

# Transportation

## Assessment Area

An effective transportation network is a cornerstone of a livable and sustainable community. It determines the mobility of the community and is one of the main considerations when choosing a place to live. Access to public transportation, bikeability and walkability has been identified by many public surveys as indicators residents use to assess the quality of life within a community. Because personal passenger cars are one of the greatest contributors to air pollution and greenhouse gas (GHG) emissions in Miami-Dade County, the overall health of our community is intimately linked to the movement of people and goods throughout the network. Therefore, land use practices, roadway design, the diversity of transportation choices, and the delivery of public transportation services all play a part in the sustainability and performance of our transportation network, with the ultimate goal to move people in the fewest number of vehicles with the greatest fuel efficiency, in the quickest manner.

It is important to understand that one critical piece of the formula, the efficiency of vehicles operating on our roads, is set by federal fuel efficiency standards. While these standards set the minimum allowable fuel efficiency, opportunities remain to influence the purchase of more efficient vehicles for both government and residential use. Other elements of a strong network, such as the structure and functioning of our roadways and public transportation, are directly addressed by the County through the institution of policies, goals, objectives, and measures set forth in several County Plans. Specifically, the four plans considered in this report are the 2035 Long Range Transportation Plan (LRTP), the Draft Transit Development Plan FY2010 to 2019 (TDP), the 2009 Freight Plan, and the Transportation and Land Use Elements of the Comprehensive Development Master Plan (CDMP). A brief description of these plans is provided in table below.

Name of Plan	Responsible Entity	Aligns with	Brief Description
Comprehensive Development Master Plan (CDMP)	Miami-Dade County – Planning and Zoning Department	Other plans listed below are supposed to align with the CDMP	It sets the County's general objectives and policies addressing where and how it intends development or conservation of land and natural resources will occur during the next ten to twenty years, and the delivery of County services to accomplish the Plan's objectives.
2035 Long Range Transportation Plan (LRTP)	Metropolitan Planning Organization—established via interlocal agreement by County and Florida Department of Transportation which follows rules and regulations established by the US Department of Transportation	CDMP	Guides transportation investments in Miami-Dade County. Because there is only a limited amount of funding available for transportation the LRTP is used to prioritize funding allocated to transportation projects for all modes (roadways, public transportation, non-motorized transportation, etc.)
Draft Transit Development Plan FY2010 to 2019 (TDP)	Miami-Dade County – Transit Department	LRTP	It is a strategic development and operational guide for public transportation used by Miami- Dade Transit for the next 10 year planning horizon.
2009 Freight Plan (Freight Plan)	Metropolitan Planning Organization	LRTP	The Miami-Dade Freight Plan has a goal of promoting regional goods movement that are socially and environmentally responsible.

The Transportation area of this report brings information from the various plans together in one place, identifies links, and presents key challenges that plan originators face when trying to put into action (implement) objectives that were designed to meet identified transportation needs of the county.

The challenges identified below are the result of a review of existing plans as well as discussions with the GreenPrint Interdepartmental Team, and are organized into categories/themes for clearer presentation, with overarching challenges listed first. The challenges in this section are very specific relative to other assessment areas due to the many facets of transportation including policy, planning, design, and service, as well as the stakeholders at the federal, regional, state and local levels.

<b><u>SUMMARY OF KEY SUSTAINABILITY CHALLENGES</u></b>	
<i>Main challenges identified through collaborative stakeholder analysis of assessment data &amp; indicators</i>	
<b>Overarching</b>	<ul style="list-style-type: none"> <li>• Addressing conflicting policies, different levels of project reviews and compartmentalized reviews by individual departments.</li> <li>• Integrating sustainability into the development review and approval process, including the prioritization and selection of highway projects.</li> <li>• Promoting a true multi-modal balance by strengthening policy and financial commitment for transit, walking, and bicycling while diminishing the emphasis on maintaining or expanding roadway capacity.</li> <li>• Shifting funding to better support transit and non motorized modes, since current federal transportation funding formulas favor road expansion and construction.</li> </ul>
<b>Transportation Practices Related to Land-Use</b>	<ul style="list-style-type: none"> <li>• Increasing the demand for living in the urban core and designated urban centers.</li> <li>• Increasing transit-supportive, multi-family, and mixed-use developments.</li> <li>• Identifying and expanding alternative ways to address development and service costs associated with infill development and re-urbanization. The rate of infill development and re-urbanization is impeded by the cost of providing necessary infrastructure and services such as additional roadway capacity and utilities, such as water and sewer.</li> </ul>
<b>Highways</b>	<ul style="list-style-type: none"> <li>• Improving connectivity as a means to ease congestion.</li> <li>• Establishing urban-style roadway cross sections, that provide for the various modes of transportation within existing rights-of-way; Prioritizing rights-of-way users.</li> <li>• Establishing alternate ways to handle persistent traffic congestion.</li> </ul>
<b>Freight Movement</b>	<ul style="list-style-type: none"> <li>• Improving connectivity between intermodal facilities such as rail terminals/yards, deep water ports, river terminals, etc.</li> <li>• Reducing gaps and bottlenecks in freight corridors.</li> <li>• Relieving competition for roadway space between commercial cargo trucks and passenger cars during peak traffic periods, and minimizing delay in freight movement, while also taking into consideration bicycle and pedestrian needs.</li> <li>• Obtaining funding to implement the projects identified in the Freight Plan that achieve the highest sustainability benefits.</li> </ul>
<b>Transit &amp; Alternate Modes</b>	<ul style="list-style-type: none"> <li>• Increasing transit ridership.</li> <li>• Changing the mindset of the community with regards to riding transit.</li> <li>• Facilitating development of additional priority transit corridors using</li> </ul>

	<p>propensity to ride public transportation as a key determinant.</p> <ul style="list-style-type: none"> <li>• Strengthening the County's policies regarding transit-supportive development near transit stations and corridors.</li> <li>• Expanding special use lanes for transit.</li> <li>• Preserving exclusive bus rapid transit corridors for intended purpose of serving as an alternative to the personal automobile.</li> <li>• Expanding Park and Ride facilities.</li> <li>• Providing safe, convenient, and comfortable transportation routes for bicyclists and pedestrians.</li> <li>• Increasing connectivity between pedestrian, bike, transit, and road facilities</li> </ul>
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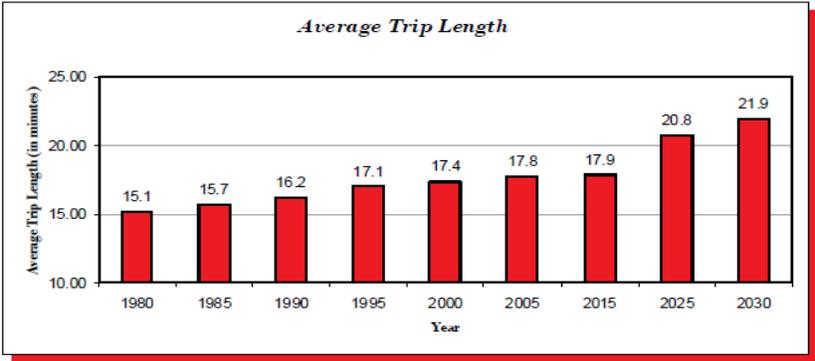
**ASSESSMENT DATA & INDICATORS**

*Data and analysis to identify key challenges & establish a sustainability baseline*

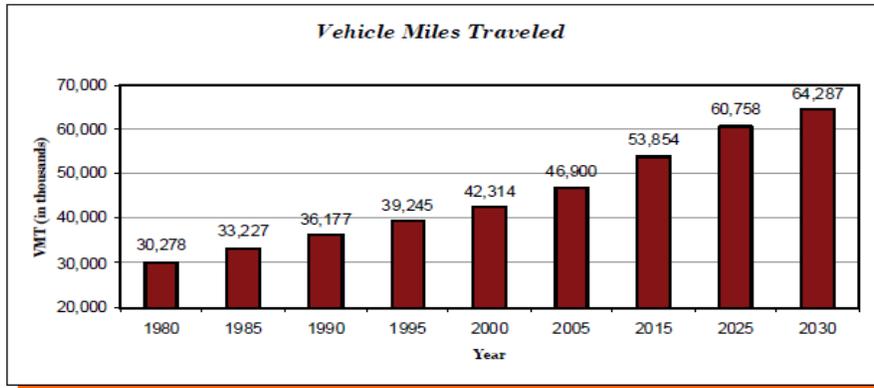
**TRAFFIC**

The following data trends are collected and reported by the Metropolitan Planning Organization (MPO) as a part of the development of the Long Range Transportation Plan. The information that follows is intended to provide a perspective on the condition of the current transportation network.

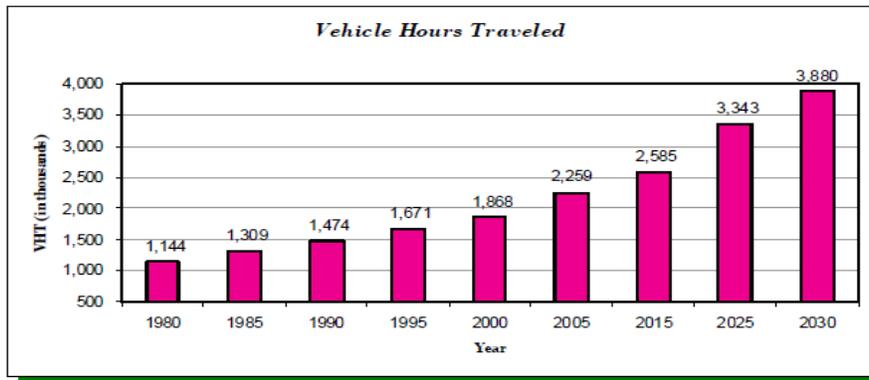
**Average Trip Length (ATL)** – One of the measures used by transportation planners and engineers to assess the demand on our roadways is the ATL, which represents the average duration of trips that people make on a typical weekday. This includes the one-way duration of trips made to go to work, the store, the gym, etc. **The ATL between 1980 and 2007 has increased from 15 minutes to almost 18 minutes, and is projected to further increase to almost 22 minutes by the year 2030.** The graph below shows the ATL for nine target years, from 1980 and projecting out to 2030.



**Vehicle Miles Traveled (VMT)** –VMT represents the total number of miles traveled by everyone in Miami-Dade County on a typical weekday. The 2007 countywide VMT of 48.3 million miles is calculated by multiplying the 2007 (County) average of 19.7 daily miles, by the number of travelers in the County on a typical weekday. **The growth in VMT between 1980 and 2007 was 60 percent,** a trend that is expected to continue, as shown below for nine target years, from 1980 and projecting out to 2030.

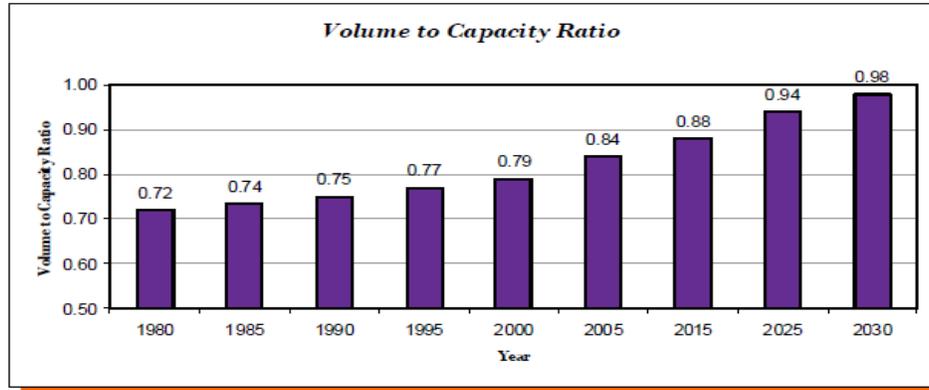


**Vehicle Hours Traveled (VHT)** – VHT represents the total number of hours of travel by everyone in Miami-Dade County on a typical weekday. The 2007 (County) average of 57 minutes, multiplied by the number of travelers in the County on a typical weekday, equals the 2007 countywide VHT of 2.3 million hours. **The growth in VHT between 1980 and 2007 was more than 100 percent**, a trend that is expected to continue, as shown in the chart below for nine target years, from 1980 and projecting out to 2030.



A challenge related to VHT is the need for Transportation Demand Strategies (TDM) that include public transportation and non-motorized transportation, such as walking and biking. Currently, subsidies are very limited and are only offered for transit riders and park-and-ride lots. The key to reducing VHTs will be to provide realistic and attractive travel options to driving, and therefore the list of TDM strategies should be broadened in order to encourage people not to drive.

**Volume to Capacity Ratio (V/C)** – V/C represents the total number of vehicles traveling on a particular roadway, and is usually measured on an hourly or daily basis. It is calculated by dividing the volume of traffic by the carrying capacity of that roadway. For example, if the volume is equal to the capacity, the ratio is 1.0 and that means that the road is gridlocked. The 2007 countywide average V/C is 0.85; meaning 85 percent of the capacity of the County's roadways is being utilized. The growth in V/C between 1980 and 2007 was 18 percent, a trend that is expected to continue, as shown below for nine target years, from 1980 and projecting out to 2030.



Additional indicators related to traffic are in the process of being developed through the County's Long Range Transportation Plan, within its Cost Feasible Assessment and its Climate Change Emissions Calculations Guidelines.

### **Cost Feasible Plan**

Because there is only a limited amount of funding available for transportation improvements in Miami-Dade County during the LRTP projection period, the LRTP's Cost Feasible Plan divides funding among the different transportation modes (e.g. highway, public transportation, non-motorized transport). The total revenues and costs included in the 2035 Plan analysis and the funding split (highway vs. transit) was not available at this time of this draft report. It is expected that the information will become available within the public comment period and therefore incorporated into the final version of this document. Once this information is available, it can be used as an indicator to assess which modes and types of projects are receiving funding prioritization.

### **Climate Change Emission Calculation Guidelines**

The LRTP's Cost Feasible Plan (LRTP) considers the following objectives when prioritizing projects for funding: (1) projects that mitigate the air quality impacts of transportation facilities, services, and operations; (2) projects that reduce fossil fuels use; and (3) projects that promote the use of alternative vehicle technologies. Projects under consideration will be assessed relative to the three objectives by estimating GHG and other pollutant emissions. The model output results will also include VMTs, travel volumes, congestion (levels of service), and travel times. The results of this analysis were not finalized at the time of this report, but will be used as a future indicator of the sustainability of projects contained in the LRTP. Once this information is available, they can be used as indicators to assess whether sustainability factors are playing a key role in determining funding prioritization.

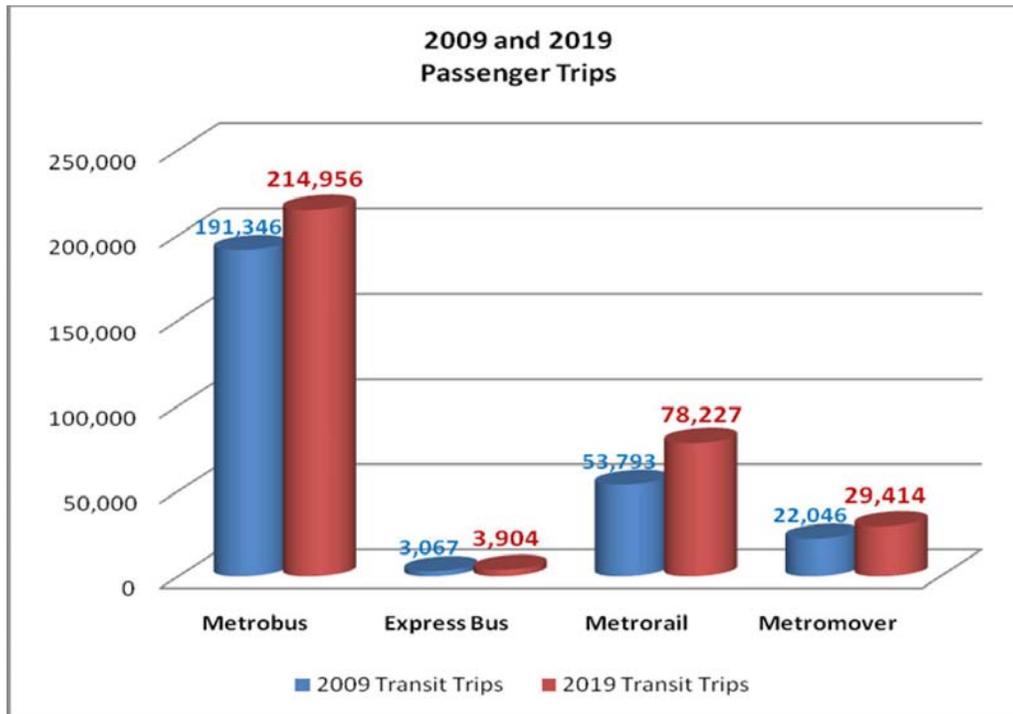
## **PUBLIC TRANSPORTATION**

Miami-Dade Transit (MDT) operates four transit modes: bus (Metrobus), heavy rail (Metrorail), automated guideway (Metromover), and demand-response service for residents with special needs (Special Transportation Services). While there are privately owned and operated jitneys and a small number of circulator bus systems run by municipalities, these services are limited in geographic scope and number of riders. Therefore the indicators included below relate to the public transportation options provided by Miami-Dade County. The following are measures set forth in the Draft Transit Development Plan to allow for the evaluation of future performance and for continued improvement of its system. The measures that relate most closely to sustainable transit services, that is, goals that promote the most efficient use and expansion of public

transportation, and those that support sustainable development such as infill and increasing ridership of mass transit are included here.

### Increased Ridership

Between 2009 and 2019, a 23 percent increase in the total number of transit trips is projected. MDT will be able to further improve upon existing ridership through the provision of efficient transit service that improves transit travel time and on-time performance.

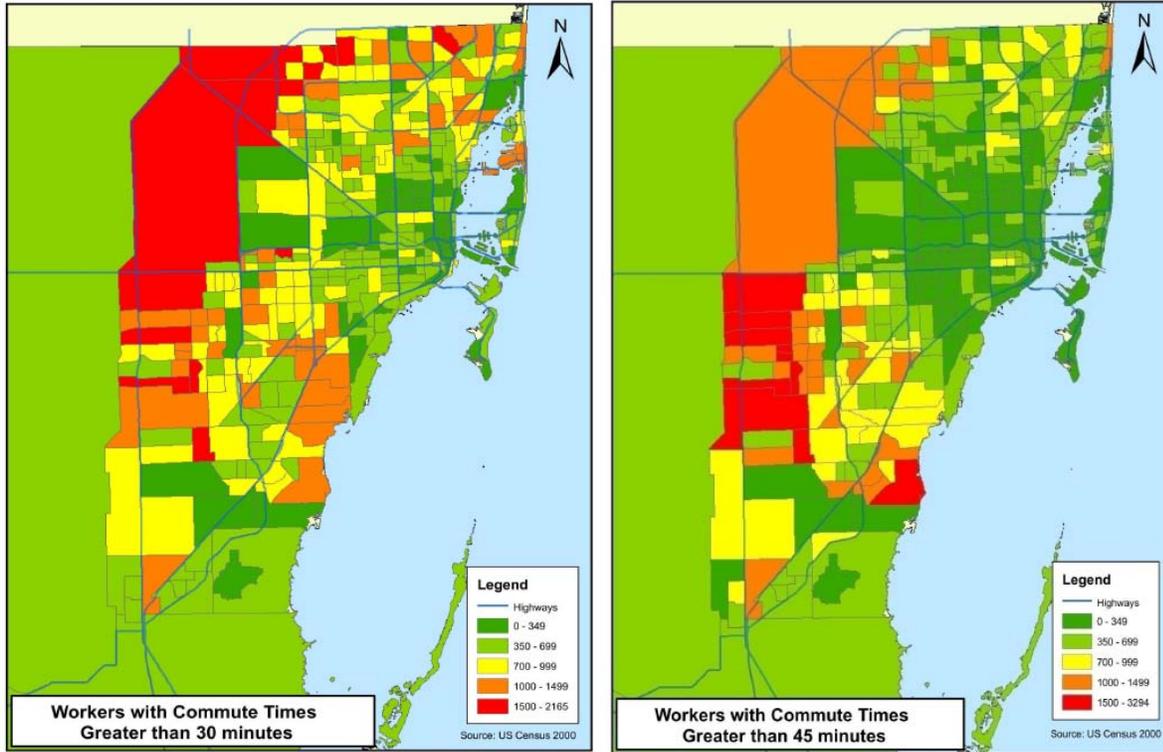


### Transit service route miles within 1/4 mile of major health facilities, recreation, education, employment, cultural and social services facilities.

Approximately 64 transit service route miles operate within a ¼ mile of major medical facilities while more than 130 transit service miles operate within ¼ mile of all colleges and universities within Miami-Dade County. In the future, this measure will also evaluate recreation, employment, cultural and social service facilities.

### Travel Time to Work

Travel times commuting back and forth to work are steadily increasing throughout the South Florida region. A majority of residents living in western regions of the county reported travel times between 30 to 45 minutes. This reveals that residents are spending longer amounts of time commuting in traffic to reach places of employment each work day. The figures below illustrate commute time to work increases significantly for residents living in the outer western regions.



**Transit service route miles within 1/4 mile of MIA and Port of Miami**

Facility	Transit Service Route Miles within 1/4 mile
Miami International Airport	70.0
Port of Miami	17.5

Source: Miami-Dade GIS, 2009

Six Metrobus routes connect directly to Miami International Airport (MIA) terminals, in addition to the Tri-Rail commuter rail service which stops nearby. The Seaport Connection bus connects the Port of Miami to downtown Miami and to Metrobus and Metrorail systems. While the indicator above provides general information on access, other indicators need to be examined to gauge ridership and commute times. The construction of the Miami Intermodal Center (MIC), the MIC-Earlington Heights extension of Metrorail, and MIA Mover will greatly enhance transit service to the airport terminal. Please see the “Existing Efforts” below for more information on the MIA Mover.

**Transit Service Route Miles Within ¼ mile of Urban Infill Area**

	Transit Service Route Miles within 1/4 mile
Urban Infill Area (UIA) Boundary	1,418

Source: Miami-Dade GIS, 2009

The transit service route miles operated by MDT within the Urban Infill Area are more than 1,400 miles. Most of the transit system operates in the urban infill area, and there are few significant areas of the infill area where transit service is not available. In many of these areas,

development still has not fully occupied the area; The TDP will begin measuring service hours on routes serving the Urban Infill Area for future TDP updates.

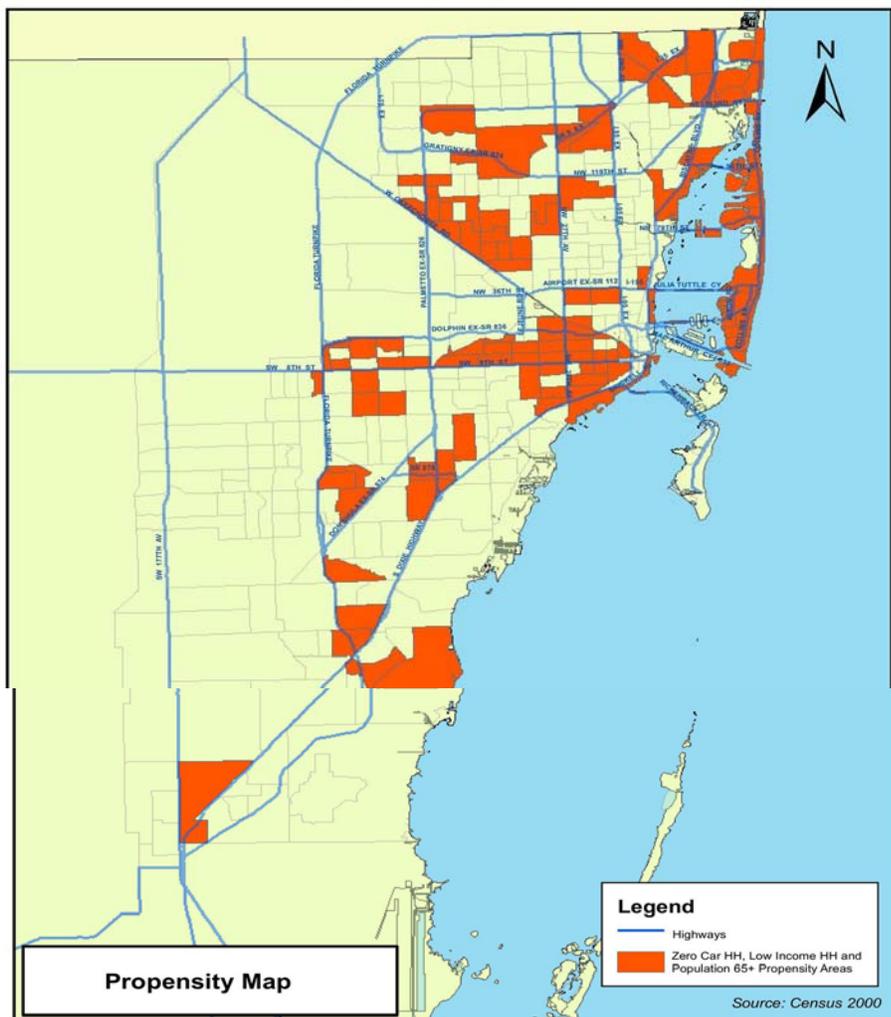
### Transit Propensity

A transit propensity analysis was performed for the TDP Major Update based upon the latest available Census 2000 data. The transit propensity analysis takes into account various demographic characteristics of geographic areas of Miami-Dade and uses this information to identify those areas that have the strongest propensity for transit use. The transit propensity analysis prepared for the MDT TDP Major Update took into account three demographic characteristics:

- Percentage of Population Age 65 or Over
- Percentage of Low Income Households (household income <\$10,000)
- Percentage of Zero Car Households

All of these household characteristics are considered an important transit market, so places with a high concentration of these three characteristics can be considered to be locations where improvements to transit service are likely to yield the greatest return in terms of transit ridership. The following is a map showing concentrations for areas with these three characteristics:

**Transit Propensity Map**



(Source: Draft Transit Development Plan FY2010 to 2019)

The transit propensity map shows a strong concentration of areas for high transit ridership potential areas west of downtown and mid-County, with a number of pockets north and south and along the coast. These areas generally correspond to those areas where MDT is providing higher level transit service or has plans to expand its service offerings.

**Total Unfunded Needs, FY2010-2019 (YOE millions)**

The table below serves as an indicator of the funding for transit service improvement needs as identified by the Miami-Dade Transit Department. 28.8 million dollars in unfunded needs for transit service improvements is projected for FY2010.

Service Improvement Category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Unfunded Needs FY10-19
Bus Improvements (Operating)	\$ 8.0	\$ 11.4	\$ 15.7	\$ 21.3	\$ 22.0	\$ 22.8	\$ 23.6	\$ 25.0	\$ 25.9	\$ 26.8	\$ 202.6
Bus Improvements (Capital)	\$ 20.8	\$ 2.0	\$ 4.9	\$ 8.8	\$ -	\$ -	\$ -	\$ 2.7	\$ 0.9	\$ -	\$ 40.0
Priority Corridors (Capital)	\$ -	\$ 106.9	\$ 44.8	\$ 29.4	\$ 80.3	\$ 64.5	\$ 41.3	\$ 110.6	\$ 172.6	\$ 121.9	\$ 772.4
CIP Projects (Capital)	\$ -	\$ -	\$ 5.7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5.7
<b>TOTAL UNFUNDED NEEDS</b>	<b>\$ 28.8</b>	<b>\$ 120.3</b>	<b>\$ 71.1</b>	<b>\$ 59.5</b>	<b>\$ 102.3</b>	<b>\$ 87.3</b>	<b>\$ 64.9</b>	<b>\$ 138.2</b>	<b>\$ 199.5</b>	<b>\$ 148.8</b>	<b>\$ 1,020.6</b>

(Source: Draft Transit Development Plan FY2010 to 2019)

**Promote transportation improvements that are consistent with adopted comprehensive development master plans**

The above is a measure established in the Draft TDP to assess meeting its goal to preserve the environment and promote energy conservation. While there is currently no method in place to measure the successful implementation of this objective, it is included here as an important future indicator.

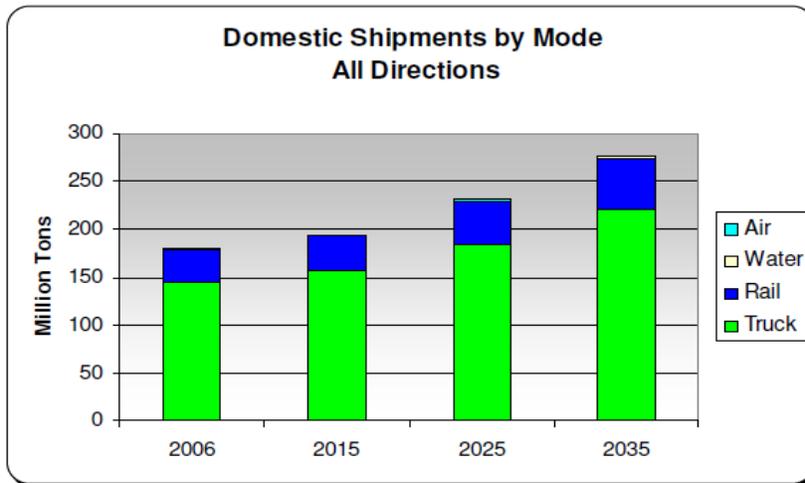
**FREIGHT MOVEMENT**

The performance of the freight network is critical to the County’s mobility and economic competitiveness. Efficient and safe movement of goods benefits business and the general public. Miami-Dade has three large commercial hubs for transportation of goods or passengers, MIA, POM, and the Port of the Miami River.

Because MIA and POM are both managed by the County, more detailed descriptions of their services and operations are provided in the *Government Operations* portion of this report. The Miami River Port is the fifth largest port in the State of Florida and its navigation and commercial shipping facilities directly handle millions of tons of cargo each year. Therefore, the Miami River Port, along with MIA and POM, are a key part of the County’s cargo-related transportation network.

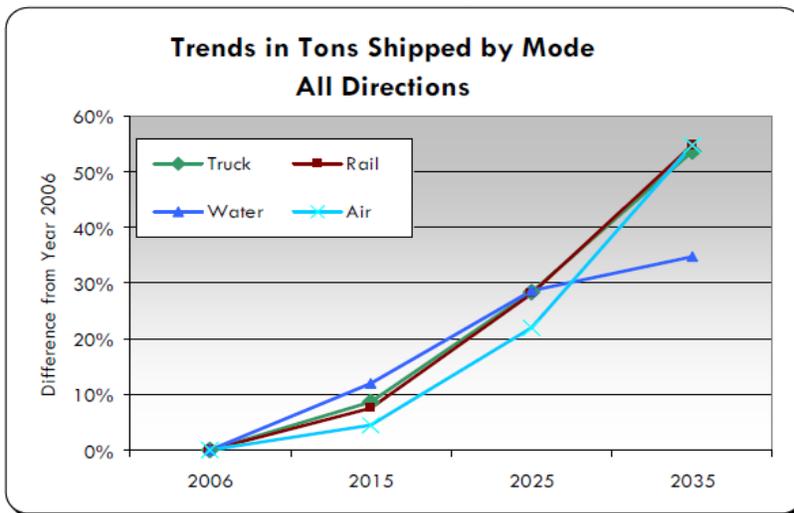
The Miami-Dade Freight Plan examines freight mobility needs, identifies goals and policy objectives, and recommends projects and policies to achieve these goals and objectives. The Freight Plan is ultimately incorporated into the County’s Long Range Transportation Plan to ensure that local freight-related improvements are consistent with the broader regional transportation plan. The following graphs illustrate that domestic shipments are expected to jump nearly 50 percent by 2035 for cargo both into and out of the county. The total number of goods shipped from Miami-Dade is slightly above those received, making the County a net exporter and providing a trade surplus.

## Domestic Shipments by Mode



(Source: Figure ES-1 from Miami-Dade County Freight Plan, March 2009)

## Trends in Tons by Modes



(Source: Figure ES-2 from Miami-Dade County Freight Plan, March 2009)

The 2009 Freight Plan identified performance areas to track during plan implementation. Once data is collected for these indicators, they will be incorporated into updates to the GreenPrint Assessment Report. Future indicators to be considered are:

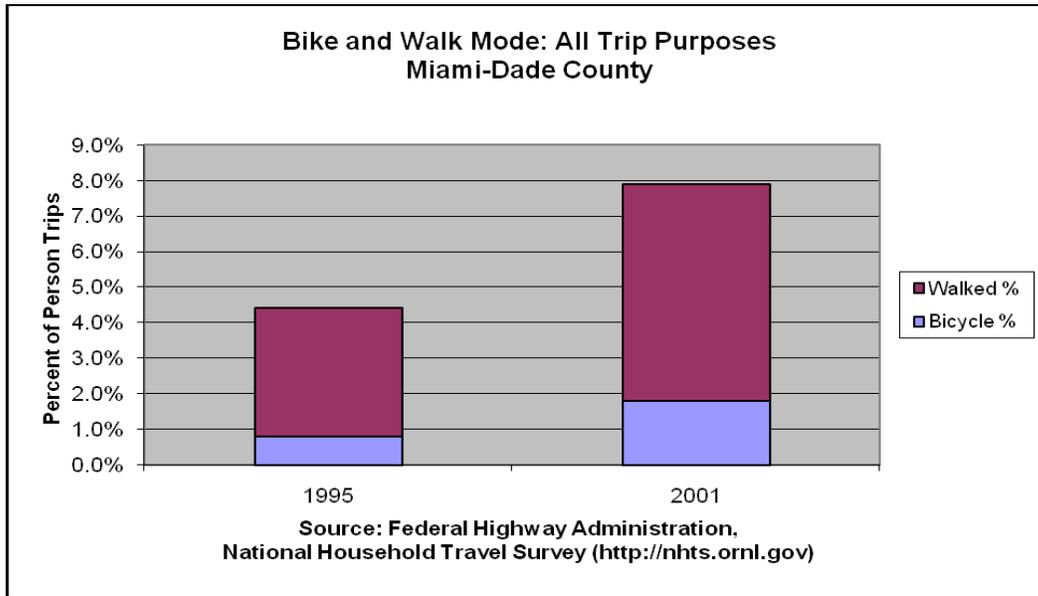
- Freight mobility: Access and Volume/Capacity ratios on key freight corridors
- Freight facilities: Availability of truck parking in relation to demand
- Other measures: System delays

## ALTERNATE MODES

### Bicycle & Pedestrian Trips

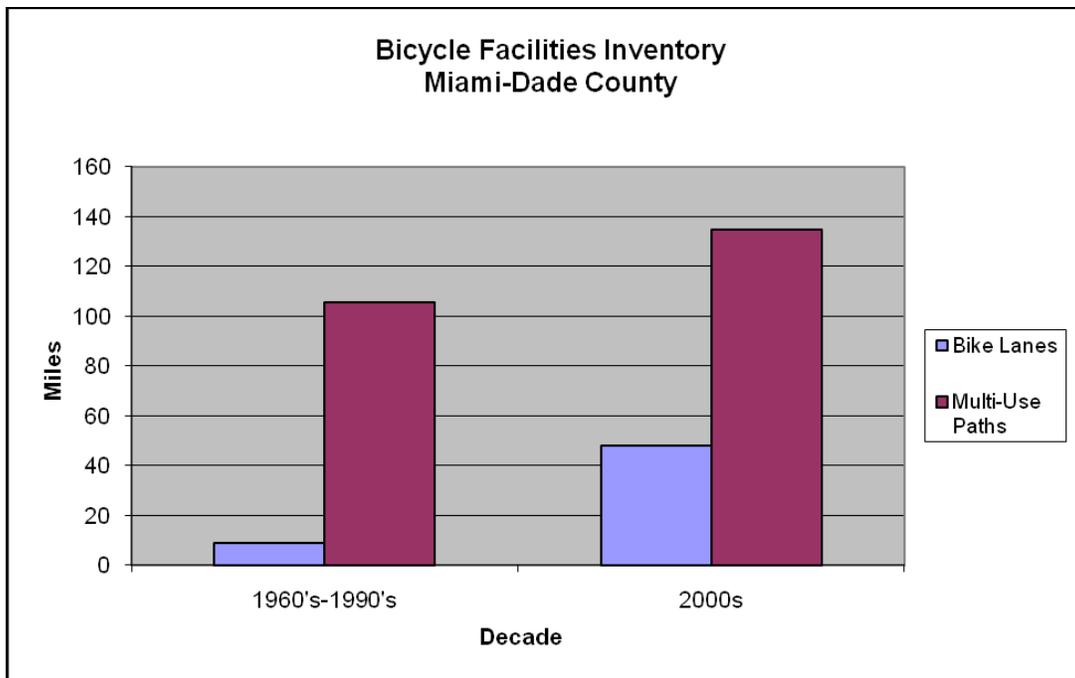
The following table compares the number of bicycle and walking trips in 1995 and 2001. The graph illustrates an approximate doubling in both modes during this period. This trend can be attributed to the development of new facilities (e.g., Phase 1 of the South Miami-Dade Busway),

expansion of Miami-Dade Transit's Bike & Ride program, and gas price increases during that period.



**Bicycle Facility (Pathways)**

Since 2000 almost 40 miles of bike lanes and 30 miles of paved paths have been built in the County. The increase in facilities mileage is the result of adopted policies, planning, and new funding sources such as the federal Transportation Enhancements Program, the County's Building Better Communities Bond Program and other municipal initiatives. Continued development of an integrated system of bicycle facilities will increase travel options for residents and visitors.



## **Competing Policies Identified in the Transit Development Plan**

MDT performed an evaluation of the Land Use and Transportation elements of the Comprehensive Development Master Plan (CDMP) as part of the update to the TDP. This review was performed to determine whether policies of these CDMP elements were supportive or hindered the provision of MDT transit services. The results of this evaluation are summarized here to demonstrate the challenge in implementing policies and objectives that compete for both funding and prioritization in their implementation. These observations illustrate the complex interconnections between land use and transportation.

### ***Land Use Element***

The objectives and policies in the Land Use Element clearly recognize the importance of multi-modal transportation and the role that land development should play in creating a well-integrated relationship between transit and the land uses it serves. Three policy amendments to the Land Use Element are suggested to further enhance its support for transit. Each of these proposed policy amendment are described below.

- **Evaluate policies that may discourage mixed-use development** - Objective LU-4 addresses the issue of incompatible land uses, with a focus on protecting residential neighborhoods. These policies could discourage mixed use and transit-oriented development. The TDP proposes modifying the objective to acknowledge that in some cases, different uses should be mixed with careful consideration of their characteristics and application of sound urban design principles to ensure compatibility.
- **Develop a stronger policy regarding inappropriate land uses and development design near transit** - Policy LU-7E states that land uses “not conducive to public transit” should not be permitted within a ¼ mile of rail rapid transit stations. The TDP suggests amending the policy in the following ways:
  - Make the prohibition mandatory – at least for uses that are clearly incompatible in all conceivable circumstances.
  - Indicate where a specific list of prohibited uses can be found in the County’s land use ordinance. In addition to use,
  - Consider the physical form of development when determining land uses, including which land uses are incompatible with transit. For example, a car dealership is not necessarily incompatible with creating a good pedestrian/transit environment if it has store front windows near the street with parking behind or within the building.
  - Expand the policy to apply to more than “rail rapid transit stations” by including urban centers and important transit corridors.
- **View major streets (section line roads) as potential community focal points rather than neighborhood boundaries.** - The “Residential Communities” section of the Land Use Element notes that the section line roads should form the physical boundaries of neighborhoods. This section also states that along major streets, pedestrians should be accommodated by sheltering sidewalks from passing traffic with landscaping on the street edge. Even when done well, this tends to create an isolated, noisy, and uninviting pedestrian environment situated between busy, high-speed streets and parking lots. The TDP suggests that people will only walk in these environments when they are forced to do so, not because they want to and adds that thinking of such streets as boundaries may also have the unintended consequence of creating few pedestrian and bicycle linkages across these major roadway barriers. The TDP suggests considering using design treatments along major streets, and especially along important transit corridors, to allow them to become attractive and active community centers rather than neighborhood barriers.

It also suggests that traffic calming, mixed land uses, pleasant and convenient pedestrian/bike access. Good urban design can transform vehicle throughways into multi-modal corridors.

### ***Transportation Element***

The TDP review acknowledges that objectives and policies in the Transportation Element recognize the importance of multi-modal transportation. However, it suggests the emphasis of the general Transportation Element objectives and policies and the Traffic Circulation Sub-element is biased toward accommodating automobiles over other transportation modes. The evaluation recommends three types of future amendments to address these issues:

- **De-emphasize the focus on level of service (LOS) for automobiles** - Objective TC-1 states that “It is desirable that all roadways in Miami-Dade County operate a level of service (LOS) C or better.” Supporting Policy TC-1H states that “...Miami-Dade County will give highest priority to the funding of necessary capacity improvements to roadways on the Florida Intrastate Highway System...” Objective TC-3 states “The County’s transportation system will emphasize safe and efficient management of traffic flow.” Supporting Policies TC-3A and B focus on auto-related system treatments and correcting high accident locations. The TDP states that similar aggressive policy statements are absent regarding pedestrian and bicycle system safety and performance, connectivity, and convenience issues. The Mass Transit Sub-element Objective MT-1 and supporting policies suggest appropriate levels of transit service, and Objective MT-3 indicates that a “sound funding base” should be provided. However, the TDP interprets this policy language as suggesting that compared to automobile travel, transit and non-motorized modes are lower priorities and recommends the County should consider promoting a true multi-modal balance by strengthening its policy and financial commitment for transit, walking, and bicycling while diminishing the emphasis on maintaining or expanding roadway capacity.
- **Consider Transportation Demand Strategies (TDM) that include transit & non-motorized transportation** - Objective TC-1F lists a number of possible TDM strategies to reduce overall peak-hour demand and use of single occupant vehicles. The analysis revealed that of the strategies, offering a subsidy for transit riders and park-and-ride lots are the only transit-related alternatives and that there are no walking or bicycling strategies. The TDP suggests the county consider broadening the list of TDM strategies to encourage people not to drive. The key will be to provide realistic and attractive travel options to driving.
- **Provide a clearer and more detailed vision regarding pedestrian and bicycle system improvements that complement transit** - The TDP states that successful transit depends upon people having easy access to it and that walking and bicycling are the two common and most efficient ways to reach transit. It explains that Objective MT-8 and the supporting policies begin to address this by noting the importance of pedestrian walkways, comfortable pedestrian environment, and bicycle lockers and racks. The TDP suggests that the Transportation Element does not clearly address what accommodations should be made to provide pedestrians and bicyclists with safe, convenient, and comfortable access between transit and surrounding development and suggests the county consider broadening the objectives and policies to cover:
  - Safe and convenient pedestrian and bicycle networks, especially within urban centers and transit corridors.

- A planned countywide non-motorized network featuring a fine-grained system that is comparable to the level of attention given to vehicular modes.
- Access strategies for the major county centers that would promote transit use along with walking and bicycling. There is no discussion about how access should be provided by transit, walking, or bicycling to the Major Existing Traffic Generators and Attractors 2025.

## **EXISTING EFFORTS**

*Consolidates current plans, goals, and initiatives related to the specific assessment area*

Goals from three of the County's major plans that deal with transportation issues are listed below. Because there are so many initiatives related to transportation in Miami-Dade County, only a few initiatives have been listed below the goals to provide a sense of the diversity of these initiatives.

### **Comprehensive Development Master Plan**

The CDMP Transportation Element provides general policies which guide Miami-Dade County's. It includes three goals and their associated objectives:

**Goal 1-** Develop and maintain an integrated multimodal transportation system in Miami-Dade County to move people and goods in a manner consistent with overall countywide land use and environmental protection goals.

- *Objective TE-1:* Miami-Dade County will provide an integrated multimodal transportation system for the circulation of motorized and non-motorized traffic by enhancing the Comprehensive Development Master Plan and its transportation plans and implementing programs to provide competitive surface transportation mode choice, local surface mode connections at strategic locations, and modal linkages between the airport, seaport, rail and other intercity and local transportation facilities. These plans and programs shall seek to ensure that, among other objectives, between 2004 and 2010 Miami-Dade Transit boardings will increase at a rate equal to or greater than the rate of resident population growth during this period.
- *Objective TE-2:* In furtherance of pedestrianism as a mode of transportation encouraged in the planned urban area, by 2008 Miami-Dade County shall enhance its transportation plans, programs and development regulations as necessary to accommodate the safe and convenient movement of pedestrians and non-motorized vehicles, in addition to automobiles and other motorized vehicles.
- *Objective TE-3:* As provided in the policies herein under, Miami-Dade County shall cooperate with the MPO for the Miami Urbanized Area to enhance Miami area planning procedures, methodologies and analytical tools to improve analysis of relationships between transportation facility plans and programs, and local land use plans, development standards and implementing programs.

**Goal 2 -** Develop, operate and maintain a safe, efficient and economical traffic circulation system in Miami-Dade County that provides ease of mobility to all people and for all goods, is consistent with desired land use patterns, conserves energy, and protects the natural environment.

- *Objective TC-1:* It is desirable that all roadways in Miami-Dade County operate at level of service (LOS) C or better. By the year 2010 no roadways in Miami-Dade County should operate at a level of service lower than the base level of service standard contained herein.

- *Objective TC-2:* Rights-of-way and corridors needed for existing and future transportation facilities will be designated and reserved.
- *Objective TC-3:* The County's transportation system will emphasize safe and efficient management of traffic flow.
- *Objective TC-4:* The Traffic Circulation Sub-element will continue to be coordinated with the goals, objectives and policies of the Land Use Element, including the land uses, Urban Development Boundary and Urban Expansion Area designated on the Land Use Plan map, and with the goals, objectives and policies of all other Elements of the CDMP.
- *Objective TC-5:* The traffic circulation system will protect community and neighborhood integrity.
- *Objective TC-6:* Plan and develop a transportation system that preserves environmentally sensitive areas, conserves energy and natural resources and promotes community aesthetic values.
- *Objective TC-7:* Miami-Dade County's Traffic Circulation Sub-element, and the plans and programs of the State, region and local jurisdictions, will continue to be coordinated.

**Goal 3** - Maintain, operate and develop a mass transit system in Miami-Dade County that provides efficient, convenient, accessible, and affordable service to all residents and tourists.

- *Objective MT-1:* By the year 2007\*, the mass transit system shall operate at a level of service no lower than the standard contained herein.
- *Objective MT-2:* Coordinate the provision of efficient transit service and facilities with the location and intensity of designated future land use patterns as identified on the Land Use Plan Map, and the goal, objectives and policies of the Land Use Element.
- *Objective MT-3:* Provide a sound funding base utilizing public and private sources that will assure maintenance of existing service operations and timely implementation of the needed transportation improvement projects and services.
- *Objective MT-4:* Provide convenient, accessible and affordable mass transit services and facilities.
- *Objective MT-5:* Provide equitable transportation services to all groups in the metropolitan population, including the special transportation needs of the elderly, persons with disabilities, low income and other transit dependent persons.
- *Objective MT-6:* Continue to coordinate Miami-Dade County's Mass Transit Sub-element, and the plans and programs of the State, region and local jurisdictions.
- *Objective MT-7:* Initiate, by 2007\*, protection strategies for Mass Transit rights-of-way and exclusive transit corridors.
- *Objective MT-8:* Encourage ease of transfer between mass transit and all other modes, where it improves the functioning of the transportation network.

### **Long Range Transportation Plan 2035**

The purpose of the Miami-Dade 2035 Long Range Transportation Plan (LRTP) was to develop a plan for a multimodal transportation system that complied with state and federal requirements, optimized the movement of people and goods, and met the goals and objectives adopted by the Miami-Dade Metropolitan Planning Organization Governing Board. The LRTP Steering Committee developed eight primary goals for the Miami-Dade County transportation system. For each goal, a number of more specific objectives were identified.

*\*Excerpt from the October 2006 Edition of the "Adopted Components Comprehensive Development Master Plan for Miami-Dade County, Florida"*

The following goals and objectives are the basis for selecting and prioritizing projects to develop a transportation system that optimizes the movement of people and goods while reinforcing the fundamental guiding principles of sustainability, equability and environmental capability. The LRTP is a plan to prioritize and designate the funding of projects that address the following goals, but is not an implementation plan for achieving these comprehensive goals and objectives.

Goals / Objectives	Measure
<b>Goal 1: Improve Transportation System and Travel</b>	
<b>Objective 1.1:</b> Improve accessibility to major health care, recreation, education, employment and cultural facilities	Highway lane & centerline miles within 1 miles of major health facilities, recreation, education, employment and cultural facilities
	Transit service route miles within 0.5 miles of major health care facilities, recreation, education, employment and cultural facilities
<b>Objective 1.2:</b> Enhance mobility for people and freight	Average travel time (all purposes)
	Number of daily passengers on public transit
<b>Objective 1.3:</b> Reduce Congestion	Hours of delay
<b>Objective 1.4:</b> Maximize multimodal travel options and provide travel choices	Transit service route miles and HOV/HOT lane miles
<b>Objective 1.5:</b> Fill transit service gaps	Service coverage in transit supportive areas (see TCQSM)
<b>Objective 1.6:</b> Promote transit reliability	Total hours of delay on highway facilities with transit service
<b>Objective 1.7:</b> Improve transportation facilities' and services' regional connectivity	Highway lane & centerline miles in corridors of regional significance
	Transit service route miles in corridors of regional significance
	Number of park-n-ride/multimodal facilities
<b>Objective 1.8:</b> Include provisions for non-motorized modes in new projects and in reconstructions	Does the plan consider non-motorized infrastructure in highway and transit improvements?
	Percentage Increase in number/mileage of non-motorized facilities
<b>Objective 1.9:</b> Promote new non-motorized (bicycle, pedestrian, greenways) projects	Does the plan consider new non-motorized facilities?
	Percentage increase in number/mileage of non-motorized facilities
<b>Objective 1.10:</b> Increase reverse commute opportunities for disadvantaged communities	Transit service route miles from cities and central areas in the AM Peak period
<b>Objective 1.11:</b> Promote transportation improvements that provide for the needs of the elderly and disabled	Average highway and transit travel time to/from TAZs with a high proportion of elderly population
<b>Objective 1.12:</b> Improve transit services that provide access to educational facilities	Transit service route miles within 0.5 miles of educational facilities
<b>Goal 4: Support Economic Vitality</b>	
<b>Objective 4.1:</b> Increase access to employment and sites	Average HBW travel time
<b>Objective 4.2:</b> Enhance tourist travel and access opportunities	Highway lane & centerline miles within 1 miles of tourist attractions

	Transit service route miles within 0.5 miles of tourist attractions
<b>Objective 4.3:</b> Increase and improve passenger and good access to airports and seaports	Highway lane & centerline miles within 1 miles of MIA, Opa Locka, HGAA, and Port of Miami
	Transit service route miles within 0.5 miles of MIA, Opa Locka, HGAA, and Port of Miami
	Number of transit patrons going to/from the airports and seaport
<b>Objective 4.4:</b> Augment multimodal access to major activity centers	Highway lane & centerline miles within 1 miles of major activity centers
	Transit service route miles within 0.5 miles of major activity centers
<b>Objective 4.5:</b> Enhance the efficient movement of freight and goods	Does the plan consider freight-specific infrastructure improvements/programs?
<b>Objective 4.6:</b> Implement projects that support economic development and redevelopment areas	Highway lane & centerline miles within 1 miles of redevelopment areas
	Transit service route miles within 0.5 miles of redevelopment areas
<b>Goal 5: Protect and Preserve the Environment and Quality of Life and Promote Energy Conservation</b>	
<b>Objective 5.1:</b> Minimize and mitigate air and water quality impacts of transportation facilities, services, and operations	Tons per day of emissions (NOx, CO, VOC)
	Surface coverage of transportation system on acres of wetlands
<b>Objective 5.2:</b> Reduce fossil fuels use	VMT
	Non fossil fuel burning daily transit service route miles
<b>Objective 5.3:</b> Promote projects that support urban infill and densification	Highway lane & centerline miles within the Urban Infill Area
	Transit service route miles within the Urban Infill Area
<b>Objective 5.4:</b> Minimize adverse impacts to established neighborhoods	Does the plan minimize impacts to established neighborhoods?
<b>Objective 5.5:</b> Promote transportation improvements that are consistent with adopted comprehensive development master plans	Is the plan consistent with adopted comprehensive development master plans?
<b>Objective 5.6:</b> Prioritize funding to favor intra-urban (within UDB) improvements	Ratio of lane & highway centerline miles inside/outside UDB boundaries
	Ratio of transit service route miles inside/outside UDB boundaries
<b>Objective 5.7:</b> Promote the use of alternative vehicle technologies	Does the plan promote the use of alternative vehicle technologies?
<b>Objective 5.8:</b> Apply transportation and land use planning techniques, such as transit-oriented development, that support intermodal connections and coordination	Does the plan's socioeconomic data projections/allocation encourage TOD and other transit-supportive land uses?
<b>Goal 6: Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes, for People and Freight</b>	
<b>Objective 6.1:</b> Improve connectivity to Strategic Intermodal System (SIS) and intermodal facilities	Highway centerline miles on SIS connectors
<b>Objective 6.2:</b> Provide multi-modal options consistent with the local government comprehensive plan	Is the plan consistent with adopted comprehensive development master plans?
<b>Objective 6.3:</b> Facilitate connections between transportation modes	Does the plan address multimodal connections?

<b>Objective 6.4:</b> Improve goods movement by enhanced intermodal access and other infrastructure that serve major freight origins and destinations in Miami-Dade County	Highway lane miles within 1 miles of major freight origins and destinations
<b>Objective 6.5:</b> Improve freight movement operations and reliability by promoting expedient and cooperative practices across all modes	Does the freight component of the plan address multimodal freight improvements?
<b>Goal 7:</b> Optimize Sound Investment Strategies for System Improvement and Management/Operation	
<b>Objective 7.1:</b> Optimize benefits of capital expenditures	Capital expenditure/travel time savings benefit ratio
<b>Objective 7.2:</b> Optimize operations and maintenance expenses	O&M expenditure/travel time savings benefit ratio
<b>Objective 7.3:</b> Optimize applications of People's Transportation Plan funding	PTP expenditure/travel time savings benefit ratio
<b>Objective 7.4:</b> Maximize use of private sector funding sources	Number of private sector funded projects
	Dollar amount of private sector funding (as a proportion of total cost of plan)
<b>Objective 7.5:</b> Maximize use of State and Federal funding sources	Percent of State and Federal funding sources
	Dollar amount of State and Federal funding (as a proportion of total cost of plan)
<b>Objective 7.6:</b> Promote local improvement projects within the systems improvement context	Number of improvements on local facilities (non-State Highway System)
<b>Goal 8:</b> Maximize and Preserve the Existing Transportation System	
<b>Objective 8.1:</b> Continue to examine the provision and utilization of special-use lanes on the existing system	Lane miles of special use/managed lanes
<b>Objective 8.2:</b> Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system	Does the plan consider the latest technologies and innovations in transportation improvements?
<b>Objective 8.3:</b> Identify and reserve corridors and right-of-way (on roadways, railways, and waterways) for future transportation facilities and services	Does the plan consider right-of-way acquisition as a phase that can be planned independently?
<b>Objective 8.4:</b> Expand the use of Transportation Demand Management (TDM) strategies	Does the plan make use of TDM strategies?

*Note: Goals 3 & 4 addressing the Increase the Safety and Security of the Transportation System for Motorized and Non-motorized Users were removed. Please see the Public Safety Area of this report for a discussion of how these goals contribute to a sustainable community.*

### **Draft Transit Development Plan FY2010 to 2019**

The fiscal year (FY) 2010 – 2019 Draft Transit Development Plan (TDP) Major Update is a strategic development and operational guide for public transportation used by MDT for the next 10 year planning horizon. The Draft TDP includes an update of existing services, demographic and travel characteristics overview, a summary of local transit policies within the region, the development of proposed transit enhancements, and the preparation of a 10-year implementation plan that provides guidance for future MDT planning.

OBJECTIVE		MEASURE
<b>Goal 1: Improve the Quality of Transit Services</b>		
1.1	Improve accessibility to major health care, recreation, education, employment, cultural and social services facilities	<ul style="list-style-type: none"> <li>▲ Transit service route miles within 1/4 mile of major health facilities, recreation, education, employment, cultural and social services facilities</li> </ul>
1.2	Enhance mobility for people through improved transit connectivity	<ul style="list-style-type: none"> <li>• Average travel time, transfer time</li> </ul>
1.3	Improve transit level of service on major roadway corridors and between major origins and destinations	<ul style="list-style-type: none"> <li>• Headway and service span, average transit time savings</li> </ul>
1.4	Maximize service reliability and efficiency	<ul style="list-style-type: none"> <li>▲ On time performance, frequency of service</li> </ul>
1.5	Maximize multimodal travel options and provide travel choices	<ul style="list-style-type: none"> <li>• Transit service route miles by transit mode (Metrorail, Metromover, Express and Local Bus)</li> </ul>
1.6	Fill transit service coverage gaps	<ul style="list-style-type: none"> <li>• Service coverage in transit supportive areas completed in a regional level</li> </ul>
1.7	Promote transit reliability	<ul style="list-style-type: none"> <li>• Increase in ridership</li> </ul>
1.8	Improve transportation facilities' and services' regional connectivity	<ul style="list-style-type: none"> <li>• Transit service route miles in corridors of regional significance</li> <li>▲ Number and location of shelters, stations, transit centers relative to service standards</li> </ul>
1.9	Include provisions for non-motorized modes in new projects and in reconstructions	<ul style="list-style-type: none"> <li>• Non-motorized infrastructure on transit improvements</li> </ul>
1.10	Increase reverse commute opportunities for disadvantaged communities	<ul style="list-style-type: none"> <li>• Transit service routes miles from urban centers to suburban employment areas in the AM Peak period</li> </ul>
1.11	Promote transportation improvements that provide for the needs of the elderly and disabled	<ul style="list-style-type: none"> <li>• Average transit travel time to/from TAZs with a high proportion of elderly and disabled population</li> </ul>
1.12	Improve transit services that provide access to educational facilities	<ul style="list-style-type: none"> <li>• Transit service route miles within 1/4 mile of educational facilities</li> </ul>
<b>Goal 2: Improve Customer Convenience, Comfort and Safety on Transit Service and within Facilities</b>		

2.1	Improve safety on vehicle service operations	<ul style="list-style-type: none"> <li>Level of investment in safety projects/Audit of System Safety Program Plan.</li> </ul>
2.2	Reduce roadway and multi-modal crashes	<ul style="list-style-type: none"> <li>Number of accidents involving transit vehicles, Number of accidents/incidents per 100,000 miles</li> </ul>
2.3	Enhance outreach opportunities to educate the community on transportation issues and highlight transit service benefits such as service reliability, passenger cost savings, and environmental benefits	<ul style="list-style-type: none"> <li>Develop speaker's bureau to inform public about transit benefits</li> <li>Work with MPO, Transportation Management Organizations, major employers to promote transit service</li> <li>Recruit community leaders to advise on promoting transit service</li> </ul>
2.4	Maintain convenient, clean, safe transit passenger facilities and vehicles	<ul style="list-style-type: none"> <li>Reduction of passenger complaints regarding safety and cleanliness of vehicles and facilities</li> <li>Completion of bi-annual safety and inspection audits of Metrorail and Metromover stations</li> <li>Number of safety related accidents and incidences on-board and in stations/transit facilities</li> </ul>

Table 6-1: TDP Major Update Goals, Objectives and Measures (continued)

OBJECTIVE		MEASURE
<b>Goal 3: Increase the Security of Transit Vehicles and Facilities</b>		
3.1	Ensure transit vehicles and facilities provide a secure environment for customers	<ul style="list-style-type: none"> <li>Percent of functioning video cameras</li> <li>Security personnel capabilities</li> <li>Ensure 100 percent compliance with security contract</li> <li>Reduction of security related incidents</li> </ul>
3.2	Increase security at transit stops and intermodal stations and connections	<ul style="list-style-type: none"> <li>Number of criminal incidents on-board transit and in stations/transit facilities</li> </ul>
<b>Goal 4: Support Economic Vitality</b>		
4.1	Provide transit access to urban centers at a minimum of 30-minutes during the peak	<ul style="list-style-type: none"> <li>Transit service within 1/4 mile of urban centers as identified by MDT</li> <li>Average home base to work (HBW) travel times on transit route providing access to urban centers</li> </ul>
4.2	Enhance major tourist travel and access opportunities within the Urban Growth Boundary	<ul style="list-style-type: none"> <li>Transit service route miles within 1/4 mile of tourist attractions</li> </ul>
4.3	Increase and improve transit access to Miami International Airport and the Port of Miami	<ul style="list-style-type: none"> <li>Transit service route miles within 1/4 mile of MIA and Port of Miami</li> <li>Service hours on transit routes operating within 1/4 mile of MIA and Port of Miami</li> </ul>
4.4	Implement projects that support economic development and redevelopment areas	<ul style="list-style-type: none"> <li>Transit service route miles within 1/4 mile of redevelopment areas</li> <li>Service hours on routes operating within 1/4 mile of redevelopment areas</li> </ul>
4.5	Apply transportation and land use planning techniques, such as transit-oriented development (TOD), that	<ul style="list-style-type: none"> <li>Promote modification of permitted land use to encourage mixed-use and TOD</li> <li>Encourage use of transit overlay districts to simplify</li> </ul>

OBJECTIVE		MEASURE
	support intermodal connections and coordination	implementation of transit-friendly land use in areas of high transit service or around transit station facilities
<b>Goal 5:—Preserve the Environment and Promote Energy Conservation</b>		
5.1	Minimize and mitigate air quality impacts of transportation facilities, services, and operations	<ul style="list-style-type: none"> <li>• Tons per day of emissions (Nox, CO, VOC) generated by the region's transportation system</li> </ul>
5.2	Reduce fossil fuels consumption through the consideration of alternative fuel vehicle technology	<ul style="list-style-type: none"> <li>▲ Number of gallons of bio-diesel fuel consumed</li> <li>• Ratio of bio-diesel to standard clean diesel fuel consumed</li> <li>• Number of hybrid technology buses in MDT fleet.</li> <li>• Average miles per gallon of bus fleet</li> </ul>
5.3	Promote transit service projects that support urban infill and densification	<ul style="list-style-type: none"> <li>• Transit service route miles within the Urban Infill Area</li> <li>▲ Service hours on routes serving the Urban Infill Area</li> </ul>
5.4	Minimize adverse impacts to established neighborhoods	<ul style="list-style-type: none"> <li>• Minimize impacts to established neighborhoods</li> </ul>
5.5	Promote transportation improvements that are consistent with adopted comprehensive development master plans	<ul style="list-style-type: none"> <li>• Consistent with adopted comprehensive development master plans</li> </ul>
<b>Goal 6: Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes and Transit Providers, for People and Freight</b>		
6.1	Provide multi-modal options consistent with the local government	<ul style="list-style-type: none"> <li>• Consistency with adopted comprehensive development master plans</li> </ul>
6.2	Facilitate connections between transportation modes	<ul style="list-style-type: none"> <li>• Multimodal connections (bus-rail, transit-taxi etc.)</li> <li>• On-time performance</li> <li>• Transfer time</li> <li>• Transfer policies</li> </ul>
6.3	Ensure transportation options are available during emergency evacuations for the elderly and persons with disabilities	<ul style="list-style-type: none"> <li>• Transit service route miles within 1/4 mile of TAZs with a high proportion (20% or higher) of elderly and the disabled population</li> </ul>
6.4	Increase coordination between regional and local transportation providers	<ul style="list-style-type: none"> <li>• Provide better Multimodal connections: Tri-Rail-bus, bus-rail, municipal services-MDT, transit-taxi, jitney etc.</li> </ul>
<b>Goal 7: Optimize Sound Investment Strategies for System Improvement and Management/Operation</b>		
7.1	Optimize benefits of capital expenditures	<ul style="list-style-type: none"> <li>• Capital expenditure</li> </ul>
7.2	Optimize operations and maintenance expenses	<ul style="list-style-type: none"> <li>• Decrease cost per revenue mile</li> <li>• Decrease cost per revenue hour</li> </ul>
7.3	Optimize applications of People's Transportation Plan funding	<ul style="list-style-type: none"> <li>• PTP expenditure</li> <li>• Consistency of PTP funding being used with commitments made in PTP</li> </ul>
7.4	Identify Public, Private Partnership opportunities	<ul style="list-style-type: none"> <li>• Number of private sector funded transit projects</li> <li>• Dollar amount of private sector funding</li> </ul>

OBJECTIVE		MEASURE
		<ul style="list-style-type: none"> <li>Ratio of public to private sector funding for operating funds and capital improvements</li> </ul>
7.5	Align MDT priorities and deliverables with available funding and resources	<ul style="list-style-type: none"> <li>Availability of additional funding from new sources tied to specific projects or programs</li> <li>Projects completed within budget and on-time</li> </ul>
<b>Goal 8: Maximize and Preserve the Existing Transportation System</b>		
8.1	Continue to examine the provision and utilization of special-use lanes on the existing system for transit use	<ul style="list-style-type: none"> <li>Lane miles of special use/managed lanes used by transit services.</li> <li>Dollar amount of planned right-of-way acquisition for transit facilities</li> </ul>
8.2	Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system	<ul style="list-style-type: none"> <li>Operation of new technologies and innovations in transportation improvements</li> </ul>
8.3	Upgrade and maintain existing transit infrastructure and facilities in a state of good repair	<ul style="list-style-type: none"> <li>Capital expenditure on existing transit infrastructure is in line with identified needs (IRP)</li> </ul>
8.4	Maintain the operational functionality of transit vehicles to maximize reliability	<ul style="list-style-type: none"> <li>Number/percentage of missed pullouts, failures</li> <li>Adherence to preventative maintenance programs</li> <li>Mean distance between service disruptions on Metrorail, metromover and bus</li> </ul>

### Freight Plan

The Miami-Dade Freight Plan has a goal of promoting regional goods movement that are socially and environmentally responsible. The Plan was developed under the guidance of the Miami-Dade MPO Freight Transportation Advisory Committee (FTAC) which is the industry's advisory panel to the Metropolitan Planning Organization. The goals of the 2009 Freight Plan are as follows:

- Goal 1: Support economic development by enhancing freight system connectivity.
- Goal 2: Advance strategic freight initiatives that support job creation and retention to enhance the region's long-term competitive position.
- Goal 3: Enhance freight transportation safety and convenience to ensure mobility and access.
- Goal 4: Provide the secure movement of international and domestic goods.
- Goal 5: Address the varied freight improvement needs of area shippers, carriers and distributors at both a regional and corridor level.
- Goal 6: Improve multimodal access in order to enhance freight efficiency throughout the County.
- Goal 7: Promote methods for regional goods movement that are socially and environmentally responsible.
- Goal 8: Educate the public on the importance of freight transportation to the region as well as the needs and issues of shippers, carriers, and other affected stakeholders.
- Goal 9: Give greater priority and attention to freight in the regional planning process.
- Goal 10: Make public investments that help minimize the cost and improve the reliability of goods movement within the County.
- Goal 11: Implement and maintain freight initiatives that provide long-term returns on public investment.

### **Bicycle Facilities Plan**

Increasing number of County residents and visitors are choosing to walk or bike for all or a portion of their trip. To meet the needs of these travelers, the MPO has addressed walking and bicycling in its transportation plan. The creation of a Bicycle Plan is a step towards not only enhancing the County's bicycling facilities but also achieving a higher percentage of non-motorized trips by identifying areas in greatest need of bicycle improvements and focusing improvements to those areas.

(Source: [http://www.miamidade.gov/mpo/docs/MPO\\_bike\\_facilities\\_plan\\_2001.pdf](http://www.miamidade.gov/mpo/docs/MPO_bike_facilities_plan_2001.pdf))

### **Pedestrian Plan**

Increasing numbers of County residents and visitors are choosing to walk or bike or all or a portion of their trip. To meet the needs of these travelers, the MPO has addressed walking and bicycling in its transportation plan. The creation of a Pedestrian Plan is a step towards not only enhancing the County's pedestrian facilities but also achieving a higher percentage of non-motorized trips by identifying areas in greatest need of pedestrian improvements and focusing improvements to those areas. The purpose of the 2025 Pedestrian Plan is to:

- Identify pedestrian facility needs based on quantitative analysis;
- Identify Candidate Projects to address pedestrian facility needs;
- Prioritize pedestrian projects; and
- Develop a Minimum Revenue Plan based on projected funding.

The goal of the 2025 Miami-Dade County Pedestrian Facilities Plan is to facilitate the construction of pedestrian improvements at locations that have been determined to address the County's most pressing needs.

(Source: [http://www.miamidade.gov/mpo/docs/MPO\\_ped\\_plan\\_2001.pdf](http://www.miamidade.gov/mpo/docs/MPO_ped_plan_2001.pdf))

### **Miami-Dade County Aesthetics Master Plan (AMP)**

Community aesthetics is a critical component of a vibrant, economically viable and sustainable metropolitan area. In Miami-Dade, we rely heavily on tourism as a primary economic engine. Furthermore, residents gauge their quality of life in the County with indicators that correspond to the aesthetic value of their neighborhoods and commercial areas they frequent. For this reason, community design of high aesthetic quality is directly tied to a community's socio-economic health.

To address the community aesthetics, in 2006 the Board directed the County Manager under the authority of Resolution No. R-108-06 to "develop a County Aesthetics Master Plan that addresses landscaping and landscape maintenance of all public roadways and County facilities..." The Community Image Advisory Board (CIAB) commissioned the development of the AMP that would provide design recommendations, guidelines, and standards for County Corridors, Gateways and Facilities. The CIAB reviewed other recent countywide community planning documents such as the Open Space Plan, the Street Tree Master Plan, the Urban Design Manual, the Landscaping Manual, and the Typical Roadway Section & Zoned ROW Update Study in order to develop the overall goals and objectives for including community design with current planning efforts.

The AMP provides guidelines for the design and appearance of the County transportation corridors, gateways, and key public facilities by providing examples of specific architectural, hardscape and landscape elements. The plan establishes clear objectives and standards for improving the appearance of the County's entrance gateways, the corridors which channel vehicular, pedestrian and marine traffic, and public facilities including public transportation centers, buildings, and parks.

Implementation of the AMP will include the development of a Community Design Element currently being drafted, that would be presented as an amendment to the CDMP. Also, a web-based portal would be created to serve as a clearing house for design standards, specifications, and municipal codes that restrict design. This portal would be promoted and accessible to the Architecture and Engineering industry as well as the general public.

- **Goal:** To articulate the principles and standards for establishing a practical, sustainable beautification and greening process for County Corridors, Gateways and Facilities.
- **Vision:** County Corridors, Gateways, and Facilities are well-designed and visually pleasing in appearance that are developed and maintained in a manner that reflects a world class image of Miami-Dade County as a sub-tropical paradise.

### Existing Legislation

Because there are so many legislative directives impacting the transportation network, the following is a limited list of those identified through searching the county's legislative database for sustainable transportation strategies including infill, transit, and alternative modes. This is not intended to be a comprehensive listing of legislation related to transportation.

- *MPO Resolution-38-09: Resolution directing staff to investigate climate emission calculation tools and incorporate climate change emission calculations in transportation studies, analysis and recommendations - MPO should include as part of its analysis when planning multimodal transportation improvements in the Miami Urbanized Area the quantity of greenhouse gas emissions caused by different transportation scenarios, investigate climate emission calculation tools available through the International Council for Local Environmental Initiatives, the US Environmental Protection Agency, Miami-Dade County Department of Environmental Resources Management and the Miami-Dade County Planning & Zoning Department; and (2) include as part of MPO studies, analysis and recommendations regarding proposed transportation improvements in the Miami Urbanized Area such as proposed road projects and transit alternatives the quantity of greenhouse gas emissions caused by each transit or transportation option.*
- *R-828-96: Resolution approving the request from the federal national mortgage association (Fannie Mae) for the neighborhood infill and stabilization program (NISP), and that surtax/ship loans made under NISP allocation be subordinate to the borrower's equity*
- *R-817-99: Resolution directing the County Manager to undertake immediate steps to provide for bicycle storage facilities in appropriate county facilities*
- *R-370-01: Resolution directing County Manager to work with the Metropolitan Planning Organization to create a pilot program to lessen traffic congestion by encouraging the use of computer technology as a means of allowing work to be performed at home and at regional work places*
- *R-728-01: Resolution directing the County Manager to enter into discussions with the Miami-Dade Expressway Authority to develop short- and long-term solutions to traffic congestion on State Road 874 and State Road 878*
- *R-493-04: Resolution directing the County Manager to conduct a comprehensive study on the effects of unprecedented population and housing growth on the Urban Development*

*Boundary in south and southwest Miami-Dade County and the impacts of infill development on the process of gentrification and displacement of current residents with limited means, with the purpose of development potential amendments to the comprehensive development master plan, and further directing the County Manager to allocate appropriate resources for conducting the study*

- *R-1196-05: Resolution directing the County Manager to take steps necessary to allow the expeditious expenditure of road impact fees for mass transit roadway capacity enhancement in certain infill and redevelopment areas, and further directing the County Manager to report on steps taken and to recommend appropriate changes to road impact fee expenditure priorities when such mass transit expenditures are allowable*
- *R-593-07: Resolution directing County Manager to conduct a greenways and bicycle trails feasibility study to identify project areas in district 2, and to identify funding sources for such study and funding sources for the development of the greenways and bicycle trails*
- *R-237-09: Resolution urging the Obama Administration and Congress to rethink the federal government's approach to funding transit and take a new approach that has the goal of facilitating the expansion of mass transit in the interest of the environment, improved economic efficiency through reduced traffic congestion, and lower reliance on foreign oil*
- *R-742-09: Resolution directing the County Mayor or County Mayor's designee to implement a pedestrian safety campaign by posting safety messages on the interior and exterior of Metrobus and Metrorail cars*
- *R-1292-09: Feasibility of utilizing housing constructed thru infill*
- *O-00-107: Ordinance amending Chapter 33 of the Code of Miami-Dade County, Florida; amending Section 33-122.3, related to bicycle racks; providing severability, inclusion in Code, and an effective date*
- *R-416-08: Resolution directing the County Mayor or his designee to apply for United States Environmental Protection Agency's Smart Growth Implementation Assistance related to Miami-Dade County's Urban Development Boundary*

### **Special Transportation Services**

MDT operates a demand-response service known as Special Transportation Service (STS). STS is a shared-ride, door-to-door transportation service for qualified individuals with disabilities who are unable to utilize the accessible fixed-route transit system. The service area includes most of urbanized Miami-Dade County and south to mile marker 50 in central Monroe County. Service is provided by sedans, vans and lift-equipped vehicles, seven days a week, 24 hours per day. Presently, there are 359 vehicles (sedans, standard vans, minivans, and wheelchair lift-equipped vans) available for ambulatory transportation. These vehicles are privately contracted through a brokerage agreement with Advanced Transportation Solutions (ATS). There are more than 21,600 eligible clients enrolled in the STS program including both ambulatory and non-ambulatory clients. The fare for Special Transportation Service (STS) users is \$3.00. The projected FY 2010 cost for the STS service contract is \$45.3 million, with an additional \$2.2 million in MDT support staff costs.

### **South Miami Dade Busway**

Since 1997, MDT has operated and maintained a 20-mile exclusive Busway paralleling US-1 from the Dadeland South Metrorail Station to SW 344th Street in Florida City. The Busway includes 29 stations with five Park and Ride facilities. The first segment of the extension to Florida City opened to revenue service on April 25, 2005 and extended the Busway five miles from SW 112th Avenue to SW 264th Street in Naranja. The second and final segment of the extension, which opened on December 16, 2007, extends the Busway another 6.5 miles south from SW 264th Street to SW 344th Street in Florida City, Miami-Dade County's southernmost municipality. Full-size buses, minibuses and over-the-road motor coaches operate on the Busway and in adjacent neighborhoods, entering the exclusive lanes at major intersections, providing both local and limited-stop service. Free parking is provided adjacent to the Palmetto Golf Course on SW 152nd Street (Coral Reef Drive), at SW 168th Street, at SW 200th Street, at SW 244th Street and SW 296th Street. Plans are in the works for a future Park and Ride lot at SW 344th Street, the furthest south station. An additional Park and Ride lot is provided at the Florida Turnpike exit on Coral Reef Drive (SW 152nd Street) and SW 117th Avenue.

### **Service Standards - Service Efficiency and Restructuring Initiative (SERI)**

MDT has undertaken an initiative to establish specific transit service standards to assess the level of operational performance. The service standards were developed to provide a fair, equitable, and objective comparison of all requests and proposals generated from the general public, elected officials, and MDT staff. Service standards are maintained and applied to be consistent in the evaluation of service proposals and to ensure that the service being provided represents the most cost-effective use of the County's resources. MDT service standards establish minimum, maximum, and recommended levels of service. The purpose of MDT's standards is to identify routes which are most in need of service changes, such as restructuring to eliminate lower-productivity segments or branches, adjusting service frequency to better reflect the demand for service, or providing additional promotion of less patronized routes. Routes which do not meet MDT standards are not automatically selected for elimination. Elimination of routes is only intended as a last resort, when it has been determined that no cost-effective actions are available to improve the productivity of the route. The numerical values of these service standards will undergo an annual evaluation by MDT yearly, using the most recent twelve-month period for which data is available. The evaluation will compare the current values of productivity standards versus those from the previous year.

One example of a route developed through the SERI is a dedicated bus route from Miami International Airport to Miami Beach. The route makes one stop at Metrorail Earlington Heights Metrorail Station connecting passengers to Downtown Miami. This route began December 13, 2009 and carried more than 800 passengers on the first day of service, at a charge of \$2.35 a trip.

### **Automated Fare Collection System**

A comprehensive automated Fare Collection System with "smart" card (EASY CARD) technology was implemented October 1, 2009 to include:

- Photo ID/Easy Card System
- Data Center Rewiring/Redesign
- Automated Passenger Counters (APC) Data & Business Process Integration
- Easy Card Website
- Corporate Discount Program Website
- Upgrade MDT Network

## **Carpool & Vanpool Programs**

South Florida Commuter Services (SFCS) is a commuter assistance program founded in 1988 which serves Miami-Dade, Broward, Palm Beach, Martin and St. Lucie Counties. The agency works with residents, private companies, and municipalities to reduce roadway congestion by promoting alternatives to single occupancy vehicle (SOV) travel. Free programs and services are promoted as alternatives, such as carpooling, vanpooling, ride-matching, transit trip planning, the Emergency Ride Home Program. By participating in these programs, individuals help to reduce traffic congestion, VMTs, VHTs, and consequently, vehicle emissions. These programs also benefit the participants by reducing money spent on gas and tolls.

South Florida Commuter Services facilitates carpooling by providing a free list of potential carpool partners to those who participate. In addition to the benefits mentioned above, carpooling can reduce the cost of commuting through cost-sharing, and greatly reduce commute times since participants benefit from access to the High Occupancy Vehicle (HOV) and I-95 Express Lanes. According to the 2008 Annual Report, "Due to escalating gas prices and an economic slowdown, SFCS achieved its highest level of participation in fiscal year 2007 – 2008 since the Program's Implementation." During Fiscal Year 2008 – 2009, the Carpool Program documented the following reductions and savings.



\*Based on miles eliminated x \$0.29 per mile – cost to commute.

Source: Jim Udvardy, SFCS Project Director, from "Annual Report 2008" Performance Measures

In addition to the Carpool Program, the Vanpool Program has also provided measurable savings and results. The SFVP was created in 1998 by the Miami-Dade Metropolitan Planning Organization (MPO). Under MPO Board resolution #39-95, Congestion Mitigation and Air Quality (CMAQ) funds were allocated for implementing the program. After the success and expansion of the program, Broward and Palm Beach MPOs joined the SFVP in 2002 and 2006, respectively. The program operates based on a 30-day lease agreement. This agreement is between the vanpool provider (VPSI, Inc.) and the volunteer driver. VPSI provides the van, insurance (no-deductible), all scheduled and non-scheduled maintenance, as well as a backup vehicle, if needed. All participants of the vanpool group are registered in the Emergency Ride Home (ERH) Program administered by the South Florida Commuter Services (SFCS). This program provides participants to have access to free taxi service in emergency situations. A monthly fee is charged based on the size of the van (7, 9 or 15 passengers) and the monthly mileage. A \$400 subsidy per van per month is provided for the participants in the program.

Over 80 percent of the funding source for the program is federal, while the state has matched the rest of the funding. The program received \$661,189.27 (\$230,842 to Miami-Dade County) corresponding to the 2005 allocations. The estimated allocation for 2010 is approximately \$1.2M. A new hardware and software is being installed in all active vans to provide real time data. Mileage and number of passengers will be reported on a daily basis. As of June 2009:

- Passenger-miles saved/year: 26.1M miles
- Parking spaces saved per day: 1,160 spaces

(Source: [http://www.miamidade.gov/MPO/docs/MPO\\_vanpool\\_facts\\_200906.pdf](http://www.miamidade.gov/MPO/docs/MPO_vanpool_facts_200906.pdf))

### **Private Sector Funded Transit Projects**

Currently there are at least two projects that are identified to include a public (M-DC Transit) private partnership. The first project includes a 260 space parking garage at the intersection of NW 107th Avenue and NW 12th Street to serve as a park and ride lot. The proposed project is a turn-key operation including M-DC Transit owning the land, once the garage is completed. The estimated cost to the owner is \$14 million. The second project is a bus station and surface park and ride lot with 45 parking spaces at the Kendall Town Center. There is an existing commitment in place as a result of the Development of Regional Impact (DRI) process to meet transit concurrency.

### **The MIA Mover**

Connecting MIA passengers to a new Rental Car Center and the future Miami Intermodal Center (MIC) will be the MIA Mover, a one-mile-long automated people mover system scheduled for completion in 2011. The MIA Mover will have the capacity to transport more than 3,000 passengers per hour between MIA and the MIC, Miami-Dade County's own grand central station. Completion of the MIA Mover and Miami Intermodal Connector (MIC)-Earlington Heights Metrorail Connector will also allow MIA passengers to travel from the airport to Miami-Dade County's downtown and business districts and various shopping areas within minutes for a minimal train fare.

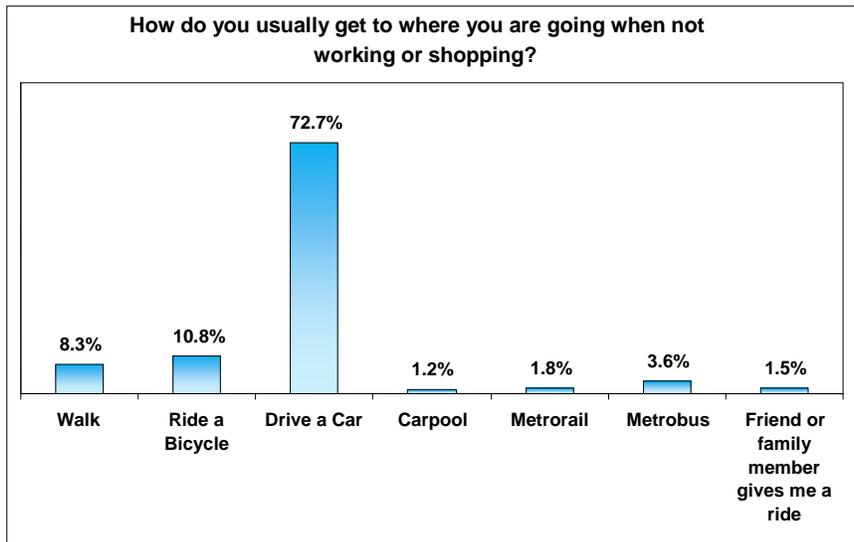
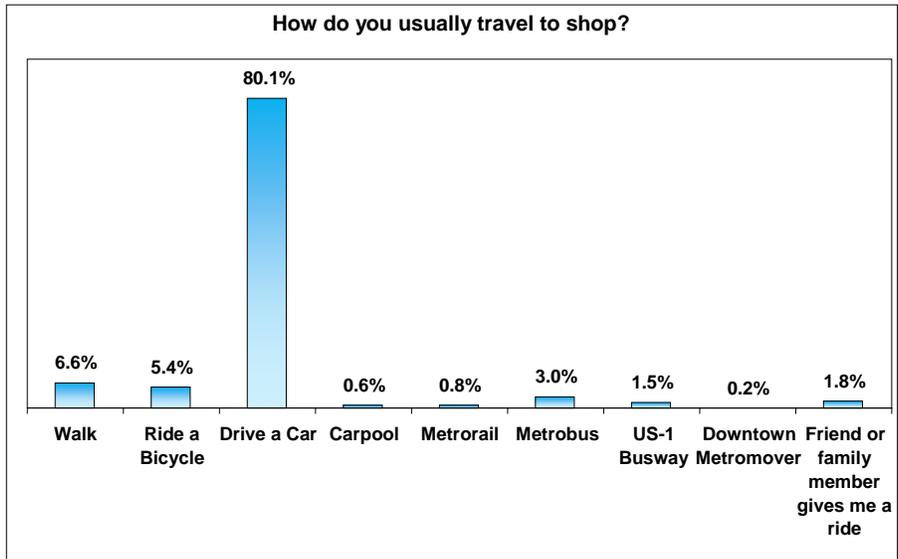
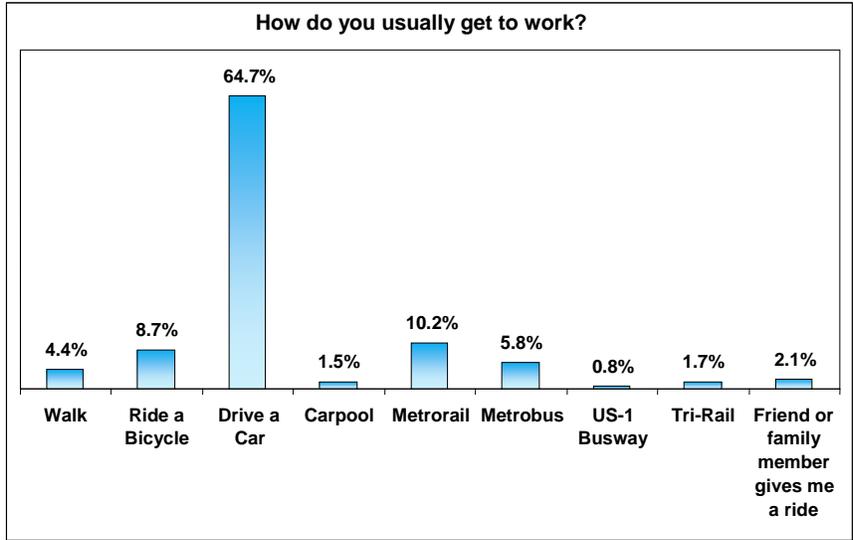
The MIC, scheduled for completion by the Florida Department of Transportation in 2012, will be the County's central transportation hub, providing MIA passengers access to all their ground transportation needs: the Rental Car Center (RCC); Miami-Dade County Metrorail and Metrobus service; Tri-Rail, a heavy-rail system that operates through Miami-Dade, Broward and Palm Beach counties; Amtrak; and taxi and other private transportation services.

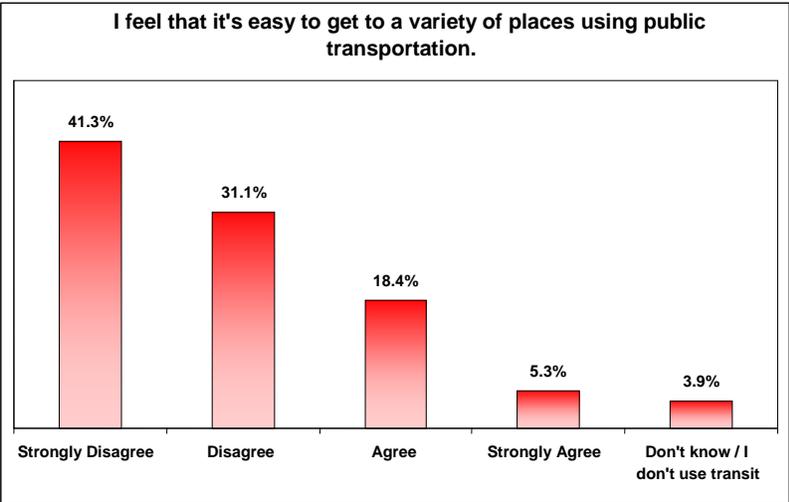
## **COMMUNITY FEEDBACK**

*Feedback & results gathered through the planning process or surveys*

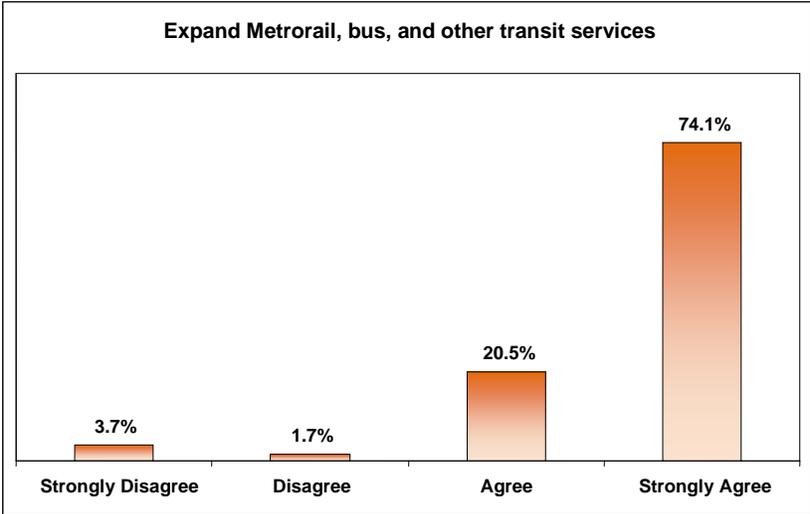
### **2035 Long Range Transportation Plan Public Survey**

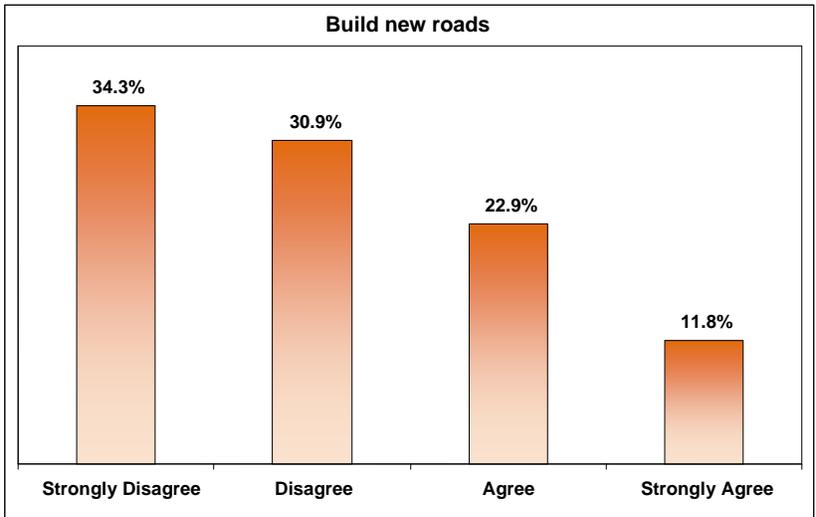
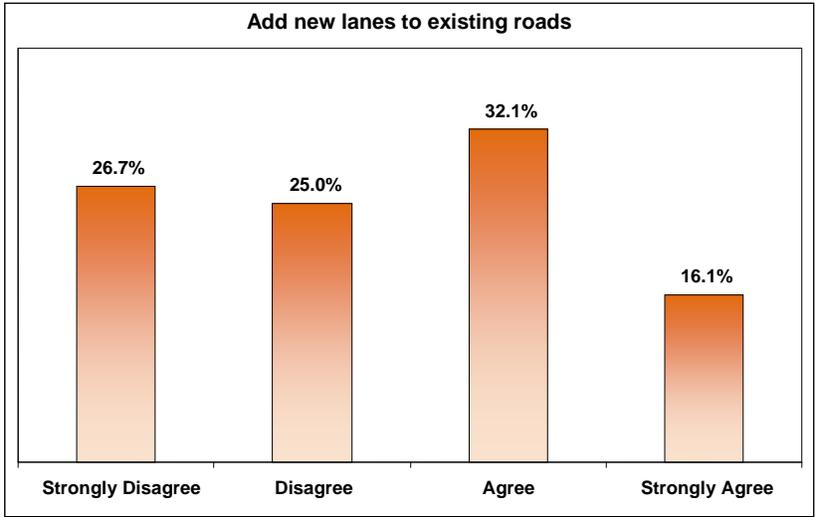
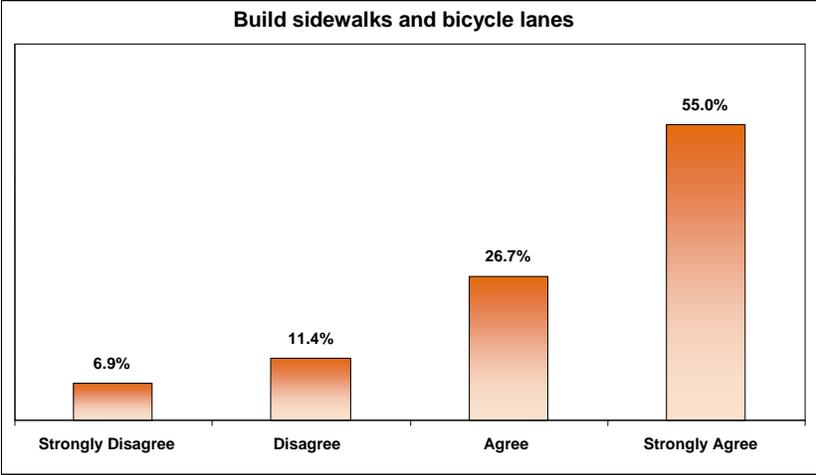
In October 2008, public feedback was collected through both an online survey and the use of the Option Finder Technology as part of the 2035 Long Range Transportation Plan public involvement process. A total of 417 responses were collected through the online survey, while a total of 294 responses were collected during public involvement sessions. The following are the results related to Traffic Congestion/Circulation.





Participants responding to questions about future transportation needs and concerns revealed that the largest percentage of respondents (40.1%) believe that the focus of future transportation improvements should be mostly transit. A large percentage (31.6%) believes that future improvements should have an emphasis on transit with some additional roads. The smallest percentage of respondents (2.6%) believed that the focus should be mostly roads. Additionally, the majority of respondents (62.9%) would like to see more greenways, pedestrian and bicycle facilities in the transportation system. Only 9.2% of respondents disagree (5.6%) or strongly disagree (3.6%) with this statement. According to the results of the survey, expanding Metrorail, bus, and other transit services had the highest average rating (3.7). Building sidewalks and bicycle lanes also had a high average rating (3.3), while building new roads had the lowest average rating (2.1). The figures below show the percentage breakdowns of the responses to each of the individual items.



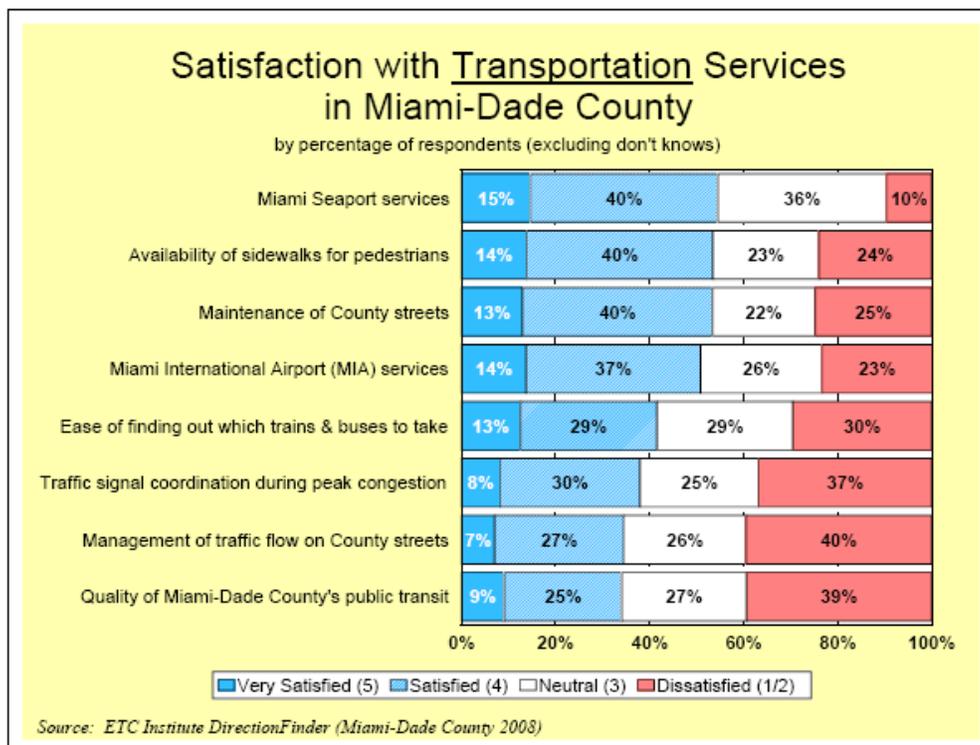


The last section of the survey measured respondents' level of agreement with a series of statements related to existing and future transportation concerns. The statement that said future transportation improvements should focus on making connections across the system received the highest average rating (3.5). The statements regarding transportation improvements needing to improve the connection between Miami-Dade and Broward counties and needing to provide better access to Miami-Dade county airports and seaports each received an average rating of 3.3. The lowest rating (2.2) went to the statement that said some existing roads should be partially converted into toll roads.

### Miami-Dade County Resident Satisfaction Survey

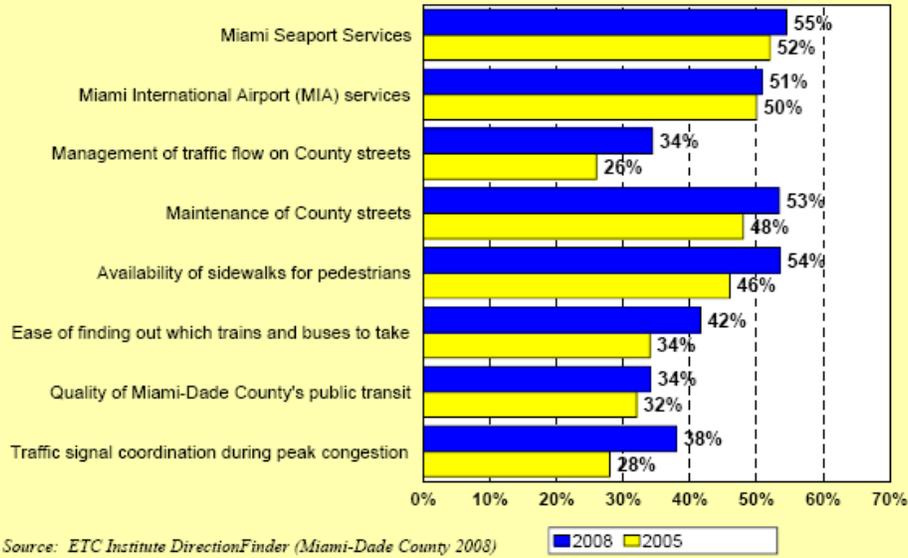
During the fall of 2008, ETC Institute administered a Resident Satisfaction Survey for Miami-Dade County to assess resident satisfaction with the delivery of major county services and to help determine priorities for the community as part of the County's ongoing planning process. Of the 20,000 households that received surveys, 5,522 were completed (a 27 percent response rate). The survey was administered in English, Spanish and Creole. Questions relating to County Transportation and Mass Transit are presented below.

*County Transportation:* The highest levels of satisfaction with county transportation services, based upon the combined percentage of "very satisfied" and "satisfied" responses among residents *who had an opinion* were: Miami Seaport Services (55%), availability of sidewalks for pedestrians (54%), the maintenance of County streets (53%) and the Miami International Airport (51%). Residents were least satisfied with the quality of Miami-Dade County's public transit system (34%) and the management of traffic flow on County streets (34%).



## TRENDS: Satisfaction with Transportation Services in Miami-Dade County

by percentage of respondents who were "Very Satisfied" or "Satisfied" (excluding don't knows)



**Mass Transit:** The highest levels of satisfaction with mass transit services in Miami-Dade County based upon the combined percentage of "very satisfied" and "satisfied" responses among residents *who had an opinion* were: the reliability of train services (63%), the frequency of train service (61%), the ease of access to trains (52%) the courtesy of bus drivers (51%) and the cleanliness of train stops (49%). Residents were least satisfied with the frequency of bus services (32%).

## How frequently do you use mass transit in Miami-Dade County?

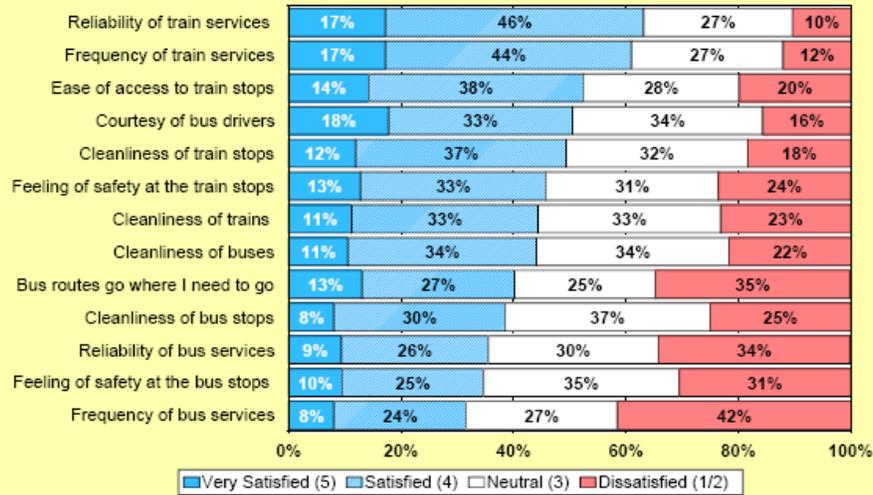
by percentage of respondents



Source: ETC Institute DirectionFinder (Miami-Dade County 2008)

## Satisfaction with Various Aspects of Mass Transit Services in Miami-Dade County

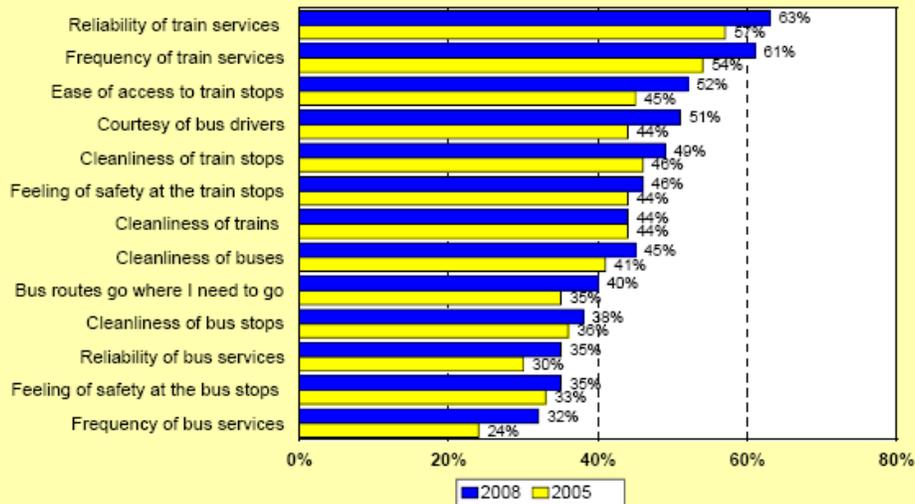
by percentage of respondents (excluding don't knows)



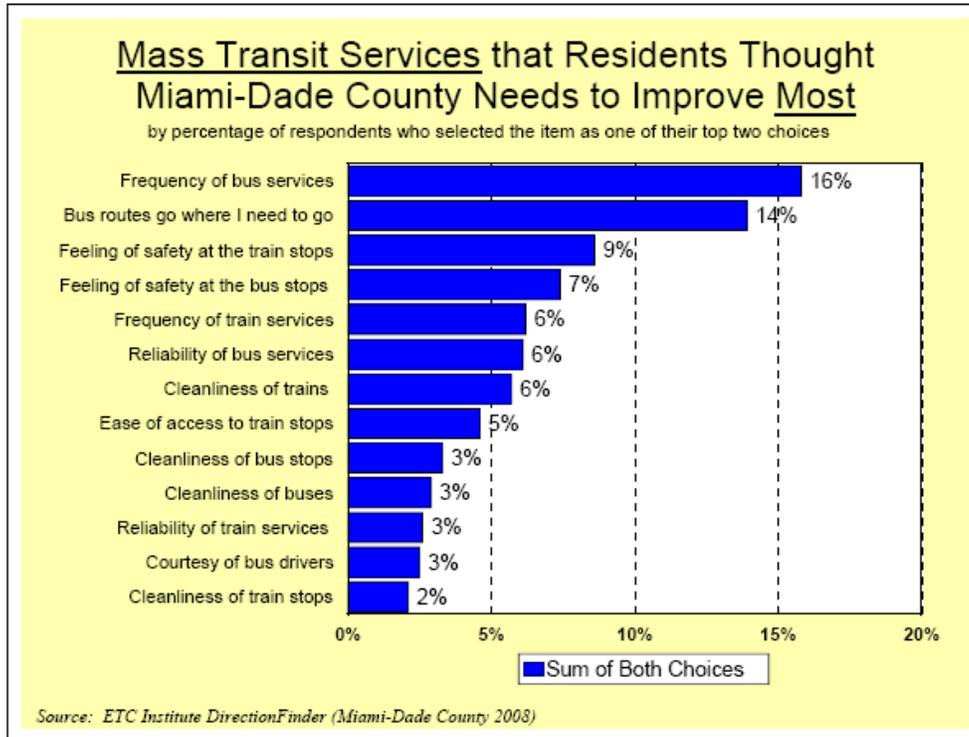
Source: ETC Institute DirectionFinder (Miami-Dade County 2008)

## TRENDS: Satisfaction with Various Aspects of Mass Transit Services in Miami-Dade County

by percentage of respondents who were "Very Satisfied" or "Satisfied" (excluding don't knows)



Source: ETC Institute DirectionFinder (Miami-Dade County 2008)



## 2010 Evaluation and Appraisal Report (EAR) for the CDMP

The EAR process requires a series of public workshops, which were held in 2009. At these workshops, members of the public identified the following transportation/mobility concerns:

### Transportation/Mobility

- Address the transportation component of HB 697 (Energy), Building Code Standards: Revises requirements for future land use element of local comprehensive plan to include energy-efficient land use patterns & greenhouse gas reduction strategies;
- Discuss how the County can more effectively achieve pedestrian friendly and walkable communities;
- Promote park connectivity on a countywide basis;
- Explore concepts such as mobility fee zones to help supplement existing transportation facilities and services; and
- Evaluate potential incentives for transit oriented development.