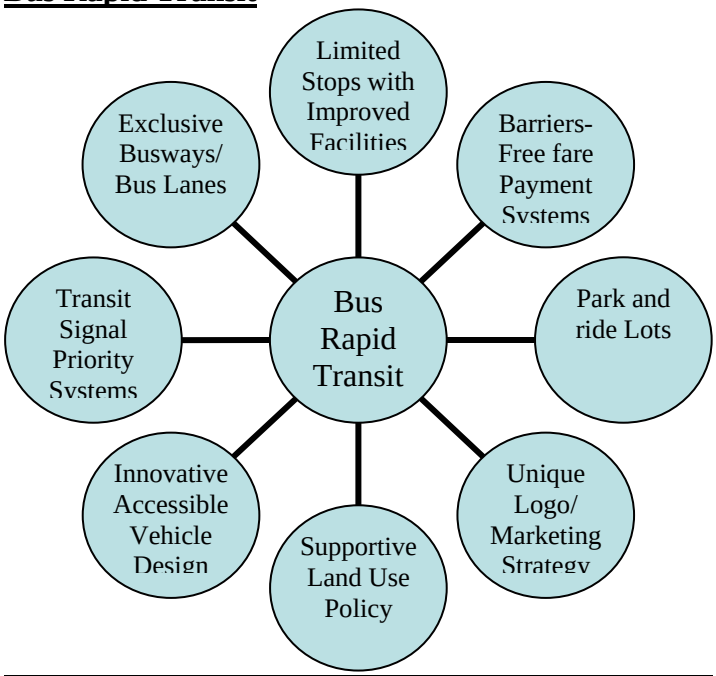
- High Speed and Capacity
- Heavy Rail, Commuter Rail
- LRT (streetcar)
- BRT

Enhanced Bus Service

- Rapid Bus
- Express Bus with Limited Stops
- New and Enhanced Local Bus
- Community Bus Service, Transit Centers, Super Stops
-

Mr. Zegeer introduced a new concept called Bus Rapid Transit (BRT). He outlined the various advantages of this system against the local buses. He noted that they are looking at enhancing local bus services, as well as providing new local bus service in the southwestern part of the County that will be convenient to passengers.

**Bus Rapid Transit**




The graph shows what a BRT service might include. In the areas around the center BRT are facilities, barrier-free fare payment, park-and-ride lots, and a unique logo. It doesn't look the same as a local bus. There are land uses that are supportive, innovative, accessible, and transit-oriented. They are in the community. The services that transit customers really would appreciate may include a newspaper stand and maybe a coffee shop.

Mr. Zegeer then introduced Mr. Haliburton from Cambridge Systematics. Mr. Haliburton discussed the trading aspect of the plan. He emphasized that the freight and goods movement is another very important part of the plan. He began to tell about the importance of transporting goods around the County. It is critical to our economical competitiveness-in this new global world, to allow all businesses to produce goods at competitive prices.

**Freight and Goods Movement**

Critical to economic competitiveness of the County

- Lower Business Costs
- Lower Consumer Prices
- Regional Competitiveness

Mr. Haliburton identified some of the goals in a plan to include trading in the next twenty-five years. There needs to be efficiency in the movement of goods. Bottlenecks are one of the challenges. Safety and security is another goal that is very important. Balancing freight with passenger mobility on the rail lines is another challenge.

**Freight and Goods**

Goals

- Intermodal Balance and Connectivity
- Efficient Movement of Goods
- Free of Bottlenecks
- Safe and Secure
- Balance Freight with Passenger Mobility

Mr. Haliburton discussed the roadways in Broward County that carry heavy truck volumes. After assessing the various needs and trends of opportunities, he came up with a list of things that will focus on providing transportation between now and the year 2030. The integration between the rail and truck network, access to load centers (which are the people that produce the goods and ship them off by the airport) is critical. The management of the contract between goods and passenger conflicts, identification of funding, and management of at-grade rail crossing are critical. We can get these things in place and support all the businesses.

**Future Freight Needs**

- Integrated regional rail and truck network
- Access to load centers
- Management of passenger/freight conflicts
- Identification of funding
- Management of at-grade rail crossing

Mr. Haliburton went on to identify the funding source for the each of the transportation modes. He outlined how this money will be divided. Most of the money will come from gas taxes. Federal funding is 37%, state funding 32%, and local tax funding is 32%. The money will then come back in a large amount to our region for the transportation means, from different funding programs such as income tax, the federal government, and vehicle sales.

**Funding Sources**

Gas Taxes: 50.4c/gal

- Funding Sources 37%
- State 32%
- Local 32%

Federal Sources

- Fuel Taxes
- Other user fees – tires, vehicle sales

State Sources

- Fuel Sales Tax
- Licensing and Title Fees
- Rental Car Fees

Local Sources

- Local option gas taxes – maxed out
- Other optional taxes – 9$^{th}$C, transit, tolls, bonds, impact/concurrency fees, incentive grant

He then provided a summary of how the money will be divided and will be available for the different programs. The first and largest category of $1.7 billion dollars over the next 21 years of the plan was identified for materials, right-of-way development on the Florida Interstate Turnpike (FTPK), and the Florida Interstate Highway System (FHIS). The FHIS accounted as the second largest category. Other categories such as strategic highway system and transit concurrency were discussed. The whole economic source available including aviation and DDA will be added, as well as other local authority in Fort Lauderdale. Money will be needed to maintain the facilities that we have already built and developed. A total of $5.8 billion dollars will pay for all these needs; however, the needs that were identified far exceed that amount.

**Financial Projections – 21 years**

| **Mode** | **Revenue ($M)** |
|---|---:|
| Arterial/ROW & Transit | 1,708.5 |
| FIHS/FTPK | 1,160.8 |
| LOGS | 997.6 |
| Section 5309 New Starts | 769.3 |
| Construction Fuel Tax | 191.1 |
| Transit Concurrency | 42.3 |
| Aviation | 1,150.0 |
| DDA | 95.2 |
| Maintenance Reductions | (284.8) |
| TOTAL | 5,830.0 |

The final financial plan that Mr. Haliburton outlined was the potential additional source of funding to try and fill the gap between the needs and the funding that is available. He expects dedicated sales taxes to generate about $3 to $ 6 billion dollars over 21 years, which would could essentially double the availability of finances as a future effect. The final category he spoke on was innovative financing opportunities; those are considered to essentially accelerate some money over the period.

Potential Additional Funding Sources

Dedicated Sales Tax

- $3.1 to $6.2 billion over 21 years

Innovative Financing

- Innovative Management of Federal Funds
- Debt Financing – GARVEE
- Credit Assistance
- Innovative Tolling

Mr. Haliburton then turned the meeting back to Mr. Zegeer from KAI. Mr. Zegeer thanked Mr. Haliburton for all the hard work he has done on the project. He then explained the cost feasible plan. Safe pedestrian transit, greenways, and bicycle facilities are important. He wants to place strong emphasis on building a transit system with direction from the MPO Board. Everyone in the County does not ride transit, but we can start to increase service at corridors that have active transit use. He also recognized the importance of land use. He suggested that if we build metro-rails throughout the County, it will not pay for itself. He wants to proceed with this plan as calmly as possible without disrupting neighborhoods.

**2030 Draft Cost Feasible Plan**

- Multi-modal System
- Within existing funding sources

Start with pedestrian scale

- Greenways, bicycle facilities

Meaningful transit improvements

- Existing customer base
- Low density land use
- No dedicated funding

Highway improvements support transit

- Grid system
- Speed – relative to auto
- Cost of right-of-way
- Flexible – future land use

The next component Mr. Zegeer spoke about was the pedestrian plan. He began by asking for input about important pedestrian improvements. The Florida Department of Transportation (FDOT) and the LRTP have done inventory throughout the County to access major streets that are missing sidewalks. The findings were that some were unsafe for pedestrians and needed to be addressed. There were five projects listed on the pedestrian plan that were discussed. Mr. Zegeer proposed to the MPO to have the funding available between now and for the year 2030, to help build greenways.

Pedestrian Plan

- FDOT Inventory
- LRTP Inventory
- 85 Projects
- 78 Miles
- 4 Unfunded Greenways Projects

Mr. Zegeer discussed the bicycle plan. The BAC will finance this project using the bicycle surplus procedures in areas where bicycle lanes and bicycle paths need to be added to the LRTP. Once this plan is completed, one should be able to travel long distance on bicycle without any complications.

Bicycle Plan

- BLOS
- BAC Input
- 96 Projects
- 166 Miles

The next part of the plan he spoke about was the transit plan. The transit plan includes several different kinds of transportation. He mentioned that studies soon will be on the way to determine how transit areas, such as the east western section from the I-95 corridor, the Sawgrass Mills area in Downtown Fort Lauderdale and the Fort Lauderdale Airport will be funded. A table showed the Florida East Coast Railroad (FEC) in gray which will be opened up to the public and the public rail transportation group in South Florida. They are going to study the possibility of providing transit rail service, through light-rail and some service on the FEC tracks in Palm Beach and Broward Counties. He mentioned that the need is

to fund trains operating in all three counties. A major focus will be placed on neighborhood transit centers to provide a reliable and efficient means of transportation.

Transit Plan
- 13 LRT/BRT/ Express projects
- 9 Enhanced or New Local Routes
- Tri-operations
- 6 Neighborhood Transit Centers
- 5 Waterborne Transportation Projects

In regard to the highway plan, Mr. Zegeer mentioned that this is another new form of a roadway project that focuses primarily on the freeway, which includes four of our major highways. He announced that Mr. Al Aschkar was kind enough to accommodate over $5 million dollars towards this plan.

**Highway Plan**

78 Highway Projects
- Many supportive of transit, freight projects

9 FIHS/Turnpike Projects

Mr. Zegeer explained the money will be distributed throughout each of the transportation modes that are in the direct planning. It is important for the public to get involved in the highway plan. The public will benefit. This is just as important as the other forms of transportation.

**Cost-Feasible 2030 LRTP Total Cost Estimate**

| **Mode** | **Revenue ($M)** |
|---|---:|
| Arterial/ROW & Transit | 1,708.5 |
| FIHS/FTPK | 1,160.8 |
| LOGS | 997.6 |
| Section 5309 New Starts | 769.3 |
| Construction Fuel Tax | 191.1 |
| Transit Concurrency | 42.3 |
| Aviation | 1,150.0 |
| DDA | 95.2 |
| Maintenance Reductions | (284.8) |
| TOTAL | 5,830.0 |

Mr. Zegeer outlined the next steps in the transportation process. He anticipates an adoption of the final cost feasible plan in December. During this time, the team will focus on public outreach to engage the community getting them involved via community workshops and neighborhood presentations.

Review of Draft Cost-Feasible Plan
- Public Workshop – October 6th & 7th
- MPO Board Meeting – November/December

Neighborhood Meetings
- Carver Ranches HOA – October 19th
- Dorsey Riverbend HOA – October 25th
- Central Lauderhill HOA– November 3rd
- "CHOICES" – November 9th

Mr. Zegeer advised the public to stay in touch through the web page, and advised them to contact Ms. Postemice from Dickey Consulting Services. Ms. Postemice is involved in the public outreach meetings and project newsletters. He thanked Mr. Al Aschkar for directing the workshop. Mr. Zegeer thanked all of the members who have been involved in the transportation process and for making this workshop possible.
Staying in touch

- Project website: www.BrowardLRTP.org
- Direct mail: newsletters; email broadcasting
- Study Team
- Linda Postemice, Dickey Consulting Services

MPO

- O. Al Aschkar

END OF PRESENTATION.

**Questions and Answer Session**.

*Joseph Rubino, Transportation Consultant*
**Question:**
How much will be spent on the Broward County Transit?
How much is spent on regular buses?

**Answer:**
The cost feasible plan contains a listing of all the different projects that are shown on the transit map. At the top, the rail and rapid bus services are the first eight projects on the list. Following this, you will see LRT and APM. Americanvest have been told to pay for the projects on the list. Together, the cost is relatively enhanced of the total that's shown.

*Joseph Rubino, Transportation Consultant*
**Comment:**
I appreciate the time spent prior to the workshop. I am very disappointed at this point. I have lived here for almost thirty years. Most of our buses drive far with more or less people in Broward County, Dade County and Palm Beach. Dade County Metro-Rail and Tri-Rail carry more or less people than they originally planned. I am not saying they are not successful. I am saying they never reached their projection. I know the people of Broward County don't like buses. They don't want to ride buses. Sixty-two percent of the model is to provide buses. It is poorly spent. I don't think it is a good idea. Mr. Rubino gave an explanation about financing. I wish that there was someone working with private sector. Create ways to do this without having problems with the buses. I hope this works. I don't think it is going to work. I think it is another line up that just keep spending on all these buses. People of Broward County have never ridden buses and do not want to fund them. People are affected by the public transit in the transportation plan. The MPO, elected officials, and County Officials will make the decision on how we pay off our transit problem. For many years, they said that we want to emphasize transit and stop building roads. He mentioned that on Monday they had a workshop with the MPO Board, so as to get the elected officials to draft a plan legally representing the majority of the community of Broward County. I will also like to do that for this workshop. We have to respond to their decisions, not the consultants.

*Timothy Dotson, Sun -Sentinel*
**Question:**
Will we be able to place public comments on the website?

**Answer:**
Yes, we have an interactive website.

**Question:**
What is the status from commission about the FEC at the Airport?

**Answer:**
The FEC was considered on the finery of this map. Nine to five were to be under construction The FEC will consider to run trains to Interstate 95 if it's on the right lane. The FDOT said there is no way we will never allow buses and trains on our tracks to get the insurance. At that time, the train will leave on the passenger's time. The FEC says that's good enough, now these are more accepted. The department of transportation is in the county. They are asking for half of billion dollars to provide a plan. I am not sure we have the money. It requires a lot of effort between the three Counties, Miami-Dade, Broward and Palm Beach. Broward County will participate in a study sometime early 2005. The study will be managed by the Florida Department of Transportation. It is my understanding that the study will cross into maintenance. It will show exactly how the FEC will work, how we will run the inter-rail lines, and which areas need to be double tracked. It will include all three counties.

*John Etling, Dania Beach Main Street-Executive Director*
**Comment:**
Residents of Broward County are not using the buses. Part of the problem is the roads in the County. There is no development on the east side of the County by I-95. There needs to be greater concentration on residential and commercial redevelopment. There are a number of places that do not have complete bicycle facilities; as a result, bicycles are used for recreational purposes. Cyclists are utilizing portions of roadways and sidewalks. There seems to be conflict as to whether or not bicycles belong on the sidewalks or if they belong in bicycle lanes. There are areas where bicycle lanes suddenly disappear. There are non-existing bicycle facilities.

**Question:**
Is there any kind of a budget or real cause for the County to improve public areas where there are bicycle paths that have been disrupted by special important groups, for example, Western Park. Are there any long range plans for maintenance or relocation of the bicycle lanes/facilities?

**Answer:**
Regarding the missing bicycle lanes, we received databases from Broward County BAC. The BAC consists of individuals who ride to work almost every day. The BAC plans to fix this issue. There are a few roadways and additional bicycle lanes that definitely need to be added.

**Question:**
Are you referring to the maintenance?

**Answer:**
The funding includes money for maintenance for all kinds of transportation facilities. There are specific areas that need maintenance. We will certainly pass your input regarding these needs and make sure they are addressed in time.

**Comment:**
Coordinate with the transit system. I hope there are new improvements in place for more coordination. The FEC loan program is an extra idea. Downtown Hollywood and Fort Lauderdale is growing. In the eastern area there are spurs of new high-rise condominiums on the beach. I think transportation should focus on the east end where there are more people than the western side.

**Answer:**
My point is to get to County Line Road, Hollywood Beach Theatre, (which is from Johnson Street) to connect on A1A.

**Question:**
So you would have to go into the southwest area then go to County Line Road?

**Answer:**
You would have to cross Hollywood Beach Boulevard and make a connection to which requires a ten second across 6 Winter Drive.

**Comment:**
I would like to suggest that we better coordinate in the County right now, rather than with the Tri-County organization. I speak now for an area that has commuted bus drivers coming in because they have no other terminal to go to. Coordinate between counties. If growth is projected at 20 %, develop commercial and residential areas.

**Comment:**
Our focus here is regional coordination, in addition to the three counties bringing together the transportation plans to coordinate together. New coordination is important. The problem is the delivering of the South Florida Regional Transportation Authority (SFRTA)/Tri-Rail. (SFRTA)/ Tri-Rail is responsible for the new innovative way to provide transit purposes throughout the three Counties. They are in the middle of the direction phase. Developing the kind of place for people to live, work or recreate could be more enticing. County officials are talking about new issues and new legislation that would require new project transit to consider mix uses. You won't have to travel a long distance. We are looking in that direction. I believe all three Counties are focusing on changing our landing policy to make the transportation system more important. He pointed out that they are working on existing RCA forms. The studies usually begin with Miami Dade. Then, transit staff companies move on to Broward County. Both Counties usually attend each others workshop to work together.

**Comment:**
A gentleman thanked the group for coming out to the South Broward for a public workshop. He asked for continuing support as they move ahead with the revitalization of the Broward cities that are included in the LRTP.

**Question**:
Are portions of State Road 7 included in the LRTP?

**Answer:**
Mr. Al Aschkar stated that the public transportation is in the process of lining State Road 7 with South County. Currently, a portion of State Road 7 lies near to the Hard Rock Hotel and Casino that is north of Sterling Road. There are portions that do not lie across the highway cross-section of South County. They are about 5.1 miles long. There is now a program for transportation north of Hollywood Boulevard. The plans are in place for design, roadways position, construction, and business standards. This plan begins in the year 2009. It is not necessary to show those funding sources from those improvements. Funds are in place for 2.1 miles north of Hollywood Boulevard and south of Sterling Road. Once this is done, we will have a six-lane section on State Road 7 all the way down from Miami-Dade County up to Palm Beach Counties.

**Question:**
The red background on the pedestrian project plan priority 1 listing shows the intersection?

**Answer:**
This is a draft plan. We want to have more information in hand. The maps show some of the critical links that will be complete before others. This is what the map shows.

**Question:**
Are the recent projects and priorities shown on the chart?

**Answer:**
It's a narrative of the actual event, it not on the chart.

**Meeting adjourned: 8:00 p.m.**
**Total attendees: 40**

# APPENDIX A-2

## NEWS MEDIA STORIES, PRESS RELEASES PUBLIC ANNOUNCEMENTS AND ADVERTISEMENTS

Page 2A • Westside Gazette Newspaper • February 19 - February 25, 2004

# Community Digest

## Meeting

The Broward County Metropolitan Planning Organization (MPO) will host two public meetings to discuss, Local Meeting #1 Dorsey Riverland Homeowners Association, Monday, Feb. 23, 7 p.m., at North Fork Elementary School 101 NW 15th Ave., Fort Lauderdale. Local Meeting #2 Lauderhill Central Resident Association, Wednesday, March 3, 7 p.m., at City of Lauderhill, Multipurpose Room 200 City Hall Dr., Lauderhill.

The Broward County 2030 Long Range Transportation Plan Update (LRTP). Confirm your attendance by R.S.V.P. to Dickey Consulting Services, Inc., at (954) 467-6822 or e-mail lpostemic@dickeyinc.com.

# ¡Invitación A Un Taller Abierto al Público!

***La Organización De Planificación Metropolitana del Condado de Broward (MPO)*** *quiere saber sobre sus necesidades de transporte durante los próximos veinte años. Escoja la hora más conveniente para asistir al taller.*

***Llame al (954) 467-6822 para reservaciones o por correo electrónico: lpostemice@dickeyinc.com***

*"Si tiene problemas auditivos, llame al Centro de Llamadas del Condado de Broward al (954) 370-3745(TDD)"*

**TALLER #1 DE BROWARD SUR**

**FECHA:** 28 de enero, 2004

**LUGAR:** South Florida Regional Planning Council
3440 Hollywood Blvd.
Suite 140
Hollywood, Florida

**HORARIO:** 6 p.m. a 8 p.m.

**TALLER #2 DE BROWARD NORTE**

**FECHA:** 29 de enero, 2004

**LUGAR:** Ayuntamiento de la Ciudad de Coconut Creek
4800 West Copans Rd.

**HORARIO:** 4 p.m. 6 p.m.

## Public Announcement

## NOTICE OF PUBLIC MEETINGS:

The Broward County Metropolitan Planning Organization (MPO) will hold a series of Public Workshops to discuss the Broward County 2030 Long Range Transportation Plan.

**Date:** **Wednesday, January 28, 2004**
**Time:** **6 p.m.**
**Location:** **South Florida Regional Planning Council**
**3440 Hollywood Blvd. Suite 140**
**Hollywood, Florida**

**Date:** **Thursday, January 29, 2004**
**Time:** **4 p.m.**
**Location:** **City Hall, City of Coconut Creek located**
**4800 West Copans Rd.**
**Coconut Creek, Florida**

# Opinion

24A WEDNESDAY, JANUARY 28, 2004 · NWS sun-sentinel.com · SOUTH FLORIDA SUN-SENTINEL

## You're Invited To A Public Workshop!

## NOTICE: DATE CHANGE

*The Broward County Metropolitan Planning Organization (MPO) wants to hear about your transportation needs in the next twenty years. Choose the most convenient time for you to attend a public workshop for*

***The Broward County 2030 Long Range Transportation Plan***

***Please call (954) 467-6822 to RSVP or e-mail: ipostemice@dickeyinc.com***

*"If hearing impaired, telephone Broward County Call Center at (954) 370-3745 (TDD)"*

| SOUTH BROWARD WORKSHOP #1 | | NORTH BROWARD WORKSHOP #2 | |
|---|---|---|---|
| **DATE:** | **WEDNESDAY, January 28, 2004** | **DATE:** | **THURSDAY, January 29, 2004** |
| **PLACE:** | South Florida Regional Planning Council<br>3440 Hollywood Blvd<br>Suite 140, Hollywood, FL | **PLACE:** | City of Coconut Creek<br>City Hall Chamber Conference Rm.<br>4800 West Copans Rd.<br>Coconut Creek, FL |
| **TIME:** | **6 p.m. to 8 p.m.** | **TIME:** | **4 p.m. to 6 p.m.** |

CENTRAL BROWARD
Community News
SOUTH FLORIDA SUN-SENTINEL SUNDAY FEBRUARY 29, 2004
LAUDERDALE LAKES

LAUDERHILL

## Central residents schedule meeting

The Lauderhill Central Residents Association will meet from 7 to 9 p.m. on Wednesday in the multipurpose room of Lauderhill City Hall, 2000 City Hall Drive.

Area residents are encouraged to attend the meeting.

Refreshments will be served. Call 954-321-8322.

BUSINESS
South Florida Sun-Sentinel
SUNDAY | OCTOBER 3, 2004
BROWARD METRO EDITION



BROWARD COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

**Broward County 2030 Long Range Transportation Plan Update**

# PUBLIC WORKSHOPS

You are invited to attend a Public Workshop to review and discuss the Broward County 2030 Long Range Transportation Plan (LRTP) Update. The LRTP is a group of transportation improvement projects designed to meet the travel needs in Broward County due to future growth. These projects are multi-modal in nature and include pedestrian, bicycle, transit, roadway, waterborne, and freight improvements.

At these Public Workshops, the project team will present the recommended projects to the public for review and for more public input. Please confirm your attendance by R.S.V.P. to Dickey Consulting Services, Inc. at (954) 467-6822 or e-mail: lpostemice@dickeyinc.com. If you require auxiliary aids for communication, please call (954) 357-8170 (voice) or (954) 537-2844 (TTY) prior to the event for advance arrangements.

**NORTH BROWARD WORKSHOP**
**Wednesday, October 6, 2004**
Emma Lou Olson Civic Center
1801 N.E. 6th St.
Pompano Beach, FL 33060
6:00 p.m. to 8:00 p.m.

**SOUTH BROWARD WORKSHOP**
**Thursday, October 7, 2004**
South Regional / BCC Library
7300 Pines Blvd.
Pembroke Pines, FL 33024
4:00 p.m. to 6:00 p.m.

*For more information, visit www.BrowardLRTP.org*

Washington advierte a Castro que no per

MIAMI

el Nuevo Herald

www.elnuevoherald.com

PREMIO ORTEGA Y GASSET

35¢

SABADO 2 DE OCTUBRE DEL 2004

BROWARD COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

## Condado de Broward
### Actualización Sobre el Plan de Transporte de Largo Alcance 2030
### TALLERES PÚBLICOS

Lo invitamos a participar en el Taller Público para revisar y discutir la Actualización Sobre el Plan de Transporte de Largo Alcance 2030 (LRTP en inglés). El LRTP es un grupo de proyectos de mejoras al plan diseñado para cubrir las necesidades de transporte en el Condado de Broward debido al crecimiento futuro. Estos proyectos son de naturaleza multi-modal e incluyen mejoras para las aceras, carril de bicicletas, tránsito general, carreteras, transporte por agua, y flete.

Durante estos talleres públicos el equipo encargado presentará los proyectos recomendados al público para su revisión y opinión al respecto. Debe confirmar su asistencia llamando a Dickey Consulting Services, Inc., al (954) 467-6822 o por e-mail a: lpostermice@dickeyinc.com. Si requiere ayuda especial para comunicación, llame al (954) 357-8170 (voice) o (954) 537-2844 (TTY) antes del evento para poder hacer los arreglos pertinentes.

**TALLER EN EL NORTE DE BROWARD**
**Miércoles 6 de Octubre, 2004**
Emma Lou Olson Civic Center
1801 N.E. 6th St.
Pompano Beach, FL 33060
6:00 p.m. a 8:00 p.m.

**TALLER EN EL SUR DE BROWARD**
**Jueves 7 de Octubre, 2004**
Región Sur /Biblioteca de BCC
7300 Pines Blvd.
Pembroke Pines, FL 33024
4:00 p.m. a 6:00 p.m.

*Para más información, visite: www.BrowardLRTP.org*

# BROWARD COUNTY
# 2030 LONG RANGE TRANSPORTATION PLAN UPDATE

## PUBLIC MEETING NOTICE:

The Broward County Metropolitan Planning Organization (MPO) will hold a series of public workshops to discuss the Broward County 2030 Long Range Transportation Plan.

**Date:** **Wednesday, October 6, 2004**
**Time:** **6:00 p.m. to 8:00 p.m.**
**Location:** **Emma Lou Olson Civic Center**
**1801 Northeast Sixth Street**
**Pompano Beach, FL 33060**

**Date:** **Thursday, October 7, 2004**
**Time:** **4:00 p. m. to 6:00 p.m.**
**Location:** **South Regional/ BCC Library**
**7300 Pines Boulevard**
**Pembroke Pines, FL 33024**

**Call (954) 467-6822 to R.S.V.P. today!**

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# PUBLIC HEARING

NOTICE IS HEREBY GIVEN by the Broward County Metropolitan Planning Organization that said Organization will hold a public hearing at 9:30 A.M., on December 9, 2004 at the Governmental Center, 115 S. Andrews Ave, Room 422, Fort Lauderdale, FL. 33301, to consider adoption of the Year 2030 Long Range Transportation Plan and the corresponding Conformity Determination Report.

Copies are available at the Transportation Planning Division, Room 329, Broward County Governmental Center, 115 South Andrews Avenue, Fort Lauderdale, FL 33301 or at http://www.BrowardLRTP.org/

Westside Gazette
Broward County's Oldest and Largest
African American Owned and Operated Newspaper
SEPTEMBER 30 - OCTOBER 7, 2004



# Community Digest

## Meeting

The Broward County Metropolitan Planning Organization (MPO) will hold a series of public workshops to discuss the Broward County 2030 Long Range Transportation Plan, Wednesday, Oct. 6, 6 to 8 p.m., at Emma Lou Olson Civic Center 1801 NE Sixth St., Pompano Beach and Thursday, Oct. 7, 4 to 6 p.m., at South Regional/BCC Library 7300 Pines Blvd., Pembroke Pines.

For further information, call (954) 467-6822 to RSVP.

# Workshop to map out bus, rail plans for transit line

BY MICHAEL TURNBELL
TRANSPORTATION WRITER

Interstate 595 was on the road to obsolescence not long after it opened in the early 1990s.

A decade later, officials are looking to ease east-west congestion with mass transit. They say even a major overhaul of I-595, with braided ramps, collector roads and express lanes, won't be enough to keep up with growing traffic demands.

The interstate is the spine of a proposed bus rapid transit or light rail line that would connect Sawgrass Mills, downtown Fort Lauderdale and the airport.

The alignment, which also runs along State Road 7, Broward Boulevard and Andrews Avenue, scored best among four routes considered by the Florida Department of Transportation.

The public is invited to a workshop from 5 to 7:30 p.m. Thursday at Nova High School in Davie to comment on the alignment. A presentation is planned at 6 p.m.

Officials say mass transit has to be part of the solution for Broward's east-west commuting woes because I-595 can't be widened much more.

"The travel demands we're seeing is going to double what's out there today," said Scott Seeburger, DOT project manager. "The roadway improvements aren't going to be able to carry it all. Some sort of transit facility is needed to enhance the capacity of the corridor."

The project is years away from completion because of high costs and the necessity of conducting environmental studies. At best, Seeburger said, it could be built in 10 to 12 years if there are no obstacles.

Light rail is powered by overhead electrical wires and can run on rails in a city street next to a car, in its own right of way or on a traditional railroad track. Bus rapid transit is a type of bus that moves in its own restricted lane to avoid getting stuck in traffic. It can move as quickly as a train.

Both ranked about the same in the state's analysis, but light rail is nearly twice as expensive. Construction estimates range from $445 million for bus rapid transit to $841 million for light rail.

Thursday's workshop comes on the heels of a highly critical study released this week by a conservative Tallahassee think-tank that labeled light rail a financial disaster, with costs that far outweigh benefits.

The study by the James Madison Institute says rail transit may be one of the reasons why congestion in South Florida has grown so much in the past decade.

"Freeways are 10 times more cost-effective at moving people than Miami and Fort Lauderdale rail lines," said Randal O'Toole, the study's author.

"Rail transit gives limousine-priced rides to people, most of whom were previously riding buses."

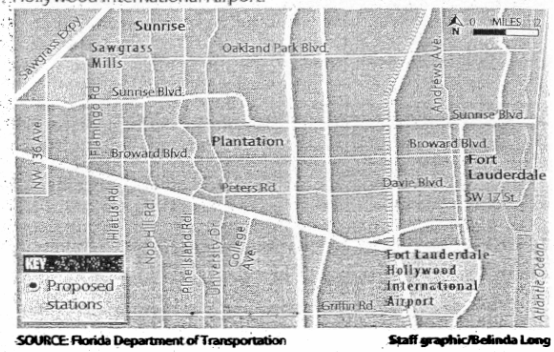
The study suggests that high-occupancy toll lanes and bus-rapid transit are the solutions to the region's traffic problems and can be done much cheaper than light rail.

Broward's Metropolitan Planning Organization, a group that oversees how federal transportation money is spent in the county, will consider choosing an alignment in March.

Seeburger said the ability to raise funds will determine which type of transit is chosen.

## East-west transit line

The Florida Department of Transportation is recommending one of four possible light rail or bus transit routes connecting Sawgrass Mills, downtown Fort Lauderdale and the Fort Lauderdale-Hollywood International Airport.




SOURCE: Florida Department of Transportation

Staff graphic/Belinda Long

## IF YOU GO

The public is invited to a workshop from 5 to 7:30 p.m. Thursday at Nova High School in Davie to comment on the proposed route for a bus rapid transit or light rail line that would connect Sawgrass Mills, downtown Fort Lauderdale and the airport. A presentation is planned at 6 p.m.

A workshop is planned in April for local elected officials after a financial analysis laying out all the options is done.

The proposed route would tie into a bus rapid transit line planned along State Road 7 from I-595 south to the Golden Glades interchange and Pro-Player Stadium. S.R. 7 also has Broward's highest bus ridership.

The other alignments include I-595, S.R. 84 and Andrews, or via Sunrise and Broward boulevards, using University Drive or S.R. 7 as a north-south connector.

The Sunrise-Broward routes could be built at nearly half the cost of either I-595 alignment because the routes would likely be built at-grade and not require any expensive bridges. But the Sunrise-Broward routes would be more oriented toward local trips and slower service with more stops.

Although the preferred alignment puts the transit line on the south side of I-595 in Davie, Seeburger said the exact route is still up in the air.

For more information about the project, log online to www.centralbrowardtransit.com.

*Michael Turnbell can be reached at mturnbell@sun-sentinel.com or 954-356-4155*

South Florida Sun Times Published Every Thursday! South Florida's Weekl

# *Mayor Mara* Giulanti

**Facets of the Diamond—Transportation for the New Millennium--Get the Planning! – by Mayor Mara Giulianti, July 8, 2004**

**Broward County does a Long Range Transportation Plan (LRTP), to w Hollywood City Commissioners give input through membership on the Metropolitan Planning Organization (MPO). Periodic reports on the Pl provided to the Public. Recently, I was skimming the 2030 Update — y already planning for 26 years from now — and was pleased to see that finally planning the development of a multimodal transportation syster has been so far behind in providing modern mass transit, as we all kno will take many years to catch up to other urban areas.**

**Among the goals in the LRTP are: to provide a balanced multimodal transportation system that serves the local and regional movement of p goods, and services, with choices in mobility; to develop a transportatio that is regionally coordinated, safe, and affordable; and to ensure that i aesthetically pleasing, to minimize the impact on our natural and built environments.**

**We are all aware that our county has experienced significant growth in decade or so, and the growth is expected to continue to occur through 2 LRTP Update declares that population is expected to increase by a whc 49% to 2.38 million and jobs to increase by 45% to 944,000 by 2030. Tl place great demands on Broward County's transportation system. Witl careful planning, it will lead to increased congestion for the region. But going to let that happen — according to the document I read. (Let's ho right!)**

**Studies are being done to look into Light Rail Transit, as well as Bus R: Transit, able to operate on city streets, in pedestrian malls, or on dedic: of-way, including underground, on aerial structures, or street level. To credit, the planners seek your input.**

**They have created a Public Involvement Plan (PIP) — they love using i discovered. The goal is to develop early and continuous participation fr interested groups, as well as the public, especially the traditionally und communities. Public workshops and local meetings were held already, : county. A total of 266 individuals attended, and 113 questionnaires wer completed and returned, with respondents expressing their thoughts or congestion, safety, and funding priorities for the future.**

**The next series of public meetings will be held in September and Octob your name to the mailing list, or to obtain more information about the**

South Florida Sun-Sentinel

WEDNESDAY OCTOBER 6, 2004 BROWARD METRO EDITION C/MS WWW.SUN-SENTI



# $5 billion plan adds to mass transit, roads

BY MICHAEL TURNBELL
TRANSPORTATION WRITER

The roads and buses that carry commuters will see some big changes in the next 25 years if a $5 billion blueprint for Broward transportation projects is carried out.

By 2030, bus riders would be able to jump on rapid transit buses that move as swiftly as trains down major streets such as State Road 7, Oakland Park Boulevard, University Drive and Hollywood Boulevard.

Money would also be spent to develop rail transit along Interstate 595 and the Florida East Coast Railway and to extend the water bus on the New River west to the Marina Mile area along State Road 84.

Broward's Metropolitan Planning Organization, a board that prioritizes which road and transit projects get built, will conduct the first of two workshops today to get public comments on the 2030 long-range transportation plan to be adopted by the end of the year.

Today's workshop is from 6 to 8 p.m. at Emma Lou Olson Civic Center, 1801 NE Sixth St., Pompano Beach. Another workshop follows from 4 to 6 p.m. Thursday at Broward Community College's South Regional Library, 7300 Pines Blvd., Pembroke Pines.

The latest plan, which must be updated every three years, devotes more money to transit than road improvements. It calls for spending $3.1 billion on transit, $1.4 billion on local streets, $1 billion on the intrastate highway system, $100 million on bikeways, $20 million on pedestrian projects, $50 million on waterborne transit and $50 million on greenways.

"Even the bicycle, pedestrian and highway parts of the plan really look at providing better access to major transit stations and community transit centers," said John Zageer, a consultant from Kittelson & Associates working on the plan. "The number of highway projects have been significantly reduced."

Still, a number of major improvements are proposed.

Interstate 95 would be widened to 10 lanes in both directions.

Across north Broward, Cypress Creek Road and McNab Road would become a hybrid between an expressway and a major street with interchanges at Northwest 31st Avenue, Rock Island Road and University Drive to get drivers quickly between the Sawgrass Expressway and I-95.

The plan also calls for widening Southwest 10th Street to six lanes between the turnpike and I-95 in Deerfield Beach.

In south Broward, a study would look at extending the turnpike from Miramar east to I-95 near the Broward-Miami-Dade line. Zageer said the extension would provide another east-west expressway to relieve congestion on I-595. The plan is available online at www.browardlrtp.org.

*Michael Turnbell can be reached at mturnbell@sun-sentinel.com or 954-356-4155 or 561-243-6550.*

South Florida
**Sun-Sentinel**

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*NOV. 18, 1910*

KINGSLEY GUY
EDITORIAL PAGE EDITOR

TRANSPORTATION

# SPEAK UP ON PROPOSALS

More transportation options are on the way for Broward County. That's a good thing for the county, the business community and every local resident.

The county's Metropolitan Transportation Organization, which is responsible for prioritizing transportation projects, has drafted its new long-range plan, which must be updated every three years. It calls for spending $5.8 billion over the next 25 years.

**PUBLIC INPUT**

Meetings are scheduled for:
**Mary Sanders Park** in Hollywood at 7 p.m. Tuesday
**North Fork Elementary School** in Fort Lauderdale at 7 p.m. on Oct. 25
**Lauderhill City Hall** at 7 p.m. on Nov. 3
You needn't live in those areas; the general public is invited to all three meetings.
Information is also available and comments may be posted online at:
www.browardlrtp.org.

The best part is that the four-part blueprint, which calls for scores of pedestrian, bicycle, mass transit and highway projects, puts the emphasis where it belongs: on transit. More than half of the total spending would be devoted to transit.

It's a plan that recognizes the county's changing nature and ongoing growth pressures. Officials are approaching it in a logical way, with pedestrian and bicycle projects preceding others so as to provide better access to transit.

Imagine a future when rapid transit buses whisk riders along major thoroughfares; when a new rail line parallels Interstate 595; and when bikeways and pedestrian greenways offer safe, healthy alternatives. With this well thought-out plan, the county has taken a giant step into that future.

**It's a plan that recognizes the county's changing nature and ongoing growth pressures.**

Roads aren't being overlooked. The proposal calls for spending $2.4 billion on roadway expansions and improvements.

Remember, though, that the plan is just a draft. The MPO wants your input before finalizing it. Two well-attended public workshops have already taken place, and three more meetings are planned. Let your voice be heard.


**PRESS RELEASE**

**FOR IMMEDIATE RELEASE**
**January 5, 2004**
**CONTACT:**
**Peter Haliburton**
**Consultant Project Manager**
**Kittelson & Associates Inc.**
**(954) 735-1245**

# BROWARD COUNTY 2030 LONG RANGE TRANSPORTATION PLAN UPDATE

**FT. LAUDERDALE - January 20, 2004** The Broward County Long Range Transportation Plan **(LRTP)** Year 2030 Update will provide a plan of the development of a multi-modal transportation system throughout Broward County for the next twenty-five years.

This plan projects twenty-five years into the future and is used by transportation officials to prioritize the spending of transportation dollars for improvement projects including: bicycle, pedestrian, waterborne, freight, transit and roadway facilities.

It is very important that the plan reflects the choices and desires of Broward County residents, businesses and visitors. As part of a continuous effort that includes a year long study to obtain public input, two public workshops will be held.

**SOUTH BROWARD WORKSHOP #1**
**DATE:** January 28, 2004
**LOCATION**: South Florida Regional Planning Council
3440 Hollywood Boulevard, Suite 140
Hollywood, Florida
**TIME:** 6 p.m. to 8 p.m.

**NORTH BROWARD WORKSHOP #2**
**DATE:** January 29, 2004
**LOCATION**: City Hall
City of Coconut Creek
4800 West Copans Road.
Coconut Creek, Florida
**TIME:** 4 p.m. to 6 p.m.

The 2030 update will enhance the current plan focused on the non-automobile modes of transportation. Though it remains important to consider roadway plans to improve travel conditions for the automobile-driving public, it is essential to look at transit, bicycle and pedestrian modes of travel. For more information, please contact Linda Postemice at (954) 467-6822 or via e-mail lpostemice@dickeyinc.com.

###


**PRESS RELEASE**

**FOR IMMEDIATE RELEASE**
**September 30, 2004**
**CONTACT:**
**John Zegeer**
**Project Manager**
**Kittelson & Associates Inc.**
**(954) 735-1245**

**ALTERNATIVE NEEDS ASSESSMENTS FOR**
**BROWARD COUNTY'S**
**2030 LONG RANGE TRANSPORTATION PLAN UPDATE**
***"Needed projects identified to keep us mobile in the next 25 years"***

**FORT LAUDERDALE -** The Broward County Metropolitan Planning Organization (MPO) will host two Public Workshops during the month of October to present the recommended projects for the 2030 Long Range Transportation Plan (LRTP) Update to the public.

Two Public Workshops will be held on:

**NORTH BROWARD WORKSHOP**

| | |
|---|---|
| **DATE:** | **Wednesday, October 6, 2004** |
| **LOCATION:** | **Emma Lou Olson Civic Center** |
| | **1801 Northeast Sixth Street** |
| | **Pompano Beach, FL 33060** |
| **TIME:** | **6:00 p.m. to 8:00 p.m.** |

**SOUTH BROWARD WORKSHOP**

| | |
|---|---|
| **DATE:** | **Thursday, October 7, 2004** |
| **LOCATION** | **South Regional /BCC Library** |
| | **7300 Pines Boulevard** |
| | **Pembroke Pines, FL 33024** |
| **TIME:** | **4:00 p.m. to 6:00 p.m.** |

**About The Long Range Transportation Plan (LRTP)**
The LRTP is a group of transportation improvement projects designed to meet the travel needs in Broward County due to future growth. These projects are multi-modal in nature and include pedestrian, bicycle, transit, roadway, waterborne, and freight improvements.

The 2030 LRTP Update will enhance the current plan focused on the non-automobile modes of transportation. Though it remains important to consider roadway plans to improve travel conditions for the automobile-driving public, it is essential to look at transit, bicycle and pedestrian, freight, and waterborne modes of travel. For more information, please contact Linda Postemice at (954) 467-6822 or via e-mail lpostemice@dickeyinc.com.

###

# APPENDIX A-3

## FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT ENPLANEMENT FORECASTS

# APO TERMINAL AREA FORECAST DETAIL REPORT

**REGION:**ASO **STATE:**FL **LOCID:**FLL
**CITY:** FORT LAUDERDALE **AIRPORT:** FORT LAUDERDALE/HOLLYWOOD INTL

| AIRCRAFT OPERATIONS | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scheduled Enplanements | | | | Itinerant Operations | | | | | Local Operations | | | | | |
| Year | AC | Comm. | Total | AC | AT & Comm. | GA | Mil | Total | GA | Mil | Total | Total OPS | Total Inst.OPS | Based Aircraft |
| 1976 | 1,972,623 | 49,333 | 2,021,956 | 71,009 | 14,923 | 150,243 | 661 | 236,836 | 76,683 | 975 | 77,658 | 314,494 | 117,027 | 0 |
| 1977 | 2,073,624 | 53,228 | 2,126,852 | 77,862 | 11,490 | 172,255 | 896 | 262,503 | 66,232 | 631 | 66,863 | 329,366 | 300,073 | 0 |
| 1978 | 2,671,078 | 59,000 | 2,730,078 | 84,370 | 13,000 | 199,518 | 905 | 297,793 | 56,351 | 172 | 56,523 | 354,316 | 339,373 | 0 |
| 1979 | 2,882,153 | 26,433 | 2,908,586 | 92,093 | 12,866 | 200,530 | 989 | 306,478 | 32,290 | 12 | 32,302 | 338,780 | 355,587 | 0 |
| 1980 | 2,988,611 | 9,885 | 2,998,496 | 94,033 | 3,856 | 170,110 | 755 | 268,754 | 15,729 | 61 | 15,790 | 284,544 | 319,386 | 393 |
| 1981 | 2,752,569 | 9,770 | 2,762,339 | 87,498 | 5,184 | 151,774 | 666 | 245,122 | 11,601 | 51 | 11,652 | 256,774 | 291,730 | 411 |
| 1982 | 3,002,120 | 18,302 | 3,020,422 | 84,148 | 17,593 | 131,794 | 867 | 234,402 | 9,809 | 26 | 9,835 | 244,237 | 274,029 | 428 |
| 1983 | 2,602,150 | 26,450 | 2,628,600 | 80,043 | 29,614 | 118,891 | 755 | 229,303 | 7,081 | 1 | 7,082 | 236,385 | 269,845 | 428 |
| 1984 | 2,788,152 | 84,117 | 2,872,269 | 75,393 | 49,998 | 106,414 | 684 | 232,489 | 5,915 | 54 | 5,969 | 238,458 | 274,717 | 380 |
| 1985 | 3,295,100 | 76,400 | 3,371,500 | 72,176 | 50,096 | 98,266 | 1,135 | 221,673 | 7,056 | 22 | 7,078 | 228,751 | 271,147 | 380 |
| 1986 | 3,709,517 | 64,171 | 3,773,688 | 90,622 | 35,156 | 90,961 | 964 | 217,703 | 6,131 | 2 | 6,133 | 223,836 | 277,748 | 380 |
| 1987 | 4,220,198 | 66,425 | 4,286,623 | 105,385 | 28,598 | 82,858 | 902 | 217,743 | 5,953 | 0 | 5,953 | 223,696 | 289,863 | 380 |
| 1988 | 4,205,955 | 131,605 | 4,337,560 | 97,202 | 42,517 | 76,038 | 1,178 | 216,935 | 6,242 | 38 | 6,280 | 223,215 | 286,736 | 329 |
| 1989 | 4,090,000 | 217,100 | 4,307,100 | 89,820 | 51,097 | 69,853 | 968 | 211,738 | 4,970 | 32 | 5,002 | 216,740 | 287,860 | 375 |
| 1990 | 4,199,098 | 227,332 | 4,426,430 | 98,777 | 54,105 | 64,475 | 1,518 | 218,875 | 5,229 | 16 | 5,245 | 224,120 | 291,257 | 375 |
| 1991 | 3,913,149 | 95,451 | 4,008,600 | 89,666 | 51,434 | 60,236 | 1,149 | 202,485 | 7,223 | 44 | 7,267 | 209,752 | 271,735 | 173 |
| 1992 | 3,935,063 | 103,529 | 4,038,592 | 83,157 | 45,128 | 68,035 | 1,390 | 197,710 | 6,439 | 34 | 6,473 | 204,183 | 266,595 | 173 |
| 1993 | 4,128,690 | 139,673 | 4,268,363 | 85,300 | 55,921 | 69,485 | 1,221 | 211,927 | 5,837 | 22 | 5,859 | 217,786 | 272,194 | 173 |
| 1994 | 4,964,562 | 109,568 | 5,074,130 | 106,135 | 57,167 | 66,077 | 1,199 | 230,578 | 2,436 | 30 | 2,466 | 233,044 | 289,667 | 173 |
| 1995 | 4,558,947 | 120,645 | 4,679,592 | 106,133 | 60,692 | 68,762 | 894 | 236,481 | 1,627 | 0 | 1,627 | 238,108 | 293,515 | 114 |
| 1996 | 5,288,530 | 353,840 | 5,642,370 | 100,145 | 60,999 | 72,562 | 768 | 234,474 | 1,858 | 10 | 1,868 | 236,342 | 278,950 | 124 |
| 1997 | 6,150,857 | 276,411 | 6,427,268 | 111,243 | 54,130 | 78,509 | 667 | 244,549 | 1,635 | 2 | 1,637 | 246,186 | 307,405 | 124 |
| 1998 | 5,755,536 | 291,000 | 6,046,536 | 113,363 | 54,285 | 79,140 | 757 | 247,545 | 1,873 | 4 | 1,877 | 249,422 | 302,912 | 152 |
| 1999 | 6,506,626 | 288,817 | 6,795,443 | 131,577 | 50,818 | 93,959 | 683 | 277,037 | 2,645 | 141 | 2,786 | 279,823 | 336,026 | 152 |
| 2000 | 7,288,034 | 365,665 | 7,653,699 | 143,950 | 54,560 | 86,581 | 636 | 285,727 | 1,206 | 161 | 1,367 | 287,094 | 339,350 | 152 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 8,071,530 | 331,186 | 8,402,716 | 158,528 | 58,050 | 81,993 | 586 | 299,157 | 601 | 15 | 616 | 299,773 | 348,209 | 165 |
| 2002 | 7,654,761 | 313,411 | 7,968,172 | 147,874 | 64,076 | 62,647 | 559 | 275,156 | 311 | 6 | 317 | 275,473 | 318,907 | 163 |
| 2003* | 7,965,619 | 301,438 | 8,267,057 | 153,827 | 67,994 | 60,838 | 591 | 283,250 | 236 | 0 | 236 | 283,486 | 325,880 | 162 |
| 2004* | 8,518,135 | 311,084 | 8,829,219 | 168,132 | 69,421 | 60,838 | 591 | 298,982 | 236 | 0 | 236 | 299,218 | 342,723 | 163 |
| 2005* | 8,990,698 | 321,038 | 9,311,736 | 178,556 | 70,462 | 60,838 | 591 | 310,447 | 236 | 0 | 236 | 310,683 | 352,762 | |
| 2006* | 9,402,838 | 331,311 | 9,734,149 | 187,126 | 71,166 | 60,838 | 591 | 319,721 | 236 | 0 | 236 | 319,957 | 362,804 | 164 |
| 2007* | 9,833,877 | 341,581 | 10,175,458 | 194,610 | 71,877 | 60,838 | 591 | 327,916 | 236 | 0 | 236 | 328,152 | 372,845 | 165 |
| 2008* | 10,284,682 | 352,169 | 10,636,851 | 202,393 | 72,595 | 60,838 | 591 | 336,417 | 236 | 0 | 236 | 336,653 | 382,887 | 167 |
| 2009* | 10,756,158 | 363,086 | 11,119,244 | 210,487 | 73,320 | 60,838 | 591 | 345,236 | 236 | 0 | 236 | 345,472 | 392,928 | 168 |
| 2010* | 11,249,255 | 374,340 | 11,623,595 | 218,906 | 74,053 | 60,838 | 591 | 354,388 | 236 | 0 | 236 | 354,624 | 402,969 | 168 |
| 2011* | 11,666,787 | 383,698 | 12,050,485 | 225,910 | 74,793 | 60,838 | 591 | 362,132 | 236 | 0 | 236 | 362,368 | 413,011 | 169 |
| 2012* | 12,099,820 | 393,289 | 12,493,109 | 233,138 | 75,540 | 60,838 | 591 | 370,107 | 236 | 0 | 236 | 370,343 | 423,053 | 170 |
| 2013* | 12,548,932 | 403,120 | 12,952,052 | 240,597 | 76,295 | 60,838 | 591 | 378,321 | 236 | 0 | 236 | 378,557 | 433,093 | 170 |
| 2014* | 13,014,714 | 413,197 | 13,427,911 | 248,295 | 77,057 | 60,838 | 591 | 386,781 | 236 | 0 | 236 | 387,017 | 443,135 | 172 |
| 2015* | 13,497,790 | 423,526 | 13,921,316 | 256,240 | 77,827 | 60,838 | 591 | 395,496 | 236 | 0 | 236 | 395,732 | 453,176 | 173 |
| 2016* | 13,998,805 | 434,113 | 14,432,918 | 264,439 | 78,605 | 60,838 | 591 | 404,473 | 236 | 0 | 236 | 404,709 | 463,218 | 174 |
| 2017* | 14,518,420 | 444,965 | 14,963,385 | 272,900 | 79,391 | 60,838 | 591 | 413,720 | 236 | 0 | 236 | 413,956 | 473,259 | 174 |
| 2018* | 15,057,329 | 456,088 | 15,513,417 | 281,632 | 80,184 | 60,838 | 591 | 423,245 | 236 | 0 | 236 | 423,481 | 483,300 | 175 |
| 2019* | 15,616,246 | 467,490 | 16,083,736 | 290,643 | 80,985 | 60,838 | 591 | 433,057 | 236 | 0 | 236 | 433,293 | 493,342 | 176 |
| 2020* | 16,195,916 | 479,176 | 16,675,092 | 299,942 | 81,794 | 60,838 | 591 | 443,165 | 236 | 0 | 236 | 443,401 | 503,384 | 179 |

| | | | | |
|---|---|---|---|---|
| | 1976 - 2020 | Daily | 2000-2020 | Daily |
| 2000 Daily Back-check | | 20,969 | | |
| AAGR | 16.4705% | | 5.8935% | |
| 2020 Back-Check | 16,675,092 | 45,685 | 16,675,092 | 45,685 |
| 2021 | 17,008,118 | 46,598 | 17,126,162 | 46,921 |
| 2022 | 17,341,144 | 47,510 | 17,577,231 | 48,157 |
| 2023 | 17,674,169 | 48,422 | 18,028,301 | 49,393 |
| 2024 | 18,007,195 | 49,335 | 18,479,371 | 50,628 |
| 2025 | 18,340,221 | 50,247 | 18,479,371 | 50,628 |
| 2026 | 18,673,247 | 51,160 | 18,930,440 | 51,864 |

Projection of 2030 Enplanements Using BEBR Forecasts

| | |
|---|---|
| BEBR Population | |
| 2020 Medium Projection | 2,207,000 |
| 2030 Medium Projection | 2,482,000 |
| Growth Factor | 1.124603534 |
| 2020 Annual Enplanement Projection | 16,675,092 |
| 2020 Daily Enplanements | 45,685 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2027 | 19,006,273 | 52,072 | 19,381,510 | 53,100 | 2030 Projected Annual Enplanements | 18,752,867 |
| 2028 | 19,339,299 | 52,984 | 19,832,580 | 54,336 | 2030 Projected Daily Enplanements | **51,378** |
| 2029 | 19,672,324 | 53,897 | 20,283,649 | 55,572 | **USE BEBR FACTOR METHOD** | |
| **2030** | 20,005,350 | 54,809 | 20,734,719 | **56,807** | | |

# APPENDIX A-4

## EXTERNAL TRIP FORECASTS

| Station | | Boundary | Growth rate 1999 Urban Model vs. 2030 Draft Total | Recommended 2030 Total | Annette's Recommended 2025 Total | 2030 projection based on urban model growth & AADT | 2030 projection based on SERPM growth & AADT | Recommended 2030 FDOT Total | Final 2030 Total | 2030 External Loading for E+C Condition |
|---|---|---|---|---|---|---|---|---|---|---|
| A1A | @ | Palm Beach CL | 1% | 15391 | 22682 | 13,872 | 11,894 | 15400 | 16,500 | 17,762 |
| US-1 | @ | Palm Beach CL | 4% | 61653 | 49044 | 45,489 | 30,066 | 49000 | 49,000 | 53,400 |
| SR 811 (Old Dixie) | @ | Palm Beach CL | -1% | 11608 | 32151 | 25,490 | 15,760 | 32000 | 32,000 | 35,217 |
| I-95 | @ | Palm Beach CL | 1% | 230741 | 298043 | 295,457 | 304,619 | 299000 | 299,000 | 318,959 |
| Military Trail | @ | Palm Beach CL | 1% | 34970 | 40781 | 41,909 | 26,303 | 42000 | 40,800 | 44,821 |
| SR 845 (Powerline) | @ | Palm Beach CL | 3% | 50725 | 54553 | 47,017 | 59,282 | 54500 | 54,500 | 62,567 |
| Turnpike | @ | Palm Beach CL | 2% | 126083 | 82056 | 145,521 | 113,275 | | 157,700 | 186,091 |
| Lyons Road | @ | Palm Beach CL | -1% | 15139 | 44089 | 63,790 | 13,844 | 44100 | 44,100 | 56,200 |
| SR 7 / 441 | @ | Palm Beach CL | 1% | 52319 | 53901 | 51,607 | 55,595 | | 46,100 | 62,233 |
| Rock Island | @ | Palm Beach CL | | 0 | 0 | | | | -- | -- |
| Lox Road | @ | Palm Beach CL | 6% | 17676 | 14486 | | | | 17600 | 22,650 |
| Riverside | @ | Palm Beach CL | | 26904 | 260152 | | | | -- | -- |
| SR 817 (Univ) | @ | Palm Beach CL | | 50460 | 44082 | | | | 41,700 | --* |
| Coral Ridge Dr | @ | Palm Beach | | 73722 | 0 | | | | 60,900 | --* |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CL | | | | | | | | | |
| Holmberg1 | @ | Palm Beach CL | | 33000 | 33000 | | | | -- | -- | |
| US 27 | @ | Palm Beach CL | 1% | 15267 | 17339 | 15,522 | 15,521 | | 17300 | 17300 | |
| I-75 | @ | Collier CL | 1% | **26774** | 25734 | 25,124 | 25,476 | | 26700 | 26700 | |
| US 27 | @ | Miami-Dade CL | 4% | **47165** | 34601 | 30,915 | 138,755 | | 34600 | 34600 | |
| US 27 | @ | Miami-Dade CL | | -142 | 1192 | | | | -- | -- | |
| SW 172nd Ave | @ | Miami-Dade CL | | 0 | 0 | | | | -- | -- | |
| SW 172nd Ave | @ | Miami-Dade CL | | 0 | 0 | | | | -- | -- | |
| Dykes Road | @ | Miami-Dade CL | | 10188 | 617 | | | | -- | -- | |
| I-75 | @ | Miami-Dade CL | 4% | 255073 | 234811 | 335,267 | 215,916 | 217000 | 217,000 | 217,000 | |
| HEFT | @ | Miami-Dade CL | 2% | **40053** | 36864 | 57,684 | 79,909 | | 75,100 | 75,100 | |
| SW 136th Ave | @ | Miami-Dade CL | | 0 | 0 | | | | -- | -- | |
| Flamingo | @ | Miami-Dade CL | 2% | **26820** | 22647 | 27,004 | 47,885 | 27000 | 23,700 | 23,700 | |
| Red Road | @ | Miami-Dade CL | 5% | **61442** | 36649 | 72,960 | 37,923 | 38000 | 45,000 | 45,000 | |
| SW 101 / Palm Ave | @ | Miami-Dade CL | 4% | 29016 | 27419 | 34,122 | 29,264 | 29300 | 27,500 | 27,500 | |
| Douglas Road | @ | Miami-Dade CL | 11% | 51760 | 35781 | 34,196 | 19,207 | 34200 | 32,000 | 32,000 | |
| SR 817 (Univ) | @ | Miami-Dade CL | 1% | **67373** | 65210 | 76,907 | 88,533 | 67400 | 67,000 | 67,000 | |
| Turnpike | @ | Miami-Dade CL | 6% | 147802 | 113244 | 197,643 | 183,136 | | 159,800 | 159,800 | |
| SR 7 / 441 | @ | Miami-Dade CL | 2% | **66749** | 63749 | 77,789 | 74,176 | | 65,000 | 65,000 | |
| SW 56th Ave | @ | Miami-Dade CL | 0% | **10513** | 10424 | 6,873 | 7,357 | | 10,500 | 10,500 | |
| SW 40th Ave | @ | Miami-Dade | 0% | **7977** | 8065 | 5,899 | 6,322 | | 8,000 | 8,000 | |

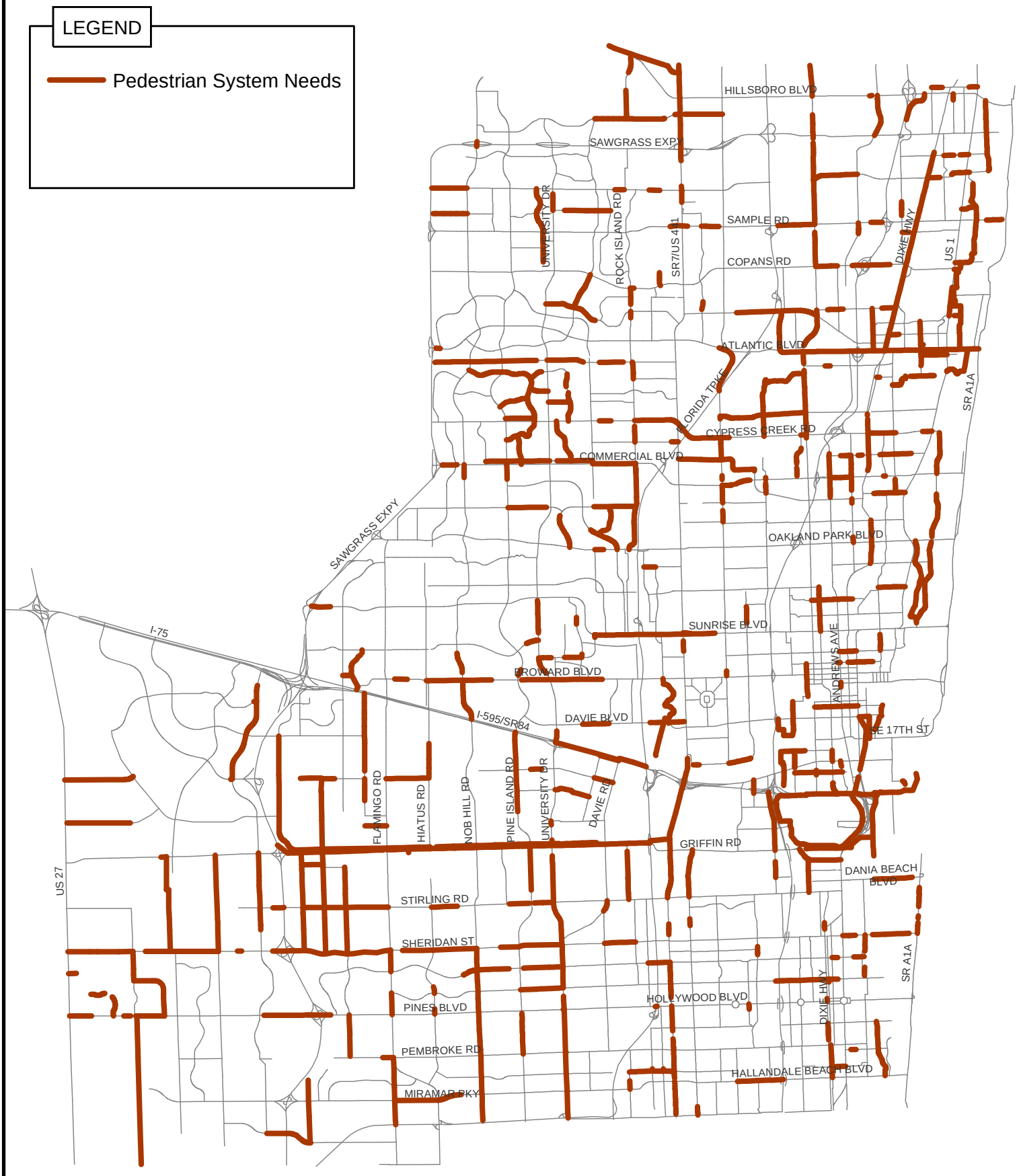
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CL | | | | | | | | |
| I-95 | @ | Miami-Dade CL | 1% | **313337** | 300148 | 310,031 | 290,262 | | 288,500 | 288,500 |
| NW 8th Ave | @ | Miami-Dade CL | 6% | 17396 | 12708 | 8,151 | 11,645 | | 13,400 | 13,400 |
| Dixie Hwy | @ | Miami-Dade CL | 4% | **10874** | 17361 | 12,183 | 8,147 | | 18,400 | 18,400 |
| US-1 | @ | Miami-Dade CL | 1% | **62521** | 60363 | 64,725 | 64,197 | | 62,500 | 62,500 |
| A1A | @ | Miami-Dade CL | 2% | **40180** | 36665 | 37,227 | 42,357 | | 36,700 | 36,700 |
| Dummy (I-95) | @ | Palm Beach CL | | 0 | 0 | 0 | 0 | | -- | -- |
| | | SUM | | 2108530 | 2190611 | 2160374 | 2016626 | | 2,088,600 | 2,088,600 |

# APPENDIX A-5

## NEEDS ASSESSMENT

# Broward County 2030 Long Range Tranportation Plan

## 2030 Pedestrian System Needs



# 2030 LRTP Needs Assessment - Greenways Projects

| Project Name | Limits | Miles | Cost ($ 1,000) |
|---|---|---|---|
| Dixie Hwy (north) | From north Perimeter Rd to Broward Palm Bch County line | 14.6 | 10,000 |
| Dixie Hwy (South) | From north Perimeter Rd to Broward Miami-Dade County line | 14.0 | 10,000 |
| SR A1A | Miami-Dade County Line to Palm Bch County Line | 25.7 | 28,000 |
| C-11 | from Flamingo Rd to US 27 | 13.6 | 5,200 |
| | **TOTAL** | **67.9** | **53,200** |

# 2030 LRTP Needs Assessment - Bicycle Projects

| Line No. | Street Name | Segment Name | Project Description | Length (mi) | Cost (in $000) | Cumulative Cost (in $000) |
|---|---|---|---|---|---|---|
| 1 | Andrews Ave (FTL) | Sunrise Blvd to Oakland Park Blvd | Add Bike Lane | 2.1 | 1,540 | 1,540 |
| 2 | Andrews Ave (FTL) | Prospect Rd to NE 62nd St | Add Bike Lane | 1.6 | 1,165 | 2,705 |
| 3 | Atlantic Blvd (CCR) | SR 7 to Powerline Rd | Add Bike Lane | 3.0 | 2,268 | 4,973 |
| 4 | Atlantic Blvd (CSP) | University to SR 7 | Add Bike Lane | 3.1 | 2,318 | 7,291 |
| 5 | Atlantic Blvd (CSP) | Sawgrass Exp to University | Add Bike Lane | 2.6 | 1,975 | 9,266 |
| 6 | Atlantic Blvd (POM) | Powerline Rd to I-95 | Add Bike Lane | 1.3 | 940 | 10,205 |
| 7 | Broward Blvd (FTL) | SR 7 to I-95 | Resurface/Restripe for Bike Lane | 2.0 | 233 | 10,438 |
| 8 | Broward Blvd (PLN) | Flamingo Rd to Nob Hill Rd | Add Bike Lane | 1.8 | 1,344 | 11,782 |
| 9 | Broward Blvd (PLN) | University to SR 7 | Resurface/Restripe for Bike Lane | 3.9 | 443 | 12,226 |
| 10 | Commercial Blvd (FTL) | NE 15th Ave to US 1 | Add Bike Lane | 0.7 | 521 | 12,747 |
| 11 | Commercial Blvd (FTL) | US 1 to ICWW | Add Bike Lane | 0.9 | 687 | 13,434 |
| 12 | Commercial Blvd (TAM) | Rock Island Rd to Turnpike | Add Bike Lane | 0.7 | 539 | 13,973 |
| 13 | Copans Rd (CCR) | SR 7 to Turnpike | Add Bike Lane | 2.3 | 1,700 | 15,673 |
| 14 | Cypress Creek Rd/NW 62nd St (FTL) | Dixie Hwy to US 1 | Add Bike Lane | 1.5 | 1,118 | 16,791 |
| 15 | Davie Blvd (FTL) | I-95 to SE 3rd Ave | Resurface/Restripe for Bike Lane | 1.8 | 200 | 16,992 |
| 16 | Davie Rd/SW 64th Ave (DAV) | Nova Dr to SR 84 | Add Bike Lane | 0.5 | 397 | 17,389 |
| 17 | Davie Rd/SW 64th Ave (DAV) | Stirling St to Griffin Rd | Add Bike Lane | 1.3 | 982 | 18,371 |
| 18 | Dixie Hwy (DAV) | NE 38th St to Commercial Blvd | Resurface/Restripe for Bike Lane | 1.1 | 124 | 18,495 |
| 19 | Dixie Hwy (POM) | McNab Rd to SW 2nd Pl | Resurface/Restripe for Bike Lane | 1.3 | 149 | 18,645 |
| 20 | Dykes Rd/SW 160th Ave (DAV) | Sheridan St to Griffin Road | Add Bike Lane | 2.3 | 1,698 | 20,343 |
| 21 | Federal Hwy (DAN) | E Young Cir to Dixie Hwy | Add Bike Lane | 2.0 | 1,457 | 21,799 |
| 22 | Federal Hwy (DFB) | NE 36th St to Hillsboro Blvd | Add Bike Lane | 3.0 | 2,207 | 24,006 |
| 23 | Federal Hwy (FTL) | Broward Blvd to Sunrise Blvd | Add Bike Lane | 1.0 | 776 | 24,782 |
| 24 | Federal Hwy (FTL) | Sunrise Blvd to Oakland Park Blvd | Add Bike Lane | 2.2 | 1,620 | 26,402 |
| 25 | Federal Hwy (FTL) | Commercial Blvd to Atlantic Blvd | Add Bike Lane | 3.0 | 2,261 | 28,663 |
| 26 | Griffin Rd (DAN) | Ravenswood Rd to US 1 | Resurface/Restripe for Bike Lane | 1.6 | 185 | 28,848 |
| 27 | Hiatus Road (SUN) | Oakland Park Blvd to Commercial Blvd | Add Bike Lane | 1.9 | 1,455 | 30,302 |
| 28 | Hillsboro Blvd (DFB) | Military Trail to A1A | Add Bike Lane | 3.2 | 2,395 | 32,697 |
| 29 | Hollywood Blvd (HOL) | SR 7 to S Circle Dr | Add Bike Lane | 1.5 | 1,150 | 33,847 |
| 30 | Hollywood Blvd (HOL) | Turnpike Mainline to SR 7 | Resurface/Restripe for Bike Lane | 0.3 | 39 | 33,886 |
| 31 | Johnson St (HOL) | I-95 to US 1 | Resurface/Restripe for Bike Lane | 1.5 | 170 | 34,056 |
| 32 | Johnson St (HOL) | Park Rd to I-95 | Resurface/Restripe for Bike Lane | 0.5 | 60 | 34,116 |
| 33 | Johnson St (HOL) | SR 7 to Park Rd | Add Bike Lane | 2.0 | 1,496 | 35,612 |
| 34 | Johnson St (HOL) | SW 72nd Ave to SR 7 | Resurface/Restripe for Bike Lane | 1.5 | 171 | 35,783 |
| 35 | Las Olas Blvd (FTL) | SE 3rd Ave to SE 15th Av | Resurface/Restripe for Bike Lane | 0.9 | 104 | 35,887 |
| 36 | McNab Rd (TAM) | Nob Hill Rd to Pine Island Rd | Add Bike Lane | 1.0 | 745 | 36,632 |
| 37 | Miramar Pkwy (MIR) | University Drive to SR 7 | Add Bike Lane | 2.6 | 1,918 | 38,550 |
| 38 | MLK Boulevard (POM) | Powerline Rd to I-95 | Add Bike Lane | 1.8 | 1,366 | 39,917 |
| 39 | N 46th Ave (HOL) | Sheridan St to just south of N 35th St | Resurface/Restripe for Bike Lane | 0.6 | 70 | 39,987 |
| 40 | N 56th Ave (DAN) | Sheridan St to Stirling Rd | Resurface/Restripe for Bike Lane | 1.0 | 116 | 40,102 |
| 41 | N 72nd Ave (HOL) | Johnson to Sheridan St | Add Bike Lane | 1.0 | 746 | 40,849 |
| 42 | NE 16th Ave (OAK) | NE 26th St to NE 45th St | Add Bike Lane | 1.7 | 1,235 | 42,084 |
| 43 | NE 48th St (DFB) | NE 15th Ave to Federal Hwy | Resurface/Restripe for Bike Lane | 0.9 | 106 | 42,190 |
| 44 | NE 56th St (FTL) | Dixie Hwy to US 1 | Add Bike Lane | 1.3 | 975 | 43,165 |
| 45 | NE 6th Ave (OAK) | Oakland Park Blvd to NE 38th St | Resurface/Restripe for Bike Lane | 0.5 | 57 | 43,222 |
| 46 | NE 6th Ave (OAK) | NE 38th St to Prospect Rd | Resurface/Restripe for Bike Lane | 0.5 | 59 | 43,281 |
| 47 | Nob Hill Rd/NW 100th Ave (SUN) | Oakland Park Blvd to McNab Rd | Resurface/Restripe for Bike Lane | 2.7 | 305 | 43,586 |
| 48 | Nova Dr (DAV) | University Dr to Davie Rd | Add Bike Lane | 1.4 | 1,058 | 44,644 |
| 49 | NW 136th Ave / Commodore Blvd | SR 84 to Sunrise Blvd | Resurface/Restripe for Bike Lane | 1.9 | 211 | 44,855 |
| 51 | NW 6th St (FTL) | NW 27th Ave to Federal Hwy | Add Bike Lane | 2.5 | 1,891 | 46,746 |
| 52 | NW 7th Ave (FTL) | Broward Blvd to Sunrise Blvd | Add Bike Lane | 0.5 | 365 | 47,111 |
| 53 | NW 81st Ave (NLD) | Commercial Blvd to Mc Nab Rd | Add Bike Lane | 1.0 | 747 | 47,858 |
| 54 | Oakland Park Blvd (LDH) | University Dr to Rock Island Rd | Add Bike Lane | 2.1 | 1,587 | 49,444 |
| 55 | Oakland Park Blvd (OAK) | NW 21st Ave to NW 17th Ter | Add Bike Lane | 0.3 | 212 | 49,656 |
| 56 | Park Rd (HOL) | Pembroke Rd to Stirling St | Add Bike Lane | 3.6 | 2,709 | 52,365 |
| 57 | Pembroke Rd (HAL ) | I-95 to Federal Hwy | Add Bike Lane | 1.4 | 1,077 | 53,441 |
| 58 | Pembroke Rd (MIR) | Douglas Rd to University Dr | Resurface/Restripe for Bike Lane | 1.0 | 113 | 53,554 |
| 59 | Peters Rd (PLN) | Pine Island Rd to SR 7 | Add Bike Lane | 3.9 | 2,903 | 56,457 |
| 60 | Pine Island Rd/NW 88th Ave (TAM) | Commercial Blvd to Southgate Blvd | Add Bike Lane | 2.6 | 1,947 | 58,404 |
| 61 | Powerline Rd (FTL) | Prospect Rd to Atlantic Blvd | Add Bike Lane | 3.5 | 2,585 | 60,989 |
| 62 | Prospect Rd (FTL) | SR 7 to Commercial Blvd | Add Bike Lane | 2.2 | 1,653 | 62,643 |
| 63 | Prospect Rd (OAK) | Commercial Blvd to Dixie Hwy | Add Bike Lane | 2.7 | 2,048 | 64,691 |

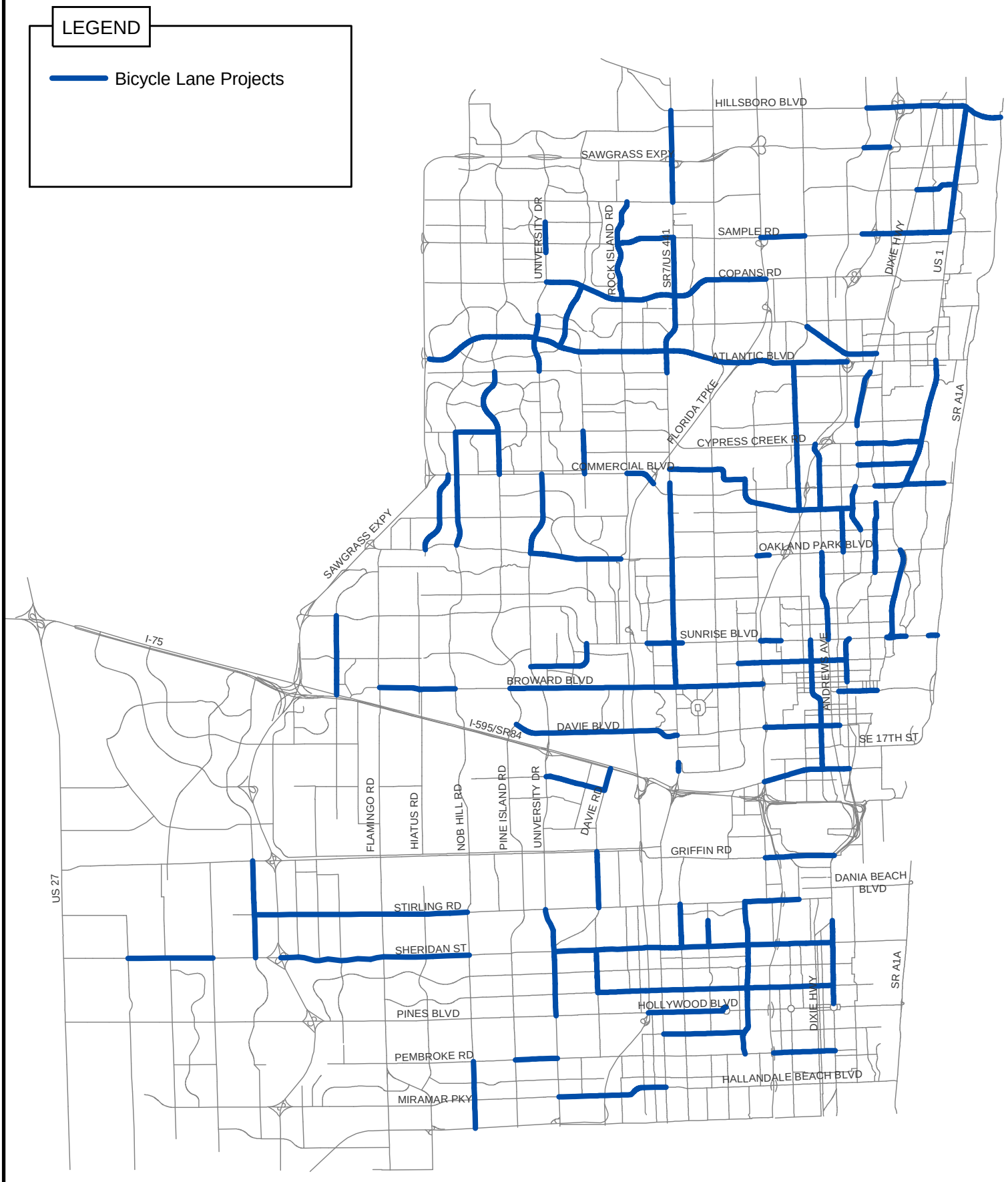
# 2030 LRTP Needs Assessment - Bicycle Projects

| Line No. | Street Name | Segment Name | Project Description | Length (mi) | Cost (in $000) | Cumulative Cost (in $000) |
|---|---|---|---|---|---|---|
| 64 | Riverside Dr (CSP) | Atlantic Blvd to Royal Palm Blvd | Resurface/Restripe for Bike Lane | 1.5 | 176 | 64,867 |
| 65 | Rock Island (CSP) | Royal Palm Blvd to Wiles Rd | Add Bike Lane | 2.4 | 1,790 | 66,657 |
| 66 | Royal Palm Blvd (CSP) | University Dr to SR 7 | Add Bike Lane | 3.0 | 2,271 | 68,928 |
| 67 | Sample Rd (CSP) | Rock Island to SR7 | Add Bike Lane | 1.3 | 995 | 69,923 |
| 68 | Sample Rd (LHP) | NE 5th Ave to US 1 | Resurface/Restripe for Bike Lane | 2.0 | 233 | 70,156 |
| 69 | Sample Rd (POM) | Turnpike Mainline to Powerline Rd | Add Bike Lane | 1.0 | 769 | 70,925 |
| 70 | Sheridan Street (DAV) | I-75 to Palm Ave/NW 101st Ave | Add Bike Lane | 4.4 | 3,307 | 74,232 |
| 71 | Sheridan Street (HOL) | University to SR 7 | Add Bike Lane | 2.5 | 1,864 | 76,095 |
| 72 | Sheridan Street (HOL) | SR 7 to US 1 | Add Bike Lane | 4.1 | 3,032 | 79,128 |
| 73 | Sheridan Street (PEM) | SW 196th Ave to SW 172nd Ave | Add Bike Lane | 2.0 | 1,487 | 80,615 |
| 74 | SR 7 (CCR) | Wiles Rd to Hillsboro Rd | Resurface/Restripe for Bike Lane | 2.2 | 246 | 80,860 |
| 75 | SR 7 (CSP) | Southgate Blvd to Sample Rd | Add Bike Lane | 3.2 | 2,422 | 83,282 |
| 76 | SR 7 (LLK) | Broward Blvd to Commercial Blvd | Add Bike Lane | 4.8 | 3,575 | 86,857 |
| 77 | SR 7 (UNI) | North of Turnpike ramp to Riverland | Add Bike Lane | 0.2 | 147 | 87,005 |
| 78 | SR 84 (FTL) | I-95 to US 1 | Add Bike Lane | 2.0 | 1,493 | 88,498 |
| 79 | Stirling Rd (CPC) | SW 160th Ave to Nob Hills Rd | Add Bike Lane | 5.0 | 3,732 | 92,230 |
| 80 | Stirling Rd (DAN) | Park Rd to S Bryan Road | Add Bike Lane | 1.3 | 953 | 93,182 |
| 81 | Sunrise Blvd (FTL) | I-95 to NW 15th Ave | Add Bike Lane | 0.5 | 359 | 93,541 |
| 82 | Sunrise Blvd (FTL) | US 1 to Middle River | Add Bike Lane | 0.5 | 385 | 93,926 |
| 83 | Sunrise Blvd (FTL) | North Birch Rd to A1A | Add Bike Lane | 0.1 | 111 | 94,037 |
| 84 | Sunrise Blvd (LDH) | NW 45th Ave to SR 7 | Add Bike Lane | 0.8 | 615 | 94,652 |
| 85 | SW 101st Ave (MIR) | Florida Turnpike to Pembroke Rd | Add Bike Lane | 1.6 | 1,167 | 95,819 |
| 86 | SW 10th St (DFB) | Military Trail to I-95 | Resurface/Restripe for Bike Lane | 0.6 | 68 | 95,887 |
| 87 | SW 4th Ave (FTL) | SR 84 to Davie Blvd | Resurface/Restripe for Bike Lane | 1.0 | 116 | 96,003 |
| 88 | SW 4th Ave/SW 7th Ave (FTL) | SW 7th St to Broward Blvd | Add Bike Lane | 1.6 | 1,202 | 97,205 |
| 89 | University Dr (CSP) | NW 31st Ct to NW 40th St | Add Bike Lane | 0.7 | 533 | 97,738 |
| 90 | University Dr (CSP) | Southgate Blvd to Atlantic Blvd | Add Bike Lane | 0.8 | 593 | 98,331 |
| 91 | University Dr (CSP) | Atlantic Blvd to Shadow Wood Blvd | Resurface/Restripe for Bike Lane | 0.5 | 62 | 98,393 |
| 92 | University Dr (DAV) | Pines Blvd to Stirling Rd | Resurface/Restripe for Bike Lane | 2.5 | 289 | 98,682 |
| 93 | University Dr (LDH) | Oakland Park Blvd to Commercial Blvd | Add Bike Lane | 1.9 | 1,439 | 100,120 |
| 94 | Washington St (HOL) | SR 7 to Park Rd | Resurface/Restripe for Bike Lane | 1.9 | 216 | 100,336 |
| | | | **TOTAL** | **168** | **100,336** | |

LEGEND:
COCONUT CREEK (CCR)
COOPER CITY (CPC)
CORAL SPRINGS (CSP)
DANIA BEACH (DAN)
DAVIE (DAV)
DEERFIELD BEACH (DFB)
FORT LAUDERDALE (FTL)
HALLANDALE BEACH (HAL )
HOLLYWOOD (HOL)
LAUDERDALE LAKES (LLK)
LAUDERHILL (LDH)
LIGHTHOUSE POINT (LHP)
MIRAMAR (MIR)
NORTH LAUDERDALE (NLD)
OAKLAND PARK (OAK)
PEMBROKE PINES (PEM)
PLANTATION (PLN)
POMPANO BEACH (POM)
SUNRISE (SUN)
TAMARAC (TAM)
UNINCORPORATED (UNI)

# Broward County 2030 Long Range Tranportation Plan

## 2030 Bicycle System Needs



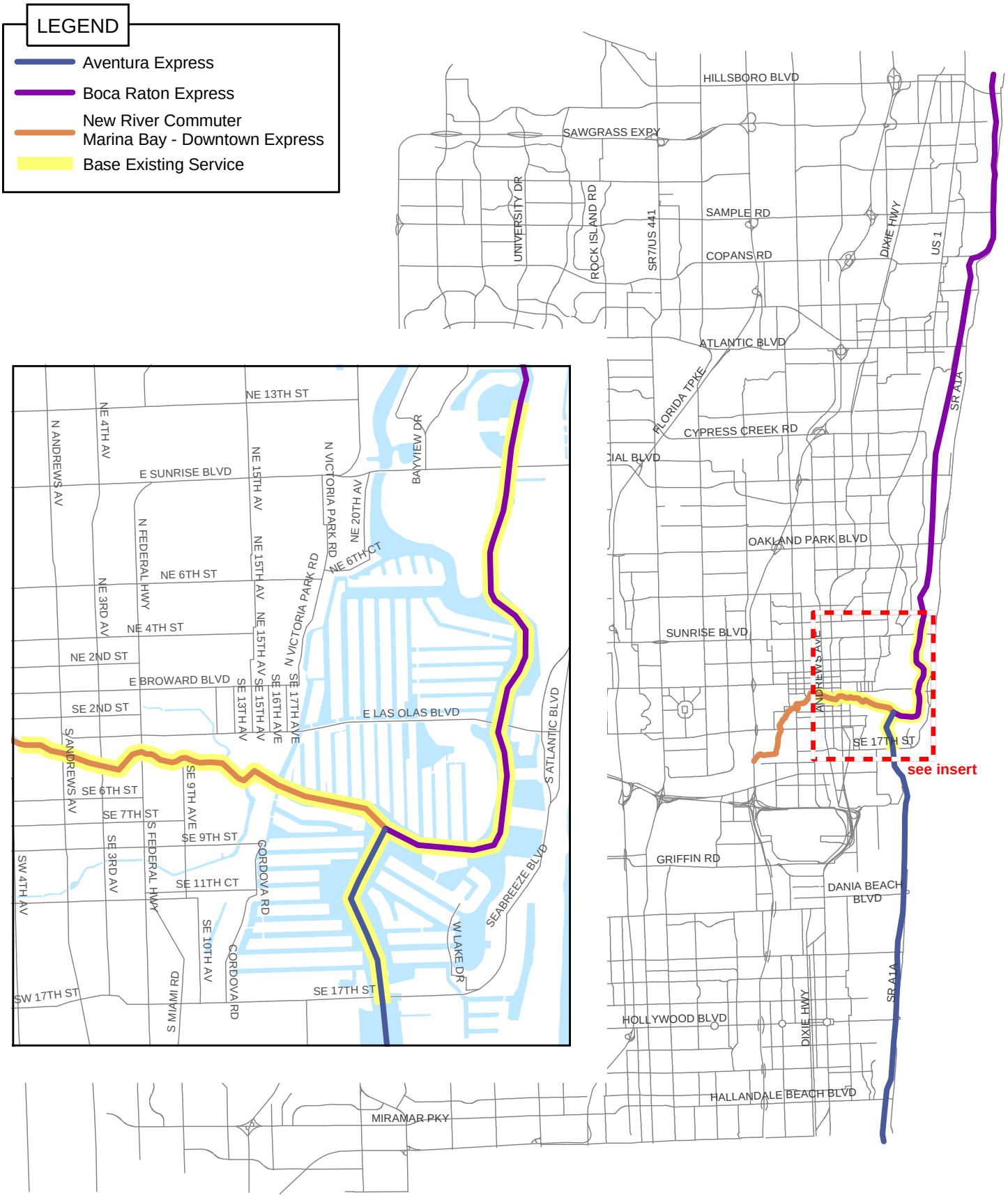
## Waterborne Transportation Needs

| Ref | Project Name | Project Description | Vessel | Estimated Operating Subsidy Requirement [1] (in $000) | Capital Cost (in $000) |
|---|---|---|---|---|---|
| 1 | Improved Base Service Operations | Hourly Service to 22 stops on New River & Intracoastal Waterway | Waterbus | $31,500 | $370 |
| 2 | New Terminal | Optional locations being considered | n/a | $0 | $2,500 |
| 3 | Peak Hour New River Commuter Service | 6:30 am to 9:30 am service from S.W. 7th Street to Marina Bay | Waterbus | $2,625 | $0 |
| 4 | I-95/Marina Bay to Downtown Express | West on New River from S.W. 7th Street to Marina Bay | Catamaran | $6,636 | $2,500 |
| 5 | Aventura/ Hollywood Express | High speed service from downtown Ft Lauderdale to Hollywood and Aventura | Catamaran | $0 | $6,000 |
| 6 | Boca Raton Express | High speed service from downtown Ft Lauderdale to Pompano Beach and | Catamaran | $0 | $6,000 |
| | | | **TOTAL** | **$40,761** | **$17,370** |

[1] Annual Operating Subsidy multiplied by 21 years.

# Broward County 2030 Long Range Tranportation Plan

## 2030 Waterborne Transportation Needs



# 2030 LRTP Needs Assessment - Regular Transit Projects

| Project Type | Service Improvement | Route Numbers | Total Operating Subsidy (2004$ - in $000) | Total Capital Cost (1) (in $000) |
|---|---|---|---|---|
| **Regular Transit Service** | | | | |
| Local Operations | Transportation trust funds used to subsidize local transit operations, 2010 to 2030 | | $753,690 | $0 |
| Local Service | Improve Local Service Frequency | | $378,000 | $0 |
| Regular Bus | Weekday 10 minute headways | 1, 18, 36, and 72 | | $5,171 |
| Regular Bus | Weekday 15 minute headways | 2, 14, 31, 40, 50, and 60 | | $4,575 |
| Regular Bus | Weekday 20 minute headways | 7, 10, 11, 28, and 83 | | $3,381 |
| Regular Bus | Weekday 30 minute headways | 3, 5, 9, 15, 20, 55, and 62 | | $2,735 |
| Regular Bus | Weekday 40 minute headways | 57 | | $184 |
| Regular Bus | Saturday Headway Improvments | 2, 9, 14, 15, 31, 50, and 55 | | $624 |
| Regular Bus | Sunday/Holiday Headway Improvments | 6, 7, 9, 10, 11, 14, 15, 30, 40, 50, 55, 81, and 83 | | $893 |
| Regular Bus | Service Expansion | 12 and 88 | | $2,042 |
| Regular Bus | Six New Routes | Galleria to Aventura (4), Atlantic (35), Margate to Sawgrass Mills (44), Hillsboro (89), Stirling (201), and Griffin (202) | | $6,545 |
| | | | $1,131,690 | $26,150 |
| | | | | $1,157,840 |

(1) Cost per vehicle is assumed to be $315,000

# 2030 LRTP Needs Assessment - Premium Transit Projects

| Project ID | Project Type | Project Name | Project Alignment Limits | Year of Implementation | Total Operating Cost | Capital Costs |
|---|---|---|---|---|---|---|
| | | | | | | Total Capital Cost |
| 2 | LRT | Downtown Light Rail | Downtown Ft. Lauderdale Andrews/3rd Ave | 2025 | $30,986,000 | $51,042,000 |
| 3 | LRT | FEC / Tri-Rail Expansion | Miami-Dade County to Palm Beach County | 2020 | $50,802,000 | $775,000,000 |
| 4 | LRT | I-595 HPT Corridor | From Sawgrass Mills to Int'l Airport via Downtown | 2015 | $30,826,000 | $600,000,000 |
| 5 | LRT | SR 7 / US 441 HPT Corridor | From Miami-Dade County to Palm Beach County | 2015 | $10,851,863 | $1,037,325,000 |
| 7 | BRT | Oakland Park Blvd BRT | From Sawgrass Mills to Downtown via US 1 | 2010 | $40,942,512 | $140,897,808 |
| 8 | BRT | Pines/Hollywood Blvd BRT | From SW 160th Ave to Young Circle | 2015 | $50,500,142 | $113,445,611 |
| 10 | BRT | University Blvd BRT | From Miami-Dade County to Sample Road | 2020 | $9,844,903 | $173,605,200 |
| 11 | Express | Atlantic Blvd. Express Bus | Sawgrass to Pompano TC at Dixie | 2025 | $6,029,527 | $1,890,000 |
| 12 | Express | Broward Blvd Express Bus | Sawgrass Mills to downtown Ft Laud. | 2015 | $28,664,820 | $2,205,002 |
| 13 | Express | Cypress Creek / McNab Road Express Bus | Sawgrass Mills - Tri-Rail - Downtown TC | 2020 | $21,083,542 | $2,205,000 |
| 14 | Express | I-75 Express Bus | From Miami-Dade County to Sawgrass Mills | 2020 | $32,863,000 | $3,150,000 |
| 26 | Express | FTPK Express Bus | MIA West, HEFT, FTPK to Palm Beach County | 2015 | $3,381,972 | $315,000 |
| 15 | Express | Powerline Express Bus | From Downtown Ft. Laud. to Palm Beach Co. | 2015 | $18,995,658 | $1,575,001 |
| 9 | Express | Sample Road BRT | From Sawgrass to Pompano Square Mall via Dixie Hwy | 2025 | $36,529,000 | $30,270,000 |
| 16 | Express | Sawgrass Express Bus | Sawgrass Mills to Boca Tri-Rail Station | 2025 | $9,079,758 | $2,835,000 |
| 17 | Express | Sheridan Rd Express Bus | Sw 160 Av/Dykes Rd to FEC/US 1 | 2025 | $8,197,004 | $2,205,000 |
| 18 | Express | Sunrise Blvd Express Bus | Sawgrass Mills to downtown Ft Laud. | 2010 | $36,001,174 | $1,890,002 |
| 27 | Express | US 1 Hollywood Express Bus | FTL Airport to Aventura Mall | 2010 | $17,501,899 | $1,260,001 |
| 19 | Local | Downtown - Beach - 17th Street Circulator | Downtown - Las Olas - Beach - SE 17th St. | 2010 | $10,374,532 | $1,260,001 |
| 20 | Local | Flamingo Rd Shuttle | Miami-Dade County to I-595 | 2015 | $10,479,643 | $1,575,001 |
| 21 | Local | Griffin Rd Local Bus | Weston Rd. to US 1 & FLL | 2010 | $17,258,673 | $2,520,002 |
| 22 | Local | Palm Ave / Nob Hill Rd Local Bus | Miramar Pkwy to Broward Blvd | 2020 | $4,429,567 | $1,575,000 |
| 23 | Local | Pembroke Rd Local Bus | SW 160th Av/Dykes to SR 7 / US 441 | 2010 | $13,626,251 | $2,205,002 |
| 24 | Local | Stirling Rd Local Bus | I-75 to I-95/Tri-Rail/Oakwood Plaza | 2010 | $13,831,191 | $2,520,002 |
| 25 | Local | SW 160th Ave /Rte 23 Ext. | Miramar Pkwy to Sheridan Rd(& Sawgrass) | 2015 | $3,480,303 | $945,001 |
| | Paratransit | Operations and Capital | | | $285,500,000 | |
| | Tri-Rail Operations | Contribution to Tri-Rail Operations | Miami-Dade to Palm Beach County Lines | | $84,000,000 | |
| | Construction | Build Neighborhood and Regional Transit Centers | Cities of Lauderhill, Coral Springs, Miramar, Hollywood, Pompano Beach, and Davie (Educational Center) | | | $8,150,000 |
| | Automated People Mover (APM) | Automated People Mover | From FLL Airport to Port Everglades | | | $1,150,000 |
| Total | N/A | N/A | N/A | N/A | $886,060,933 | $2,963,015,633 |

**Sources: GAO, MASS TRANSIT: Bus Rapid Transit Shows Promise,a report to congressional requesters by the United States General Accounting Office (GAO),** **$3,849,076,567**

**Notes:**

**(1) BRT Capital Costs are based on reported 2003 median costs for independent, at-grade busways, $7.5 million and arterial median busways, $6.6 million. Broward MPO plans to implement a seperated**

**(2) BRT vehicle cost is assumed to be $1,000,000 per vehicle with a lifespan of twelve years. Source is Las Vegas MAX vehicle purchases, French- made Civis BRT Vehicle by Irisbus.**

**(3) LRT capital costs are based on 13 cities that built 18 LRT lines since 1980. The average cost in 2000 dollars is estimated at $34.8 million, this was inflated to 2004 dollars at $39.15 million. This cost**

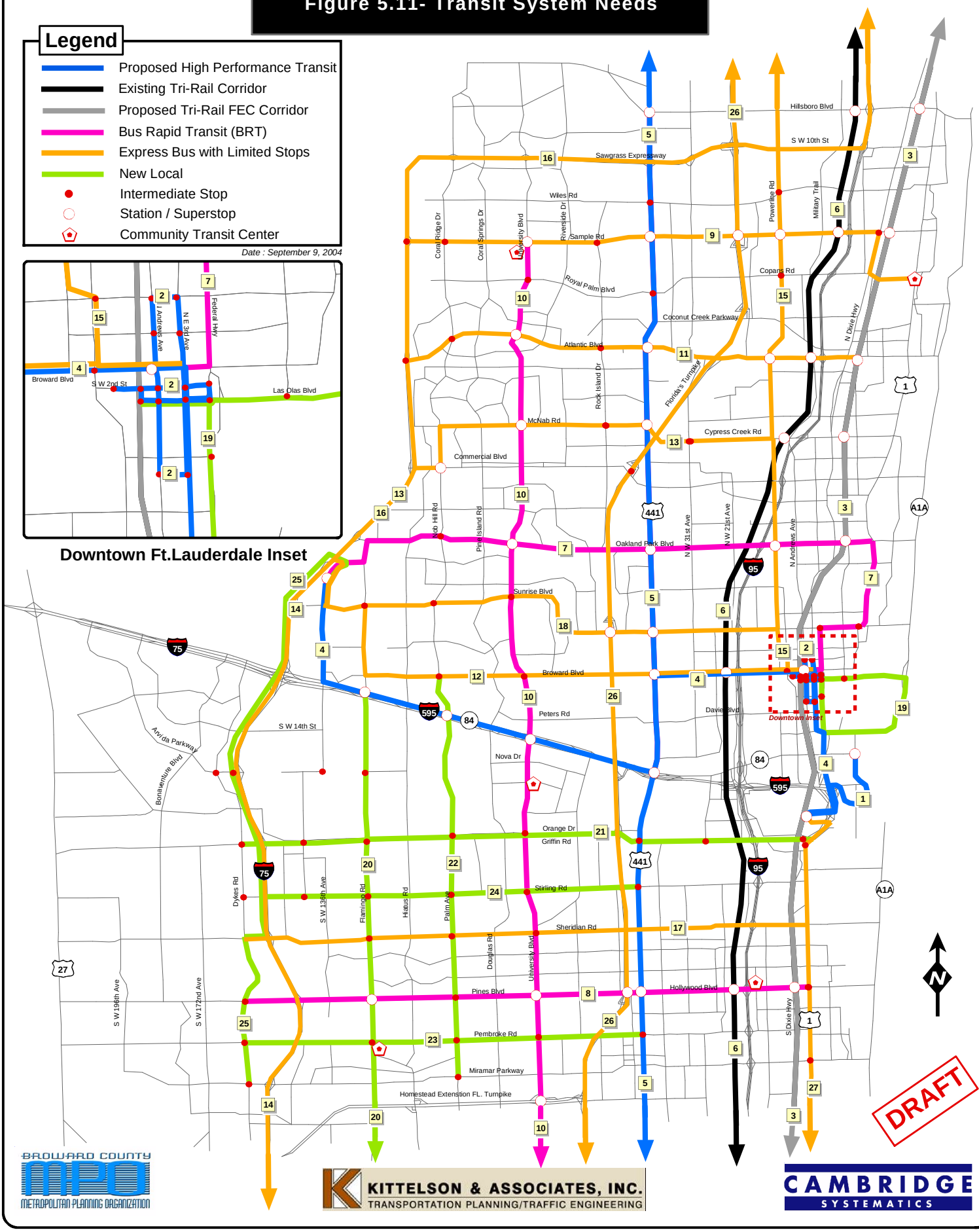
**(4) The light rail vehicle cost estimate is based on a UTA capital cost budget in 1998 of light rail transit vehicles ($2,200,000 in 1998 dollars). This figure was inflated by three percent (3%) annually to**

**(5) The express and local bus service have no estimated facility development/ initial costs and the cost per vehicle is $315,000 with a life-span of twelve years.**

**(6) The vehicle replacements for BRT and express bus over the 2030 Premium Transit Capital Cost estimates have been included where applicable and are in 2004 dollars.**

# Broward County 2030 Long Range Transportation Plan Update

## Figure 5.11- Transit System Needs




BROWARD COUNTY MPO METROPOLITAN PLANNING ORGANIZATION

KITTELSON & ASSOCIATES, INC. TRANSPORTATION PLANNING/TRAFFIC ENGINEERING

CAMBRIDGE SYSTEMATICS

**2030 LRTP Needs Assessment - Highway Projects**

| Line | Project Name | From | To | Miles | Project Description | Total Cost ($1,000) |
|---|---|---|---|---|---|---|
| 1 | Andrews Ave | Pompano Park Pl/SW 3 St | Atlantic Blvd | 0.4 | New (4LD) | 35,040 |
| 2 | Andrews Ave | Atlantic Blvd | Sample Rd | 3 | From 4 to 6 lanes (6LD) | 34,274 |
| 3 | Andrews Ave | SR 84 (SW 24th St) | Davie Blvd | 1 | From 4 to 6 lanes (6LD) | 17,956 |
| 4 | Andrews Ave | Davie Blvd | Sunrise Blvd | 2 | Corridor Improvement | 1,000 |
| 130 | Andrews Ave | NW 18 St | Copans Rd | 0.5 | New (4LD) | 19,500 |
| 5 | Arvida Pkwy | Saddle Club Rd | Weston Rd | 3 | From 4 to 6 lanes (6LD) | 14,441 |
| 6 | Atlantic Blvd | NE 2nd Ave | Federal Hwy (US1) | 1.1 | Restripe for 6LD | 1,000 |
| 7 | Atlantic Blvd | Sawgrass Expy | Coral Springs Dr | 1.9 | From 4 to 6 lanes (6LD) | 15,514 |
| 8 | Bass Creek Rd | SW 172nd Ave | SW 148 Ave | 2.3 | From 2 to 4 lanes (4LD) | 10,634 |
| 9 | Bass Creek Rd | SW 148 Ave | Flamingo Rd | 2 | New 4 lanes | 24,942 |
| 142 | Bass Creek Rd | SW 184th Avenue | SW 172nd Ave | 1 | New (4LD) | 7343 |
| 10 | Blount Rd | Hammondville Rd | Sample Rd | 1.8 | From 2 to 4 lanes (4LD) | 20,852 |
| 11 | Coconut Creek Pkwy | SR-7 / US 441 | Florida's Turnpike | 2 | From 4 to 6 lanes (6LD) | 22,929 |
| 12 | College Ave | SW 39 Ave | SR 84 | 1.4 | From 3 to 4 lanes (4LD) | 12,163 |
| 13 | Commercial Blvd | Sawgrass Expy | Nob Hill Road | 0.83 | Convert to Expressway | 2,890 |
| 14 | Copans Rd | Lyons Rd | Blount Rd | 1.3 | From 4 to 6 lanes (6LD) | 14,748 |
| 15 | Copans Rd | SR-7 | Lyons Rd | 1.2 | From 4 to 6 lanes (6LD) | 13,613 |
| 16 | Coral Ridge Dr | Sample Rd | Sawgrass Exwy | 2 | From 4 to 6 lanes (6LD) | 16,558 |
| 18 | Coral Springs Dr | Commercial Blvd | Sample Rd | 5.5 | From 4 to 6 lanes (6LD) | 45,175 |
| 19 | County Line Rd | Coral Ridge Dr | Hillsboro Blvd Ext. | 2.75 | New (4LD) | 20,193 |
| 35 | County Line Rd (HEFT Ext) | FL. Turnpike | I-95 | 3.9 | Feasibity Study | 1,000 |
| 20 | Cypress Creek Rd | Cypress Rd | US-1 | 0.9 | From 2 to 4 lanes (4LD) | 16,502 |
| 21 | Cypress Creek Rd | Dixie Hwy | Cypress Rd | 0.6 | From 2 to 4 lanes (4LD) | 11,241 |
| 22 | Dania Bch Blvd | SW 3rd/4th Ave | US 1 | 0.4 | From 2 to 4 lanes (4LD) | 7,334 |
| 23 | Davie Blvd | SR7/US 441 | US-1 | 3.5 | From 4 to 6 lanes (6LD) | 51,275 |
| 24 | Davie Rd | Nova Dr | I-595 | 0.5 | From 4 to 6 lanes (6LD) | 5,672 |
| 25 | Douglas/Pine Island Rd | Stirling Rd | Sheridan St | 1.2 | From 4 to 6 lanes (6LD) | 9,647 |
| 26 | Dykes Rd | Sheridan St | Griffin Rd | 2.3 | From 2 to 4 lanes (4LD) | 11,117 |
| 27 | Flamingo Rd | Bass Creek Rd | Pembroke Rd | 2 | From 4 to 6 lanes (6LD) | 16,078 |
| 28 | Florida's Turnpike | Sawgrass | Palm Beach County Line | 25.9 | From 6 to 8 lanes | 26,700 |
| 29 | Florida's Turnpike | At Stirling Rd | | 0.2 | New Interchange | 60,000 |
| 132 | Florida's Turnpike | At Oakland Park Boulevard | | 0.2 | New Interchange | 18,600 |
| 136 | Florida's Turnpike | At I-595 | | 0.3 | Interchange Modification | 88,900 |
| 138 | Florida's Turnpike | At Sunrise Boulevard | | 0.1 | Interchange Modification | 28,000 |
| 141 | Florida's Turnpike | At Sawgrass Interchange | | 0.2 | Interchange Modification | 35,000 |
| 30 | Griffin Rd | I-75 | Flamingo Rd | 2.7 | From 4 to 6 lanes (6LD) | 13,122 |
| 31 | Griffin Rd | US 27 | Bonaventure Blvd | 2.5 | From 2 to 4 lanes (4LD) | 12,084 |
| 32 | Hallandale Bch Blvd | SR 7 / US 441 | I-95 | 2.5 | From 4 to 6 lanes (6LD) | 28,361 |
| 33 | Hammondville Rd | Florida Turnpike | Andrews Ave | 2 | From 4 to 6 lanes (6LD) | 22,689 |
| 34 | HEFT | Miami-Dade County Line | FL. Turnpike | 7.3 | From 4 to 6 lanes (6LD) | 83,535 |
| 36 | Hiatus Rd | Oakland Park Blvd | Commercial Blvd | 1.8 | From 4 to 6 lanes (6LD) | 14,470 |
| 37 | Hiatus Rd | Sheridan Rd | Stirling Rd | 1 | From 2 to 4 lanes (4LD) | 8,209 |
| 38 | Hiatus Rd | Stirling Rd | Griffin Rd | 0.6 | New (4LD) | 7,483 |
| 39 | Hillsboro Blvd | NW 64th Ter | SR7/US 441 | 0.8 | From 4 to 6 lanes (6LD) | 9,076 |
| 40 | Hillsboro Blvd | US 1 | SR A1A | 1 | From 4 to 6 lanes (6LD) | 17,956 |
| 41 | Hollywood Blvd | I-95 | S. Dixie Hwy | 1.4 | Restripe for 6LD | 2,000 |

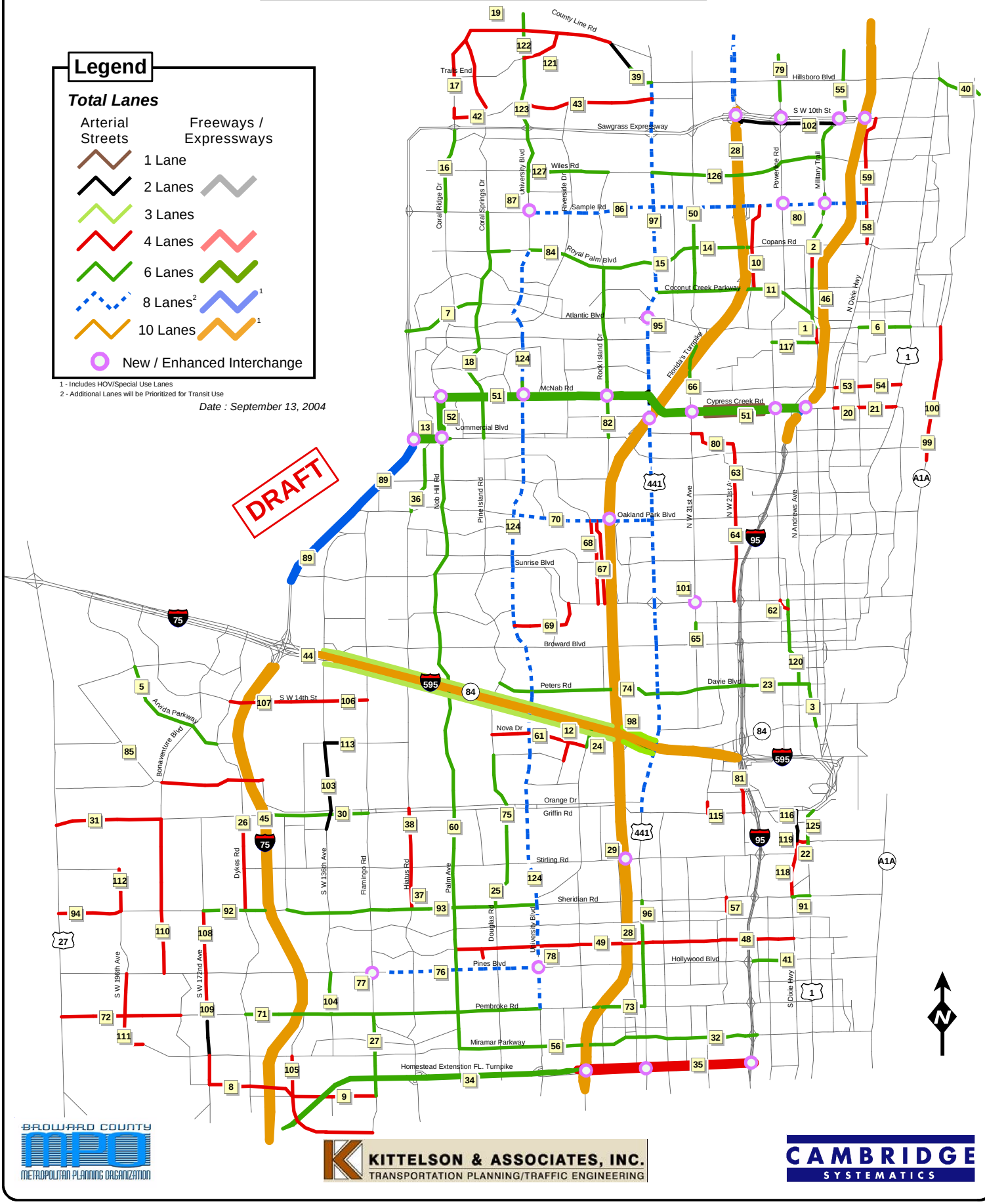
**2030 LRTP Needs Assessment - Highway Projects**

| Line | Project Name | From | To | Miles | Project Description | Total Cost ($1,000) |
|---|---|---|---|---|---|---|
| 42 | Holmberg Rd | Coral Ridge Dr. | Coral Springs Dr | 0.8 | New (2LU) | 6,588 |
| 43 | Holmberg Rd | University Dr | SR7/US 441 | 3.25 | From 2 to 4 lanes (4LD) | 37,650 |
| 44 | I-595 | E of I-75 | I-95 | 10 | Add 2 Reversible Lanes | 84,100 |
| 44 | I-595 | I-75 | US-1 | 14 | Causeway Improvements | 151,800 |
| 44 | I-595 | I-75 | University Drive | 7 | Ramp Modifications & three cross-street overpasses | 144,000 |
| 45 | I-75 | Miami-Dade County Line | I-595 | 12.3 | Add Reversible Lanes | 214,000 |
| 146 | I-75 | At Pines, Sheridan, and Griffin | | | 3 Urban Interchanges | 16,500 |
| 46 | I-95 | Commercial Blvd | Sample Rd | 6.5 | From 8 to 10 lanes (AUX) | 131,500 |
| 47 | I-95 | Sample Rd | Palm Beach County Line | 3.7 | From 8 to 10 lanes (AUX) | 58,300 |
| 48 | Johnson St | NW 46th Ave | N. Dixie Hwy | 5.7 | From 2 to 4 lanes (4LD) | 66,272 |
| 49 | Johnson St | Palm Ave | NW 46th Ave | 2.6 | From 2 to 4 lanes (4LD) | 38,896 |
| 50 | Lyons Rd | S. of Coconut Crk Pkwy | Sample Rd | 2.1 | From 4 to 6 lanes (6LD) | 23,824 |
| 51 | McNab Rd | Nob Hill Rd | Pine Island | 0.5 | From 4 to 6 lanes (6LD) | 4,020 |
| 53 | McNab Rd | Dixie Hwy | Cypress Rd | 0.6 | New (4LD) | 11,519 |
| 54 | McNab Rd | Cypress Rd | US-1 | 0.9 | From 2 to 4 lanes (4LD) | 16,502 |
| 52 | McNab Rd/Commercial Blvd | Sawgrass, Nob Hill | I-95 | 10.4 | New Expressway Connector | 10,000 |
| 55 | Military Trail | Sample Rd | Palm Beach County Line | 3.9 | From 4 to 6 lanes (6LD) | 44,244 |
| 56 | Miramar Pkwy | Palm Ave | SR 7 / US 441 | 4.6 | From 4 to 6 lanes (6LD) | 44,822 |
| 57 | N. Park Rd | Sheridan Rd | Coolidge St. | 0.4 | From 2 to 4 lanes (4LD) | 4,634 |
| 129 | NE 10th Street | Dixie Hwy | US-1 | 1.5 | From 2 to 4 lanes (4LD) | 27,503 |
| 58 | NE 3rd Ave | Copans Rd | Sample Rd | 1 | From 2 to 4 lanes (4LD) | 9,834 |
| 59 | NE 3rd Ave | Sample Rd | SW 10th St | 1.5 | From 2 to 4 lanes (4LD) | 12,023 |
| 17 | Nob Hill Rd | N. of Trails End | County Line Rd | 1.63 | New (4LD) | 11,969 |
| 60 | Nob Hill Rd/Palm Ave | Miramar Pkwy | Commercial Blvd | 15.1 | From 4 to 6 lanes (6LD) | 122,349 |
| 61 | Nova Dr | Pine Island Rd | Davie Rd | 2.3 | From 2 to 4 lanes (4LD) | 34,408 |
| 63 | NW 21 Ave | Oakland Park Blvd | Commercial Blvd | 1.3 | From 2 to 4 lanes (4LD) | 15,300 |
| 64 | NW 21/23 Ave | Sunrise Blvd | Oakland Pk Blvd | 2 | From 3 to 4 lanes (4LD) | 17,377 |
| 65 | NW 31st Ave | Broward Blvd | Sistrunk Blvd | 0.5 | From 4 to 6 lanes (6LD) | 5,672 |
| 66 | NW 31st Ave | McNab Rd. | N of FL. Turnpike | 1.3 | From 4 to 6 lanes (6LD) | 14,748 |
| 67 | NW 55th Ave | Sunrise Blvd | Oakland Park Blvd | 2 | From 2 to 4 lanes (4LD) | 23,169 |
| 128 | NW 55th Ave | South of Oakland Park Blvd | North of Oakland Park Blvd | 0.5 | Re-align with Rock Island Rd | 3,672 |
| 68 | NW 56th Ave | Sunrise Blvd | Oakland Park Blvd | 2 | From 2 to 4 lanes (4LD) | 23,409 |
| 69 | NW 5th St/65th Ave | University Dr | Sunrise Blvd | 1.8 | From 2 to 4 lanes (4LD) | 20,852 |
| 62 | NW 7th/9th Ave Connector | S of Sunrise Blvd | NW 6th St | 0.5 | New (4LD) | 40,000 |
| 70 | Oakland Pk Blvd | University Dr | SR 7 / US 441 | 2.3 | From 6 to 8 lanes (8LD) | 29,845 |
| 73 | Pembroke Rd | W of Turnpike | SR 7 / US 441 | 1.4 | Restripe for 6LD | 1,000 |
| 71 | Pembroke Rd. | SW 160th Ave | University Dr | 7.1 | From 4 to 6 lanes (6LD) | 23,792 |
| 72 | Pembroke Rd. | E. of SW 178th Ave | US Hwy 27 | 1.5 | New (4LD) | 11,015 |
| 74 | Peters Rd | Pine Island Rd | SR 7 / US 441 | 3.25 | From 4 to 6 lanes (6LD) | 37,110 |
| 75 | Pine Island Rd | Nova Dr | Stirling Rd | 2.8 | From 4 to 6 lanes (6LD) | 22,509 |
| 76 | Pines Blvd | Flamingo Rd | University Dr | 3 | From 6 to 8 lanes (8LD) | 27,142 |
| 77 | Pines Blvd | At Flamingo Rd | | | New Interchange | 10,000 |
| 78 | Pines Blvd | At University Dr | | | New Interchange | 10,000 |
| 79 | Powerline Rd | SW 10 St | Palm Beach County Line | 1.6 | From 4 to 6 lanes (6LD) | 18,391 |
| 80 | Prospect Rd | NW 31 Ave | Commercial Blvd | 1.5 | From 2 to 4 lanes (4LD) | 17,377 |
| 81 | Ravenswood Rd | Griffin Rd | SW 36 St | 1 | From 2 to 4 lanes (4LD) | 11,825 |

**2030 LRTP Needs Assessment - Highway Projects**

| Line | Project Name | From | To | Miles | Project Description | Total Cost ($1,000) |
|---|---|---|---|---|---|---|
| 82 | Rock Island Dr | Commercial Blvd | McNab Rd | 1 | From 4 to 6 lanes (6LD) | 11,345 |
| 83 | Rock Island Dr | McNab Rd. | Royal Palm Blvd | 3.1 | From 4 to 6 lanes (6LD) | 36,128 |
| 84 | Royal Palm Blvd | W of University Dr | SR 7 / US 441 | 3.4 | From 4 to 6 lanes (6LD) | 39,531 |
| 85 | S.Post Rd | Bonaventure Blvd | SW 154 Ave | 1.6 | From 2 to 4 lanes (4LD) | 7,734 |
| 86 | Sample Rd | University Dr | I-95 | 7.2 | From 6 to 8 lanes (8LD) | 91,926 |
| 87 | Sample Rd | At Powerline Rd | | | New Interchange | 10,000 |
| 88 | Sample Rd | At University Dr | | | New Interchange | 10,000 |
| 89 | Sawgrass Expy | Sunrise Blvd | Commercial Blvd | 4.4 | From 6 to 8 lanes (HOV) | 35,234 |
| 147 | Sawgrass Exwy | Sunrise Blvd | FTPK Main Line | 22.1 | Implement Open Road Tolling | 30,000 |
| 90 | SE/NE 3 Ave | Davie Blvd | Sunrise Blvd | 2 | Corridor Improvement | 1,000 |
| 91 | Sheridan St | Dixie Hwy | US-1 | 0.4 | From 4 to 6 lanes (6LD) | 19,671 |
| 92 | Sheridan St | SW 160th Ave | SW 172nd Ave | 1 | From 4 to 6 lanes (6LD) | 4,734 |
| 93 | Sheridan St | SW 148th St | University Dr | 5 | From 4 to 6 lanes (6LD) | 33,496 |
| 94 | Sheridan St | US 27 | NW 196th Ave | 1.4 | From 2 to 4 lanes (4LD) | 6,767 |
| 96 | SR 7 | Pines Blvd | Sheridan St | 2.4 | From 4 to 6 lanes (6LD) | 152,536 |
| 95 | SR 7 / US 441 | At Atlantic Blvd | | | Intersection Improvement | 10,000 |
| 98 | SR 84 Frontage Roads | SW 136 Ave | SR-7/ US 441 | 8.2 | from 2 to 3 lanes each way | 29,727 |
| 100 | SR A1A | Pine Ave | Atlantic Blvd | 2.43 | From 2 to 4 lanes (4LD) | 44,556 |
| 131 | SR A1A (Deerfield Bch) | NE 4th Street | SE 1st Street | | Intersection Improvements | 11,600 |
| 99 | SR A1A/ Bougainvilla Dr | Imperial Lane | Pine Ave | 2.7 | 2-lane oneway each | 4,296 |
| 97 | SR7 / US 441 | Griffin Rd | Hillsboro Rd | 15.8 | From 6 to 8 lanes (8LD) | 202,926 |
| 101 | Sunrise Blvd | At NW 31 Ave | | | New Interchange | 10,000 |
| 102 | SW 10th St | Powerline Rd | Military Trail | 1.4 | From 4 to 6 lanes (Expy) | 11,016 |
| 103 | SW 136th Ave | E Palomino Dr | Griffin Rd | 0.4 | New (2LU) | 3,414 |
| 104 | SW 136th Ave | Pembroke Rd | N. of SW 10th St | 0.5 | New 6 lanes | 4,105 |
| 105 | SW 148th Ave | Bass Creek Rd | Miramar Pkwy | 1 | From 2 to 4 lanes (4LD) | 14,435 |
| 106 | SW 14th St | SW 130 Ave | Flamingo Rd | 0.5 | New (4LD) | 6,235 |
| 107 | SW 14th St | Weston Rd | SW 130 Ave | 2.7 | From 2 to 4 lanes (4LD) | 22,165 |
| 108 | SW 172 Ave | Pines Blvd | Sheridan St | 1.5 | From 2 to 4 lanes (4LD) | 7,251 |
| 109 | SW 172 Ave | Pembroke Rd | Pines Blvd | 1 | From 3 to 4 lanes (4LD) | 3,625 |
| 139 | SW 172 Ave | Miramar Pkwy | SW 23 Street | 0.6 | Add one Northbound Lane | 1450 |
| 140 | SW 172 Ave | Miramar Pkwy | Bass Creek Road | 0.6 | From 2 to 4 lanes (4LD) | 2900 |
| 110 | SW 184th Ave | 4th | Sheridan Rd | 1.5 | New (4LD) | 3,899 |
| 135 | SW 184th Ave | Sheridan Street | Griffin Road | 2.2 | New (4LD) | 16,155 |
| 144 | SW 184th Ave | Pines Blvd | Bass Creek Road | 2.5 | New 4 lanes | 20,000 |
| 111 | SW 196th Ave | Miramar Pkwy | Pines Blvd | 2 | New 4 lanes (4LD) | 14,686 |
| 112 | SW 196th Ave | S. of Sheridan St | Stirling Rd | 1.1 | From 2 to 4 lanes (4LD) | 5,317 |
| 113 | SW 26th St | SW 130th Ave | Flamingo Rd | 0.5 | New (2LU) | 4,118 |
| 114 | SW 26th St | US 27 | S.Post Rd | 1.6 | From 2 to 4 lanes (4LD) | 13,135 |
| 115 | SW 30th Ave | Griffin Rd | SW 45th St | 0.3 | From 2 to 4 lanes (4LD) | 3,475 |
| 116 | SW 3rd Ave Ext | Old Griffin Rd | Griffin Rd | 0.3 | New (2LU) | 5,758 |
| 117 | SW 3rd St/Pompano Park Pl | Powerline Rd | Andrews Ave | 0.6 | From 4 to 6 lanes (6LD) | 6,807 |
| 118 | SW 3rd/4th Ave | Dixie Hwy | Dania Bch Blvd | 1.2 | From 2 to 4 lanes (4LD) | 22,003 |
| 119 | SW 3rd/4th Ave | Old Griffin Rd | Dania Bch Blvd | 0.5 | New (2LU) | 9,197 |
| 120 | SW 4th Ave/NW 7th Ave | Davie Blvd | Sunrise Blvd | 2.1 | From 4 to 6 lanes (6LD) | 37,707 |
| 121 | Trails End | University Dr | County Line Rd | 0.7 | New (4LD) | 5,140 |
| 122 | University Dr | Holmberg Rd | County Line Rd | 1.5 | From 2 to 6 lanes (6LD) | 7,251 |
| 123 | University Dr | NW 40 St (Cardinal) | Holmberg Rd. | 2.2 | From 4 to 6 lanes (6LD) | 24,958 |
| 124 | University Dr | Pembroke Rd | Royal Palm Blvd | 17.6 | From 6 to 8 lanes (8LD) | 226,147 |
| 125 | US 1(Federal Hwy) | Stirling Rd | Griffin Rd | 1.1 | From 4 to 6 lanes (6LD) | 19,991 |
| 126 | Wiles Rd | SR7/US 441 | Military Trail | 4.1 | From 4 to 6 lanes (6LD) | 46,753 |
| 127 | Wiles Rd | University Dr | Rock Island Rd | 1.7 | From 4 to 6 lanes (6LD) | 19,286 |

# Figure 5.13- Highway System Needs

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# 2030 LRTP Needs Assessment - Freight Projects

**Infrastructure Projects**

| Project # | Type | Project Name | Limits / Description | Cost ($ 000) |
|---|---|---|---|---|
| 1 | Airport/Seaport Infrastructure Expansion | FPL Canal Bridge (1) | Construct new bridge over FPL canal | $2,000 |
| 2 | Airport/Seaport Infrastructure Expansion | Southport rail connector (1) | Rail Connector between Southport and FEC mainline | $3,300 |
| 3 | Airport/Seaport Infrastructure Expansion | On-Port circulation Improvements (1) | | $4,500 |
| 4 | Airport/Seaport Infrastructure Expansion | Advanced baggage transfer system | Between Port & Airport | $5,000 |
| 5 | Airport/Seaport Infrastructure Expansion | Intermodal Container Terminal Facility (ICTF) | Southport | $13,500 |
| 6 | Airport/Seaport Infrastructure Expansion | Roadway capacity expansion | At Eller Drive; Port Entrance. | $500 |
| 7 | Airport/Seaport Infrastructure Expansion | Access Improvements | At Eisenhower Blvd; Port Entrance. | $500 |
| 8 | Airport/Seaport Infrastructure Expansion | Access Improvements | At SW 24/ Spangler Blvd; Port Entrance | $500 |
| 9 | Parsec-Intermodal Infrastructure Improvement | Operational improvement - turn radius | Andrews Ave./SR 84 southbound | $200 |

*(1) from Atlantic Commerce Corridor Study, Nov 2003* ***SUBTOTAL*** **$30,000**

**Intelligent Transportation System (ITS) projects**

| | | | | |
|---|---|---|---|---|
| 10 | Operational & Technology Improvements | Directional Dinamic Message Signs (DMS) | Within Port Limits | $78 |
| 11 | Operational & Technology Improvements | Optimize Signal Timing | 7 East-West Arterials | $1,680 |
| 12 | Operational & Technology Improvements | Inventory Clearance Equipment | FDOT and FTPK accessible | $210 |
| 13 | Operational & Technology Improvements | Traveler Information via DMS | Port exit: inform on major incidents; security | $525 |
| 14 | Operational & Technology Improvements | Real Time Train Locations | Upgrade/expand current FEC program; add SFRC. | $462 |
| 15 | Operational & Technology Improvements | Delivery appointment system for cruise ships | Web-based appointment system | $147 |
| 16 | Operational & Technology Improvements | Database integration | Integrate Available Databases into Centralized System | $105 |
| 17 | Operational & Technology Improvements | Additional vehicle classification counts. | Key freight highways, annually | $336 |
| 18 | Operational & Technology Improvements | Outreach & Education | Each freight project includes outreach, public relations, and education purposes. | $0 |

*Annualized cost - over 21 years* ***SUBTOTAL*** **$3,543**

**Studies**

| Project # | Type | Project Name | Limits / Description | Cost ($ 000) |
|---|---|---|---|---|
| 19 | Freight Program Enhancements | Freight origin/destination surveys | Commodity type, pick-up and drop-off facility types, key highways, trip frequency | $90 |
| 20 | Freight Program Enhancements | Economic impact study | Economic impact study to evaluate the impact of the industry based in Broward County. | $40 |
| 21 | Freight Program Enhancements | Freight modeling tools | Integrate statewide freight model with local | $30 |
| 22 | Freight Program Enhancements | Freight operations data. | Surveys carriers & shippers | $50 |
| 23 | Freight Program Enhancements | Train volume data set | # freight trains, length, type of equipment, etc. | $175 |
| 24 | Freight Program Enhancements | Revise ranking/prioritization methodology | Develop freight-specific project evaluation criteria to evaluate and prioritize freight improvement projects. | $50 |
| 25 | Freight Program Enhancements | Regional freight plan | With Palm Beach and Miami-Dade MPOs. | $100 |
| 26 | Freight Program Enhancements | Commodity flow forecasts for the region | Utilize the statewide truck freight model to forecast truck trips for internal/external and external/internal trips. | $75 |
| 27 | Freight Program Enhancements | Develop freight performance measures | The MPOs should develop a comprehensive set of performance measures to evaluate the Tri-County freight transportation system on an ongoing basis. | $60 |
| | | | ***SUBTOTAL*** | **$670** |
| | | | **GRAND TOTAL** | **$34,213** |

# 2030 LRTP Needs Assessment - ITS Projects

| No | Project Description | Cost ($ 1,000) |
|---|---|---|
| 1 | ATMS Design Group 3 | $8,000 |
| 2 | Traffic Signal Preemption/Priority along CMS Corridor | $2,000 |
| 3 | Video based vehicle detection systems along CMS Corridor | $2,000 |
| 4 | ATMS Design Group 4 | $10,000 |
| 5 | ATMS Design Group 5 | $12,000 |
| 6 | ATMS Design Group 6 | $12,000 |
| 7 | Crash Data Center | $500 |
| | **TOTAL** | **$46,500** |

# APPENDIX A-6

## HIGHWAY PROJECT PRIORITIES

## Highway Cost-Feasible Projects

| Line | Project Name | From | To | Miles | Project Description | E+C LOS | Needs LOS | Relieves existing congestion (1) | Relieves future congestion (1) | Consistent with local plans (1) | Access to multimodal facility (2) | Supports economic vitality (1) | ROW cost (No=2, average=1, e (2) | System continuity, missing link (1) | Environmental (sever -1, no im (1) | Score | Cost $1,000 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Andrews Ave | Pomp. Pk./SW 3 St | Atlantic Blvd | 0.4 | New (4LD) | F | F | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 20 | 35,040 |
| 130 | Andrews Ave | NW 18 St | Copans Rd | 0.5 | New (4LD) | N/A | D | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 22 | 19,500 |
| 4 | Andrews Ave | Davie Blvd | Sunrise Blvd | 2.0 | Corridor Improvement | N/A | N/A | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 19 | 1,000 |
| 6 | Atlantic Blvd | NE 2nd Ave | Federal Hwy (US1) | 1.1 | Restripe for 6LD | E | D | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 19 | 1,000 |
| 7 | Atlantic Blvd | Sawgrass Expy | Coral Springs Dr | 1.9 | From 4 to 6 lanes (6LD) | C | B | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 16 | 15,514 |
| 8 | Bass Creek Rd | SW 172nd Ave | SW 148 Ave | 2.3 | From 2 to 4 lanes (4LD) | D | D | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 10,634 |
| 9 | Bass Creek Rd | SW 148 Ave | Flamingo Rd | 2.0 | New 4 lanes | D | E | 1 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 19 | 24,942 |
| 142 | Bass Creek Rd | SW 184 Ave | SW 172 Ave | 1.0 | New 4 lanes | N/A | D | 1 | 1 | 2 | 0 | 2 | 2 | 2 | 2 | 18 | 7,343 |
| 10 | Blount Rd | Hammondville Rd | Sample Rd | 1.8 | From 2 to 4 lanes (4LD) | F | F | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 20,852 |
| 16 | Coral Ridge Dr | Sample Rd | Sawgrass Exwy | 2.0 | From 4 to 6 lanes (6LD) | D | B | 1 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 15 | 16,558 |
| 19 | County Line Rd | Coral Ridge Dr | Hillsboro Blvd Ext. | 2.8 | New (4LD) | N/A | C | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 16 | 20,193 |
| 24 | Davie Rd | Nova Dr | I-595 | 0.5 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 5,672 |
| 31 | Griffin Rd | US 27 | Bonaventure Blvd | 2.5 | From 2 to 4 lanes (4LD) | B | B | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 14 | 12,084 |
| 30 | Griffin Rd | I-75 | Flamingo Rd | 2.7 | From 4 to 6 lanes (6LD) | E | B | 2 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 13,122 |
| 32 | Hallandale Bch Blvd | SR 7 / US 441 | I-95 | 2.5 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 18 | 28,361 |
| 37 | Hiatus Rd | Sheridan Rd | Stirling Rd | 1.0 | From 2 to 4 lanes (4LD) | F | B | 2 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 8,209 |
| 41 | Hollywood Blvd | I-95 | S. Dixie Hwy | 1.4 | Restripe for 6LD | E | E | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 20 | 2,000 |
| 50 | Lyons Rd | S. of Coconut Crk Pkwy | Sample Rd | 2.1 | From 4 to 6 lanes (6LD) | F | C | 2 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 23,824 |
| 52 | McNab Rd/Commercial Blvd | Sawgrass, Nob Hill | I-95 | 10.4 | Corridor /Tranist Improve | D | A | 1 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 19 | 10,000 |
| 56 | Miramar Pkwy | Palm Ave | SR 7 / US 441 | 4.6 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 18 | 44,822 |
| 57 | N. Park Rd | Sheridan Rd | Coolidge St. | 0.4 | From 2 to 4 lanes (4LD) | F | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 4,634 |
| 58 | NE 3rd Ave | Copans Rd | Sample Rd | 1.0 | From 2 to 4 lanes (4LD) | F | C | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 18 | 9,834 |
| 59 | NE 3rd Ave | Sample Rd | SW 10th St | 1.5 | From 2 to 4 lanes (4LD) | F | B | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 18 | 12,023 |
| 17 | Nob Hill Rd | N. of Trails End | County Line Rd | 1.6 | New (4LD) | N/A | B | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 16 | 11,969 |
| 63 | NW 21 Ave | Oakland Park Blvd | Commercial Blvd | 1.3 | From 2 to 4 lanes (4LD) | F | E | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 15,300 |
| 64 | NW 21/23 Ave | Sunrise Blvd | Oakland Pk Blvd | 2.0 | From 3 to 4 lanes (4LD) | F | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 17,377 |
| 65 | NW 31st Ave | Broward Blvd | Sistrunk Blvd | 0.5 | From 4 to 6 lanes (6LD) | F | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 5,672 |
| 66 | NW 31st Ave | McNab Rd. | N of FL. Turnpike | 1.3 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 14,748 |
| 128 | NW 55th Ave | South of Oakland Park Blvd | North of Oakland Park Bl | 0.5 | Re-align with Rock Island Rd | F | D | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 3,672 |
| 62 | NW 7th/9th Ave Connector | S of Sunrise Blvd | NW 6th St | 0.5 | New (4LD) | N/A | F | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 20 | 40,000 |
| 73 | Pembroke Rd | W of Turnpike | SR 7 / US 441 | 1.4 | Restripe for 6LD | F | F | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 1,000 |
| 72 | Pembroke Rd. | SW 200th Ave | US Hwy 27 | 1.5 | New (4LD) | N/A | B | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 11,015 |
| 133 | Pembroke Rd | SW 184 Ave | SW 200th Ave | 1.0 | New (4LD) | N/A | B | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 7,342 |
| 134 | Pembroke Rd | SW 160th Ave | SW 184th Ave | 1.9 | New (4LD) | N/A | D | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 13,950 |
| 145 | Pembroke Rd. | University Dr | Douglas Rd | 1.0 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 2,500 |
| 77 | Pines Blvd | At Flamingo Rd | | | New Interchange | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 16 | 10,000 |
| 76 | Pines Blvd | Flamingo Rd | University Dr | 3.0 | From 6 to 8 lanes (8LD) | F | F | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 16 | 27,142 |
| 78 | Pines Blvd | At University Dr | | | New Interchange | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 16 | 10,000 |
| 79 | Powerline Rd | SW 10 St | Palm Beach County Line | 1.6 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 18,391 |
| 80 | Prospect Rd | NW 31 Ave | Commercial Blvd | 1.5 | From 2 to 4 lanes (4LD) | F | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 17,377 |
| 81 | Ravenswood Rd | Griffin Rd | SW 36 St | 1.0 | From 2 to 4 lanes (4LD) | E | B | 2 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 11,825 |
| 83 | Rock Island Dr | McNab Rd. | Royal Palm Blvd | 3.1 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 1 | 15 | 36,128 |
| 82 | Rock Island Dr | Commercial Blvd | McNab Rd | 1.0 | From 4 to 6 lanes (6LD) | D | D | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 11,345 |
| 90 | SE/NE 3 Ave | Davie Blvd | Sunrise Blvd | 2.0 | Corridor Improvement | N/A | N/A | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 18 | 1,000 |
| 92 | Sheridan St | SW 160th Ave | SW 172nd Ave | 1.0 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 4,734 |
| 94 | Sheridan St | US 27 | NW 196th Ave | 1.4 | From 2 to 4 lanes (4LD) | B | B | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 14 | 6,767 |
| 93 | Sheridan St | SW 148th St | University Dr | 5.0 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | 2 | 0 | 2 | 1 | 1 | 1 | 15 | 33,496 |
| 91 | Sheridan St | Dixie Hwy | US-1 | 0.4 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 19 | 19,671 |
| 96 | SR 7 | Pines Blvd | Sheridan St | 2.4 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | 2 | 2 | 2 | -2 | 1 | -2 | 12 | 152,536 |
| 95 | SR 7 / US 441 | At Atlantic Blvd | | | Intersection Improvements | N/A | N/A | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 20 | 10,000 |
| 102 | SW 10th St | Powerline Rd | Military Trail | 1.4 | From 4 to 6 lanes (Expy) | F | C | 2 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 16 | 11,016 |
| 103 | SW 136th Ave | E Palomino Dr | Griffin Rd | 0.4 | New (2LU) | N/A | D | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 3,414 |
| 105 | SW 148th Ave | Bass Creek Rd | Miramar Pkwy | 1.0 | From 2 to 4 lanes (4LD) | F | B | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 14,435 |
| 108 | SW 172 Ave | Pines Blvd | Sheridan St | 1.5 | From 2 to 4 lanes (4LD) | D | B | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 7,251 |

| Line | Project Name | From | To | Miles | Project Description | E+C LOS | Needs LOS | Relieves existing congestion | Relieves future congestion | Consistent with local plans | Access to multimodal facility | Supports economic vitality | ROW cost (No=2, average=1, e | System continuity, missing link | Environmental (sever -1, no im | Score | Cost $1,000 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109 | SW 172 Ave | Pembroke Rd | Pines Blvd | 1.0 | From 3 to 4 lanes (4LD) | F | D | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 3,625 |
| 139 | SW 172 Ave | Miramar Pkwy | SW 23 St | 0.6 | Add one Northbound Lane | F | D | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 1,450 |
| 140 | SW 172 Ave | Miramar Pkwy | Bass Creek Rd | 0.6 | From 2 to 4 lanes (4LD) | D | B | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 2,900 |
| 110 | SW 184th Ave | 4th Street | Sheridan Rd | 1.5 | New (4LD) | N/A | C | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 3,899 |
| 135 | SW 184th Ave | Sheridan St | Griffin Rd | 2.2 | New (4LD) | N/A | B | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 16,155 |
| 144 | SW 184th Ave | Pines Blvd | Bass Creek Rd | 2.5 | New (4LD) | N/A | D | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 20 | 20,000 |
| 111 | SW 196th Ave | Miramar Pkwy | Pines Blvd | 2.0 | From 2 to 4 lanes (4LD) | N/A | B | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 14,686 |
| 112 | SW 196th Ave | S. of Sheridan St | Stirling Rd | 1.1 | From 2 to 4 lanes (4LD) | D | B | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 5,317 |
| 115 | SW 30th Ave | Griffin Rd | SW 45th St | 0.3 | From 2 to 4 lanes (4LD) | F | D | 2 | 1 | 2 | 0 | 2 | 2 | 1 | 2 | 17 | 3,475 |
| 121 | Trails End | University Dr | County Line Rd | 0.7 | New (4LD) | N/A | C | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 16 | 5,140 |
| 123 | University Dr | NW 40 St (Cardinal) | Holmberg Rd. | 2.2 | From 4 to 6 lanes (6LD) | D | C | 1 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 17 | 24,958 |
| 122 | University Dr | Holmberg Rd | County Line Rd | 1.5 | From 2 to 6 lanes (6LD) | B | C | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 16 | 7,251 |
| 127 | Wiles Rd | University Dr | Rock Island Rd | 1.7 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 19 | 19,286 |
| 131 | SR A1A (Deerfield Bch) | NE 4th Street | SE 1st Street | | Intersection Improvements | N/A | N/A | | | 2 | 2 | 2 | 2 | 1 | 2 | 16 | 11,600 |

| Line | Project Name | From | To | Miles | Project Description | E+C LOS | Needs LOS | Relieves existing congestion | Relieves future congestion | Consistent with local plans | Access to multimodal facility | Supports economic vitality | ROW cost (No=2, average=1, e | System continuity, missing link | Environmental (sever -1, no im | Score | Cost $1,000 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## FIHS/Turnpike Cost Feasible Projects

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | Florida's Turnpike | At Stirling Rd | | 0.2 | New Interchange | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 14 | 60,000 |
| 28 | Florida's Turnpike | Sawgrass Expwy | Palm Beach County Lin | 1.9 | From 6 to 8 lanes (HOV) | E | E | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 16 | 26,700 |
| 132 | Florida's Turnpike | Oakland Park Blvd | | 0.2 | New Interchange | N/A | N/A | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 20 | 18,600 |
| 136 | Florida's Turnpike | At I-595 | | 0.3 | Interchange Modification | N/A | N/A | 2 | 2 | 2 | 2 | 2 | 0 | 1 | 0 | 16 | 88,900 |
| 141 | Florida's Turnpike | At Sawgrass Int. | | 0.2 | Interchange Modification | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 16 | 35,000 |
| 147 | Sawgrass Expwy | Sunrise Blvd | FTPK Main Line | 22.1 | Implement Open Road Tolling | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 16 | 30,000 |
| 138 | Florida's Turnpike | At Sunrise Blvd | | 0.1 | Interchange Modification | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 16 | 28,000 |
| 35 | HEFT Ext | FL. Turnpike | I-95 | 3.9 | Study Need and Preliminary Eng. | N/A | D | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 16 | 1,000 |
| 44 | I-595 | I-75 | State Road 7 | 10.0 | Add 2 Reversible Lanes | F | E | 2 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 16 | 84,100 |
| 44 | I-595 | I-75 | US 1 | 14.0 | Corridor Improvements | F | E | 2 | 2 | 2 | 0 | 2 | -1 | 1 | -1 | 12 | 151,800 |
| 44 | I-595 | I-75 | University Drive | 7.0 | Ramp Mods & overpasses | N/A | N/A | 2 | 2 | 2 | 0 | 2 | -1 | 1 | -1 | 12 | 144,000 |
| 45 | I-75 | Miami-Dade Co. Line | I-595 | 12.3 | Add Reversible Lanes | E | E | 2 | 2 | 2 | 0 | 2 | -2 | 2 | -2 | 12 | 214,000 |
| 146 | I-75 | Pines, Sheridan, & Griffin | | | 3 Urban Interchanges | N/A | N/A | 2 | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 18 | 16,500 |
| 47 | I-95 | Sample Rd | Palm Beach County Lin | 3.7 | From 8 to 10 lanes (AUX) | E | E | 2 | 2 | 2 | 2 | 2 | 0 | 1 | 0 | 16 | 58,300 |
| 46 | I-95 | Commercial Blvd | Sample Rd | 6.5 | From 8 to 10 lanes (AUX) | E | E | 2 | 2 | 2 | 2 | 2 | -1 | 1 | -1 | 14 | 131,500 |

## Unfunded Highway Projects (Needs Assessment)

| Line | Project Name | From | To | Miles | Project Description | E+C LOS | Needs LOS | Relieves existin | Relieves future | Consistent with | Access to multi | Supports econ | ROW cost (No= | System continu | Environmental | Score | Cost $1,000 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Andrews Ave | SR 84 (SW 24th St) | Davie Blvd | 1.0 | From 4 to 6 lanes (6LD) | E | C | 2 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 17,956 |
| 2 | Andrews Ave | Atlantic Blvd | Sample Rd | 3.0 | From 4 to 6 lanes (6LD) | F | D | 2 | 1 | -2 | 1 | 0 | 1 | 1 | 1 | 4 | 34,274 |
| 5 | Arvida Pkwy | Saddle Club Rd | Weston Rd | 3.0 | From 4 to 6 lanes (6LD) | E | B | 2 | 0 | -2 | 0 | 1 | 2 | 1 | 2 | 6 | 14,441 |
| 11 | Coconut Creek Pkwy | SR-7 / US 441 | Florida's Turnpike | 2.0 | From 4 to 6 lanes (6LD) | F | C | 2 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 22,929 |
| 12 | College Ave | SW 39 Ave | SR 84 | 1.4 | From 3 to 4 lanes (4LD) | F | E | 2 | 2 | -2 | 0 | 1 | 2 | 1 | 2 | 8 | 12,163 |
| 20 | Cypress Creek Rd | Cypress Rd | US-1 | 0.9 | From 2 to 4 lanes (4LD) | F | C | 2 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 16,502 |
| 21 | Cypress Creek Rd | Dixie Hwy | Cypress Rd | 0.6 | From 2 to 4 lanes (4LD) | B | B | 0 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 2 | 11,241 |
| 13 | Commercial Blvd | Sawgrass Expy | Nob Hill Road | 0.8 | Convert to Expressway | B | B | 0 | 0 | -2 | 0 | -2 | 2 | 1 | 2 | -2 | 2,890 |
| 15 | Copans Rd | SR-7 | Lyons Rd | 1.2 | From 4 to 6 lanes (6LD) | F | D | 2 | 1 | -2 | 0 | 0 | 2 | 1 | 2 | 5 | 13,613 |
| 14 | Copans Rd | Lyons Rd | Blount Rd | 1.3 | From 4 to 6 lanes (6LD) | E | F | 2 | 2 | -2 | 0 | 0 | 2 | 1 | 2 | 6 | 14,748 |
| 18 | Coral Springs Dr | Commercial Blvd | Sample Rd | 5.5 | From 4 to 6 lanes (6LD) | C | B | 0 | 0 | -2 | 0 | 0 | 1 | 1 | 1 | 0 | 45,175 |
| 22 | Dania Bch Blvd | SW 3rd/4th Ave | US 1 | 0.4 | From 2 to 4 lanes (4LD) | N/A | B | 0 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 2 | 7,334 |
| 23 | Davie Blvd | SR7/US 441 | US-1 | 3.5 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | -2 | 0 | 0 | 0 | 1 | 0 | 2 | 51,275 |
| 25 | Douglas/Pine Island Rd | Stirling Rd | Sheridan St | 1.2 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | -2 | 0 | 0 | 2 | 0 | 2 | 4 | 9,647 |
| 26 | Dykes Rd | Sheridan St | Griffin Rd | 2.3 | From 2 to 4 lanes (4LD) | D | B | 1 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 3 | 11,117 |
| 27 | Flamingo Rd | Bass Creek Rd | Pembroke Rd | 2.0 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | -2 | 0 | 0 | 2 | 1 | 2 | 6 | 16,078 |
| 33 | Hammondville Rd | Florida Turnpike | Andrews Ave | 2.0 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | -2 | 0 | 0 | 2 | 1 | 2 | 6 | 22,689 |
| 38 | Hiatus Rd | Stirling Rd | Griffin Rd | 0.6 | New (4LD) | N/A | B | 0 | 0 | -2 | 0 | 1 | 2 | 2 | 2 | 6 | 7,483 |
| 36 | Hiatus Rd | Oakland Park Blvd | Commercial Blvd | 1.8 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | -2 | 0 | 1 | 2 | 1 | 2 | 8 | 14,470 |
| 40 | Hillsboro Blvd | US 1 | SR A1A | 1.0 | From 4 to 6 lanes (6LD) | F | C | 2 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 17,956 |
| 39 | Hillsboro Blvd | NW 64th Ter | SR7/US 441 | 0.8 | From 4 to 6 lanes (6LD) | D | B | 1 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 3 | 9,076 |
| 42 | Holmberg Rd | Coral Ridge Dr. | Coral Springs Dr | 0.8 | New (2LU) | N/A | B | 0 | 0 | -2 | 0 | 0 | 2 | 2 | 2 | 4 | 6,588 |
| 43 | Holmberg Rd | University Dr | SR7/US 441 | 3.3 | From 2 to 4 lanes (4LD) | F | C | 2 | 0 | -2 | 0 | 0 | 1 | 1 | 1 | 2 | 37,650 |
| 49 | Johnson St | Palm Ave | NW 46th Ave | 2.6 | From 2 to 4 lanes (4LD) | F | D | 2 | 1 | -2 | 0 | 0 | 1 | 1 | 1 | 3 | 38,896 |
| 48 | Johnson St | NW 46th Ave | N. Dixie Hwy | 5.7 | From 2 to 4 lanes (4LD) | F | E | 2 | 2 | -2 | 0 | 0 | 0 | 1 | 0 | 2 | 66,272 |
| 51 | McNab Rd | Nob Hill Rd | Pine Island | 0.5 | From 4 to 6 lanes (6LD) | E | B | 2 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 4,020 |
| 53 | McNab Rd | Dixie Hwy | Cypress Rd | 0.6 | New (4LD) | N/A | B | 0 | 0 | -2 | 0 | 0 | 2 | 2 | 2 | 4 | 11,519 |
| 54 | McNab Rd | Cypress Rd | US-1 | 0.9 | From 2 to 4 lanes (4LD) | C | B | 0 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 2 | 16,502 |
| 52a | McNab Rd/Commercial Blvd | Sawgrass, Nob Hill | I-95 | 10.4 | Limited Access Facility | D | A | 1 | 0 | -2 | 0 | -2 | 1 | 0 | 1 | -5 | 30,000 |

| Line | Project Name | From | To | Miles | Project Description | E+C LOS | Needs LOS | Relieves existing congestion | Relieves future congestion | Consistent with local plans | Access to multimodal facility | Supports economic vitality | ROW cost (No=2, average=1, e | System continuity, missing link | Environmental (sever -1, no im | Score | Cost $1,000 Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | Military Trail | Sample Rd | Palm Beach County Line | 3.9 | From 4 to 6 lanes (6LD) | F | E | 2 | 2 | -2 | 0 | 0 | 1 | 1 | 1 | 4 | 44,244 |
| 60 | Nob Hill Rd/Palm Ave | Miramar Pkwy | Commercial Blvd | 15.1 | From 4 to 6 lanes (6LD) | E | E | 2 | 2 | -2 | 0 | 0 | 0 | 1 | 0 | 2 | 122,349 |
| 61 | Nova Dr | Pine Island Rd | Davie Rd | 2.3 | From 2 to 4 lanes (4LD) | E | D | 2 | 1 | -2 | 0 | 0 | 1 | 1 | 1 | 3 | 34,408 |
| 67 | NW 55th Ave | Sunrise Blvd | Oakland Park Blvd | 2.0 | From 2 to 4 lanes (4LD) | N/A | D | 1 | 1 | -2 | 0 | 0 | 2 | 1 | 2 | 4 | 23,169 |
| 68 | NW 56th Ave | Sunrise Blvd | Oakland Park Blvd | 2.0 | From 2 to 4 lanes (4LD) | F | D | 2 | 1 | -2 | 0 | 0 | 2 | 1 | 2 | 5 | 23,409 |
| 69 | NW 5th St/65th Ave | University Dr | Sunrise Blvd | 1.8 | From 2 to 4 lanes (4LD) | F | E | 2 | 2 | -2 | 0 | 0 | 2 | 1 | 2 | 6 | 20,852 |
| 70 | Oakland Pk Blvd | University Dr | SR 7 / US 441 | 2.3 | From 6 to 8 lanes (8LD) | F | E | 2 | 2 | -2 | 0 | -2 | 1 | 1 | 1 | 0 | 29,845 |
| 74 | Peters Rd | Pine Island Rd | SR 7 / US 441 | 3.3 | From 4 to 6 lanes (6LD) | D | B | 1 | 0 | -2 | 0 | 0 | 1 | 1 | 1 | 1 | 37,110 |
| 75 | Pine Island Rd | Nova Dr | Stirling Rd | 2.8 | From 4 to 6 lanes (6LD) | F | D | 2 | 1 | -2 | 0 | 0 | 2 | 1 | 2 | 5 | 22,509 |
| 84 | Royal Palm Blvd | W of University Dr | SR 7 / US 441 | 3.4 | From 4 to 6 lanes (6LD) | E | D | 2 | 1 | -2 | 0 | 0 | 1 | 1 | 1 | 3 | 39,531 |
| 86 | Sample Rd | University Dr | I-95 | 7.2 | From 6 to 8 lanes (8LD) | E | E | 2 | 2 | -2 | 0 | -2 | 0 | 1 | 0 | -2 | 91,926 |
| 87 | Sample Rd | At Powerline Rd | | | New Interchange | N/A | N/A | 0 | 0 | -2 | 1 | -2 | 2 | 0 | 2 | -3 | 10,000 |
| 88 | Sample Rd | At University Dr | | | New Interchange | N/A | N/A | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 2 | -4 | 10,000 |
| 85 | S.Post Rd | Bonaventure Blvd | SW 154 Ave | 1.6 | From 2 to 4 lanes (4LD) | E | B | 2 | 1 | -2 | 0 | 1 | 2 | 1 | 2 | 7 | 7,734 |
| 98 | SR 84 Frontage Roads | SW 136 Ave | SR-7/ US 441 | 8.2 | from 2 to 3 lanes each way | E | D | 2 | 1 | -2 | 0 | 0 | 1 | 1 | 1 | 3 | 29,727 |
| 100 | SR A1A | Pine Ave | Atlantic Blvd | 2.4 | From 2 to 4 lanes (4LD) | F | C | 2 | 0 | -2 | 0 | -1 | 1 | 1 | 1 | 0 | 44,556 |
| 99 | SR A1A/ Bougainvilla Dr | Imperial Lane | Pine Ave | 2.7 | 2-lane oneway each | F | F | 2 | 2 | -2 | 0 | -1 | 2 | 1 | 2 | 4 | 4,296 |
| 97 | SR7 / US 441 | Griffin Rd | Hillsboro Rd | 15.8 | From 6 to 8 lanes (8LD) | F | E | 2 | 2 | -2 | 1 | -1 | -2 | 1 | -2 | -3 | 202,926 |
| 101 | Sunrise Blvd | At NW 31 Ave | | 0.2 | New Interchange | N/A | N/A | 0 | 0 | -2 | 0 | -2 | 2 | 1 | 2 | -2 | 10,000 |
| 104 | SW 136th Ave | Pembroke Rd | N. of SW 10th St | 0.5 | New 6 lanes | N/A | F | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 2 | 6 | 4,105 |
| 106 | SW 14th St | SW 130 Ave | Flamingo Rd | 0.5 | New (4LD) | N/A | A | 0 | 0 | -2 | 0 | 0 | 2 | 2 | 2 | 4 | 6,235 |
| 107 | SW 14th St | Weston Rd | SW 130 Ave | 2.7 | From 2 to 4 lanes (4LD) | C | B | 0 | 0 | -2 | 0 | 0 | 2 | 1 | 2 | 2 | 22,165 |
| 113 | SW 26th St | SW 130th Ave | Flamingo Rd | 0.5 | New (2LU) | N/A | B | 0 | 0 | -2 | 0 | 0 | 2 | 2 | 2 | 4 | 4,118 |
| 116 | SW 3rd Ave Ext | Old Griffin Rd | Griffin Rd | 0.3 | New (2LU) | N/A | F | 2 | 2 | -2 | 0 | -1 | 2 | 2 | 2 | 6 | 5,758 |
| 117 | SW 3rd St/Pompano Park P | Powerline Rd | Andrews Ave | 0.6 | From 4 to 6 lanes (6LD) | F | B | 2 | 0 | -2 | 0 | -1 | 2 | 1 | 2 | 2 | 6,807 |
| 118 | SW 3rd/4th Ave | Dixie Hwy | Dania Bch Blvd | 1.2 | From 2 to 4 lanes (4LD) | E | D | 2 | 1 | -2 | 0 | -1 | 2 | 1 | 2 | 3 | 22,003 |
| 119 | SW 3rd/4th Ave | Old Griffin Rd | Dania Bch Blvd | 0.5 | New (2LU) | N/A | F | 0 | 2 | -2 | 0 | -1 | 2 | 2 | 2 | 4 | 9,197 |
| 120 | SW 4th Ave/NW 7th Ave | Davie Blvd | Sunrise Blvd | 2.1 | From 4 to 6 lanes (6LD) | F | D | 2 | 1 | -2 | 0 | -1 | 2 | 1 | 2 | 3 | 37,707 |
| 124 | University Dr | Pembroke Rd | Royal Palm Blvd | 17.6 | From 6 to 8 lanes (8LD) | F | D | 2 | 1 | -2 | 1 | -2 | -2 | 1 | -2 | -6 | 226,147 |
| 125 | US 1(Federal Hwy) | Stirling Rd | Griffin Rd | 1.1 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | -2 | 0 | -1 | 2 | 1 | 2 | 4 | 19,991 |
| 126 | Wiles Rd | SR7/US 441 | Military Trail | 4.1 | From 4 to 6 lanes (6LD) | F | F | 2 | 2 | -2 | 0 | 0 | 1 | 1 | 1 | 4 | 46,753 |