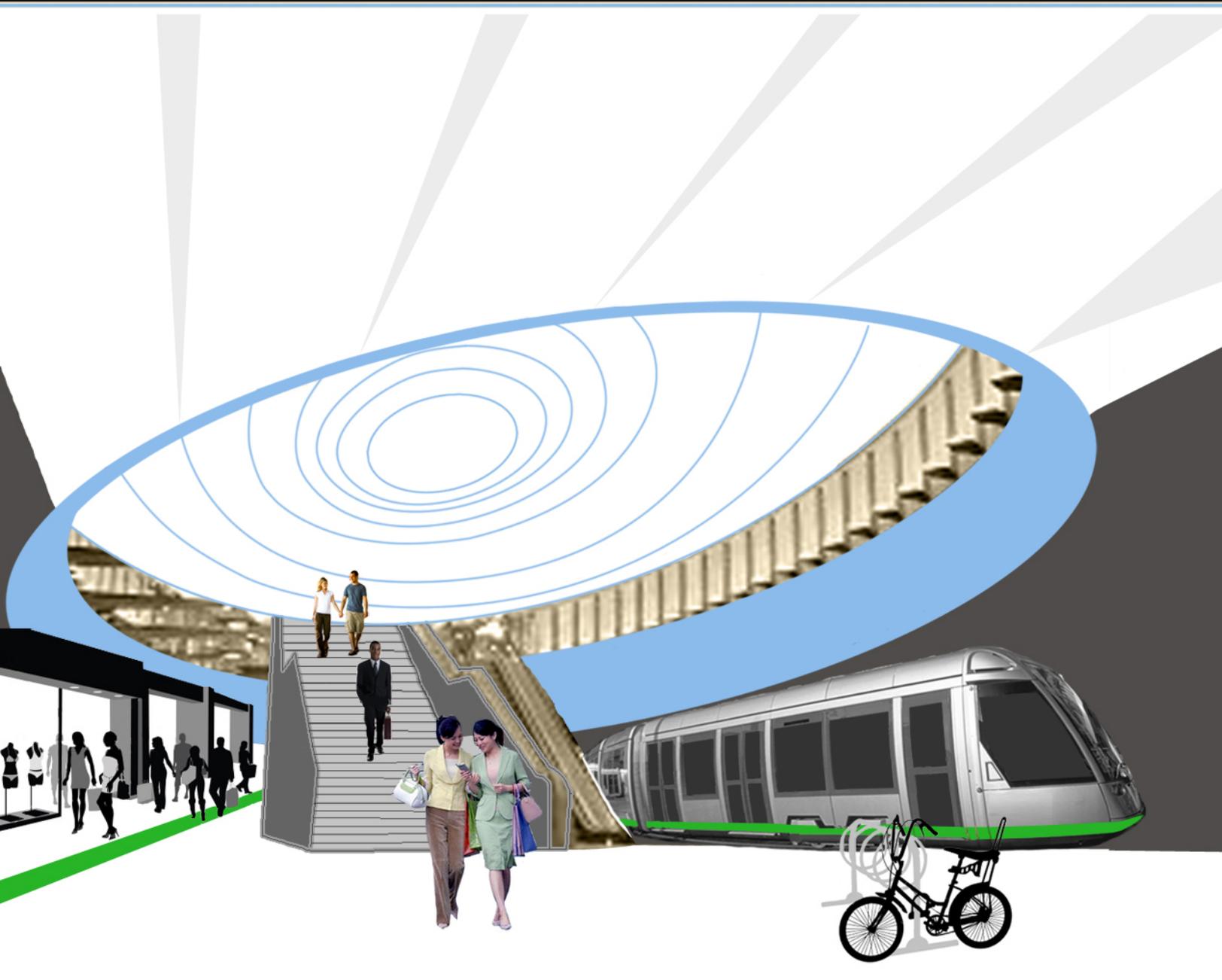


# 2035 *BROWARD* TRANSFORMATION *LONG RANGE TRANSPORTATION PLAN*

December 2009





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# Transformation

## Broward 2035 Long Range Transportation Plan

### Executive Summary

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#### Introduction

The Broward Metropolitan Planning Organization (MPO) Board unanimously adopted the 2035 Long Range Transportation Plan (LRTP) that sets the framework for a balanced and forward thinking system with investments toward alternative modes such as mass transit, bicycle, pedestrian, and smart growth policies. The Broward 2035 LRTP, branded as “Transformation,” is the Broward MPO’s plan for change. The LRTP was developed based on current political and public desire for more opportunities to move around Broward County other than by single occupant vehicle travel. Economic vitality for the region, a better environment, and enhanced quality of life are envisioned.

#### Vision Statement

*“Transform transportation in Broward County to achieve optimum mobility with emphasis on mass transit while promoting economic vitality, protecting the environment, and enhancing quality of life.”*

#### Mission Statement

*“The Broward County 2035 Long Range Transportation Plan (LRTP) promotes the safe, secure, and efficient movement of people and goods by providing balanced transportation choices that support superior mobility through improvements in all modes with a focus on mass transit and transit-supportive land use in key corridors and mobility hubs.”*

Many challenges face Broward County in planning for our future mobility needs. Broward County is built out within a geographically constrained area and funding is limited and difficult to predict given today’s economic recession.

The volatility of fuel prices and the real estate market continue to strain local budgets and revenue sources. The 2035 LRTP considers solutions that will best address projected mobility needs given available resources.

Based on the anticipated available revenues of approximately \$8.5 billion, the transit focused LRTP proposed transportation investments in Bus Rapid Transit (BRT), premium rapid bus, mobility hubs, and other mobility options such as bicycle, pedestrian and greenway projects which complement transit. Other projects include mega projects on I-95 and I-595, improvements for Turnpike, freight, Intelligent Transportation System (ITS) and other roadways. Inclusion in the Cost Feasible LRTP is a prerequisite for public transportation improvement projects to receive federal and state funding. (See “Strategy” pages 7-17.)

In addition to investment in projects using various modes, policies were identified to overcome the challenges of transit markets and increase the overall use of alternative modes in Broward County. Near term action items have been defined to implement these projects and policies. (See “Policies” page 17 and “Living the LRTP” pages 19-20).

Through the plan development process, it became clear that existing revenue sources cannot support the operating and maintenance (O&M) costs required to fully develop the needed transit focused system driven by the goals and objectives of the 2035 LRTP. The Broward MPO is committed to collaborate with implementing agencies, key stakeholders and the residents of Broward County to pursue new funding necessary to transform the transportation system in Broward County. (See “Innovative Funding Options” page 18.)

## Process

MPOs in urbanized areas such as Broward County are required to prepare a comprehensive multimodal transportation plan that looks forward at least 20 years. The LRTP must be developed, adopted, and updated through a process that engages the community and all implementing agencies within the metropolitan region. The LRTP must be fiscally-constrained, or affordable, and it must be consistent with planning standards established in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The Broward MPO recognizes that the success of the LRTP is dependent upon a successful public outreach effort that fosters community interaction. Consequently, the 2035 LRTP is based upon a year-long dialogue with various stakeholders including the general public; government officials, both elected and professional staff; economic development interests and private businesses; non-profit and community organizations; environmental organizations; and transportation planners.

Public sentiment expressed during workshops and through surveys concerning spending for mobility solutions favored transit over roadways by a margin of 2:1. Bicycle/pedestrian facilities tied with roadways at approximately 20% for public spending preference.

Seven practical goals were developed based on the input received from the public workshops and Broward MPO committees that identify needed changes to the previously adopted 2030 LRTP, utilizing alternative modes of transportation to enhance mobility throughout the county and region as shown in Exhibit 1.

### Exhibit 1: Goals for the 2035 LRTP

**GOAL 1: Provide a balanced multi-modal transportation system that serves the local and regional movement of people, freight, and services; and that encourages travel by public transit.**

**GOAL 2: Ensure that the transportation system furthers the economic vitality of Broward County.**

**GOAL 3: Increase the safety of the transportation system for all of its users.**

**GOAL 4: Increase the security of the transportation system for all of its users.**

**GOAL 5: Promote sustainable systems and programs.**

**GOAL 6: Provide an aesthetically pleasing transportation system which improves the relationship between public transportation and land use development, and promotes the quality of life for the community.**

**GOAL 7: Preserve the existing and planned transportation system.**

In reviewing the goals established for the LRTP, the following issues were identified which frame the problems facing Broward County.

- Roadways are Built Out;
- Expansion (population and employment growth);
- Emissions;
- Economic Vitality;
- Aging Population;
- Availability of Transit;
- Insufficient Resources;
- Dispersion of High Capacity Transit Lines;
- Urbanization; and
- Sustainable Transportation and Community.

Based on the goals and issues, the 2035 LRTP Transformation was developed as described in the remaining sections of this executive summary.

## Innovation

In addition to emphasizing certain types of transportation modes versus others, a secondary challenge for Broward County is the integration of transportation and land use objectives. By prioritizing transportation capital investments that promote other modes of transportation over single occupant vehicles, a different development pattern is encouraged that is more compatible with established land use policies. Transportation innovation themes included in the 2035 LRTP are illustrated in Exhibit 2. Two key elements of this innovation are the Mobility Hubs concept and Premium Transit service.



Exhibit 2: 2035 LRTP Improvements

## Mobility Hubs Concept

The experience of traveling along a route does not characterize a trip entirely. People travel between places. A transit place considers form in addition to function, as well as the social relevance of the place within a community. The nexus between transportation and land use elements of the urban planning practice are fully addressed in the 2035 LRTP through the concept of building Mobility Hubs.

Mobility Hubs are envisioned as places where a majority of people would interact with the proposed multi-modal transportation system. A Mobility Hub is defined as a transit access point with frequent transit service, high development potential, and a critical point for trip generation or transfers within the transit system. They are places of connection for walking, biking, park-n-ride, transit, and carpooling.

Mobility Hubs can also provide direct connections to concentrated activities such as housing, commercial, office, and entertainment. This concept also presents an incremental method of improving both the transportation and land use components within the communities in a manageable and focused way. Three types of Mobility Hubs are proposed for the 2035 LRTP. Mobility Hub features are shown in Exhibit 4 and characteristics listed for each in Exhibit 5.

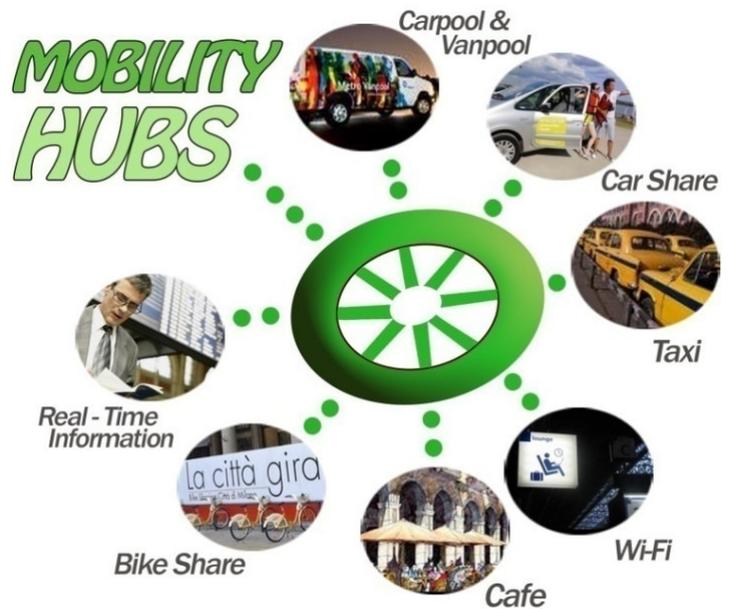


Exhibit 3: Mobility Hub Concept

### Gateway Hub Concept



### Anchor Hub Concept



### Community Hub Concept



### Exhibit 4: Mobility Hub Features

Feature	Gateway	Anchor	Community
Waiting Area*	<b>Building*</b>	<b>Shelter*</b>	<b>Bus Stop</b>
Community Plaza with Landscape/Public Art	Yes	No	No
Carshare Facility	Yes	No	No
Restrooms	Yes	No	No
Ticket Vending Machines	Yes	No	No
WiFi Facility	Yes	No	No
ITS Equipment for Downtown Central Facility	Yes	No	No
Bus Pull-in Bays*	Yes	Yes	No
Taxi Bays and Kiss-n-ride Pull-in	Yes	Yes	No
Surface Parking	Yes	Yes	No
Bikeshare Facility	Yes	Yes	No
Closed Circuit TV Cameras	4	2	1
Real-time Passenger Information	Yes	Yes	Yes
Transit Maps and Schedules	Yes	Yes	Yes
Emergency Phone Service	Yes	Yes	Yes
Allowance for drainage, utilities, landscaping	Yes	Yes	Yes

\*Cost for platforms, canopy, ticket vending machines, and bus bays are included in the cost for transit corridors.

### Exhibit 5: Characteristics of Mobility Hubs

Characteristic	Gateway	Anchor	Community
Daily boardings/alightings	High > 2,200	Moderate to high 1,500 to 2,200	< 1,500
Connectivity	Two or more planned high capacity transit lines (BRT/LRT)	One planned high capacity transit line (BRT/LRT)	Served by Rapid Bus
Development	High density mixed use development; transit oriented corridor or transit oriented development as defined in Broward County Future Land Use Plan	Near major institutions, employment centers, town centers and regional shopping centers (local or regional activity centers)	Attract more local trips than regional trips.

## Premium Transit Service

Two types of Premium Transit service were defined during the 2035 LRTP process to prioritize investments based on exhibited future demand for service, Premium High Capacity and Premium Rapid Bus. Both would offer high frequencies, modern vehicles, streamlined ticketing, and passenger information services.

Premium Transit investments provide a balanced approach to more widespread and timely improvements to address different levels of mobility solutions, and to enhance the supporting local bus network. A summary of characteristics of each type of Premium Transit service is shown in Exhibit 6.

**Premium High Capacity** transit service would include Light Rail Transit (LRT), Streetcar, People Mover, Bus Rapid Transit (BRT) or Commuter Rail Transit technologies with all or part of the alignment operating in a fixed guideway (dedicated transit lanes) requiring more costly construction of new infrastructure.

**Premium Rapid Bus** transit service with the addition of traffic signal priority, would operate high frequency service with modern, distinctive vehicles in mixed traffic, and would enhance the supporting bus network to provide connections to Premium High Capacity transit.



**Exhibit 6: Characteristics of Premium Transit – High Capacity and Rapid Bus**

Characteristic	Premium High Capacity	Premium Rapid Bus
Type of guideway	50% or more operates in fixed guideway (dedicated transit lane)	Operates in mixed traffic
Peak/Off-peak headway	5 – 7.5 minutes	10 – 15 minutes
Transit Signal Priority	Yes	Yes
Off-board fare collection system	Yes	Yes
Articulated low-floor transit vehicles	Yes	Yes
Real-time passenger information	Yes	Yes
Potential federal funding	<b>New Starts</b> Project cost >\$250 million <b>Small Starts</b> Project cost <=\$250 million	<b>Very Small Starts</b> <\$50 million per project

## Vision (The Needs Assessment)

The needs assessment process identified projects required to meet future demand and address transportation deficiencies through transit (instead of highway) improvements, irrespective of how they will be funded. This is the first step in developing a list of affordable projects.

By 2035, Broward County population is expected to grow to 2.3 million people, an increase of 29%. Employment is also expected to grow to 1 million jobs, an increase of 37%. Increased density comes with this growth. Population density is expected to increase to 9 persons from 7 persons per acre within the 413 square mile developable area of Broward County. High employment concentrations are also occurring at the major employment centers in downtown Fort Lauderdale, Cypress Creek Business Center, Midtown Plantation, State Road 7 at Sample Road, Sawgrass Mills, among others. If we only build projects already programmed, people will spend over 60% more time in their cars each day as a result of doubling overall roadway congestion.

These trends in density increase opportunities for transit. The 2035 LRTP makes the most of this opportunity by providing alternative travel modes including more local bus transit; premium rapid and high capacity transit; bicycle, pedestrian, and Greenway facilities, improved signal timing, carpooling, and vanpooling.

A planning framework was established to facilitate an evaluation of the best projects for inclusion in the Needs Plan by travel mode. Transit corridors were screened based on six key factors:

1. Deficiency analysis to identify areas that exhibit a decrease in mode split;
2. High quality Premium Transit corridors with high future travel movements within Broward County and between adjacent counties;

3. Highest performing Broward County Transit local bus routes, existing and future per Transit Development Plan (TDP);
4. Direct service connections (one-seat rides) to major employment or activity centers;
5. Transit service in areas designated by Broward Comprehensive Land Use Plan as Transit Oriented Corridor, Transit Oriented District, Regional Activity Center, or Local Activity Center; and
6. Transit service for transit dependent population.

Candidate corridors were modeled to measure the effectiveness of the transit service frequencies in meeting future travel demand. Existing and projected ridership were applied in tandem with an operational analysis to determine synergies between candidate corridors. Transit improvements were then rated as Premium High Capacity or Premium Rapid Bus for the cost feasible assessment.

Mobility Hubs with community support and existing or future transit service were identified along with pedestrian, bicycle, and Greenway facilities. Identification of roadway projects focused on missing links critical to local and regional connectivity; cost-effective congestion mitigation strategies; improvements that support transit, bicycle and/or pedestrian enhancements; and safety. Freight, ITS, and safety and security projects were also identified.

Candidate system elements and projects included in the Needs Plan were prioritized to determine what projects would be included in the Cost Feasible Plan.

## Strategy (The Cost Feasible Plan)

Total revenue available for the Cost Feasible Plan is \$8.5 billion (2009 dollars). The range of required funding from the Needs Plan is \$9 to 20 billion (2009 dollars) for the technology scenarios evaluated. This creates a shortfall in terms of what the region can afford compared with identified needs.

This transit focused plan consists of 81 miles of Bus Rapid Transit, 75 miles of Premium Rapid Bus, 20 Gateway Hubs, 20 Anchor Hubs, 63 Community Hubs and 8 new local bus routes. To provide other mobility options which complement transit, the plan also includes 485 miles of bicycle projects, 314 miles of pedestrian projects and 251 miles of Greenway projects. Other projects include mega projects on I-95 and I-595, 6 Florida Turnpike projects, 42 freight projects, 7 Intelligent Transportation System projects, and 44 highway projects. A portion of operations funding is also provided in this plan for community bus and Tri-Rail services.

A portion of Broward County Transit's Operations and Maintenance and all capital costs are funded in the Cost Feasible Plan. One third of FY 2009-2018 TDP service is funded. This includes existing plus expanded service including new routes, route extensions and higher frequencies (additional buses). This leaves a gap in funding for expanded service of 66%. If only current levels of service are maintained and no expansion in service occurs, 50% would be funded in the Cost Feasible Plan.

The pie chart shown in Exhibit 7 represents the allocation for cost feasible projects by mode. Percentages shown in Exhibit 7 are of the revenues available for allocation to priority projects, or \$5,567 million. This excludes the SIS/FIHS/Turnpike funding in the amount of \$2,915 million for which funds have been previously allocated and committed by the sponsoring agencies.

Approximately 79% of available funds are allocated to projects and services of alternative modes. Of the remaining allocations, roadway funding at 17% was allocated for projects that directly or indirectly support transit improvements. Intelligent Transportation Sys-

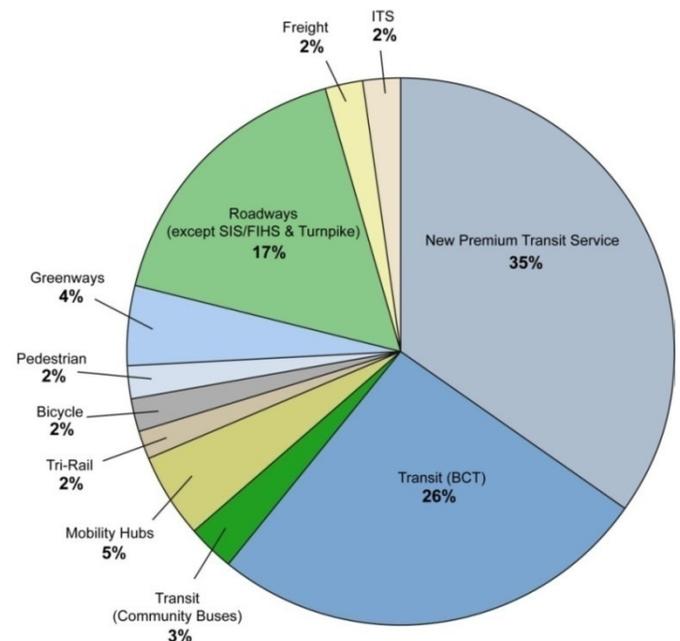
tems (ITS) funding at 2% was allocated to provide infrastructure to support transit. Freight at 2% addresses both freight movement and capacity expansion on roadways.

Cost Feasible Plan improvements are mapped in Exhibits 8 through 12 on the following pages for Premium Transit and Mobility Hubs, Greenways, Pedestrian, Bicycle, and Roadways.

Revenue streams by funding source in 2009 dollars and Year of Expenditure dollars are detailed in Exhibits 13 and Exhibit 14. The financial plan was developed following guidelines from the 2035 Revenue Forecast Handbook prepared by the Florida Department of Transportation (FDOT) in May 2008.

Phasing for capital projects and timing of operating funds to support those projects was developed at the project level for each major program in the transportation investment portfolio. Project development time for environmental processes, engineering and vehicle purchases, and timing coordination to facilitate intermodal balance were also factors in phasing.

**Exhibit 7: Funding Distribution by Cost Category**



Aggregate results in Year of Expenditure dollars for phasing of programs in the transportation investment portfolio for the Cost Feasible Plan are shown in Exhibit 15.

**Exhibit 8: 2035 Cost Feasible Transit Projects and Mobility Hubs**

**LEGEND**

**PREMIUM TRANSIT PROJECTS**

-  Premium Rapid Bus
-  Premium High Capacity
-  Service in Neighboring Counties

**BROWARD COUNTY TRANSIT SERVICE**

-  Existing Local Bus Route
-  New Local Bus Route

**MOBILITY HUBS**

-  Community Hub
-  Anchor Hub
-  Gateway Hub

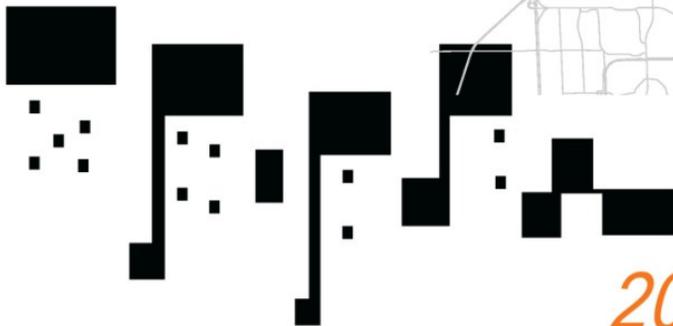
**ILLUSTRATIVE PROJECTS**

-  The Wave (City of Fort Lauderdale Downtown Circulator)
-  Peplemover-SunPort (Airport/Seaport)
-  Central Broward Transit (not final routing)
-  South Florida East Coast Corridor (FEC)

**Notes:**

Illustrative projects are shown for context and are not part of the 2035 Cost Feasible Plan.

50% of the existing transit service's operating and maintenance are funded with existing sources. Local bus services that are partially funded may be restructured to better serve mobility hubs and Premium Transit corridors.



**2035** *BROWARD*  
LONG RANGE  
TRANSPORTATION PLAN

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Exhibit 9: 2035 Cost Feasible Greenways Projects

# LEGEND

## GREENWAYS

-  Planning Priority 1
-  Planning Priority 2
-  Planning Priority 3




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Exhibit 10: 2035 Cost Feasible Pedestrian Projects

# LEGEND

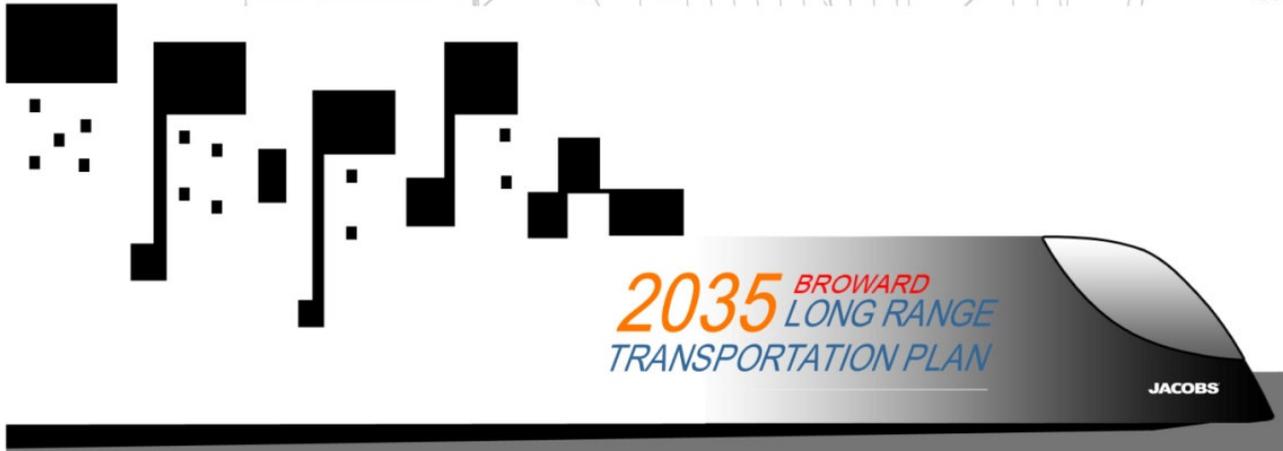
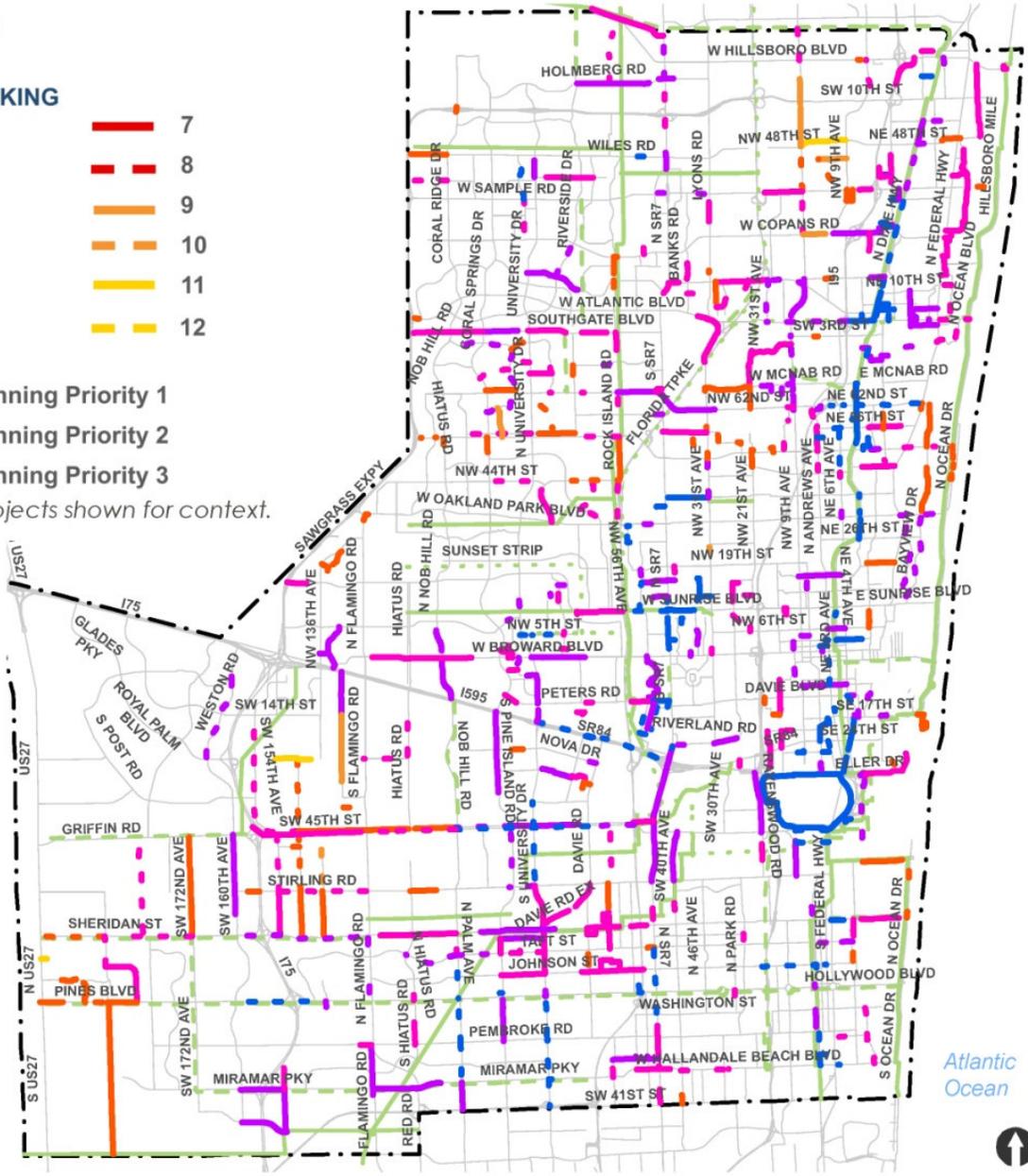
## PROJECT RANKING

- |  |   |  |    |
|--|---|--|----|
|  | 1 |  | 7  |
|  | 2 |  | 8  |
|  | 3 |  | 9  |
|  | 4 |  | 10 |
|  | 5 |  | 11 |
|  | 6 |  | 12 |

## GREENWAYS

- Planning Priority 1
- Planning Priority 2
- Planning Priority 3

\*Greenways projects shown for context.



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Exhibit 11: 2035 Cost Feasible Bicycle Projects

LEGEND

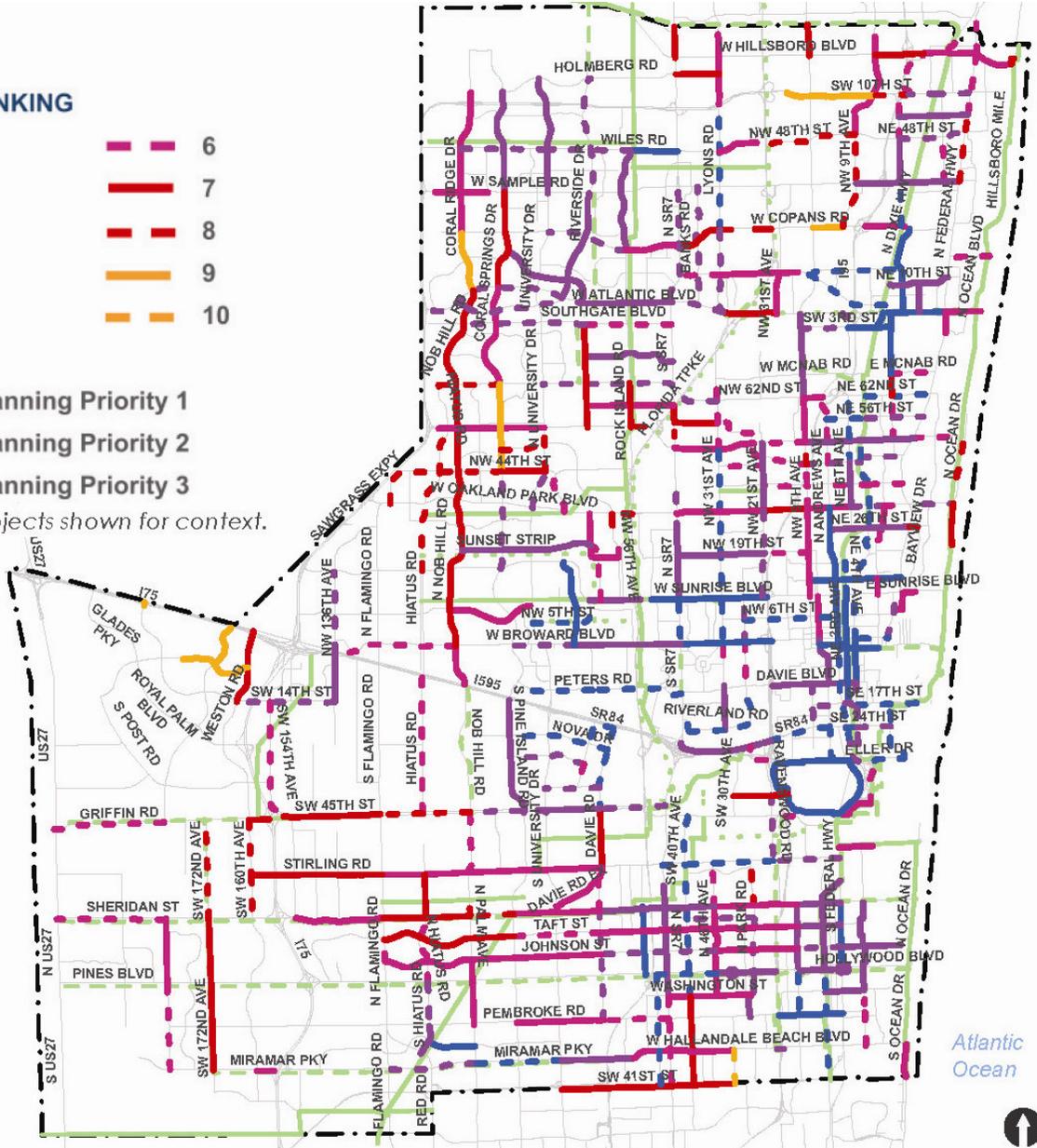
PROJECT RANKING

	1		6
	2		7
	3		8
	4		9
	5		10

GREENWAYS

- Planning Priority 1
- Planning Priority 2
- Planning Priority 3

\*Greenways projects shown for context.



2035 BROWARD  
LONG RANGE  
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**Exhibit 12: 2035 Cost Feasible Roadway Projects**

*(Illustrative Projects are shown for context and are not part of the 2035 Cost Feasible Plan.)*

**LEGEND**

- Proposed Cost Feasible Projects
- Proposed Cost Feasible Projects
- Illustrative Projects
- Illustrative Projects



**2035 BROWARD LONG RANGE TRANSPORTATION PLAN**

JACOBS

**Exhibit 13: Revenue Forecast in Current Year FY 2009 Dollars (in millions)**

Revenue Projections by Source	FY 2014-15	FY 2016-20	FY 2021-25	FY 2026-30	FY 2031-35	21-Year Total
FDOT - SIS/FIHS	\$79	\$466	\$39	\$0	\$0	\$585
FDOT - "Mega-Projects" (uncertain timing)			\$2,052			\$2,052
FDOT - Other Arterial, Transit, TMA	\$74	\$378	\$354	\$321	\$290	\$1,418
FDOT - Product Support (Equal to 20% of Other Arterial)	\$7	\$39	\$37	\$34	\$32	\$149
State & Federal Transit New Starts	\$37	\$128	\$101	\$86	\$73	\$425
Turnpike (revenues available for capital)	\$13	\$67	\$67	\$66	\$64	\$278
Fuel Taxes (constitutional, county, LOGTs)	\$103	\$473	\$423	\$379	\$339	\$1,718
Transportation Concurrency Fees	\$2	\$12	\$12	\$11	\$11	\$48
Broward County Transit Operating <sup>1</sup>	\$65	\$307	\$290	\$275	\$262	\$1,199
Broward County Transit Capital <sup>1</sup>	\$21	\$100	\$94	\$88	\$83	\$387
County Contribution to SFRTA	\$5	\$27	\$29	\$31	\$32	\$124
Fare Revenue from Premium Transit				\$50	\$50	\$100
<b>Total</b>	<b>\$408</b>	<b>\$1,996</b>	<b>\$3,498</b>	<b>\$1,343</b>	<b>\$1,237</b>	<b>\$8,482</b>

<sup>1</sup>Not included elsewhere

**Exhibit 14: Revenue Forecast in Year of Expenditure Dollars (in millions)**

Revenue Projections by Source	FY 2014-15	FY 2016-20	FY 2021-25	FY 2026-30	FY 2031-35	21-year Total
FDOT-SIS/FIHS	\$97	\$639	\$63	\$0	\$0	\$799
FDOT-"Mega-Projects" (uncertain timing)			\$3,304			\$3,304
FDOT-Other Arterial, Transit, TMA	\$91	\$517	\$570	\$607	\$645	\$2,430
FDOT-Product Support	\$9	\$54	\$60	\$64	\$70	\$257
State & Federal Transit New Starts	\$45	\$175	\$163	\$163	\$163	\$708
Turnpike (revenues available for capital)	\$16	\$92	\$108	\$125	\$143	\$484
Fuel Taxes (constitutional, county, municipal, LOGTs)	\$126	\$648	\$681	\$716	\$753	\$2,925
Transportation Concurrency Fees	\$3	\$16	\$19	\$22	\$25	\$84
Broward County Transit Operating <sup>1</sup>	\$80	\$428	\$480	\$539	\$606	\$2,133
Broward County Transit Capital <sup>1</sup>	\$26	\$137	\$151	\$167	\$185	\$666
County contribution to SFRTA	\$5	\$29	\$34	\$39	\$46	\$153
Fare Revenue from Premium Transit				\$95	\$111	\$206
<b>TOTAL</b>	<b>\$498</b>	<b>\$2,735</b>	<b>\$5,632</b>	<b>\$2,538</b>	<b>\$2,745</b>	<b>\$14,148</b>

<sup>1</sup>Not included elsewhere

**Exhibit 15: 2035 Cost Feasible Plan – Phasing in Year of Expenditure Dollars (in millions)**

Transportation Improvement Portfolio	FY 2014-15	FY 2016-20	FY 2021-25	FY 2026-30	FY 2031-35	21-Year Total
Premium Transit Service (Capital)	\$65	\$541	\$689	\$575	\$608	\$2,478
Premium Transit Service (On-going Studies)	\$50	\$0	\$0	\$0	\$0	\$50
Premium Transit Service (O&M)	\$0	\$0	\$0	\$403	\$456	\$858
Broward County Transit (BCT) (Capital)	\$26	\$137	\$111	\$0	\$0	\$274
Broward County Transit (BCT) (O&M)	\$80	\$428	\$480	\$539	\$606	\$2,133
Community Bus (O&M)	\$12	\$58	\$63	\$68	\$84	\$284
Mobility Hubs (Capital)	\$48	\$213	\$0	\$0	\$0	\$261
Mobility Hubs (O&M)	\$0	\$26	\$29	\$35	\$41	\$131
Tri-Rail (O&M)	\$5	\$29	\$34	\$39	\$46	\$153
Bicycle	\$8	\$44	\$62	\$43	\$28	\$185
Pedestrian	\$7	\$44	\$63	\$43	\$28	\$185
Greenways	\$11	\$62	\$156	\$127	\$70	\$426
Roadways (SIS/FIHS)	\$97	\$639	\$3,367	\$0	\$0	\$4,103
Roadways (Turnpike)	\$16	\$92	\$108	\$125	\$143	\$484
Roadways (Arterial & Others) (Capital)	\$29	\$199	\$352	\$414	\$482	\$1,476
Roadways (Arterial & Others) (O&M)	\$9	\$45	\$49	\$52	\$71	\$226
Freight	\$5	\$47	\$69	\$74	\$81	\$276
ITS	\$30	\$133	\$0	\$0	\$0	\$163
<b>Total (w/o SIS/FIHS and Turnpike)</b>	<b>\$385</b>	<b>\$2,005</b>	<b>\$2,157</b>	<b>\$2,412</b>	<b>\$2,602</b>	<b>\$9,559</b>
<b>Total (w SIS/FIHS and Turnpike)</b>	<b>\$498</b>	<b>\$2,735</b>	<b>\$5,632</b>	<b>\$2,537</b>	<b>\$2,745</b>	<b>\$14,147</b>

Note: Totals do not match those in Exhibit 14 due to rounding.

**Near-term Implementation (FY 2014-2020)**

Expansion of the local bus system occurs in the near-term, including a number of support facilities. Operating funds are provided by the 2035 Cost Feasible Plan up to 50% of existing service or 33% of expanded plus existing service. Funding shortfalls need to be addressed in the near-term to ensure long-term operations.

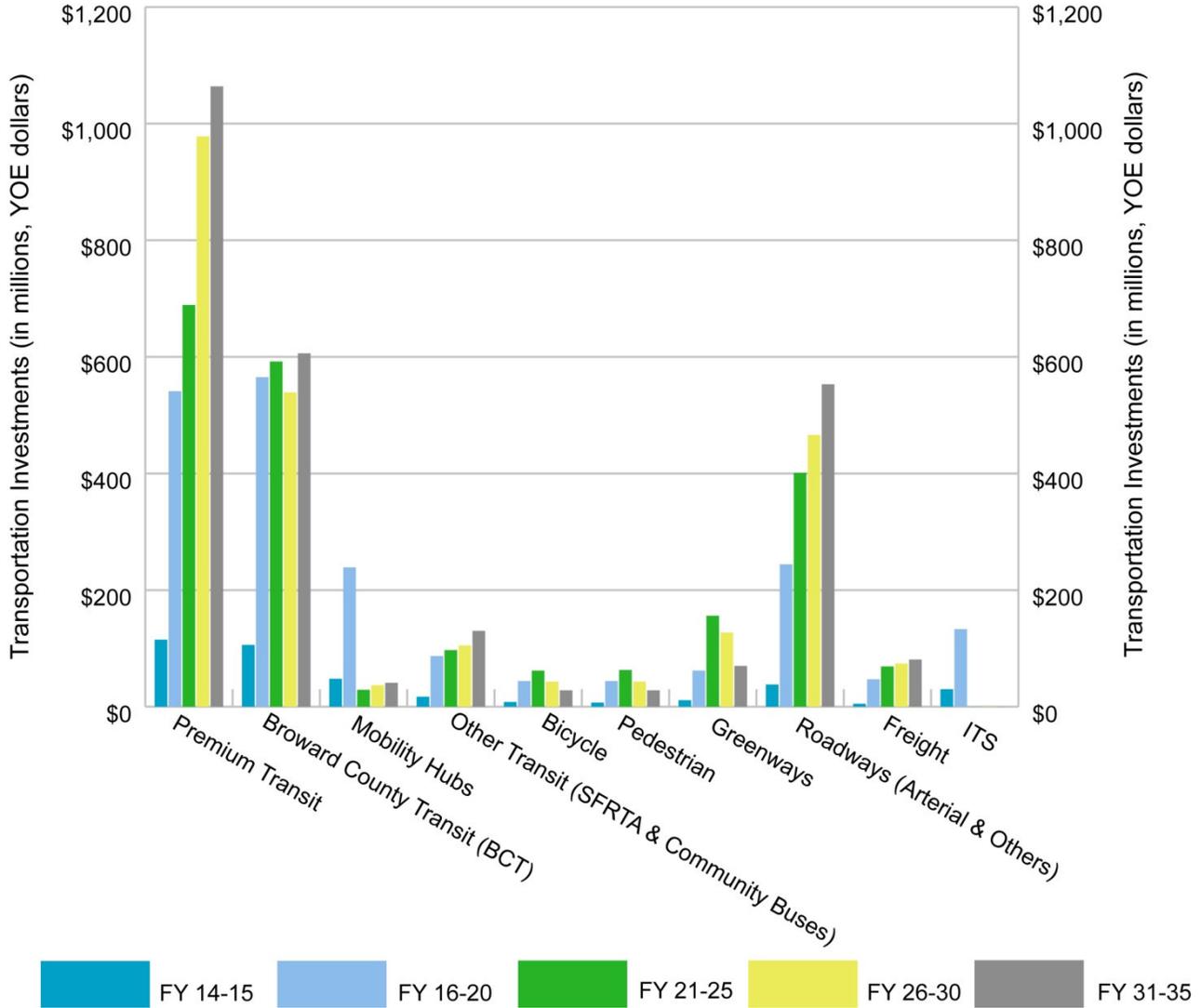
Early implementation of Mobility Hubs and bicycle, pedestrian, and Greenway connectivity projects will promote transit-supportive land use. All Mobility Hubs shall be implemented in the near-term. Approximately one third of all connectivity projects could be constructed in the near-term including 167 miles of bike-ways, and 107 miles of pedestrian sidewalks. Greenways will be expedited with almost two thirds of the total system (153 miles) in place by FY 2020. All identified ITS projects will be implemented in the

near-term. This includes both Open Road Tolling and Automated Traffic Management Systems.

Systems planning, alternatives review, environmental processes and public involvement required to implement High Capacity Premium Transit projects (BRT for the Cost Feasible Plan and possibly LRT should funding be identified) and Rapid Bus will also begin by or before FY 2014 and continue through FY 2020. Projects now in the planning stages are included in the 2035 LRTP as Illustrative Projects.

Almost half of the roadway projects and all of the freight projects on roadways are expected to be constructed by FY 2020. Other mega-projects, Florida Turnpike projects, and SIS/FIHS roadway projects will be implemented in accordance with each agency’s capital program which is determined separate from the 2035 LRTP effort.

**Exhibit 16: Transportation Investment Portfolio Phasing (in millions, YOE dollars)**



**Long-term Implementation (FY 2021-2035)**

Project development for High Capacity and Rapid Bus Premium Transit projects involve significant front-end planning to study and secure federal and local funding commitments. Construction on these projects could begin as early as FY 2021. These projects are not expected to be in operation until FY 2026; therefore, Premium Transit operating funds are provided for in the ten-year period from FY 2026 through FY 2035. Operating funds are also provided for Mobility Hubs during this period.

**Broward County Transit (Local Bus)**

The Broward County Transit (BCT) bus system and supporting infrastructure will be expanded in the ear-

ly years of the plan. This expansion will include a third bus operations/maintenance facility, park-n-ride facilities, bus shelter/bus bays/bus stop upgrades, and expansion of the bus fleet by 150 vehicles to a total fleet of 450 vehicles. There is a shortfall of operating funds for BCT that necessitate a restructuring of operations or additional resources. The constraints associated with certain revenue sources limits funds available for operations. New sources of revenue will be needed for local bus service.

**Mobility Hubs**

Mobility Hubs are planned for implementation by local jurisdictions, in cooperation with the Broward MPO, BCT and FDOT. The specific location of Mobility

Hubs are dependent on further planning studies to select sites based on availability of land, public-private partnership opportunities, delineation of Premium Transit services, and bike/pedestrian facilities as well as local desire. Many Mobility Hub locations in the LRTP are depicted adjacent to multiple jurisdictions. A determination of jurisdictional boundaries for each Mobility Hub is dependent on the factors mentioned above. This will require considerable coordination, cooperation and commitment from all involved parties.

### ***Bicycle/Pedestrian/Greenway Improvements***

All projects identified are funded in this plan. Timing of implementation is based on priorities established in consideration of timing for Mobility Hub implementation to ensure that connectivity to transit occurs when it is needed.

### ***Roadways***

SIS/FIHS project timing is taken directly from the cost feasible 2035 SIS/FIHS Long Range Highway Capacity Plan (FY2014-FY2035) prepared by FDOT. Mega projects including I-595 and I-95 reconstruction and managed lanes were not phased at the request of project sponsors due to uncertain timing.

Turnpike projects were matched to available revenues so as to complete projects timely and efficiently without project interruption or overruns.

All local roadway projects are phased based on connectivity to transit or congestion management needs.

### ***Freight/airport/seaport***

Freight/airport/seaport facilities are eligible for funding under FDOT's SIS/FIHS, TRIP and Other Arterial/Right-of-Way Program funds. SIS/FIHS funds have already been programmed by FDOT for this plan period and available TRIP funds are uncertain. In January 2010, TRIP funds will also be reviewed and some of the projects included in this category may receive funding at that time. However, at the time of this report, only Other Arterial/Right-of-Way Program funds were available for these projects.

Freight projects selected for funding total \$276 million for those eligible for Other Arterial/Right-of-Way Program funds. Depending on the TRIP fund allocations and future SIS/FIHS funds, additional projects could be funded during this plan period. Other sources of revenues could come from aviation and seaport capital improvement programs outside of the LRTP efforts.

### ***Intelligent Transportation Systems***

The Automated Traffic Management System (ATMS) for all of Broward County is scheduled for planning and design in FY 2014-2015 with implementation to follow in FY 2016-2020. Open Road Tolling is included in Florida's Turnpike Enterprise plan.

### ***Additional Plan Elements***

In addition to the transportation portfolio of projects, plan elements considered in development of the 2035 LRTP include congestion management, travel demand management, and hurricane evaluation.

### ***Illustrative Projects***

The financial-constraint requirement for the Cost Feasible Plan limits the number of needed projects that can be programmed. Despite this limitation, it is widely recognized that the needs and the desires of communities to improve mobility far exceed resources available. As a result, LRTPs are permitted to include Illustrative Projects that would be included in the adopted transportation plan if additional resources beyond those identified in the cost feasible financial plan were to become available. The transit projects identified in the LRTP as Illustrative Projects include:

1. Florida East Coast (FEC) Railway commuter service;
2. The Wave Fort Lauderdale Streetcar;
3. Central Broward East-West Transit;
4. SunPort-Airport/Seaport People Mover;
5. Broward County Intermodal Center (IMC);
6. Broward County Transit O&M Cost (50%);
7. FEC/CSX Connector (Commuter Rail); and
8. Broward County Transit Administration Building.

These projects are representative of the MPO's desire to achieve more for mobility improvements for Broward County residents than is defined in the Cost Feasible Plan. The first four projects are actively engaged in pursuing a combination of federal, state, regional and local funds. Until full funding for implementation is identified, they will remain as an "illustrative" designation as an indication of project intent pending funding availability. Additional roadway and intersection improvements are also included as Illustrative Projects and are listed in the 2035 Final Report.

### **Policies**

The following policies were identified to overcome the problems of transit markets and increase the overall use of alternative modes in Broward County.

1. Communicate the results of the LRTP to governments, agencies, and other groups to stimulate action. The MPO and partners should continue to host workshops for the community to refine concepts captured in the LRTP.
2. Develop a cooperative strategy to broaden the base of support for transit. Continue partnership with transit operating agencies to further enhance the image and quality of transit services. Build coalitions with other planning entities and interest groups.
3. Get businesses and employers on board with specific incentives towards favoring alternative modes. This may include free passes for transit use or special amenities for carpoolers, vanpoolers, bikeshare, carshare, and transit users.
4. Influence local governments to remove impediments to transit such as large parking minimums and wide setbacks for development projects.
5. Influence planners and developers to encourage land use decisions which will create an urban structure supportive of transit. Influence transportation planners and engineers to design road and parking facilities which are both transit-friendly and safe, including bus bay pull-outs and pedestrian amenities.
6. Consider innovative funding mechanisms that support transit, including taxation measures that contribute to more adequate transit funding.
7. Make appropriate changes to legislation to remove obstacles to widespread transit use such as removing limitations on funding sources dedicated exclusively for roadways.
8. Encourage land use development opportunities, especially around Mobility Hubs.
9. Encourage integration of transit services with other modes such as conducting multimodal studies, rather than segregating projects as roadway, transit, pedestrian or other.
10. Provide adequate local funding support and long term commitment to opportunities to increase transit modal share.
11. Actively pursue federal and state funds which could increase transit modal share including New Starts, Small Starts, Very Small Starts, Climate Change Initiatives, and Livable Communities Grants.
12. Encourage development that supports transit such as incorporating the Mobility Hubs into the County Land Use Plan and Comprehensive Plans.
13. Encourage developers to integrate transit service into developments and share in the funding of the capital facilities and operations by developing successful models for Mobility Hub areas.
14. Enhance tourism through the provision of additional mobility options and effective marketing.
15. Implement bikeshare and carshare programs at Mobility Hubs.
16. Distribute investments to serve transit dependent population and new markets.
17. Simplify transit routes and access to transportation information.

## Context

The LRTP takes into consideration the context of environmental needs, environmental justice, safety, security, and additional funding needed to address needs beyond the Cost Feasible Plan. The Broward 2035 LRTP is also part of a Regional LRTP which encompasses the tri-county area of Miami-Dade, Palm Beach, and Broward counties.

## Environmental Justice

The 2035 LRTP considered environmental justice issues in the selection, placement, and timing of implementation of projects in the Cost Feasible Plan. One of the established goals is to promote sustainable systems and programs. One of the objectives of this goal is to provide access and mobility to a greater number of people in minority populations and low-income households. The 2035 LRTP process was proactive, inclusive and interactive in providing opportunities to engage traditionally underserved populations.

## Safety and Security

Safety and security comprise two of the SAFETEA-LU planning factors that should be considered in developing a long range transportation plan. Safety considerations include provision of pedestrian and bicycle facilities with adequate buffers from other types of transportation; Mobility Hubs and Premium Transit facilities that are well-lit, patrolled by cameras and personnel, and that utilize Crime Prevention Through Environmental Design principles; and hurricane preparedness and response plans. Security plans include crisis management protocol; regional security strategies for commuter rail; and training for transportation system personnel.

## Innovative Funding Options

More funding is needed to fulfill the 2035 LRTP goals. The Cost Feasible Plan assumes we will only build BRT as LRT would require more funding. Also, operating funds required for Broward County Transit is not fully funded in this plan. Possible funding options include:

## *Sales Tax*

Potential revenues from a one-cent charter county transit surtax are estimated to be \$287 million per year (2009 dollars). A sales tax could generate significant funding from a broad base; state authority is already in place with a favorable referendum vote; and the collection structure is in place.

## *Vehicle Miles Traveled (VMT) Tax*

Potential revenues from a 2-cent per mile VMT tax are estimated to be \$136 million per year (2009 dollars). A new VMT tax could generate major new funding at a low rate on a very broad base and could be used for congestion management. While pilot programs have been implemented elsewhere, no current authority exists in Florida and a new collection structure would be required.

## *Tax Increment Financing (TIF) Districts*

Potential revenues for TIF Districts vary considerably (\$187-\$496 million per year 2009 dollars) depending on land use and increment captured. Authority for TIFD exists in the State of Florida and the existing property tax collection mechanism would be used for collection. This does not require an explicit increase in taxes.

A single strategy or a combination of these three solutions discussed—Sales Tax, VMT Tax, and TIFD may be instrumental in the implementation of needs beyond available resources in the Cost Feasible Plan.

## Regional Planning

Broward MPO has been closely coordinating the 2035 LRTP process with its neighboring counties of Palm Beach and Miami-Dade from the development of goals to the preparation of the Cost Feasible Plan. As a result of these coordinated efforts, southeast Florida will have produced in the year 2010, the first Southeast Florida Regional Long Range Transportation Plan (RLRTP) which will link the MPO LRTPs in the tri-county area into one vision with a prioritized set of highway and transit improvements. The intent of the RLRTP is to provide additional funding opportunities and transportation projects that would otherwise not be available.

## Living the LRTP

Long range transportation plans are unique in their ability to evolve. The amendment process for the 2035 LRTP occurs at regular intervals throughout the year. Amendments allow changes in transportation programming in response to changing conditions related to funding and project definitions. A risk however, is pursuing modifications that are inconsistent with the overall vision and mission of an adopted LRTP. The 2035 LRTP signals a paradigm shift. The overall objective to shift facilities, services and travel behavior to alternative modes is critical. In order to preserve this until the 2040 LRTP update which will likely be initiated four years from now, it is recommended that any plan amendment be measured and documented as to how well they meet the performance measures defined in this LRTP for each, in addition to the vision and mission. If these base parameters are met, flexibility in programming can be accommodated for the following reasons:

- The Cost Feasible Plan **does not include innovative financing**. Based on innovative financing mechanisms currently under consideration, it is anticipated that a dedicated local funding structure may generate an additional \$4-\$10 billion in cash revenues through 2035, resulting in additional projects, or upgrades to projects, including the addition of light rail transit.
- The Cost Feasible Plan maximizes the use of revenues for alternative modes; however, many of the **uses of funds were limited based on established rules**. Changes in the types of improvements that are allowable, specifically for roadway funding in many cases will require state legislative action. If changes are made, amendments to the plan may be warranted.
- **Projects evolve over time**. Many of the Premium Transit corridors and all of the Mobility Hubs documented in this plan have not undergone any detailed study outside of this plan. Based on additional planning, environmental study, design, and community input, project definitions and funding allocations may require modification.

Recognizing that the 2035 LRTP provides the basic framework for a system of sustainable transportation and community, MPO staff will take an active approach to promote and implement 2035 LRTP recommendations. Within the near-term, special emphasis shall be placed on the following approaches and policies defined in the 2035 LRTP.

- Continue public outreach efforts for elements of the 2035 LRTP.
- Establish “Livability Planning Initiative” to promote and implement 2035 LRTP recommendations and policies.
- Initiate a transit system plan that can build on the priorities and analyses for Premium Transit corridors and related facilities. Alternative analyses and/or environmental studies for the priority corridors should be initiated.
- Create a Mobility Hubs pilot program to build prototypes of Gateway, Anchor, and Community hubs.
- Define potential sites for Mobility Hubs based on generalized locations in the 2035 LRTP and amend the Broward County Comprehensive Plan to reflect these locations and investments.
- Focus Broward County’s Livability Planning Initiatives to build on the Mobility Hubs concept.
- Develop alternative approach for the design of bicycle, pedestrian, and Greenway facilities beyond those traditionally used. Identify impediments and establish a process to accelerate the funding and implementation of these transit-supportive facilities.
- Create a pilot program for the creation of bike-share and carshare programs at future Mobility Hub locations.
- Establish working groups with the business community to initiate public-private partnerships in the development of Mobility Hubs.
- Develop more detailed plans and specific milestones for the innovative financing options defined in the 2035 LRTP.
- Enhance the region’s travel demand forecast model to truly reflect emerging markets for alternative modes.

- Test land use scenario planning based on the Mobility Hubs concept and measure demand potential.
- Identify implementing and operating authorities for new services, facilities and programs proposed.
- Refocus the Broward MPOs Congestion Management Process to complement the Livability Planning Initiative.
- Monitor implementation of ATMS systems which are critical to the successful implementation of many elements of this the 2035 LRTP.
- Incorporate TRIP funding allocations and assign projects (TRIP allocations were not determined at the time of publication).
- Leverage federal funding, especially related to New Starts, Homeland Security, Climate Change (legislation pending at plan completion), new transportation authorization (CLEAN-TEA or Green-TEA legislation pending a plan completion), and Livable Communities.

### Livability Planning Initiatives

Through the Livability Planning Initiatives efforts, MPO staff, with local governments, will develop the detailed elements of Mobility Hubs, including the location of facilities, needed bike and pedestrian infrastructure, designation of appropriate land uses, and guidelines for appropriate redevelopment and retrofitting. These efforts will explore community support, and ultimately guide the final design of Gateway, Anchor and Community hubs and assist the MPO in determining funding options including public and private sources.

The planning efforts will take the form of areawide Livability Studies distributed among the five MPO Districts. The MPO will prioritize the study areas using criteria such as the 2035 LRTP Cost Feasible Plan rankings and location of Mobility Hubs, transit routes and ridership, development patterns, redevelopment opportunities, and municipal plans for the Mobility Hub areas. Collaboration and timing of planning efforts will coincide with and support ongoing studies where possible.

The recommendations of the Livability Studies will address five major areas:

- Transportation Improvements – transit-supportive infrastructure (shelters, sidewalks, streetscape, etc.) to facilitate multimodal access to transit;
- Land Use Amendments – designation of mixed-use Transit Oriented Corridors (TOC) and Transit Oriented Development (TOD);
- Rezoning and Design Guidelines – land development regulations for transit-supportive, pedestrian-friendly design;
- Business Retention, Expansion, and Attraction – economic development strategies for private investment; and
- Affordable and Attainable Housing – greater variety of housing options.

More detailed information is available in the full *2035 Broward Transformation LRTP Final Report*, December 2009.





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