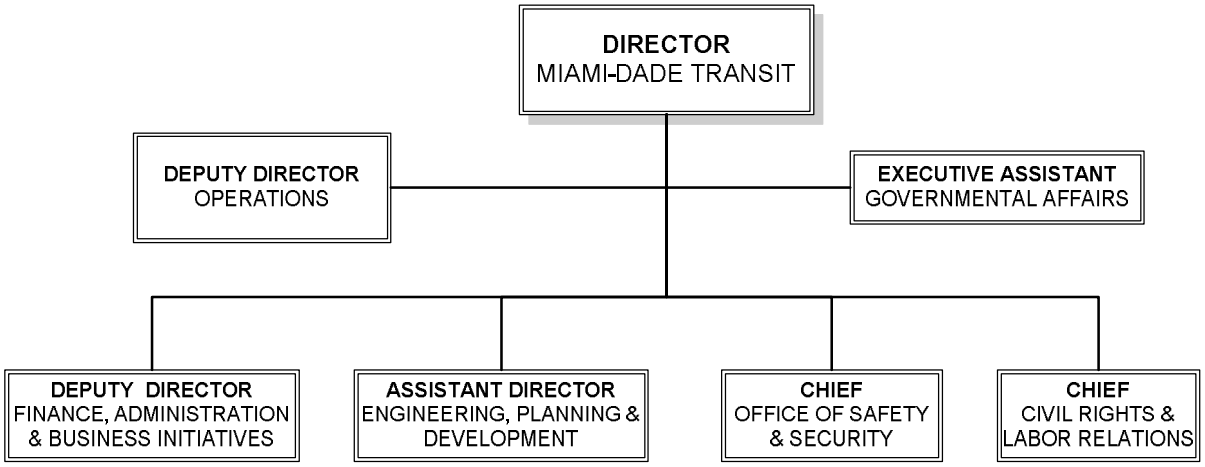
# 7.0 SITUATION APPRAISAL

The situation appraisal section provides an appraisal of factors within and outside the provider that affect the provision of transit service. This section includes an evaluation of organizational issues, the effects of land use regulations, support or hindrance of transit service, state and local transportation plans, other governmental actions and policies, socioeconomic trends, and technology on transit. It also includes an estimation of transit demand from the Southeast Florida Regional Planning Model (SERPM 6.5.4) model.

## 7.1 Miami-Dade Transit Organizational Structure

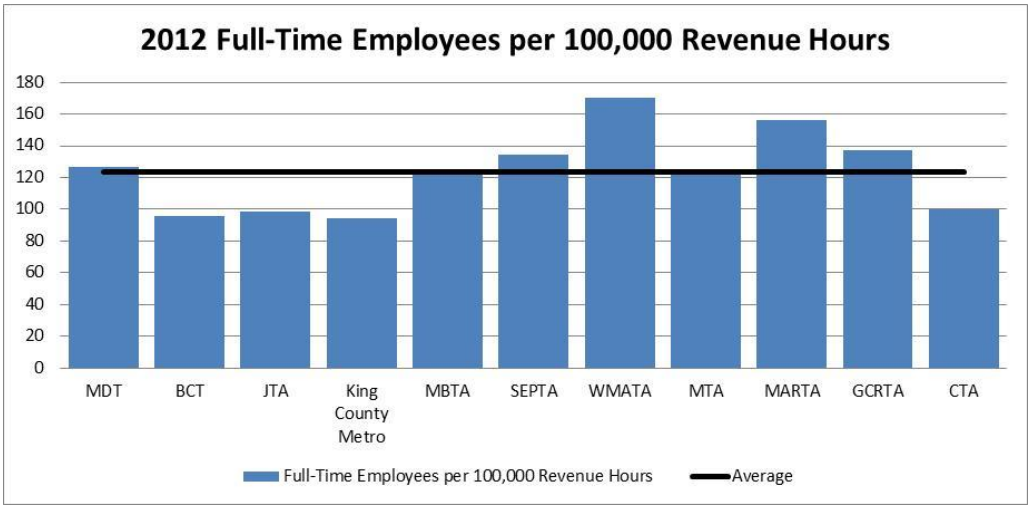
Miami-Dade Transit (MDT) is a department under Miami-Dade County government. Leadership of the department is comprised of a Director, Deputy Director of Operations, Deputy Director of Finance, Administration and Business and five additional direct reports responsible for leading distinct functional areas related to governmental affairs, planning and development, engineering, safety and security as well as civil rights and labor relations.




There a total of 3,235 full-time positions and 349 part-time positions budgeted for fiscal year 2014-2015. A table of organization for MDT is presented in Appendix A1.

A review of MDT staffing levels as compared to its peers using National Transit Data (NTD) data revealed that MDT operates with fewer staff than its peers. Comparing the number of full-time employees reported to NTD in 2012, MDT has about the average staff per 100,000 revenue hours. This difference indicates that MDT has economized its staffing levels to save money.

**Figure 7-1: MDT Employee Peer Comparison**




Source: National Transit Database.

In addition to having a lean staffing plan, MDT works to improve efficiency internally. Miami-Dade Transit FY 2014-2015 Business Plan presents key organizational issues that apply throughout MDT in fulfilling the Agency's mission: **"to meet the needs of the public for the highest-quality transit service: Safe, Reliable, Efficient and Courteous."** Miami-Dade Transit applies a systematic, widely-deployed approach to share skills and best practices across agency work units, jobs, and locations, by including the effective use of available data and organizational learning. Specifically, MDT remains focused on the attainment of a results-oriented government to improve operating efficiency by:

1.) Optimizing resources;

2.) Continual measurement and tracking of progress through performance indicators;

3.) Enhancement of employee recognition and communication; and,

4.) Encouragement of employees to share ideas and suggestions for the improvement of operational efficiency.

## 7.2 Intergovernmental and Stakeholder Coordination

As Miami-Dade County's transit operator, MDT's coordination extends throughout county government. This includes the Mayor's office, the Board of County Commissioners, the Miami-Dade Metropolitan Planning Organization (MPO), Miami-Dade County Department of Regulatory and Economic Resources (RER) and other county departments whose efforts and responsibilities integrate with the operation of mass transit services. Miami-Dade Transit also collaborates with the Florida Department of Transportation (FDOT), the South Florida Regional Transportation Authority (SFRTA), Broward County Transit (BCT), and the local municipalities located throughout its transit service area.

This level of coordination was exemplified in 2013 when MDT's AirportLink Project, the 2.4-mile Metrorail extension (Orange Line) and the Miami International Airport (MIA) Metrorail station was awarded the Local and State Collaboration Award by the Florida Association of County Engineers and Road Superintendents (FACERS). This statewide honor is bestowed upon construction projects completed in high professional regard that have made significant contributions to their communities. The Airport Link Project was completed on-time and on-budget, and provides a vital alternative method of transportation that provides a direct connection to MIA - the community's central economic engine.

### 7.2.1 Regional Coordination

Miami-Dade Transit works in cooperation with FDOT Districts 4 and 6, SFRTA, (operator of the Tri-Rail commuter rail system), and BCT on various transportation issues, conceptual plans and policies, and the implementation of projects of local and regional significance. Several projects where MDT serves in a participating and coordinating role include the development of the 2040 Regional Transit Plan, the Tri-Rail Coastal Link Plan, Regional Express Bus service planning (I-95, I-75, SR 826, I-595) and the integration of Intelligent Transportation System (ITS) projects into the regional information technology architecture.

The Florida Department of Transportation has placed new emphasis in the region on the use of express buses on newly implemented managed lanes on I-95 and I-595. MDT staff participates in the monthly Planning Technical Advisory Committee (PTAC) Regional Express Bus Subcommittee meetings as well as the 595 Express Bus Service Workshop meetings. These meetings bring FDOT District 4 and 6, SFRTA, MDT, and BCT staffs together to discuss the implementation of express buses on managed lanes. At present, Phase I on I-95 is operational while Phase II is being constructed and expected to be operational in 2015. Phase II stretches from Miami Gardens Drive to Davie Boulevard. As part of the coordination process, MDT will contribute to FDOT's express bus service policy, including express bus service standards, being developed by FDOT.

### 7.2.2 Metropolitan Planning Organization

Miami-Dade Transit coordinates extensively with the Miami-Dade MPO for the development of the FY 2014/15 – 2018/19 Transportation Improvement Program (TIP) and the 2040 Long Range Transportation Plan (LRTP) through the participation on the TIP development committee and LRTP steering committee. Ongoing collaboration between MDT and the MPO occurs for countywide transportation planning initiatives and studies through participation on the Transportation Planning Council.

Recent studies include the preparation of corridor plans for transit improvement projects to include the implementation of enhanced bus service in the form of MDT's new rapid bus on Biscayne Boulevard, NW 27$^{th}$ Avenue, Flagler Street and SR 836. The Beach Corridor Transit Connection Study is also underway and seeks to identify a transit alignment and modal technology to connect the City of Miami with the City of Miami Beach. MDT and MPO have also collaborated on origin and destination survey studies

for purposes of in-depth tracking of transit usage, ridership patterns as well as customer satisfaction with existing services.

### 7.2.3 Miami-Dade County Department of Regulatory and Economic Resources

Miami-Dade Transit coordinates with the Miami-Dade County RER by providing input on various transit impacts of the Comprehensive Development Master Plan (CDMP) Bi-annual Amendments, as well as, with area-wide issues tailored to the various Commission Districts and Community Councils. Furthermore, various measures are being applied to monitor progress and assess achievement of the various objectives contained in the Mass Transit Sub-element of the CDMP for the Evaluation and Appraisal Report (EAR).

Specifically, MDT has been charged with the responsibility of reviewing and approving concurrency applications in all areas of unincorporated Miami-Dade County for mass transit levels of service as per County Ordinance 89-66, Administrative Order 4-85, and Section 33-G of the Miami-Dade County Code. Based on the latest socio-economic information provided by Miami-Dade County RER and a review of the June 2013 service area for Metrobus and Metrorail it was determined that MDT meets or exceeds the level-of-service standards for mass transit as established according to Policy MT-1 of the CDMP of Miami-Dade County.

### 7.2.4 Community Stakeholders

Miami-Dade Transit continuously undertakes extensive outreach efforts to engage local stakeholders and the public for purposes of providing educational information and to collect feedback and input on MDT's daily transit operations and future service plans. Throughout MDT, outreach efforts are viewed as an ongoing effort to improve the perception of public transportation as well as educating the public on service expansion and necessary service adjustments. This is consistent and follows one of MDT's tenets of providing easy access to transportation information. Specific strategic objectives related to MDT's outreach efforts include: meeting residents' expectations for delivery of the Peoples Transportation Plan (PTP); promoting awareness of transit progress and challenges; and providing information related to scheduling adjustments.

Miami-Dade Transit staff work with individual County Commissioners to organize transit town hall meetings in their districts to provide their constituents with updates on the PTP and distribute brochures, maps and other materials. These meetings enable staff to tailor messages to specific audiences by highlighting local PTP projects. Miami-Dade Transit also maintains an extensive list of community civic and other organizations that are contacted periodically in order to schedule appearances by a rotating list of informed staff members by MDT department based on the topics in which an organization expresses interest. This approach helps to build community support for transit at the grassroots level.

MDT staff members also speak at meetings of homeowners associations, business and civic organizations to provide information and answer questions on transit programs.

These meetings help MDT maintain good relations with community leaders while enlisting their organizations' support for transit-related programs and incentives.

Public stakeholders can also utilize the 3-1-1 Answer Center which provides a fast, simple and convenient way for residents to get information on local government services. Call Specialists can initiate service requests related to transit services. By dialing 3-1-1 residents get one-on-one personal customer service in English, Spanish or Creole by dialing one easy-to-remember number.

## 7.3 Local and Regional Transportation Plans

A review of several local and regional planning documents was performed to assess the level of impact that proposed and programmed project initiatives would have on MDT services. Furthermore, these documents were reviewed to ensure that the FY 2015 – 2024 TDP Major Update is consistent with corresponding transit capital and operational improvement projects for the Miami-Dade Transit service area.

### 7.3.1 MPO 2035 LRTP

The MPO 2035 LRTP was adopted in November 2009 to include a cost feasible plan for the implementation of transit projects as grouped by priority (Priority 1 through 4). The projects listed as Priority 2 and Priority 3 occur within the planning horizon of the FY 2015-2024 TDP Major Update. Priority 2 and Priority 3 projects were included as funded projects between 2015 – 2020 and 2021 – 2025 respectively. The following premium transit projects are listed in the 2035 LRTP by priority to include:

- Golden Glades Multi-Modal Terminal (Priority 2)
- Miami Beach Intermodal Center (Priority 2)
- South Beach Bus Transfer Station (Priority 2)
- US-1 Busway additional park-and-ride facilities (Priority 4)
- US-1 Busway signal priority (Priority 2)

### 7.3.2 MPO 2040 LRTP

The Miami-Dade County MPO is currently updating the 2035 LRTP to the year 2040. The previous LRTP was adopted in November of 2009. An update of the latest LRTP needs to occur every five years to meet federal and state requirements. The 2040 LRTP is anticipated to be approved by the MPO Governing Board in the fall of 2014.

The emphasis of the 2040 LRTP is to determine the priority of the People's Transportation Plan (PTP) projects that remain unfunded. In addition, the 2040 LRTP will focus on improving the efficiency of the current transportation infrastructure while identifying innovative ways to enhance mobility. At the time of this writing, the proposed transportation improvements and prioritization of transit projects were not available. Miami-Dade Transit is represented on the LRTP Steering Committee to assure that the development of the 2040 LRTP is aligned with MDT's policy and project initiatives.

### 7.3.3 Regional 2040 LRTP

A 2040 Regional LRTP is being prepared which provides an update to the 2035 Regional LRTP. A primary component of this update, is the identification of a regional transit network to enhance regional mobility between employment, residential educational and recreational locations. At the time of this writing, the proposed transportation improvements and prioritization of transit projects were not available. Miami-Dade Transit is represented on the Regional Transportation Technical Advisory Committee to assure that the development of the 2040 Regional LRTP is aligned with MDT's policy and project initiatives.

### 7.3.4 SFRTA Strategic Regional Transit Plan

The SFRTA developed the Strategic Regional Transit Plan (SRTP) for the promotion of regional transit to ensure mobility, economic viability and quality of life in the south Florida region. The Strategic Plan serves as a long range plan to identify transportation service needs for the South Florida region. The SRTP defined three potential transit networks:

1.) Connective Network: Serves future land use and activity centers maximizing infrastructure investments.

2.) Productive Network: Places transit options in most heavily used corridors.

3.) Value Network: Presents transit options that result in high ridership through a provision of good transit service at a reasonable price.

The transit alternatives proposed in the SRTP and serve either one or more of the three listed networks include:

- Miami Beach Light Rail Transit
- Tri-Rail branch to downtown Miami
- Kendall Drive Bus Rapid Transit
- Metrorail East-West Extension
- 137th Avenue Rapid Bus

The projected capital and operating costs for the implementation of these projects is significant. Each project has the potential for eligibility under the FTA 5309 New Starts program where up to 75 percent of capital funds could be secured through the federal (50%) and state (25%) government participation. However, the associated operating cost of a project would need to be funded locally over the life of the project. Therefore, operating funding in addition to existing sources being applied to fund current transit operations will need to be identified.

## 7.4 Information Technology

Miami-Dade Transit is committed to the deployment of a comprehensive, inter-operative and fully integrated system of Intelligent Transportation Systems (ITS) technologies. MDT is continuously working to ensure seamless technology integration with county and regional technology initiatives, and incorporating technology in the implementation of

transit business processes. Miami-Dade Transit adheres to a locally approved regional ITS architecture and has developed its own ITS architecture that integrates existing systems with future ITS initiatives. MDT participates with FDOT and other local agencies to incorporate and integrate all ITS projects to the overall regional architecture.

MDT's strategic business plan is aligned with the following objectives and key performance targets:

1.) Provide easy access to transportation information;

2.) Ensure excellent customer service for passengers;

3.) County processes improved through information technology

The information technologies deployed serve to provide enhanced methods of communicating information to transit passengers and better align MDT's business objectives for the proficient administration, operation, and maintenance of transit services. The following lists several key projects that demonstrate MDT's commitment to implementing technology enhancements to better serve the community:

**Kiosk Transit Informatiom:** Electronic Transit information centers provide transit information relating to bus routes, schedules, service interruptions, service modifications, station and emergency information to our MDT patrons.

**Rider Alerts:** Public notification of delays, detours, or service disruptions affecting any transit route on the MDT system. The public has the ability to sign up on the MDT web site to receive alerts via text messages, emails and/or electronic pagers.

**Train Tracker Information Application:** Informs Metrorail passengers of the time of arrival for the next train approaching a station. This information has significantly reduced the waiting time of MDT's passengers.

**Electronic Asset Management System (EAMS):** An integrated and automated Materials Management, Maintenance and Inventory system that provides information on detailed worked performed, hours necessary to perform the task, and automatic preventive maintenance generation of work orders resulting in a more efficient delivery of services.

**Electronic Document Management System (EDMS):** An electronic filing system that enables MDT departments to obtain fast, accurate and reliable access to MDT's project files. This has enhanced the assurance of document integrity and records management work flows.

MDT is concentrating heavily in the infrastructure area for future ITS deployment. The following is a list of several key projects that are in various phases of development and implementation to further enhance passenger information as well as promote the efficient operation of MDT services systemwide.

MDT's assessment of new technology available for development coupled with the implementation of ITS project improvements are aligned with the TDP Major Update goals and objectives.

### 7.4.1 Electronic Signage Information System (ESIS)

Miami-Dade Transit upgraded the ESIS, which is designed to provide an excellent riding environment by informing transit passengers of "Next Train" arrival time displays at station platforms. MDT replaced the existing analog clock units with state of the art liquid crystal display (LCD) screens at Metrorail station platforms. These LCD displays, face both the north and southbound tracks, provide passengers with train arrival and departure times for the next three trains and show which trains serve the Green Line (from Palmetto to Dadeland South stations) and which serve the Orange Line (which takes passengers from Dadeland South to Miami International Airport stations).

The system also provides wireless access at Metrorail station platforms for patrons wishing to use their electronic devices while waiting for the train. Wi-Fi is also available within Metrorail cars and on all Metrobuses. With the implementation of this system, it will be possible to provide real-time arrival times, emergency information, elevator/escalator status and other events that may potentially affect service. In an effort to comply with local ADA rules and regulations, MDT will also provide audible information. A summary of the new system information that will be communicated to passengers includes:

- Real Time Targeted information;
- Next Train arrival times;
- Emergency information;
- Text to Speech – ADA compliant;
- Elevator/escalator operational status;
- Rider alerts;
- Free Wi-Fi connectivity for patrons at all platforms;
- Law Enforcement display of real-time Amber and Silver Alerts or any other.

### 7.4.2 Transit Operational System Replacement

The implementation of the Transit Operation System (TOS) Replacement project will replace the current TOS to support an improved operator workforce management system, as well, as to provide seamless integration with the fleet management system to improve transit operations, service monitoring and reporting. The new system will provide:

- Improved rail and bus operator assignments;
- Increased operational efficiency;
- Improved data to assist with operational decision making;
- An advanced automated bidding functions for different work shifts;
- A robust daily dispatch functions, advanced vehicle assignment functions;

- Vehicle availability, workforce management;
- Performance and discipline management;
- Absences tracking;
- Employees incentives;
- Complaints and commendations;
- Service incidents;
- Timekeeping;
- Property specific reports;

### 7.4.3 Real Time Bus Tracker/Computer Aided Dispatch/Automatic Vehicle Locator System/Traffic Signal Priority

Miami-Dade Transit is preparing a "state of the art" county owned infrastructure that supports "real time" predictive arrivals. Included in this implementation is a replacement of the MDT's Computer Aided Dispatch/Automatic Vehicle Locator (CAD/AVL) system, "The System". To communicate and transfer vehicle location data in real time using the county infrastructure, a replacement of the existing CAD/AVL System and infrastructure is required. This system will enhance the monitoring of fixed-route services for Metrobus, Metrorail, Metromover, and select supervisory/administrative vehicles. This upgrade will facilitate added security, functionality and interoperability within the existing MDT system.

The system will be accessible via the Internet, cell phone, mobile devices and electronic signs at select Bus Stops. This project will not only enable the delivery of real time predictive arrivals but it will upgrade hardware and software to current technology for improved bus operational efficiencies.

Furthermore, this project will enable Traffic Signal Priority (TSP) on board all MDT bus vehicles allowing communication with traffic signal controllers along major corridors. MDT is leveraging and collaborating with the County's Advanced Traffic Management System (ATMS) project team to prioritize and coordinate the installation of TSP enabled equipment within the signal controller intersections that correspond to the defined priority corridors. The efficiencies that will be realized through the implementation of the CAD/AVL replacement project providing the integrated Bus Tracker System include:

- A dedicated real-time vehicle location system using GPS with no recurring cellular cost to provide bus tracker information via the Internet, mobile devices and electronic signs;
- Replaces obsolete on-board, and back office hardware and software;
- Ability for traffic controllers to remotely provide in-vehicle audio transmissions for customer safety or route information to individual buses, all buses on a route or the entire fleet;

- Drivers to instantly and silently alert traffic controllers to emergency conditions;
- Real time configurable maps, status, events and incident grids;
- Bus bunching/service and vehicle on-time performance alerts;
- Remote on-board PA announcements from central control;
- Real time vehicle diagnosis and alerts to maintenance personnel and control center;
- Customer access to arrivals via automated telephone system;
- Centralized incident management system;
- Customer on demand or subscription based alerts to route information or predictive arrival information;
- 75 solar powered bus stop electronic signs;
- Modernized bus traffic control center;
- Dash boards to assist in management decisions regarding fleet size, vehicle deployment, staffing levels, and equipment failure levels.

### 7.4.4 Traffic Signalization Prioritization (TSP)

Miami-Dade Transit is working to implement on all buses the necessary hardware and software to enable Traffic Signal Priority with automated Vehicle integration with the County's ATMS to automatically communicate with the local traffic controllers at the intersections along transit corridors. Six corridors have been identified pursuant to Resolution No. R-891-13, to be initially integrated as part of this project:

1) Kendall Cruiser
2) NW 27th Avenue Enhanced Bus
3) SR 836 Express Bus
4) Flagler Enhanced Bus
5) Biscayne Enhanced Bus
6) Douglas Enhanced Bus

### 7.4.5 Pilot Project Using Cellular Infrastructure

**Miami-Dade Tra**nsit is conducting a pilot project to explore the alternative application of cellular infrastructure to provide transit information and Wi-Fi service for passengers. The following are being implemented as part of this project:

- Real-time bus tracker information using cellular communication via mobile devices and the Internet;

- Free public Wi-Fi on seven bus routes;
- Real time predictive bus arrivals on electronic signs on selected bus shelters aligned to seven routes.

### 7.4.6 Metrorail Central Control Upgrade

This project will provide a new complete rail transit central control system for MDT at the Stephen P. Clark Center. This upgrade will provide a new modernized efficient and reliable transit control center including but not limited to a new interior design, new electrical system, new communication and mechanical equipment.

### 7.4.7 Replacement and Upgrade of Existing Radio Infrastructure System

Miami-Dade Transit will leverage the Federal Communication Commission (FCC) radio re-banding County-wide initiative to replace the 800 MHz EDACS Radio System. The countywide re-banding project utilizes P25 and OpenSky Technology which applies voice-over-IP (VoIP) transport to radio communications architecture. Re-banding causes all frequencies to change; which will require all radios to be programmed or changed out (due to antiquated technology).

### 7.4.8 Special Transportation Services

Miami-Dade Transit is seeking to implement Smart Card/RFID, mobile data terminal and GPS Technology on-board special transportation vehicles. This will provide geographically displayed real time status of each vehicle, historical locations, vehicle arrival and departure time for each stop. Furthermore, through an integration of the automated smart card using RFID technology the identification of customers certified to use the system will be improved.

## 7.5 Plan Review

In preparing this TDP Update, a review of applicable federal, state, regional, and local plans, programs, and studies that influence MDT operations, infrastructure, policy, or funding were reviewed. Findings of this review have been summarized and are incorporated into the development of the TDP through the situation appraisal. A situation appraisal, which is required during a major TDP update under the TDP Rule, is an evaluation of the environment in which the transit agency operates. One of the key components of the situation appraisal is this review of relevant plans, programs, and studies, in which factors and influences that will help MDT better understand its environment are identified.

### 7.5.1 Transportation Program and Plans Review

Coordination with other local, regional, and state agencies will also help to solidify interagency planning efforts and goal development to support a more unified transportation system in the South Florida region. A review of local, regional, state, and federal programs and plans was performed for purposes of the TDP Major Update.

Table 7-1 provides a summary of the key findings and considerations from the plans, programs, and studies reviewed as part of this effort.

### 7.5.2 Comprehensive Land Use Plans Review

Under the Florida Growth Management Act, a local government is required to adopt a comprehensive plan that includes both a transportation and land use element. The transportation element identifies the goals, objectives, and policies that will serve to guide transportation-related policy decisions for the local government over a specified period of time. The land use element serves the same purpose by identifying the goals, objectives, and policies that will serve to guide land use-related decisions.

A review of the transportation and land use elements of the Comprehensive Development Master Plan (CDMP) and the 12 most populous municipalities in Miami-Dade County was conducted in preparation of the MDT10Ahead. Table 7-2 provides an overview of the transit supportiveness of various land use plans affecting MDT's operations. Essentially, this table provides the pertinent "take-aways" from each to be considered during the situation appraisal.

**Table 7-1: Program and Plans Review**

| Plan/Program/Study Reviewed | Geographic Applicability | Most Recent Update/Timeframe | Responsible/Partner Agencies | Overview | Key Considerations for the Situation Appraisal |
|---|---|---|---|---|---|
| **Moving Ahead for Progress in the 21st Century Act (MAP 21)** | Federal | Implemented July 6, 2012 | Federal Transit Administration (FTA), FDOT | • MAP-21 extends federal highway and transit funding through federal fiscal year 2014. | • MAP-21 consolidates or eliminates a number of existing funds and provides several new funds for transit capital and operating programs, in which MDT may be a recipient.<br>• New Freedom funds are combined with Section 5310 program funds, while the Job Access and Reverse Commute (JARC) program is eliminated; however, many JARC projects are now eligible for funding under 5307 and 5311 funds. |
| **Clean Air Act of 1990** | Federal | Revisions to National Ambient Air Quality (NAAQS) proposed in 2010; not yet implemented | U.S. Environmental Protection Agency (EPA) | • The Clean Air Act of 1990 and subsequent amendments determine the NAAQS for six pollutants, including carbon monoxide and ozone. | • Miami-Dade County is currently classified as an-attainment area.<br>• Enhanced transit options reduce travel by single-occupant vehicle, helping Miami-Dade County to remain classified as an attainment area. |
| **Title VI and Environmental Justice (EJ) Circulators** | Federal | EJ Circulator, effective August 15, 2012<br><br>Title VI Circulator, effective October 1, 2012 | U.S. DOT, FTA | • The new EJ Circular issued by FTA provides recipients of FTA financial assistance with guidance for incorporating EJ principles into FTA-funded plans, projects, and activities.<br>• The revised Title VI Circular includes the removal of several references to EJ, which are now incorporated into the separate EJ Circular, to better understand the distinctions between Title VI and EJ. | • MDT is required to submit Title VI programs every three years as a transit provider operating 50 or more fixed route vehicles in peak service and located in an urbanized area of more than 200,000 persons. MDT also is required to evaluate service and fare equity changes or monitor transit service for Title VI impacts.<br>• MDT's public involvement plan should incorporate outreach designed to encourage meaningfull participation from members of the EJ population. |
| **DOT Livability Initiative and Federal Sustainable Communities Program** | Federal | Partnership for Sustainable Communities formed in 2009 | U.S. DOT, FTA, U.S. Department of Housing and Urban Development (HUD), and EPA | • The goal of this joint-initiative is to improve access to affordable housing, better transportation choices, and lower transportation costs while protecting the environment – essentially making communities throughout the United States more livable. | • The US DOT and FTA support a number of policies and initiatives intended to help communities improve livability and overall quality of life, including programs to encourage Transit Oriented Development (TOD), enhanced mobility options, etc. |
| **Florida Transportation Plan: Horizon 2060 (FTP)** | State | 2010 | FDOT | • The Florida Transportation Plan (FTP) looks at a 50-year transportation planning horizon and calls for a fundamental change in how and where Florida invests in transportation. | • The FTP supports the development of state, regional, and local transit services through a series of related goals and objectives, emphasizing new and innovative approaches by all modes to meet the needs today and in the future. |
| **State of Florida Transportation Disadvantaged Five-Year/Twenty-Year Plan** | State | 2005 | Florida Commission for the Transportation Disadvantaged | • The plan, required under the Florida Statutes, includes the following elements:<br>  • Explanation of the Florida Coordinated Transportation System<br>  • Five-Year Report Card<br>  • Florida Office of Program Policy Analysis and Government Accountability Review<br>  • Strategic Vision and Goals, Objectives, and Measures | • Short-term strategic vision includes developing and field-testing a model community transportation system for persons who are Transportation Disadvantaged.<br>• Long-range strategic vision includes developing a universal cost-effective transportation system with a uniform funding system and services that are designed and implemented regionally throughout the state. |

**Table 7-1: Program and Plans Review (Continued)**

| Plan/Program/Study Reviewed | Geographic Applicability | Most Recent Update/Timeframe | Responsible/Partner Agencies | Overview | Key Considerations for the Situation Appraisal |
|---|---|---|---|---|---|
| **FDOT FY 2015-2019 Work Program** | State (specific project list developed for FDOT District Six and Miami-Dade County) | In Progress | FDOT | • The Five-Year Work Program is developed annually by FDOT and is a project-specific list of transportation activities and improvements developed in cooperation with the Broward MPO and local transportation agencies.<br>• The Work Program must be consistent, to the maximum extent feasible, with the capital improvement elements of local government comprehensive plans. | • A summary of transit projects by type of work found in the adopted FY 2013-2017 Work Plan was compiled for consideration in the TDP update.<br>• Types of transit projects included in the FY 2013-2017 Work Program include MDT route realignments, operational improvements, fixed-route capital, transit studies, park-and-ride lot improvements, etc. |
| **State Growth Management Legislation (House Bill 7207)** | State | June 2, 2011 | Florida Legislature and local governments | • HB 7207 repeals most of the State-mandated growth management planning laws that have governed development activities within Florida since the original Growth Management Act of 1975, including transportation concurrency. | • The repeal of state-mandated transportation concurrency provides local governments with the opportunity to develop a more localized concurrency program that aligns with the development and mobility goals of the community.<br>• HB 7207 strengthens legislative language that supports multi-modal approaches to transportation by stating that Comprehensive Plan Transportation Elements "shall provide for a safe, convenient multi-modal transportation system." |
| **SFRTA: Moving our Region Forward (SFRTA Forward for short) is SFRTA's 10 Year Transit Development Plan (2014-2023)** | SFRTA Service Area (Miami-Dade, Broward, and Palm Beach counties) | South Florida Regional Transportation Authority | August 2013 | • SFRTA Forward documents the investments that SFRTA is committed to making over the next five years, as well as the agency's vision for additional priorities and improvements through FY 2023. | • Immediate improvements identified in SFRTA Forward include the modernization and expansion of the Tri-Rail fleet, the shift of rail corridor dispatch and maintenance duties to SFRTA, and the opening of the new Miami Airport Tri-Rail Station at the Miami Intermodal Center (MIC) |
| **BCT Connect is BCT's 10 Year Transit Development Plan (2014-2023)** | Broward County | Broward County Transit | October 2013 | • BCT Connect provides both a "Status Quo Plan" and "Vision Plan" to guide the future of public transportation services in Broward County during this 10-year planning horizon. While the Status Quo Plan seeks to maintain existing service levels over the next 10 years, the goal of the Vision Plan is to improve the transit system beyond its current capabilities, level of service, and current funding levels. | • The Status Quo Plan includes identified reliability/capacity adjustments to address on-time performance issues, implementation of the new WAVE Streetcar, ITS and infrastructure improvements, and completion of various plans and programs. In addition to improvements contained in the Status Quo Plan, the Vision Plan identifies frequency and service improvements, route realignments, enhanced bus service, new fixed route and express bus service, various facility improvements, and other administrative programs and improvements. |
| **Tri-Rail Coastal Link Study (TRCL)** | Regional | In Progress | FTA, Southeast Florida Transportation Council, FDOT, SFRTA, Broward MPO, BCT, Palm Tran, Palm Beach MPO, Miami-Dade MPO, Miami-Dade Transit (MDT) | • The TRCL Study proposes reintroducing passenger service along an 85-mile stretch of the Florida East Coast (FEC) Railway corridor between downtown Miami and Jupiter. | • This regional corridor connects to the existing bus systems, including MDT, BCT, and Palm Tran and rail transit systems including both Tri-Rail and Metrorail. It will also integrate with the various transit systems including the new Miami Trolley.<br>• The System Master Plan is currently being refined to identify and evaluate initial phases for implementation, start-up infrastructure, stations, and preliminary costs. Next Steps include recommending a preferred alternative<br>• MDT is a Project Partner on this study and sits on the TRCL Steering Committee. |

**Table 7-1: Program and Plans Review (Continued)**

| Plan/Program/Study Reviewed | Geographic Applicability | Most Recent Update/Timeframe | Responsible/Partner Agencies | Overview | Key Considerations for the Situation Appraisal |
|---|---|---|---|---|---|
| **All Aboard Florida** | Regional | In Progress | Private Initiative led by Florida East Coast Industries | • All Aboard Florida is looking at the feasibility of implementing a privately owned, operated, and maintained intercity passenger rail service along a 240-mile section of the existing FEC between Miami and the Space Coast and the creation of new tracks into Orlando. | • Study requires coordination between with FEC and local transit/transportation agencies (including MDT) regarding connecting service at proposed stations (including a proposed station in Downtown Miami). |
| **95 Express Managed Lanes (Phase 2)** | Regional | In Progress | FDOT | • 95 Express Phase 2 will extend the existing express lanes north from Golden Glades interchange in Miami-Dade County to Broward Boulevard in Broward County. | • The 95 Express provides Express Bus service between Broward County and Downtown Miami within existing express lanes. The extension of the 95 Express lanes from the Miami-Dade County line to Broward Boulevard will allow this Express route to continue traveling at higher average travel speeds via uninterrupted express lanes. |
| **Regional Transit System Master Plan (RTSMP)** | Regional | In Progress | South Florida Transportation Council (SEFTC) | • A key component of the SEFTC-led 2040 Southeast Florida Regional Transportation Plan (2040 RTP). Project will identify the most significant regional investment needed to meet travel demands throughout the Southeast Florida region. | • The RTSMP, when completed in 2014, will provide a thorough analysis of unmet transit travel demands and other regional transit opportunities in the three-county region. It is expected that this analysis will be particularly helpful for the development of future regional express bus service. |
| **Regional Transit Interoperability/Universal Fare Technology Study** | Regional | In Progress | FDOT, BCT, SFRTA, MDT, and Palm Tran | • Purpose of this study is to evaluate and implement a regional fare card using smart card technologies for MDT, SFRTA, BCT, and Palm Tran, along with evaluating the business case and total cost drivers associated with realizing the technical integration solution.<br>• SFRTA and MDT utilizing the Easy Card system.<br>• Regional travel is complex where separate fare media, different fares and transfer policies make travel difficult for existing riders and daunting for new customers | The next steps for implementing a regional fare system include:<br>• Decision-makers from transit stakeholders to draft a fare policy for multi-modal regional trips<br>• Define limitations to accessing Easy Card encryption key<br>• Launch pilot program to evaluate use and administrative functions<br>• Focus to develop robust system that is extensible to emerging technologies |
| **Regional Climate Change Action Plan** | Regional | 2012 | Southeast Florida Regional Climate Change Compact (Compact), | • Compact is a collaborative effort among Palm Beach, Broward, Miami-Dade, Monroe Counties, their municipalities and partners to develop a regional action plan for Southeast Florida to reduce greenhouse gas emissions and adapt to regional and local impacts of a changing climate. | • The Regional Climate Change Action Plan establishes seven goals to categorize the 110 action items identified by the Plan. One of the goals is to "reduce greenhouse gas emissions by planning, designing, and prioritizing walkable, affordable communities supported by sustainable multimodal transportation options." There are 16 action items associated with this goal that address both land use policy and multimodal infrastructure investment strategies.<br>The Regional Climate Change Action Plan recognizes that there are more than 100 entities in the four-county region that exercise governance over transportation planning, operation, and investment decisions. Continued enhancement of mobility options and land use policy to support alternative modes will require inter-regional coordination among these agencies, including MDT. |

**Table 7-1: Program and Plans Review (Continued)**

| Plan/Program/Study Reviewed | Geographic Applicability | Most Recent Update/Timeframe | Responsible/Partner Agencies | Overview | Key Considerations for the Situation Appraisal |
|---|---|---|---|---|---|
| **Seven50 Regional Plan** | Broward County | In Progress | South Florida Regional Planning Council – Treasure Coast Regional Planning Council | • Led by the South Florida and Treasure Coast Regional Planning Councils and the Southeast Florida Regional Partnership(SFRP). The SFRP is a voluntary, broad-based and growing collaboration of more than 200 public, private, and civic stakeholders from the Southeast Florida region.<br>• The plan is being devised through a series of public summits, workshops, online outreach, and high-impact studies and will identify a blueprint for growing the Southeast Florida region into a prosperous and desirable place for the next 50 years and beyond. | • Concept is based on the “six pillars” designed to serve as an organizing force for strategic planning at local, regional, and state levels. The six pillars include: Talent Supply and Education, Innovation and Economic Development, Infrastructure and Growth Leadership, Business Climate and Competitiveness, Civic and Governance Systems, and Quality of Life and Quality Places.<br>• Identifies a need to develop and maintain multimodal, interconnected trade and transportation systems to support a globally competitive economy and focus on improvement.<br>• The Comprehensive Economic Development Strategies (CEDS) completed by the South Florida and Treasure Coast Regional Planning Councils, addressing the six pillars, will be integrated into the Seven50 Plan to form a comprehensive 2060 vision plan for the entire seven- county Southeast Florida Region. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **Miami-Dade County Comprehensive Development Master Plan (CDMP)** | Transportation Element | Goals, Objectives, and Policies | Miami-Dade County | October 2013 | High | • Coordinating objectives and policies between different elements of the Comprehensive Development Master Plan, including the Transportation and Land use Elements, to encourage and promote the use of public transportation.<br>• Multi-modal objectives and policies that positively impact transit services, transit infrastructure, and transit ridership, including LOS standards that consider the transit services provided along the corridors.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to jointly improve and develop transportation and transit facilities that are identified across agency plans.<br>• A mass transit specific section within the Transportation Element that identifies objectives and policies that encourage and promote the use of public transit by providing interconnectivity between the transportation modes, as well as setting policies to provide a sound funding base for mass transit in the County. |
| **Miami-Dade County Comprehensive Development Master Plan (CDMP)** | Land Use Element | Goals, Objectives, and Policies | Miami-Dade County | October 2013 | High | • Goals, objectives, and policies that encourage and facilitate transit-oriented, mixed-use, and other development strategies that support the use of the existing and future transit system in specific areas of the County by providing certain incentives, as well as improve the existing infrastructure around major activity nodes.<br>• Coordinating objectives and policies between different elements of the Comprehensive Development Master Plan, including the Transportation and Land use Elements, to encourage and promote multi-modal development design. |
| **Miami Comprehensive Neighborhood Plan** | Transportation Element | Goals, Objectives, and Policies | City of Miami | January 2013 | High | • Review of appropriate land use, zoning, urban design, and transportation connectivity within areas surrounding existing and future rail/premium transit stations to determine if changes are needed to foster development and/or infrastructure improvements that support multi-modal travel, including transit use.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve and increase the use of the existing mass transit network within the city and the region.<br>• Alternative ways to measure roadway and/or transit facility level-of-service (LOS), including person-trip metrics. |
| **Miami Comprehensive Neighborhood Plan** | Land Use Element | Goals, Objectives, and Policies | City of Miami | January 2013 | High | • Goals, objectives, and policies that promote and facilitate mixed-use and infill developments within neighborhoods and areas of the city that have easy access to a variety of existing transportation modes, including mass transit.<br>• Identifying multiple areas of the city, including the Central Business District (CBD) and Regional Activity Centers (RACs), where new developments must include and/or encourage the use of mass transit and reduce the need for automobile travel. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment (Continued)**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **City of Hialeah Comprehensive Plan 2003-2015** | Transportation Element | Goals, Objectives, and Policies | City of Hialeah | 2003 | High | • Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve and increase the use of the transit.<br>• Strategies to facilitate the dissemination of transit service information, including coordinating with Hialeah employers and distributing information at City-owned and operated facilities.<br>• Multi-modal objectives and policies that positively impact transit services, transit infrastructure, and transit ridership, including LOS standards that consider the transit services provided along the corridors.<br>• Protecting and preserving current and future right-of-way for mass transit projects, including within proposed developments. |
| **City of Hialeah Comprehensive Plan 2003-2015** | Land Use Element | Data and Inventory, with Goals, Objectives, and Policies | City of Hialeah | 2003 | Medium | • Goals, objectives, and policies that encourage downtown mixed-use, compact urban design, and infill development, and accompanying strategies that support the use of the existing and future transit system in certain areas of the city.<br>• Coordinating objectives and policies between the Transportation and Land Use Elements of the Comprehensive Plan to ensure consistency between land use policies and the city's transportation infrastructure. |
| **City of Miami Gardens Comprehensive Development Master Plan** | Transportation Element | Goals, Objectives, and Policies | City of Miami Gardens | December 2006 | High | • Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve and maximize transit mobility within the city, as well as coordination to achieve consistency between plans and programs at the regional and state levels.<br>• Coordinating objectives and policies between different elements of the Comprehensive Development Master Plan, including the Transportation and Land use Elements, to encourage and promote the use of public transportation.<br>• Multi-modal goals, objectives, and policies that positively impact transit services and transit ridership, including improvements to pedestrian infrastructure around existing transit stops. |
| **City of Miami Gardens Comprehensive Development Master Plan** | Land Use Element | Goals, Objectives, and Policies | City of Miami Gardens | December 2006 | High | • Coordinating objectives and policies between different elements of the Comprehensive Development Master Plan, including the Transportation and Land Use Elements, to identify transit-focused corridors and other areas within the city.<br>• Goals, objectives, and policies that encourage mixed-use, infill, compact urban design, and transit-oriented development strategies that support the use of the existing and future transit system in specific areas of the city. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment (Continued)**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **City of Miami Beach Year 2025 Comprehensive Plan** | Transportation Element | Goals, Objectives, and Policies | City of Miami Beach | April 2011 | High | • Dedicating a section of the Transportation Element to identify mass transit-specific objectives and policies that encourage and promote the use of public transit, including setting minimum transit service and infrastructure standards and strategies for interagency/intergovernmental coordination to ensure the implementation of the objectives and policies.<br>• Sections of the Transportation Element that identify multi-modal and bicycle and pedestrian circulation specific objectives, and policies that positively impact transit services, transit infrastructure, and transit ridership, including pedestrian and bicycle safety, complete streets, and Transportation Demand Management (TDM) strategies,<br>• Strategies to increase the non-single occupancy vehicle (non-SOV) modal split, including mass transit, as well as strategies to continuously review the effectiveness of these strategies.<br>• Coordinating objectives and policies between different elements of the Comprehensive Plan, including the Transportation and Land Use elements, to maximize leverage of the existing infrastructure and transportation system. |
| **City of Miami Beach Year 2025 Comprehensive Plan** | Land Use Element | Goals, Objectives, and Policies | City of Miami Beach | April 2011 | Medium | • Mixed-use and transit-oriented development objectives, policies, and zones within the city to support the use of existing and future mass transit system. |
| **City of Homestead Comprehensive Plan** | Transportation Element | EAR-Based Amendments to Goals, Objectives, Measures, and Policies | City of Homestead | June 2011 | High | • Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve regional access through transit and to maximize available financial resources to improve and expand current transit services.<br>• Multi-modal-specific goals, objectives, and policies throughout the Transportation Element that positively impact transit services, including TDM strategies.<br>• Identifying performance measures to monitor progress in achieving the objectives and policies of the plan. |
| **City of Homestead Comprehensive Plan** | Land Use Element | EAR-Based Amendments to Goals, Objectives, Measures, and Policies | City of Homestead | June 2011 | Medium | • Goals, objectives, and policies that encourage downtown mixed-use, compact urban design, and infill development, and accompanying strategies that support the use of the existing and future transit system in certain areas of the city. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment (Continued)**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **City of North Miami Comprehensive Plan** | Transportation Element | EAR-Based Amendments to Goals, Objectives, and Policies | City of North Miami | December 2007 | High | • Multi-modal goals, objectives, and policies that positively impact transit services and transit ridership, including LOS standards that consider the transit services provided along the corridors, TDM strategies, and increasing transit modal split within the city.<br>• Procedures that identify funding mechanisms for public transportation improvements in the city.<br>• Coordinating objectives and policies between different elements of the Comprehensive Plan, including the Transportation and Land Use elements, to establish appropriate transit supportive uses, densities, and designs as well as to ensure connectivity of the multi-modal transportation system.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve local and regional access through transit and maximize available financial resources to improve and expand current transit services. |
| **City of North Miami Comprehensive Plan** | Land Use Element | EAR-Based Amendments to Goals, Objectives, and Policies | City of North Miami | December 2007 | High | • Goals, objectives, and policies that encourage and facilitate mixed-use, infill, and transit-oriented development and accompanying strategies that support the use of the existing and future transit system in specific areas of the city.<br>• Transit-oriented and urban design sections within the plan provide detailed guidelines and insight into goals and policies that promote the use of public transportation. |
| **City of Coral Gables Comprehensive Plan** | Mobility Element | Goals, Objectives, and Policies | City of Coral Gables | January 2010 | High | • Identifying objectives and policies that impact different elements of the comprehensive development plan, including the mobility and land use elements.<br>• Multi-modal goals, objectives, and policies that positively impact transit services, and transit ridership, including LOS standards that consider the transit services provided along the corridor and TDM strategies.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve consistency between local and regional plans. |
| **City of Coral Gables Comprehensive Plan** | Land Use Element | Goals, Objectives, and Policies | City of Coral Gables | January 2010 | Medium | • Goals, objectives, and policies that encourage mixed-use development downtown and along corridors, as well as infill development strategies that support the use of the existing and future transit system in specific areas of the city. |
| **City of Doral Comprehensive Plan** | Transportation Element | Goals, Objectives, Measures, and Policies | City of Doral | August 2013 | High | • Multi-modal goals, objectives, and policies that positively impact transit services, and transit ridership, including LOS standards that consider the transit services provided along the corridor and TDM strategies.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve transit access to major trip generators for city residents.<br>• Strategies and measures to increase the non-single occupancy vehicle (non-SOV) modal split, including increasing transit modal split. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment (Continued)**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **City of Doral Comprehensive Plan** | Land Use Element | Goals, Objectives, and Policies | City of Doral | August 2013 | Medium | • Goals, objectives, and policies that encourage mixed-use development downtown and along corridors, as well as redevelopment strategies that support the use of the existing and future transit system in specific areas of the city. |
| **City of North Miami Beach Comprehensive Plan** | Transportation Element | Goals, Objectives, and Policies | City of North Miami Beach | April 2011 | High | • Multi-modal objectives and policies that positively impact transit services, transit infrastructure, and transit ridership, including LOS standards that consider the transit services provided along the corridors, and TDM strategies.<br>• Identifying objectives and policies that impact multiple elements of the comprehensive development plan, including the transportation and land use elements, to ensure compatibility of said objectives and policies.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve transit services and identify potential long-term transit enhancements.<br>• On-going evaluation and monitoring of goals, objectives, and policies of the Comprehensive Plan and existing transit services to identify any potential improvements and enhancements that positively impact transit usage. |
| **City of North Miami Beach Comprehensive Plan** | Land Use Element | Goals, Objectives, and Policies | City of North Miami Beach | November 2013 | High | • Goals, objectives, and policies that encourage mixed-use and redevelopment strategies in specific areas of the city and that support the use of the existing and future transit system while reducing the need for automobile travel.<br>• Strategies to support and fund improvements to multi-modal street infrastructure, including transit stops, through impact fees for mixed-use developments. |
| **Town of Cutler Bay Growth Management Plan** | Transportation Element | Goals, Objectives, Measures, and Policies | Town of Cutler Bay | April 2008 | High | • Multi-modal goals, objectives, and policies that positively impact transit, including LOS standards that consider the transit services provided along the corridors and TDM strategies.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve transit services and transit infrastructure, and to ensure consistency between local, regional, and state plans.<br>• Coordinating objectives and policies between different elements of the Growth Management Plan, including the Transportation and Land Use Elements, to establish appropriate transit supportive uses, densities, and designs and to ensure connectivity of the transportation system.<br>• Strategies to seek alternative funding mechanisms for mobility improvements, including transit stops, through impact fees. |

**Table 7-2: Comprehensive Plans Review – Transit Supportive Assessment (Continued)**

| Comprehensive Plan | Element | Plan Format | Geographic Applicability | Most Recent Update | Level of Transit Supportiveness | Key Elements of Transit Supportiveness |
|---|---|---|---|---|---|---|
| **Town of Cutler Bay Growth Management Plan** | Land Use Element | Goals, Objectives, Measures, and Policies | Town of Cutler Bay | April 2008 | High | • Goals, objectives, and policies that encourage mixed-use and transit-oriented development and redevelopment within specific areas of the city and that support the use of the existing and future transit system.<br>• Multi-modal objectives and policies within the Land Use Element of the Growth Management Plan that positively impacts transit services, including the use of incentive programs to encourage transit-oriented developments. |
| **The City of Aventura Comprehensive Plan** | Transportation Element | Goals, Objectives, Measures, and Policies | City of Aventura | December 1998 | High | • Multi-modal goals, objectives, and policies that positively impact transit, including setting transit LOS standards and TDM strategies.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to ensure consistency between local, regional, and state plans, and further develop the multi-modal transportation system.<br>• Utilizing performance measures to monitor progress in achieving the objectives and policies of the plan, such as transit service measures to measure mobility within the city.<br>• Identifying areas and locations within the city where appropriate pedestrian and transit infrastructure should be provided. |
| **The City of Aventura Comprehensive Plan** | Land Use Element | Goals, Objectives, Measures, and Policies | City of Aventura | December 1998 | Medium | • Goals, objectives, and policies that encourage mixed-use and redevelopment strategies in specific areas of the city and that support the use of the existing and future transit system. |
| **Town of Miami Lakes Adopted Comprehensive Plan** | Transportation Element | Goals, Objectives, Measures, and Policies | Town of Miami Lakes | December 2003 | High | • Multi-modal goals, objectives, and policies that positively impact transit, including LOS standards that consider the transit services provided along the corridors, as well as completion of the pedestrian infrastructure network within the city.<br>• Goals, objectives, and policies that promote and encourage interagency and intergovernmental coordination to improve transit services within the city.<br>• Utilizing performance measures to monitor progress in achieving the objectives and policies of the plan, such intergovernmental coordination and development application review measures.<br>• Conducting a detailed review of all development proposals to ensure appropriate multi-modal facilities are provided. |
| **Town of Miami Lakes Adopted Comprehensive Plan** | Land Use Element | Goals, Objectives, Measures, and Policies | Town of Miami Lakes | December 2003 | Medium | • Goals, objectives, and policies that encourage mixed-use and redevelopment strategies in specific areas of the city and that support the use of the existing and future transit system. |

## 7.6 Land Use

The pattern of land use and urban growth promoted in the original Comprehensive Development Master Plan (CDMP) continues to occur throughout Miami-Dade County. The location and configuration of Miami-Dade County's urban growth shall emphasize concentration and intensification of development around centers of activity, development of well-designed communities containing a variety of uses, housing types and public services, renewal and rehabilitation of blighted areas, and contiguous urban expansion when warranted, rather than sprawl.

Miami-Dade County shall require all new development and redevelopment in existing and planned transit corridors and urban centers to be planned and designed to promote transit-oriented development (TOD), and transit use, which mixes residential, retail, office, open space and public uses in a pedestrian-friendly environment that promotes the use of transit. This set of actions will produce short trips, minimize transfers, attract transit ridership, and promote travel patterns using transit routes that are balanced directionally and temporally to promote transit operational and financial efficiencies.

When the existing land use map is compared to the adopted 2020 and 2030 Land Use Plan (LUP) it is noticeable that areas along the South Miami-Dade Busway are designated for future land use categories that will facilitate a gradual transition from undeveloped land to low or medium residential density (refer to the segment between Florida City and SW 216$^{th}$ Street).

The County will give special emphasis to providing a high level of public mass transit service to all planned urban centers. Urban Centers are identified on the LUP map by circular symbols noting three scales of planned centers (regional, metropolitan and community urban centers). In addition to the Urban Center locations depicted on the LUP map, all future rapid transit station sites and their surroundings shall at a minimum, be developed in accordance with the community urban center policies as set forth in the CDMP.

## 7.7 Transit Propensity

A transit propensity analysis was performed for the TDP Major Update based upon the latest available Census data for 2010 (CTPP 2006-2010 data is used for Zero Car household propensity analysis since Census 2010 did not report this information). The transit propensity analysis takes into account various demographic characteristics of geographic areas of Miami-Dade County 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 six demographic characteristics:

- Percentage of Population Age 65 or Over (Age 65+/Total Population)
- Percentage of Population Age 18 and Under (Age 18 and Under/Total Population)
- Percentage of Low Income Households (HH income <=$25,000)

- Percentage of Zero Car Households (Zero Car HH/Total HH)
- Percentage Minority (Percentage of total population that are not "White, non-Hispanic)
- Population Density (Persons/Square mile of Land)

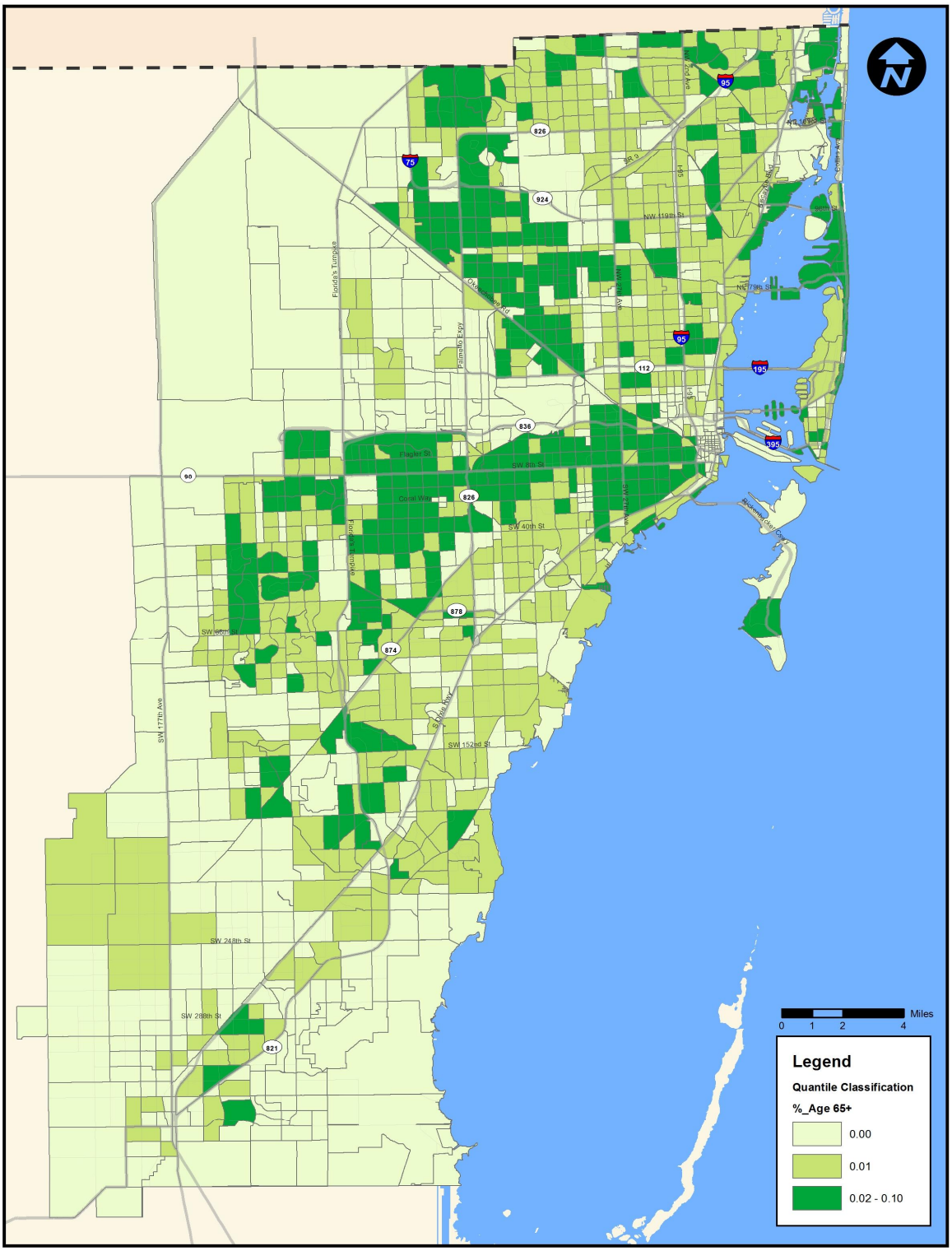
All of these household characteristics are considered an important transit market, so places with a high concentration of these six characteristics can be considered to be locations where improvements to transit service are likely to yield the greatest return in terms of transit ridership.

The maps in Figure 7-2, Figure 7-3, Figure 7-4, Figure 7-5, Figure 7-6 and Figure 7-7 on the following pages show concentrations of elderly persons, younger population, low income households, zero car households, minority and population density that traditionally lack access to a private vehicle.

As seen on the map showing percentage of population age 65 and over, the greatest concentration of elderly residents is located in the central and northern areas and along the coast. Concentrations of the percentage of population age 18 and under are located in the northern and southern portion of the County, with other pockets scattered throughout the County. Concentration of low income households are found mainly west and north of downtown and in some municipalities located to the south, with other pockets scattered throughout the County. Zero car household distribution is similar to location of low income households, with the zero car households mostly located west and north of downtown, with some scattered pockets throughout the County. Minority populations are mostly concentrated to the west and north of downtown. Areas of high population density are located mainly in the downtown area and along the coast, with other pockets scattered throughout the county.

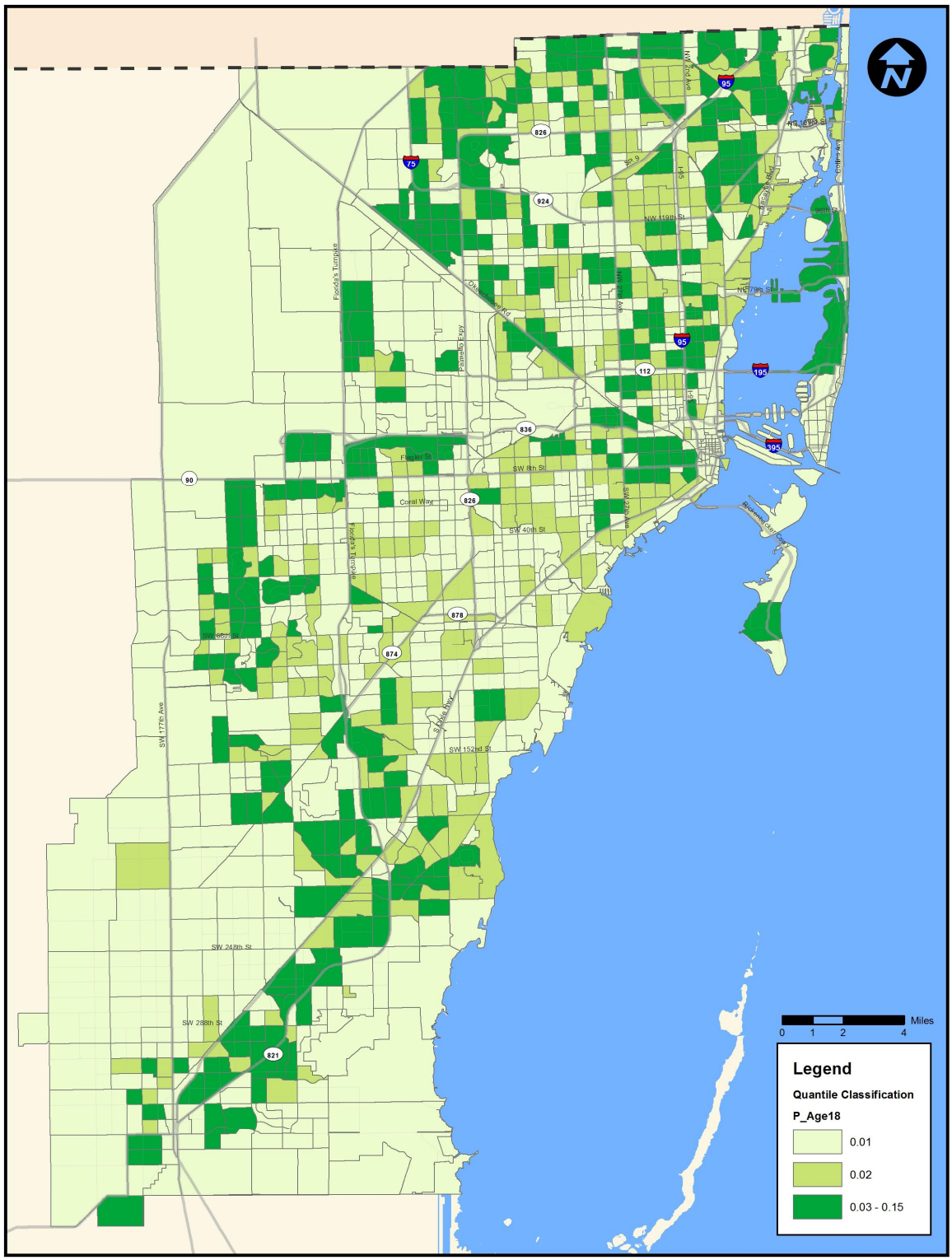
Figure 7-8 shows the combined concentration of each of these demographic characteristics plotted on the same map, allowing identification of the areas in which they overlap. The areas with high concentration of all six demographic characteristics discussed above are shown on the map in Figure 7-9.

**Figure 7-2: Percentage of People 65 Years and Older**



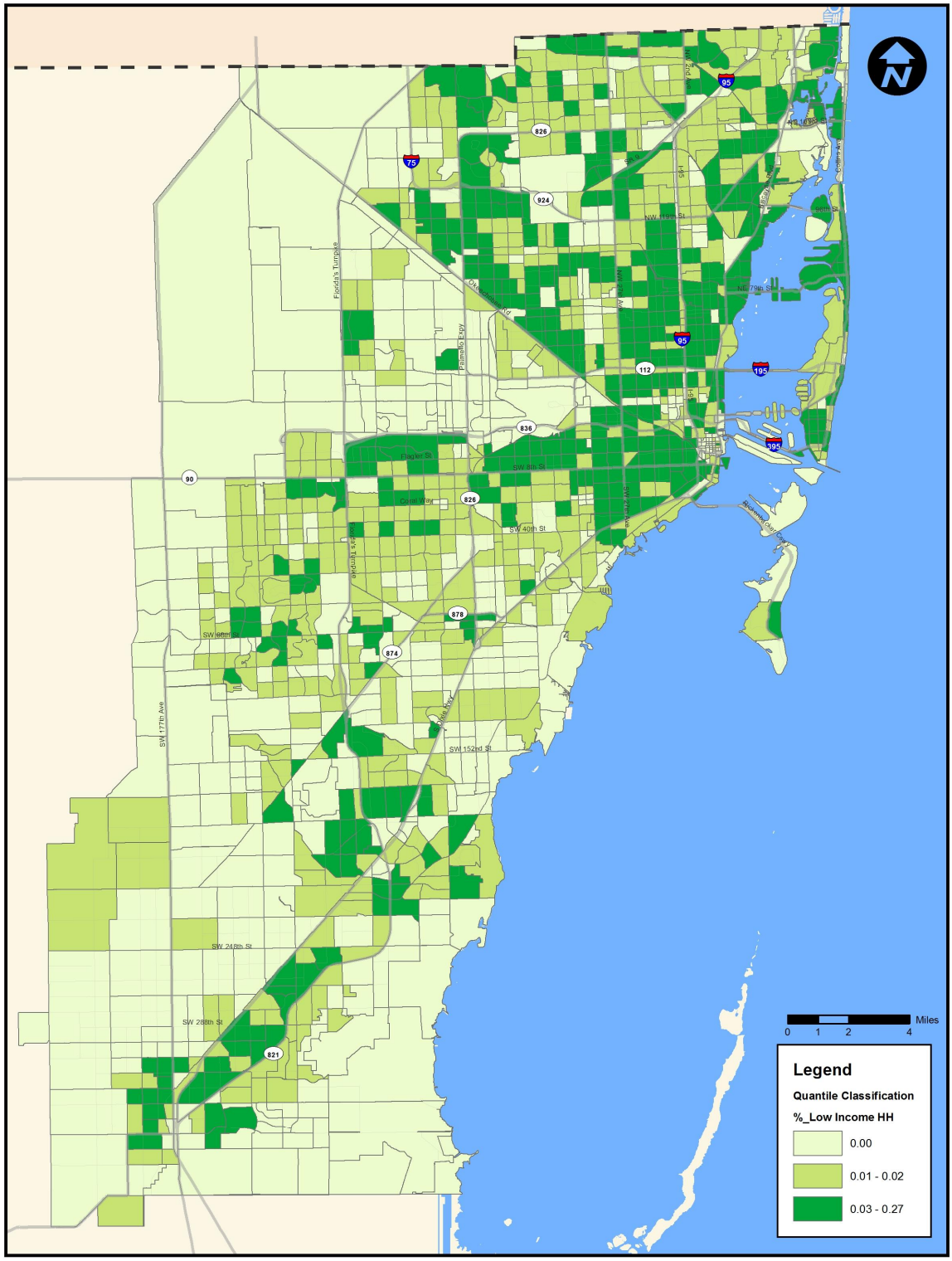

Percentage of People 65 Years or Older. Source: Miami-Dade MPO, October 2013

**Figure 7-3: Percentage of People 18 Years and Under**



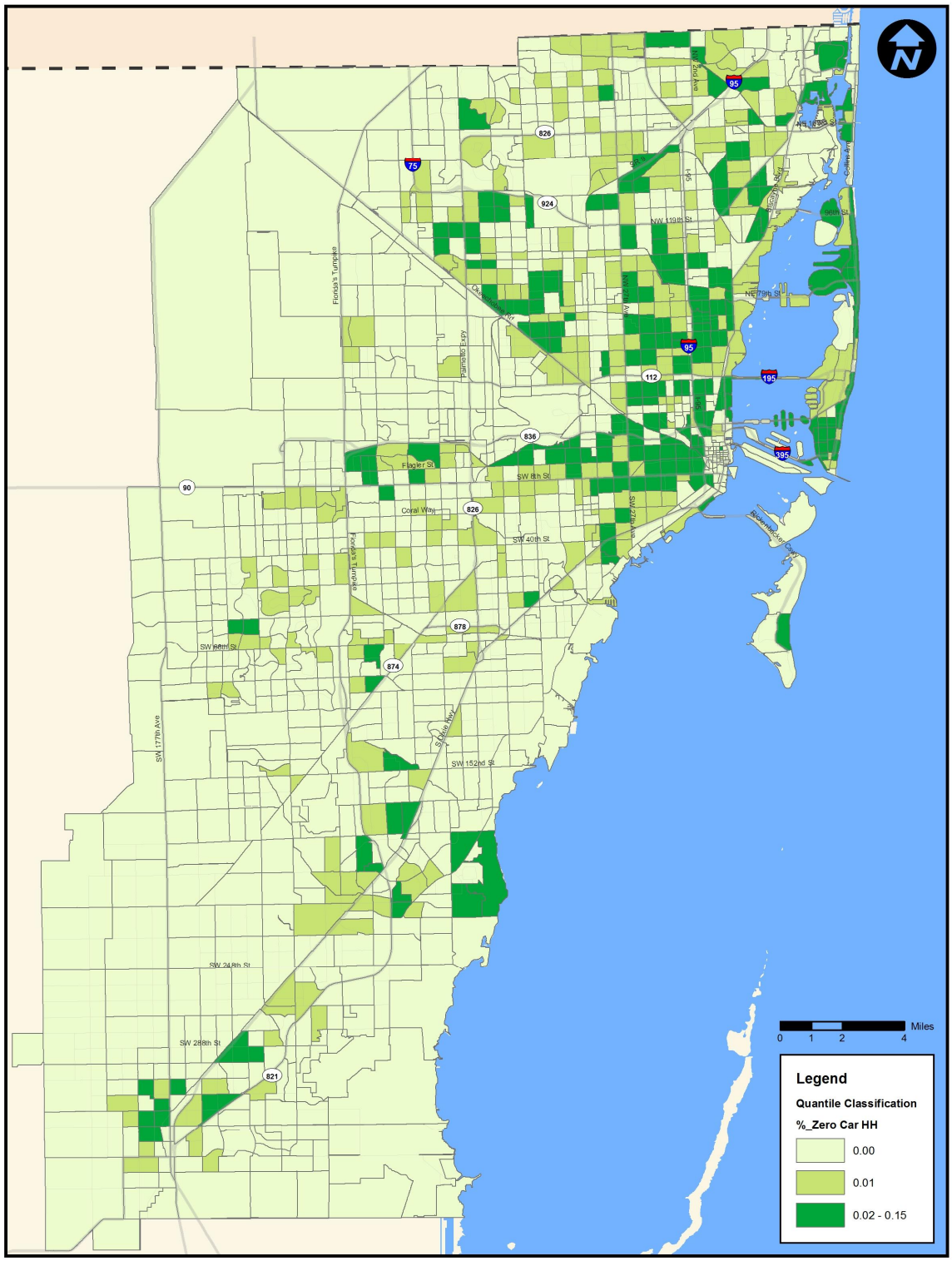

Percentage of People 18 Years or Under. Source: Miami-Dade MPO, October 2013

**Figure 7-4: Percentage of Low Income Households**



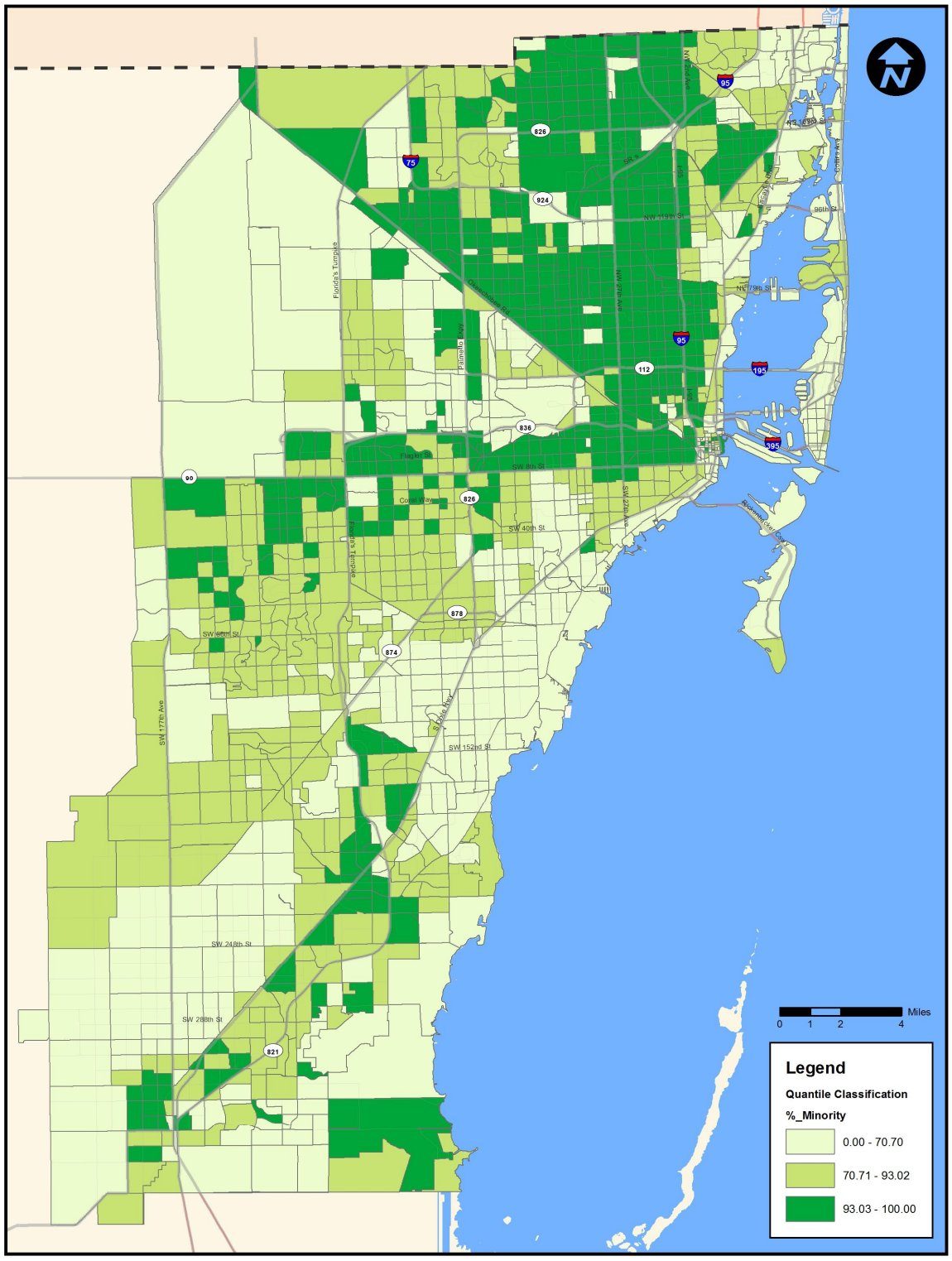

Percentage of Low Income Households. Source: Miami-Dade MPO, October 2013

## Figure 7-5: Percentage of Zero Car Households



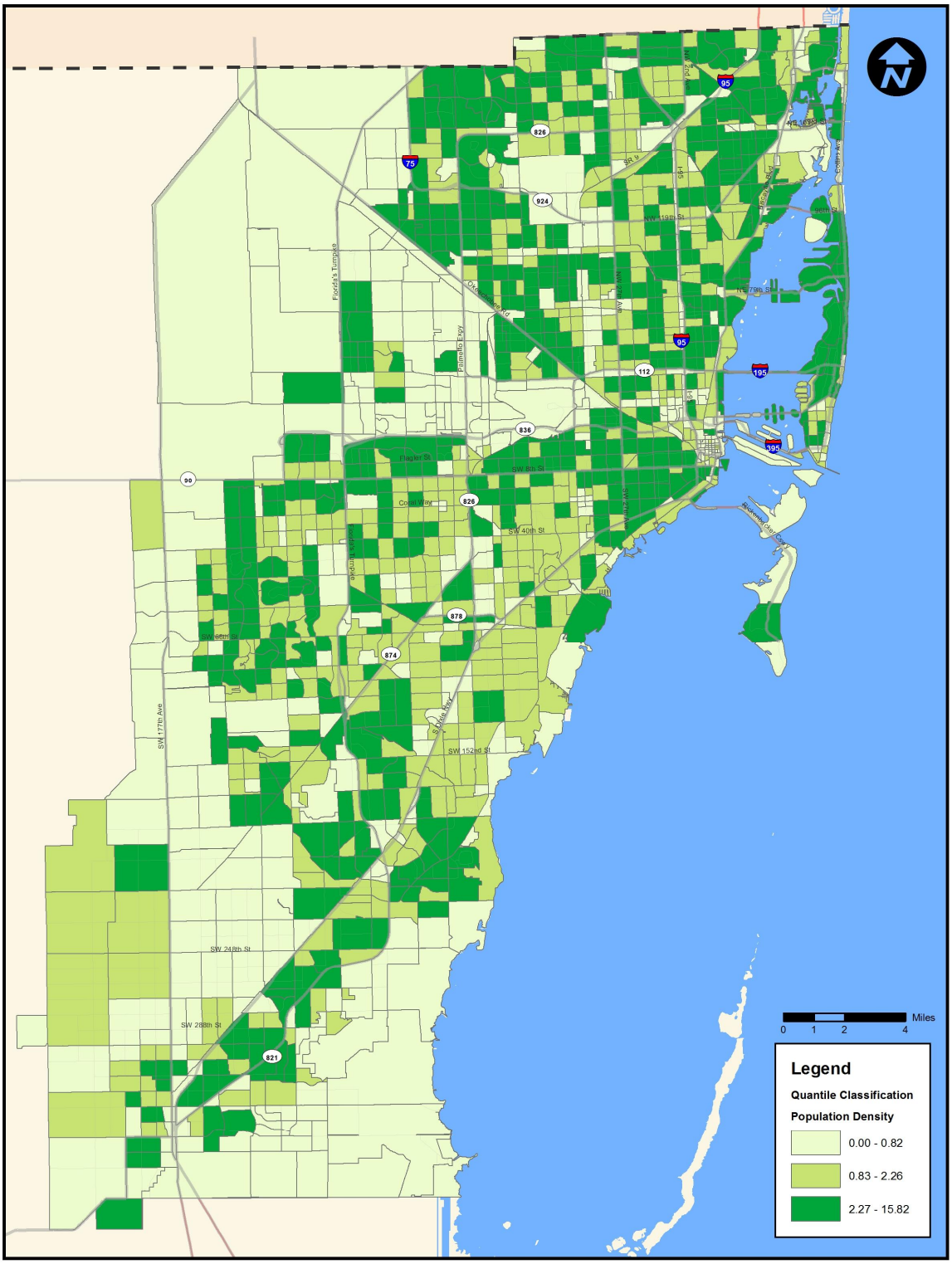

Percentage Zero Car Households. Source: CTPP 2006 - 2010, Miami Dade MPO October 2013.

**Figure 7-6: Percentage Minority**



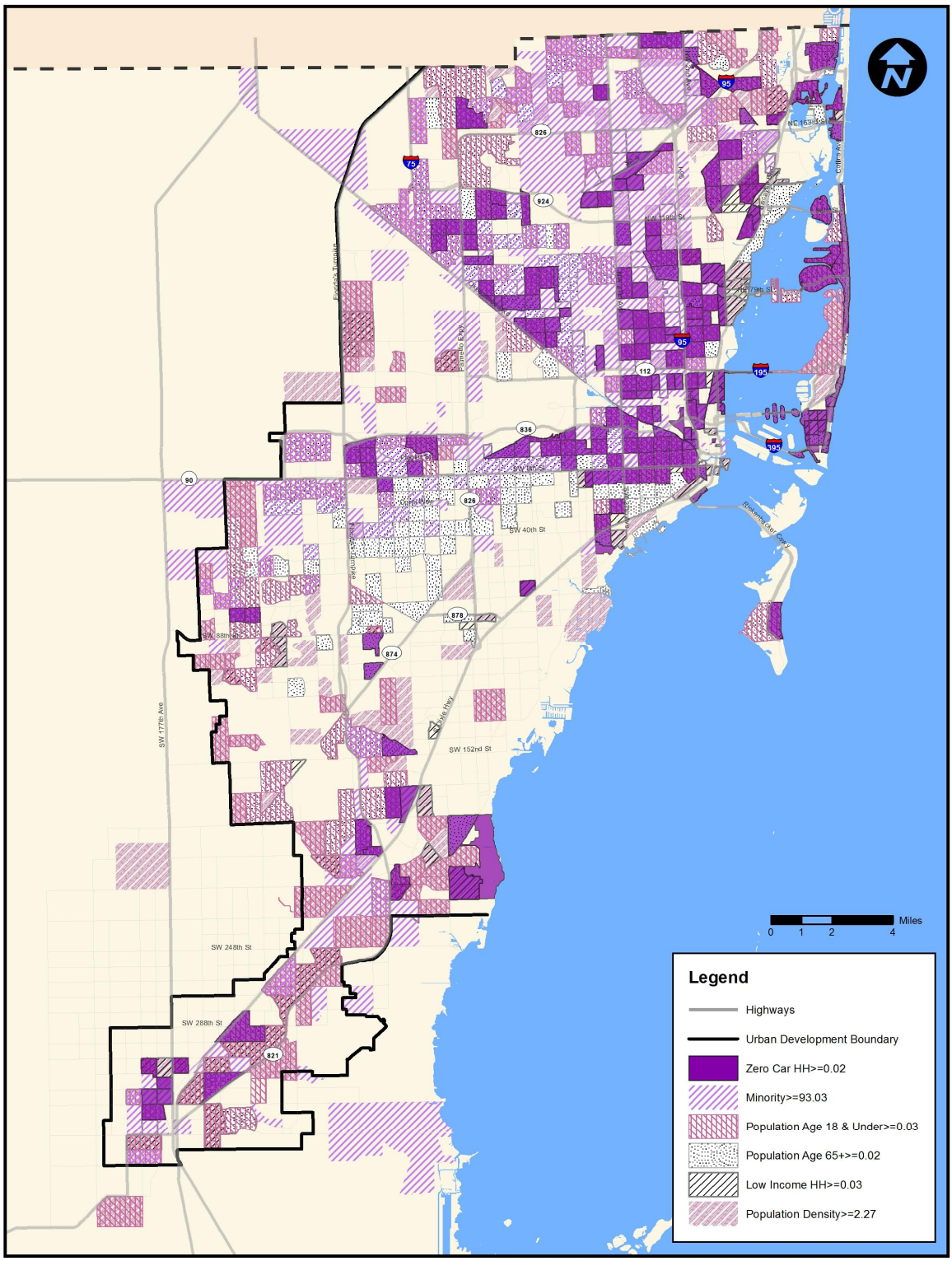

Percentage Minority. Source: Miami-Dade MPO, October 2013

**Figure 7-7: Population Density**



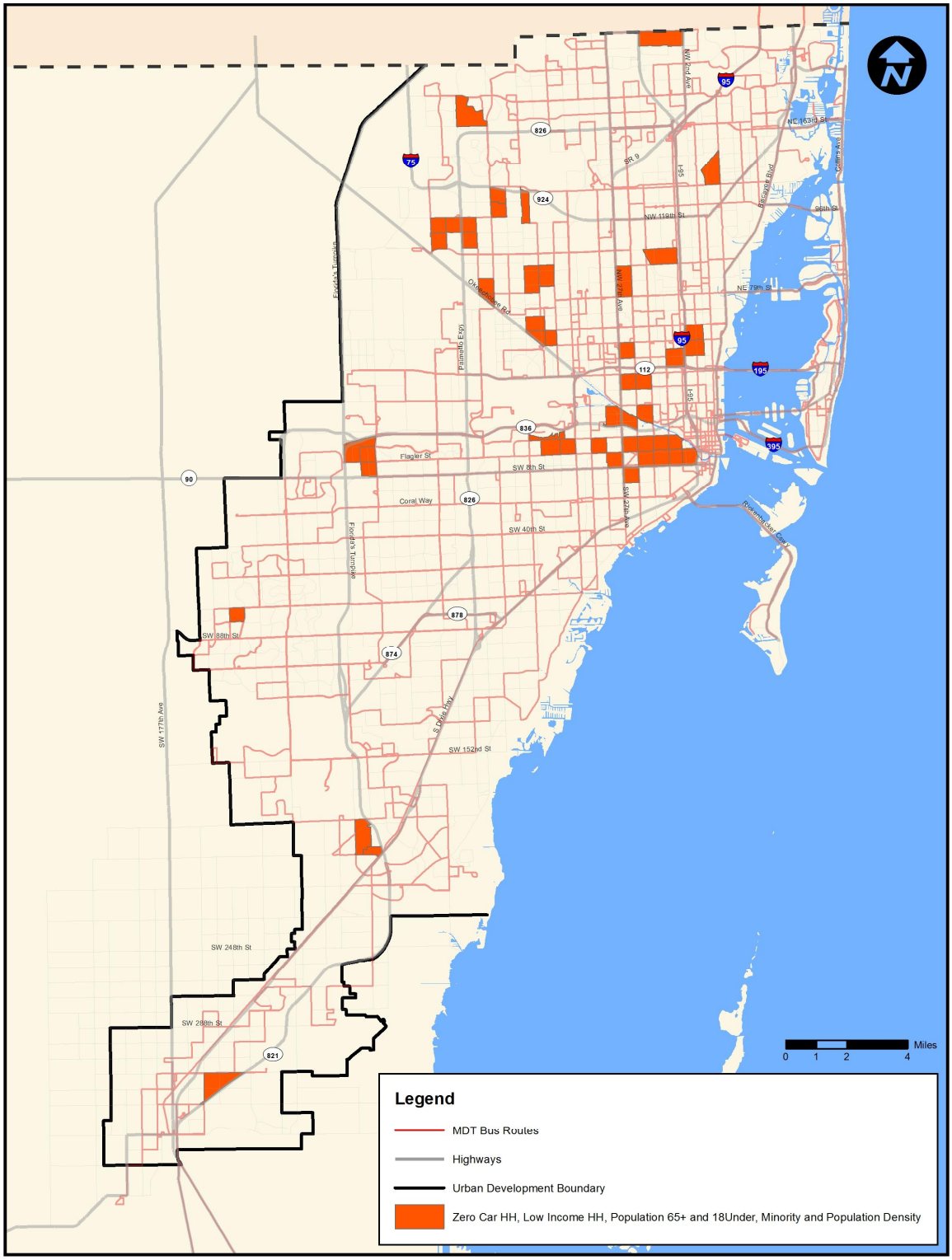

Population Density. Source: Miami-Dade MPO, October 2013

**Figure 7-8: Highest Concentration of Transit Dependent Population**




Highest Concentration of Transit Dependent Population. Source: CTPP 2006 - 2010, Miami-Dade MPO October 2013

**Figure 7-9: Transit Propensity Map**




Transit Propensity. Source: CTPP 2006 - 2010, Miami-Dade MPO October 2013

The transit propensity map shows a strong concentration of high transit ridership potential areas located to the west and north of downtown, with some pockets located at the outer edges of the county. These areas generally correspond to those areas where MDT is providing higher level transit service or has plans to expand its service offerings;

- The Hialeah area and higher-propensity pockets north and south of downtown are served by the existing Metrorail and Busway services.
- Many of the high propensity areas in the northern areas of Miami-Dade County are served by premium transit service along the NW 27th Avenue corridor.
- Areas along West Flagler Street, SW 8th Street, NW 7th Street and nearby parallel streets are served by high frequency bus service such as the Routes 11 and Flagler MAX, Route 8 and Route 7/7A respectively.

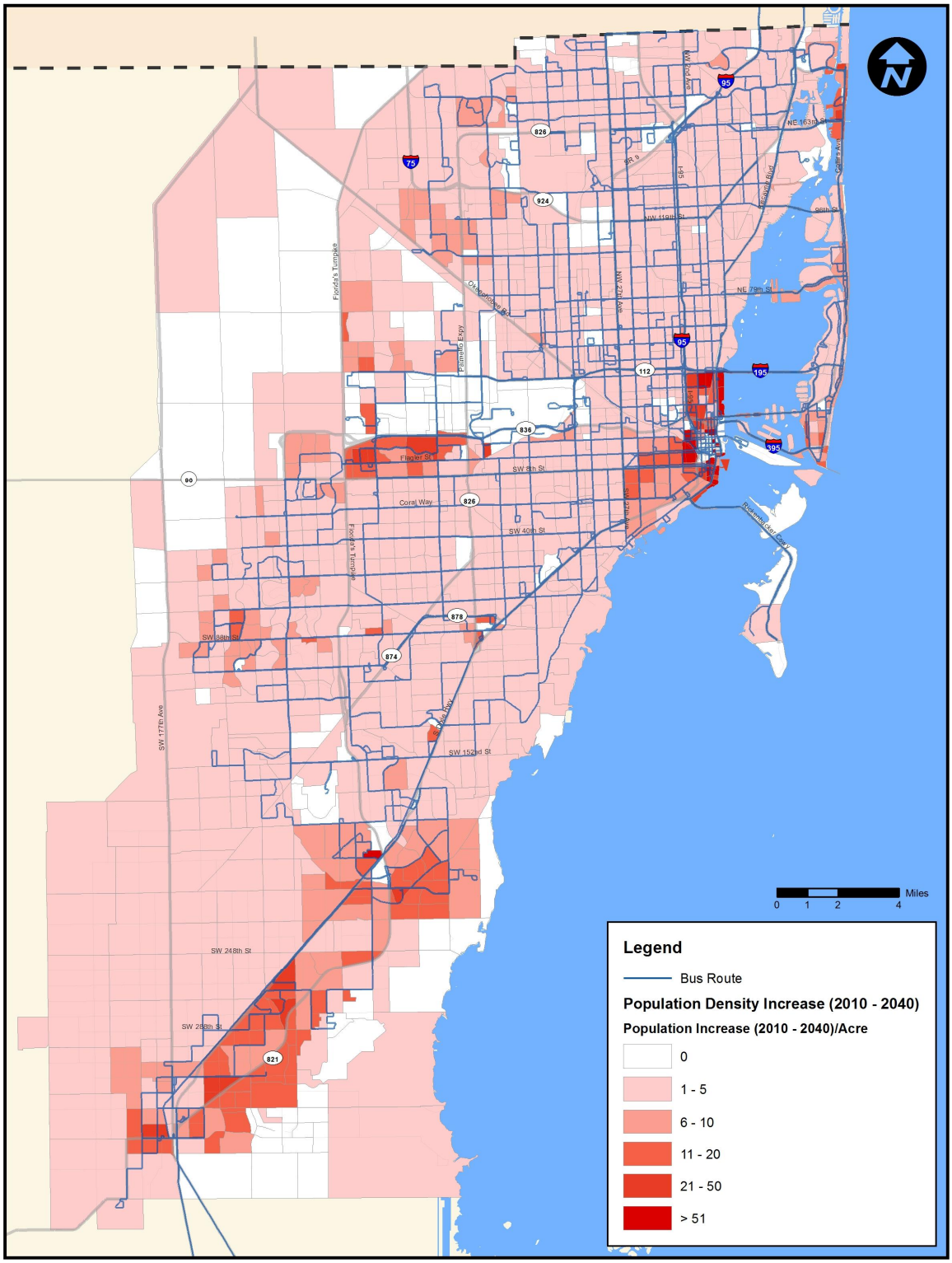
### 7.7.1 Population and Employment Density

Analysis of population and employment was based on 2010 and estimated 2040 figures based on SERPM model projections of 2040 socio-economic data. Figures 7-10 and 7-11 present areas of concentrated population and employment density increases, expressed as persons and employees per acre within a TAZ. The analysis of population and employment for Miami-Dade County illustrate that no areas will decline in terms of population and employment density between 2010 and 2040. Those areas of concentrated population growth include Downtown Miami and Brickell, Doral, Cutler Bay and along the Miami-Dade Busway into Homestead. Similarly, for employment these areas include Doral, areas adjacent to the Miami International Airport, Dadeland, Downtown Miami, and Miami Beach.

An overlay of the current transit service shows that MDT is currently serving all of the areas of the county where significant growth is anticipated. Most of the areas that are showing higher growth are already served by Metrorail or by high frequency bus service on multiple bus routes.

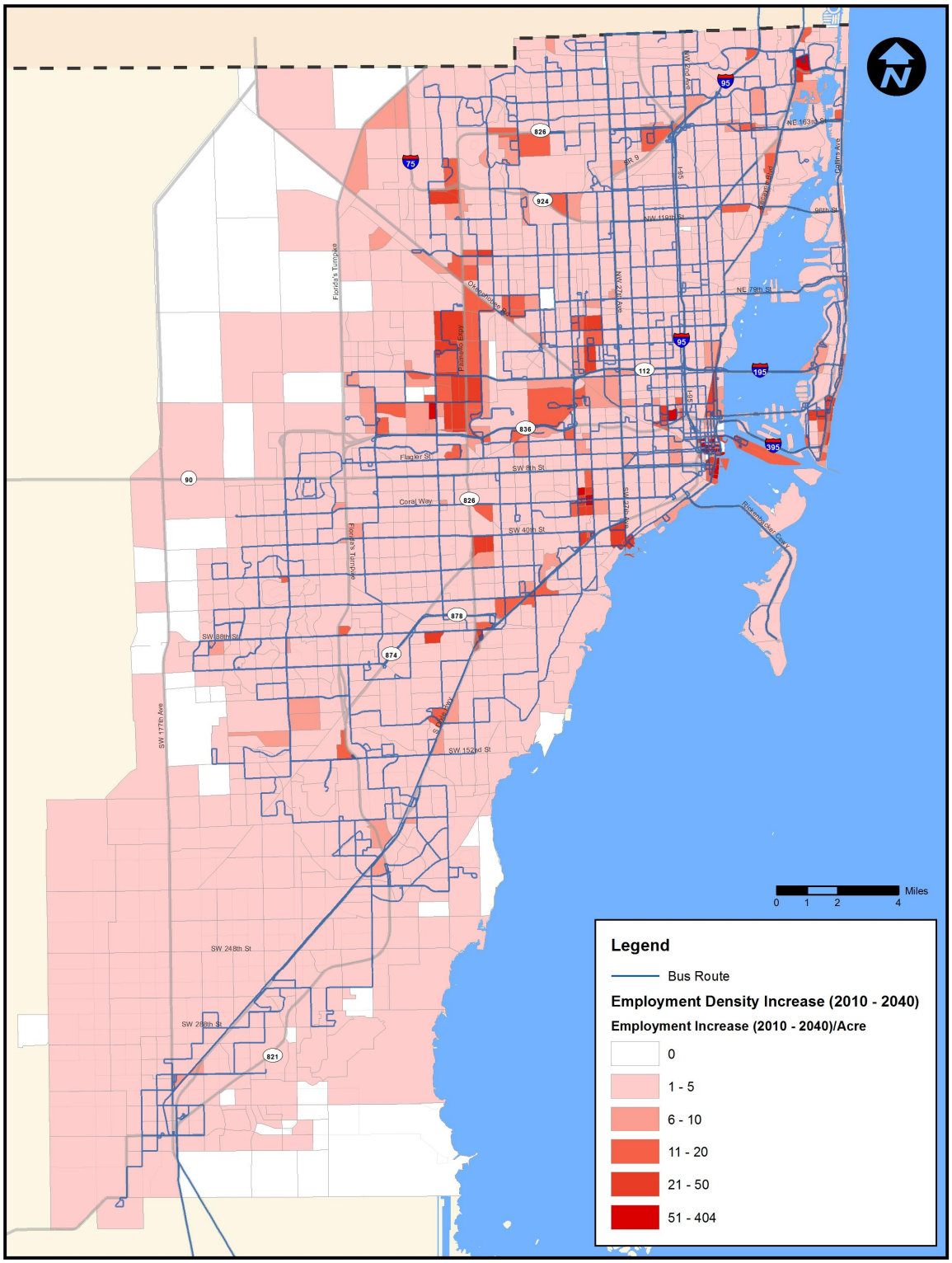
Other corridors targeted for bus improvements in this report, include NW 27th Avenue, SR 836, Flagler Street, Biscayne, SW 137th Avenue and Kendall Drive where pockets of significant growth is anticipated between 2010 and 2040.

**Figure 7-10: Population Density Increase (2010 - 2040)**




Population Density Increase. Source: SERPM Model

**Figure 7-11: Employment Density Increase (2010 - 2040)**




Employment Density Increase. Source: SERPM Model

### 7.7.2 Origin-Destination Survey Summary for MDT Local Bus Service

The Miami-Dade County Metropolitan Planning Organization (MPO) conducted a series of transit on-board surveys within Miami-Dade County to support the regional transit modeling efforts by providing ridership characteristics and origin-destination patterns for riders of Miami-Dade-Transit (MDT) local bus routes. Survey questions covered topics such as travel patterns, trip purpose, mode of travel, fare payment method, and demographic/socio-economic characteristics. The first nine survey questions were specifically asked to gather origin and destination data and information related to travel patterns of MDT local bus riders, and asked information about the following topics:

- Trip origin
- Trip purpose
- Trip sequence
- Mode of access/egress
- Parking location
- Bus Boarding and alighting location
- Trip destination

The on-board surveys were systematically conducted by trained surveyors for local MDT bus routes served by the Northeast Division Garage and Central Division Garage. The Miami-Dade MPO is currently surveying routes out of the Coral Way Division Garage.

The key findings related to the travel behavior and demand for MDT local bus service resulting from these two survey efforts is summarized below. This information will be incorporated into the situation appraisal prepared for MDT10Ahead to identify gaps in services or areas for further improvements.

It should be noted that there was general consistency in responses by riders collected during both survey efforts. As a general statement, a higher percentage of riders surveyed on routes originating from the Northeast Division Garage had better access to vehicles, higher education levels, and higher annual incomes. The origin and destination data were also generally consistent among the two survey efforts. Origin and destination data collected during these survey efforts were geocoded and mapped to illustrate origins and destinations by bus route. Both survey efforts indicated high concentrations of origin and destination locations at key activity and employment centers, including:

- Downtown Miami
- Miami Beach (notably at the I-195 and I-385 termini)
- Jackson Memorial Hospital
- Miami-Dade College
- Aventura Mall
- Omni Station
- Coconut Grove
- Miami International Airport
- Key Biscayne
- Various shopping areas and employment centers

### Summary of On-Board Survey Results for Routes Served by the MDT Northeast Division Garage

On-board surveys were conducted for 22 local bus routes served by the MDT Northeast Division Garage over a three-week period in April 2012. Of the 9,975 riders interviewed, 4,700 elected to participate in the survey and complete the minimum nine origin and destination questions. This resulted in a 48 percent response rate overall for the 22 routes.

- Trip origins tend to be more home-based trips, as more than half of the riders surveyed (53%) began their trip from home, while only 18 percent originated from work locations.
- Nearly two-thirds (62%) of riders will end their trip either at home (36%) or at work (26%), indicating that a high percentage of riders use the bus for work-based trips.
- More than half of riders (56%) did not make any transfers.
- The significant majority of riders accessed both the first transit stop (93%) and their final destination (96%) by walking. In both instances, 63 percent of these riders walked 1/4-mile or less to reach either the first transit stop or their final destination.
- Most riders (42%) made their trip five days per week; however, there was a fairly even distribution of riders who either made their trip less than one day per week or made their trip one, two, three, four, six, or seven days per week (with responses ranging from 6% to 9%). This response is again indicative of a higher percentage of employees/commuters riding the bus to/from work during a traditional five-day/40-hour work week. This is also supported by 32 percent of riders indicating that they work full time.
- More than one-third (37%) of riders indicated that their one-way trip takes somewhere between 10 and 40 minutes by bus and another 33 percent indicated that their one-way trip takes between 40 and 70 minutes. In total, 70 percent of riders require somewhere between 10 and 70 minutes to complete their one-way trip, while only three percent of riders indicated that their one-way trip takes less than 10 minutes.
- Several survey questions sought to identify socio-economic or demographic variables that may indicate whether riders are more likely to depend on public transportation for their travel needs. Survey data collected that would support a higher propensity of transit-dependent riders includes:
    - 43 percent of riders do not have a valid driver's license.
    - 65 percent of riders indicated that there are zero motorized vehicles in their households.
    - 45 percent of riders who responded do not have access to a vehicle.

- 50 percent of riders possess a high-school education level or below.
- Although only half of the riders participating elected to provide their total annual income, of those that responded, 35 percent of riders reported an annual income of less than $28,000.

### Summary of On-Board Survey Results for Routes Served by the MDT Central Division Garage

On-board surveys were conducted for 22 local bus routes served by the MDT Central Division Garage over a three-week period in April 2013. Of the 6,045 riders interviewed, 2,475 elected to participate in the survey and complete the minimum nine origin and destination questions. This resulted in a 41 percent response rate overall for the 22 routes. Key findings from this survey effort related to the travel behavior and demand include:

- Trip origins tend to be more home-based trips, as more than half of the riders surveyed (51%) began their trip from home, while only 19 percent originated from work locations.
- Nearly two-thirds (62%) of riders will end their trip either at home (34%) or at work (28%), indicating that a high percentage of riders use the bus for work-based trips.
- Just over half of riders (51%) did not make any transfers.
- The significant majority of riders accessed both the first transit stop (95%) and their final destination (97%) by walking. In both instances, 68 percent of these riders walked 1/4-mile or less to reach either the first transit stop or their final destination.
- Most riders (39%) made their trip five days per week; however, there was a fairly even distribution of riders who either made their trip less than one day per week or made their trip one, two, three, four, six, or seven days per week (with responses ranging from 7% to 11%). This is again indicative of a higher percentage of employees/commuters riding the bus to/from work during a traditional five-day/40-hour work week. This is also supported by 49 percent of riders indicating that they work full time.
- The majority of riders (54%) indicated that their one-way trip takes somewhere between 10 and 40 minutes by bus and another 25 percent of riders indicated that their one-way trip takes between 40 and 70 minutes. In total, more than three-quarters (79%) of riders require somewhere between 10 and 70 minutes to complete their one-way trip, while only less than 1 percent of riders indicated that their one-way trip takes less than 10 minutes.
- Several survey questions sought to identify socio-economic or demographic variables that may indicate whether riders are more likely to depend on public transportation for their travel needs. Survey data collected that would support a higher propensity of transit-dependent riders includes:
  - 54 percent of riders do not have a valid driver's license.

- 58 percent of riders indicated that there are zero motorized vehicles in their households.
- 78 percent of riders do not have access to a vehicle.
- 61 percent of riders possess a high-school education level or below.
- Although one-third of riders declined to provide their total annual income, of those that responded, 60 percent of riders reported an annual income of less than $28,000.

### Summary of Key Findings from Trip Origin and Destination Locational Data

In general, the trip origin and destination data provided by MDT riders illustrates a high correlation between route alignments and rider trip origin and destination locations. This is confirmed by the significant majority of MDT riders surveyed who indicated that they walk less than ¼-mile from their origin to reach their initial bus stop or from the bus stop to reach their final destination. Based on a review of the origin and destination locations mapped in relation to the 44 MDT local bus routes on which riders were surveyed, the following highlight key observations made concerning those routes with a more significant presence of trip origins or destinations located outside the immediate service area of the route.

- For Route 3, a north-south route along US 1, there are a number of origins and destinations within a two-mile range to the west of the route line. While these origins and destinations are not clustered in any high concentration, they are consistently present along most of the length of the route.
- For Route 9, a north-south route serving Aventura, North Miami Beach, Miami Shores, and downtown Miami, there is a presence of trip origins and destinations from the Golden Glades area that are located within approximately one mile to the west of the route line.
- For Route 10, a north-south route serving North Miami Beach, Miami Shores, and downtown Miami, there are trip origins located up to four miles east of the route line south of where this north-south route crosses NW 95th Street. There are also clusters of trip origins along the Metromover line as well as from Little Havana and surrounding areas.
- Route 16 is a north-south route serving North Miami, Miami Shores, and downtown Miami. While the highest concentration of trip origins is in North Miami, there is a presence of trips originating from the southwest portion of the county; this indicates riders must travel up to five miles to take this route.
- For Route 19, there are concentrations of trip origins from the Little Havana area for this route that serves North Miami and North Miami Beach. This indicates that riders are travelling north for this route, and likely traveling by the Metromover given the location of the origin data.

- For Route 22, a north-south route along 22nd Avenue, serving North Miami, Biscayne Park, and Miami-Dade College there are a number of origin and destination clusters within two miles to the east of the route line, including Biscayne Park, Miami Shores, El Portal, and downtown Miami.

- For Route 27, a north-south route along 27th Avenue from Miami Dade Gardens to S. Dixie Highway, there is a significant cluster of trip origins, along NW 22nd Avenue. between Miami Gardens and North Miami Beach. There is also a significant cluster of trip origins between the route line and US 1 to the east, between NW 79th Street and SW 8th Street. This indicates a number of riders must travel some distance to board this route.

- For Route 29, serving the central-east portion of Miami-Dade County, there are small concentrations of trip origins and destinations scattered throughout Miami in relation to this route that serves a separate area of the county, including Miami Springs, Hialeah, and Miami Lakes. There are also several small concentrations or trip origins from North Miami Beach for this route. The origin and destination data indicates likely connection to this route via the Metromover.

- For Route 32, a primarily north-south route that serves west Miami Gardens, Opa-locka, and Miami there are trips originating in Miami Gardens and into North Miami approximately two miles east of the route line, as well as a cluster of trip origins north of downtown Miami.

- For Route 36, an east-west route serving Doral, Miami International Airport (MIA) and mid-town Miami, there is incidence of trips originating in locations within one mile to the north of the route. There are also a cluster of trip origins to the south of the route line at the southern point of downtown Miami, indicating likely use of Metromover.

- For Route 36, there is also a concentration of trip destinations in downtown Miami, south of the route service area. This indicates that riders likely transferred to the Metromover after alighting this route to reach their final destination.

- For Route 37, a north-south route through central Miami-Dade County serving Hialeah, Miami Springs, and Coral Gables, there are scattered trip origins to both the east and west of the route line. In addition, there is a cluster of trip origins in southern downtown Miami, indicating that riders likely use Metromover to connect to this MDT route.

- Additionally, for Route 37, the highest concentration of trip destinations is at SW 37th Avenue and W. Flagler Street, a shopping and commercial area surrounded by residential neighborhoods. From this intersection, there are several trip destinations that are located within 1-2 miles to the east and west of the route line in the residential areas. There is also a cluster of trip destinations located in southern downtown Miami, indicating likely connection to the Metromover.

- For Route 42, a north-south route serving Opa-locka to Coral Gables, there is a cluster of trip origins from the neighborhoods (or juvenile detention center) located to the east of the route line, from where riders must travel up to two miles to reach the route. There are also several trip origins well to the east (up to five miles) of the route line along the central portion of the north-south route.

- Route 54 serves the north-west portion of the county, south to Hialeah, Medley, and Miami Springs, then east into Miami along NW 54th Street. For this route, there is a presence of trip origins approximately four miles south of the route line from southern downtown Miami and west into Little Havana

- For Route 62, there is a concentration of trip origins south of the route line extending north-south for approximately four miles throughout downtown Miami (between I-95 and Biscayne Boulevard) into southern downtown where Metromover is located. There are also several trips originating in Little Havana.

- Additionally, for Route 62, while the highest concentration of trip destinations is along NW 62nd Street between NW 12th Avenue and NW 7th Avenue, there are several destinations to the south of the route line in the Allapattah area, where Miami-Dade College Medical Center, Jackson Memorial Hospital, University of Miami hospital, and the Miami VA Healthcare System are located. There are also trip destinations in southern downtown Miami, indicating connections to Metromover.

- For Routes 75 and 99, which are both east-west routes that serve the north county (North Miami Beach and Miami Gardens) there are several concentrations of trips originating from locations in south Miami-Dade County, along the Flagler Street corridor and concentrated around the Metromover station in downtown Miami and Brickell. These riders likely take the Metromover with connection to Tri-Rail to board this route.

- For Route 102(b), which provides service between downtown Miami and Key Biscayne, the second highest concentration of trip destinations outside of Key Biscayne is at the Brickell Metromover station. However, there are other trip destinations radiating from the route termini at SW 7th Street, which indicates that riders must travel up to four miles after alighting from their route to reach their final destination.

### 7.7.3 Origin-Destination Survey Summary for Express Bus Service

The information below summarizes the onboard survey data presented in a report dated March 12, 2014 of 95 Express passengers. The original report provided responses to 22 of the 26 survey questions. The four questions whose responses were not included are qualitative, follow-up answers to other questions already accounted for. The information summarized herein is grouped in three sections: trip characteristics, fare information, and demographic information.

### Trip Characteristics

Ten of the survey questions referenced trip characteristics. About half of the "one-way" trips (48%) originated at home; similarly about half (48%) originated at work. The remaining four percent of the trips originated at either school or other. The "one-way" trips terminated as follows: forty-five percent work, forty-four percent - home, seven percent - other, three percent - school/college/university, and one percent - recreation.

Ninety percent of responders said their trip is part of a round trip they will be making that day. Six percent said it is not (4% missing). Of those who responded that their trip is part of a "round trip," seventy-three percent either use or intend to use the express bus for the return trip. Seven percent – express bus plus another mode, four percent – a mix of modes, three percent – local bus, and three percent – Metrorail/Metromover. Nine percent – missing.

Forty-four percent of the responders got to the bus stop by riding in a car (35% drove alone and parked, 9% got dropped off); passengers who walked to the bus stop accounted for thirty-seven percent of the responders; five percent transferred from another bus; while ten percent transferred from either Tri-Rail, Metrorail or Metromover. Three percent listed other or rode with someone who parked at the stop. Only one percent biked.

Regarding distance between point of origin and express bus stop, forty-nine percent traveled under two miles; twenty-two percent traveled two to five miles; fourteen percent traveled five to seven miles; and thirteen percent traveled over seven miles. The remainder is missing. To get from the express bus stop to their final destination, thirty-six percent responded walk; thirty-six percent responded drive alone in car; fifteen percent responded transfer to other transit [Metrorail, Metromover or bus (5% each)]; and nine percent responded pick up by car. Only one percent responded they ride with someone who is parked, and less than one percent responded bike.

Regarding total (door-to-door) travel time, the average rider stated that they spend 69 minutes each way (standard deviation is 62 minutes). The median travel time is 53 minutes, with more than half of the responders spending more than 50 minutes traveling.

A large majority of the passengers are choice riders. Seventy-eight percent had a motor vehicle available for their trip; twenty-one percent did not. One percent is missing.

A large majority (77%) use the express bus 5 days per week. Eight percent use it four days; four percent use it three days; and two percent use it either seven or 2 days per week. Nine percent missing or invalid.

### Fare Information

Two survey questions were related to express bus fare. A majority of passengers (61%) used monthly passes. Nine percent used 10-Ride passes, and four percent used day passes. Cash is used by nineteen percent of riders, and reduced fare permits, Golden/Patriot Passports and Tri-Rail transfers combined account for four percent of passage. Three percent were either missing or had multiple responses. Most

passengers (64%) responded that they do not receive fare assistance from their employers. Thirty-five percent do. One percent of the responses were not accounted for.

#### Demographic Information

Ten survey questions centered on responders' demographic make-up. The responses revealed that sixty-five percent are female, and thirty-two percent are male (3% missing). Nine out of ten (91%) are between the ages of 25 and 64. Four percent are aged 16-24; three percent are 65 and over; and one percent is under 16 years of age. One percent is missing.

Forty-two percent of responders describe themselves as black/African-American, twenty-five percent – Spanish/Hispanic/Latin, and twenty-one percent – white. American Indian, Asian and other account for ten percent. Two percent is missing.

Regarding approximate annual household income, thirty-two percent of responders stated more than $75,000; twenty-nine percent stated $45,000-$75,000; twenty-one percent stated $28,000-$45,000; and ten percent stated less than $28,000. Eight percent missing.

Sixty-three percent of the responders live in two to four member households; thirteen percent – one member; and twelve percent live in five to eight member households. Twelve percent missing.

Ninety-four percent of responders have at least one vehicle in their household (57% have at least two vehicles). Six percent have none. Seventy-eight percent of responders have a valid driver's license, six percent do not. Sixteen percent missing.

Less than two percent describe themselves as disabled.

Almost three-quarters of the responders (74%) hold college degrees. Nearly sixteen percent have high or grade school education; two percent – middle school. One percent missing.

Regarding employment, ninety-one percent of responders are employed full time. Eight percent are either working part-time, students, retired or unemployed.

### 7.7.4 2009 Metrorail Transit Survey

The information below summarizes the survey data presented in a report dated July 2009 of Metrorail passengers. The report included origin-destination, daily ridership and daily ridership directional information on a station-by-station basis. A total of 30,112 surveys were distributed at the 22 Metrorail passenger stations and on the trains. A total of 17,862 (including 1,324 "no responses") were retrieved.

#### Origin-Destination

The surveys revealed that the Metrorail stations used most frequently for trip origination are Dadeland South (2,591), Government Center (1,978), Dadeland North (1,572), Civic Center (1,133), and Douglas Road (917). The stations used the least for trip origin are Santa Clara (224), Vizcaya (251), Brownsville (303), Culmer (311), and University (375).

The stations used most frequently as destinations are Government Center (4,007), Civic Center (2,542), Dadeland South (1,386), Dadeland North (1,232), and Brickell (950). The stations used least frequently as destinations are Santa Clara (134), Brownsville (171), Earlington Heights (256), Vizcaya (272), and both Dr. MLK Jr. and Okeechobee have 305 arriving passengers.

The five highest origin-destination pairs are Dadeland South and Government Center (883), Dadeland North and Government Center (622), Dadeland South & Civic Center (595), Government Center and Dadeland North (367), and Government Center & Dadeland South (354). Of the 441 possible origin-destination pairs, 184 (approximately 42%) have 10 or fewer passenger trips.

#### Daily Ridership by Directions

According to the survey, 52.6% (3,376) of all daily passenger trips are southbound, and 47.4% (3,042) of all daily passenger trips are northbound. One hundred percent (60) of the daily trips originating at the Palmetto Station are southbound; and one hundred percent (383) of the daily trips originating at the Dadeland South Station are northbound.

On a percentage basis, trips originating at Palmetto and Dadeland South Stations have an almost perfectly inversed relationship, directionally, from-station-to-station. Both stations are on opposite ends of the system.

The Metrorail stations with the highest northbound daily ridership are Government Center (590), Dadeland North (437), Dadeland South (383), South Miami (305), and University (227). The stations with the lowest northbound daily ridership are Palmetto (0), Okeechobee (1), Hialeah (9), Tri-Rail (25), and both Santa Clara and Allapattah (27 each).

The Metrorail stations with the highest southbound daily ridership are Government Center (646), Civic Center (468), Tri-Rail (252), Northside (210), and Brickell (179). The Metrorail stations with the lowest southbound daily ridership are Dadeland South (0), Dadeland North (33), University (33), Culmer (62), and South Miami (72).

### 7.7.5 U.S. 1 Survey Report Summary – Express Lanes PD&E Study

The information below summarizes the survey data presented in a report dated June 2012 of US-1 busway users and motorists to better understand transportation conditions affecting the corridor.

#### Trip Purpose

Of the 6,210 responders during the peak periods, 60% were making home-based work trips; 30% were making home-based other trips; and 9% of the trips were not home based. During off-peak periods, 6,347 responders revealed that 48% of their trips were home-based work trips; 2,702 trips were home-based other trips; and 10% were not home-based.

### Auto Ownership

Of the 6,210 responders during the peak periods, 66% own at least one car (one car - 36%, two or more cars – 30%). During off-peak periods, of the 6,347 responders, 59% own at least one car (one car 37%, two or more cars – 22%). During peak and off-peak periods, 34% and 41% did not own a car, respectively.

### Auto Ownership vs. Trip Purpose

Approximately 66% of the peak period responders own one or more cars. Ninety-two percent of those trips were home-based work or home-based other. During off-peak periods, 59% of responders own one or more cars, and 89% of those trips were either home-based work or home-based other.

### Access Mode

For both peak and off-peak, walking accounted for the largest access modes. Fifty-eight and sixty-four percent, respectively. During the peak period, park and ride and transfers each accounted for nineteen percent; while kiss and ride, bike, and other combined equaled five percent. During off-peak periods, transfers represented twenty-one percent of responders' mode access. Park and riders represented nine percent. Bikers and kiss and riders combined for six percent. No one responded other during off-peak.

### Trip Purpose vs. Access Mode

During peak periods, of the responders who bike to access their mode of transportation, seventy-eight percent are home-based trips. Each of the other modes included in the survey showed eighty-eight percent or higher were home-based trips. During off-peak, eighty-five percent or more responders trips to their respective access modes were home-based.

### Egress Mode

The peak period egress modes are made up primarily of transfers (50%) and walking (44%). Park and ride represents three percent while bike, kiss and ride and other combined equal three percent. During off-peak periods, walking increased to sixty percent, transfers decreased to thirty-five percent, while park and ride and bike made up the remaining five percent.

### Trip Length Distribution

The average peak period trip length is 8.7 miles. The longest trips were over twenty-one miles (2%); the shortest are under one mile (1%); five to six miles is most common (13%). Regarding off-peak period trips, the average length is 7.9 miles. The longest trips are over twenty-one miles (1%); the shortest are under one mile (6%). Four to five miles was the most common (15%) trip length.

### Station to Station

The five highest peak period station to station pairs were Dadeland South/SW 152nd St – Coral Reef Drive (298), Dadeland South/SW 168th Street – Richmond Dr (266), SW 168th St – Richmond Drive/ Dadeland South (229), SW 200th Street – Caribbean Blvd/ Dadeland South (185), and Dadeland South/SW 312th Street – Campbell Dr – NE 8th Street (180). The five highest off-peak station to station pairs were Dadeland South/SW

152nd Street – Coral Reef Drive (303), SW 200 St – Caribbean Blvd/ Dadeland South (219), Dadeland South/SW 168th Street – Richmond Dr (193), Dadeland South/SW 344th Street – Palm Drive, Florida City (172), SW 312th Street – Campbell Dr – NE 8th Street (155). There was a large number of station to station pairs with no passenger trips for both peak and off-peak periods.

## 7.8 Systemwide Travel Demand Model Estimates

Ridership Forecasts were prepared for this FY 2015-2024 TDP update using the Florida Department of Transportation's (FDOT) current approved travel forecasting tool, the Southeast Regional Planning Model (SERPM), version 6.5.4. SERPM 6.5.4 is a comprehensive transportation demand modeling tool that is capable of estimating stop level transit boarding data for individual routes. The use of the SERPM model was approved by FDOT District 6 in response to a request submitted December 2013.

### 7.8.1 Methodology

Regional transportation needs are projected using estimates from travel demand models which incorporate socio-economic data such as population and employment, as well as the attributes of the existing and planned transportation networks. As a means of forecasting these transportation needs, the SERPM 6.5.4 model was developed to be a solid technical tool for multi-modal planning analysis and long-range transit planning. This model was calibrated upon the most comprehensive survey data of any previous model in South Florida. This model, which includes Miami-Dade, Broward, and Palm Beach counties, describes travel demand for both mobility dependant local trips, as well as for the regional commuter market.

The primary input to the SERPM 6.5.4 model, as with any other travel demand model, is the socio-economic data. This data, which is developed by each individual County's Metropolitan Planning Organization (MPO), defines where people live and work and thus sets the basis of the region's travel patterns. The next most important inputs to the model are the highway and transit networks. These networks provide a realistic representation of the region's roadways and transit routes.

### 7.8.2 Scenarios

As part of this TDP Major Update, two scenarios were modeled: one for existing conditions using 2014 MDT transit route network and another scenario for the year 2024, which implements a series of transit improvements across Miami-Dade County. The 2014 Base scenario is based on the 2010 SERPM 6.5.4 model's socio-economic data and transit network. In this scenario, the transit network route data was updated to current 2014 conditions.

For the future year 2024 scenario, socio-economic data was developed by interpolating between the 2010 and 2040 data sets. Transit routes for this scenario were based on the 2014 network with a series of new enhanced bus service routes added to the network.

### 7.8.3 Results

Based on the previously discussed inputs and assumptions, the SERPM 6.5.4 model was run for the two scenarios. The results of these runs are provided in the following sections. As shown in Table 7-3, population, employment, and person trips experienced an annual growth rate of approximately one percent. Similarly, total transit trips and daily boardings also increased annually by one percent respectively.

**Table 7-3: Regionwide Statistics**

| | 2010 Scenario | 2024 Scenario | Annual Growth Rate |
|---|---|---|---|
| Miami-Dade Population | 2,489,200 | 2,912,600 | 1.2% |
| Miami-Dade Employment | 1,481,900 | 1,770,900 | 1.4% |
| Regional Total Daily Person Trips | 17,804,200 | 20,870,400 | 1.2% |
| Regional Total Daily Home-based Work Trips | 4,868,700 | 5,508,100 | 1.0% |

The following figures illustrate the growth of population and employment, and person trips between 2010 and 2024.

**Figure 7-12: Population and Employment Growth**

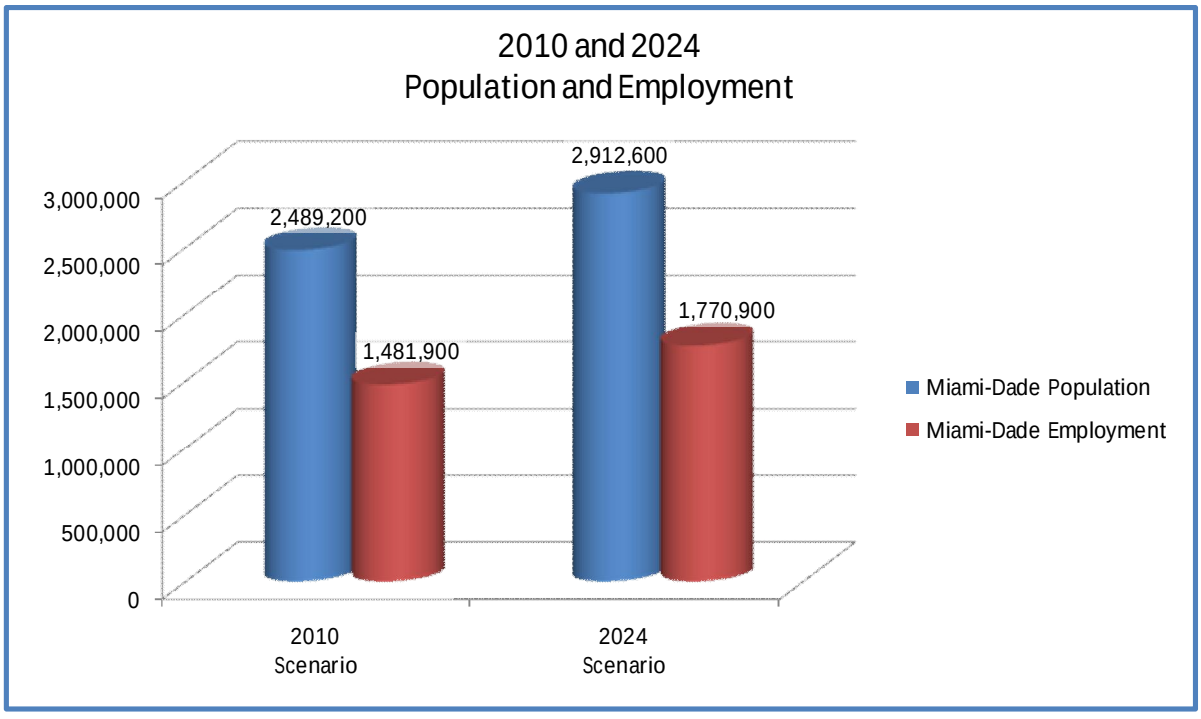
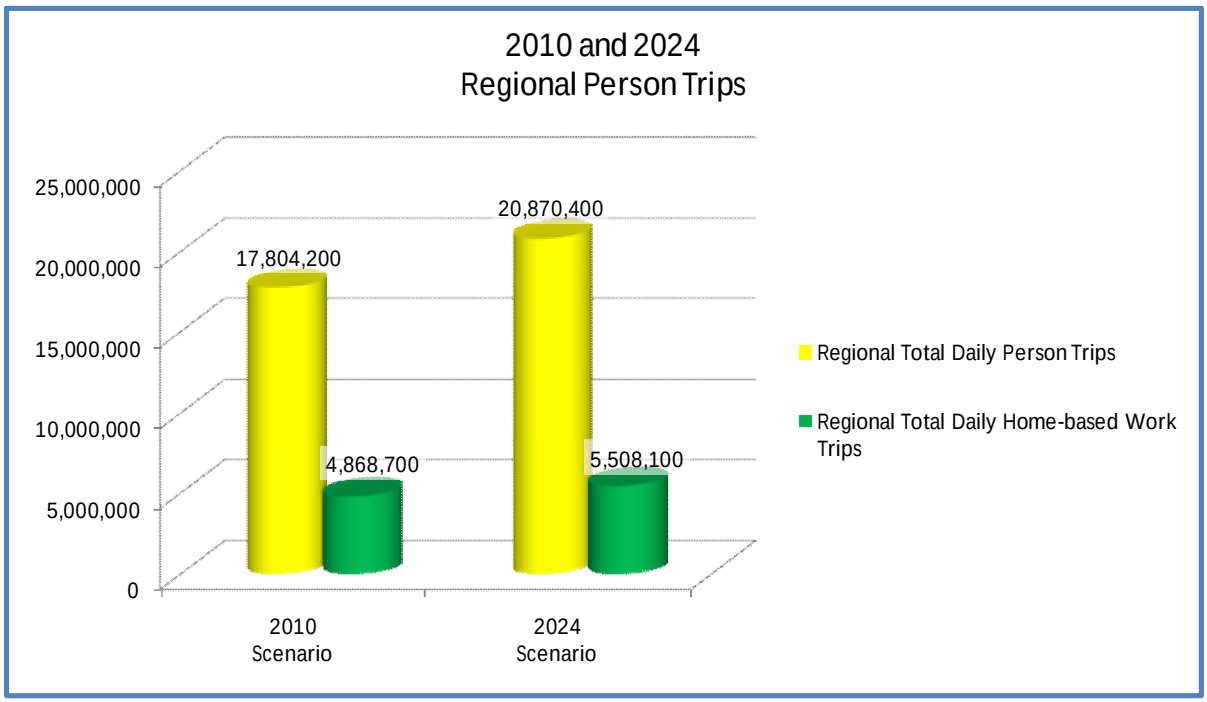


**Figure 7-13: Person Trip Growth**




## 7.8.4 Transit Ridership Growth

Based on the socio-economic growth and the existing MDT transit system the total daily ridership for the various transit modes grew by three percent (3%) per year. The estimated daily ridership for each of these modes is provided in Table 7-4.

**Table 7-4: 2010 to 2024 Ridership Growth by MDT Mode**

| Mode | 2010 Estimated Average Daily Ridership | 2024 Estimated Average Daily Ridership | Annual Growth Rate |
|---|---|---|---|
| Metrobus | 239,300 | 355,200 | 3% |
| Metrorail | 66,300 | 97,000 | 3% |
| Metromover | 9,100 | 22,700 | 7% |
| Total Boardings | 314,700 | 474,900 | 3% |

### 7.8.5 Proposed 2024 System Enhancements

For the 2024 ridership forecast scenario specific transit improvements were considered based upon several factors. These factors include corridors were existing passenger demand is high as determined by transit ridership, areas that exhibit a high concentration of transit propensity as well as those areas with high existing and forecasted population and employment densities. Specifically, the 2024 scenario examined transit improvements to include enhanced and express type bus service within the following corridors:

- 195-BC – Broward Boulevard to Civic Center
- 195-SC – Sheridan Street Boulevard to Civic Center
- Palmetto Express Bus (Palmetto Corridor)
- 295 Express Bus
- NW 27th Avenue Enhanced Bus Service (North Corridor)
- SR 836 Express Bus (East-West Corridor)
- Flagler Enhanced Bus Service (East-West Corridor)
- Biscayne Enhanced Bus Service (Northeast Corridor)
- Kendall Enhanced Bus Service (Kendall Corridor)
- SW 137th Avenue Enhanced Bus Service
- Route 97

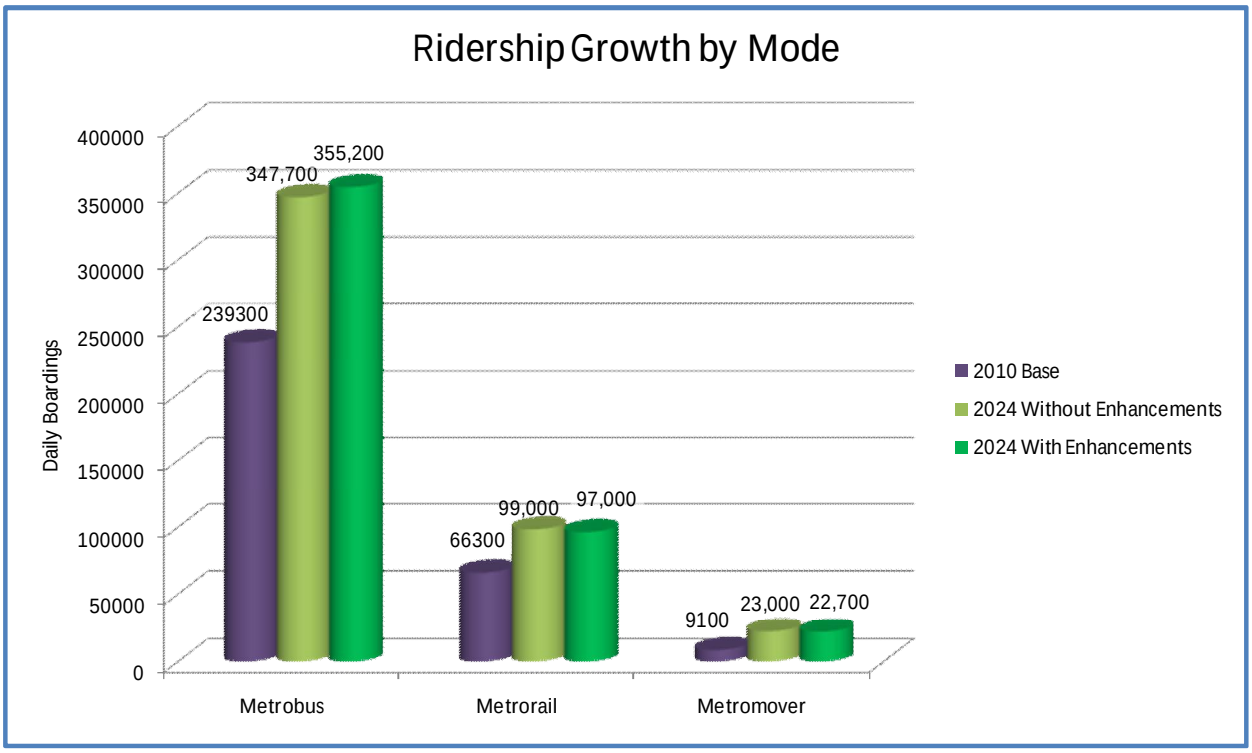
Based on the socio-economic growth, the existing MDT transit system and the various transit corridor enhancements for the corridors listed above the daily ridership for the various transit modes grew by one percent (1%) per year. The estimated daily ridership for each of these modes is provided in Table 7-5.

**Table 7-5: 2024 Ridership Growth Comparison**

| Mode | 2024 Estimated Average Daily Ridership | | Percent Difference |
|---|---|---|---|
| | Without Enhancements | With Enhancements | |
| Metrobus | 347,700 | 355,200 | 2% |
| Metrorail | 99,000 | 97,000 | -2% |
| Metromover | 23,000 | 22,700 | -1% |
| Total Boardings | 469,700 | 474,900 | 1% |

Figure 7-14 illustrates a comparison of total daily transit ridership growth by mode according to the specific scenario evaluated.

**Figure 7-14: Transit Ridership Growth by Mode**



## 7.9 Monitoring Program to Track Annual Performance of MDT Services

The 2009 TDP Major Update established eight (8) major goals, each with various objectives and corresponding measures that have been monitored each subsequent year. The monitoring of previous results against current measures will validate MDT's attainment of these goals. This TDP Major Update provides MDT an opportunity to report results for each major goal according to the objectives and corresponding evaluation measures for 2013 which data is available. For subsequent TDP updates the goals and objectives established for this Major Update which are presented in Chapter 6 will be evaluated.

These measures are the Key Performance Indicators (KPI) that will be evaluated, using the most recent twelve-month period for which data is available. The evaluation compares the current values of productivity standards versus those from the previous year. A few examples include:

- Performance measures such as On-Time Performance (OTP) and Mean Distance between Failures (MDBF) reflecting transit reliability are monitored monthly on the Active Strategy Enterprise (ASE) Scorecard.
- Review transit routes to ensure service is provided within a ¼ mile of major trip generators.
- Automated Fare Collection data to monitor ridership by route.
- Alignment of capital projects to goals.
- Public involvement events to disseminate transit information and promote transit usage.

### 7.9.1 Goal 1: Improve the Quality of Transit Services

**Objective: Improve the accessibility to major health care, recreation, education, employment cultural and social services facilities:** Transit service miles providing connections to major medical, educational, and recreational facilities were evaluated. Approximately 50 transit service route miles operate within a ¼ mile of major medical facilities, which is an 18% decrease from last year's TDP Annual Update and 280 transit service miles operate within ½ mile of all colleges and universities within Miami-Dade County which is a 52% increase since last year's TDP Annual Update.

**Objective: Improve transit level of service on major roadway corridors and between major origins and destinations:** This objective is measured according to the MDT Service Standards which describe the process utilized by MDT to evaluate level of service route performance to achieve the goal of improving transit level of services on key alignments and between key origin and destination pairs.

**Objective: Maximize service reliability and efficiency:** The on-time performance for the various MDT transit modes are provided in Table 7-6. Metrorail has excellent on-time performance of about 97 percent (97%) and continues to exceed the Agency goal of 95 percent (95%). Metrobus operates at 79 percent (79%) on-time performance, which is a good result given the congested traffic conditions under which most of the routes operate, in many corridors throughout the day, as well as the high load factors on many of the routes. On-time performance for Metrobus also exceeds the agency goal of 75 percent (75%).

**Table 7-6: MDT Annual On-Time Performance**

| | On-Time Performance | |
|---|---|---|
| | **Metrorail** | **Metrobus** |
| FY 2012-2013 | 96.8% | 79.0% |
| FY 2011-2012 | 97.2% | 79.5% |
| Goal | 95% | 75% |

Source: Miami-Dade Transit, December 2013 (Also includes first quarter of FY2013-2014).

**Objective: Maximize multimodal travel options and provide travel choices:** Miami-Dade Transit continues to implement an initiative to operate more efficient bus service through a grid operational network of service routes. The resulting bus adjustments that occurred in 2012 and 2013 attribute to a decrease in Metrobus route miles as presented in Table 7-7.

**Table 7-7: Number of Transit Route Miles by Transit Mode**

| **Transit Mode** | **Route Miles** | |
|---|---|---|
| | **2012** | **2013** |
| Metrorail | 24.8 | 24.8 |
| Metrobus | 2,582 | 2,301 |
| Metromover | 4.4 | 4.4 |

Source: National Transit Database, Miami Dade Transit, 2013

**Objective: Fill transit service coverage gaps:** Transit-supportive areas include population 65+, population 18 and under, low income households, zero car households, minority and population density propensity areas.

The number of miles of MDT bus routes within the transit-supportive service areas (Figure 7-9 is approximately 110 miles.

**Objective: Promote transit reliability:** One method to measure transit reliability is through annual systemwide ridership. 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. During the past fiscal year MDT, in total, as shown in Table 7-8 experienced an increase in ridership of approximately three percent (3%).

**Table 7-8: MDT Systemwide Boardings**

| Transit Mode | Annual Boardings (000's) | |
|---|---|---|
| | FY2011-2012 | FY2012-2013 |
| Metrorail | 18,706 | 21,199 |
| Metrobus | 77,828 | 78,893 |
| Metromover | 9,102 | 9,644 |

Source: National Transit Database, Miami Dade Transit, 2013.

MDT's system offers stations along the Metrorail and Metromover system, and bus stops, shelters and benches along Metrobus routes. Table 7-9 shows bus stops and station spacing. MDT's standard calls for an average of five (5) stops per mile for local bus. This would indicate a slightly more frequent spacing of stops, on average, than five (5) stops per mile (about one stop every 1,000 feet).

More detailed analysis is being conducted by MDT to adjust stop spacing depending on the type of service being provided, thus increasing the efficiency of each bus route.

**Table 7-9: Number of Station Stops Per Route Mile**

| Mode | Number of Stations/Stops | Total Route Miles | Stations/Stops per Route Mile |
|---|---|---|---|
| Metrorail | 23 | 24.8 | 0.93 |
| Metromover | 21 | 4.4 | 4.77 |
| Metrobus | 8,860 | 2,785 | 3.18 |

Source: National Transit Database, Miami Dade Transit, 2013.

**Objective: Improve transportation facilities' and services' regional connectivity:** Table 7-10 shows the number of transit route miles (including miles of overlapping bus service) in corridors of regional significance. These corridors of regional significance are identified as urban principal arterials according to the Functional Classification file from the Florida Department of Transportation Statistics Office.

As the table indicates, MDT provides high concentrations of service on South Dixie Highway (the Busway), Interstate-95, A1A, Biscayne Boulevard, and NW 27$^{th}$ Avenue.

**Table 7-10: Transit Route Miles in Corridors of Regional Significance**

| Corridors of Regional Significance | Transit Service Route Miles in Corridor |
|---|---|
| South Dixie Highway / US-1 (SR 5) | 186 |
| Interstate-95 (SR 9A)* | 162 |
| Collins Avenue (SR A1A) | 128 |
| Biscayne Boulevard / US-1 (SR 5) | 119 |
| NW 27th Avenue (SR 9 & SR 817) | 124 |
| Le Jeune Road / NW 42nd Avenue / SR 953 | 74 |
| Kendall Drive / SW 88th Street (SR 94) | 68 |
| Airport Expressway (SR 112)* | 65 |
| Homestead Ext. of Florida's Turnpike (HEFT) (SR 821)* | 66 |
| Palmetto Expressway (SR 826)* | 62 |
| NE 163rd Street / Sunny Isles Blvd | 55 |
| McArthur Causeway / Interstate-395 | 55 |
| Tamiami Trail / SW 8th Street (SR 90) | 53 |
| NW 41st Street / NW 36th Street (SR 948) | 51 |
| Julia Tuttle Causeway / Interstate-195 / (SR 112)* | 46 |
| Kennedy Causeway / NE 79th Street Causeway / (SR 934) | 37 |
| Dolphin Expressway (SR 836)* | 48 |
| W 49th Street / NW 103rd Street (SR 932) | 30 |
| Bird Road / SW 40th Street (SR 976) | 27 |
| Okeechobee Road (SR 25) | 25 |
| Don Shula Expressway (SR 874)* | 22 |
| Snapper Creek Expressway (SR 878)* | 21 |
| SW 152nd Street / Coral Reef Drive (SR 992) | 21 |
| NW 119th Street / Gratigny Pkwy (SR 924) | 21 |
| Krome Avenue / SW 177th Avenue (SR 997) | 20 |
| Rickenbacker Causeway (SR 913) | 17 |
| SW 137th Avenue (SR 825) | 17 |
| W 4th Avenue / NW 57th Avenue / Red Road (SR 823) | 15 |
| William Lehman Causeway / NE 192nd Street (SR 856) | 15 |
| Interstate-75 (SR 93) | 1 |
| NW 2nd Avenue / US 441 (SR 7) | 74 |

Source: Miami-Dade County GIS files, 2013.

***** Non-stop Metrobus service miles along limited access highways.

**Objective: Include provisions for non-motorized modes in new projects and in reconstructions:** Provisions that support non-motorized modes of transportation are included in the land use and transportation elements of the Miami-Dade County CDMP. Future capital improvements shall also seek to integrate non-motorized infrastructure upon the implementation of new transit services.

**Metrorail Bike Path Improvements (M-PATH) – SW 67th Avenue to the Miami River:** MDT is moving forward with infrastructure repairs and improvements to enhance the safety and performance for the M-Path users. The rehabilitation project consists of repairs to the asphalt and concrete surfaces, installation of traffic and way finding signs, installation of crosswalk pavement markings, pedestrian signals and other safety improvements in accordance with the M-Path Master Plan. The completion date is scheduled for March 2015.

**Objective: Improve transit services that provide access to educational facilities:** The number of transit service route miles within a ½ mile of colleges and universities throughout Miami-Dade County is approximately 280 miles which is a 52% increase since last year's TDP Annual Update. All of the major colleges and universities located within Miami-Dade County are served by transit service within a ¼ mile of their campuses and this remained unchanged since last year's TDP Annual Update

### 7.9.2 Goal 2: Improve Customer Convenience, Comfort and Safety on Transit Service and within Facilities

**Objective: Improve safety on vehicle service operations:** MDT regularly assesses operational safety for workers and passengers according to level of investment and compliance of regularly updated safety plan. As part of MDT's Infrastructure Renewal Program, safety projects are evaluated and prioritized for implementation on an annual basis.

**Objective: Reduce roadway and multi-modal crashes:** The goal that MDT has set forth for the reduction of the number of accidents is 3.77 per 100,000 miles. In FY 2013, MDT reported that the number of accidents was 3.07 accidents per 100,000 miles of transit service. This represents a 19 percent (19%) improvement over the set goal.

**Objective: 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:** MDT continually seeks to inform the public as well as provide opportunities for public input through various public outreach strategies. MDT is active in attending civic and community events and meetings to continually inform the public about MDT services. In addition, MDT uses various forms of media (e.g., internet, radio and televised advertisements, news paper ads, social media, etc.,) for public outreach.

**Objective: Maintain convenient, clean, safe transit passenger facilities and vehicles:** The MDT fleet was involved in 1.28 preventable accidents per 100,000 miles for FY 2013, which is 15 percent (15%) below the MDT goal of 1.50 accidents per 100,000 miles.

### 7.9.3 Goal 3: Increase the Security of Transit Vehicles and Facilities

**Objective: Ensure transit vehicles and facilities provide a secure environment for customers:** The total number of active video cameras systemwide is 756. Upon completion of future projects the MDT video surveillance system will consist of 1,247

active cameras (Rail, PYD, Mover, Bus Revenue locations, and Warehouses as well as the DRD and UNV Overpasses).

**Objective: Increase security at transit stops and intermodal stations and connections:** For 2013, the number of criminal incidents on-board transit has has increased from the previous year by 16 percent (16%).

### 7.9.4 Goal 4: Support Economic Vitality

**Objective: Provide transit access to urban centers at a minimum of 30-minutes during the peak:** Table 7-11 lists urban centers as identified in the CDMP Land Use Element that were evaluated to determine the amount of transit service within ¼ mile. Downtown Miami has the highest concentration of transit service as evident from the operation of Metrorail, Metromover and Metrobus providing service coverage throughout the entire downtown area.

This includes 56 route miles with a ¼ mile of the Downtown area. Dadeland has a more focused center of activity with direct connections from Metrorail and the South Miami-Dade Busway which results in thirty route miles within a ¼ mile. The regional activity center at NW 107th Avenue and NW 12th Street has approximately eleven transit route miles within a ¼ mile.

**Table 7-11: Transit Route Miles within ¼ mile of Urban Centers**

| Regional Activity Centers | Transit Service Route Miles within 1/4 mile |
|---|---|
| Downtown Miami CBD | 56.0 |
| Dadeland | 30.2 |
| Southland Mall | 23.5 |
| Aventura Mall | 20.4 |
| NW 107th Avenue and NW 12th Street | 11.0 |
| Westland Mall | 4.2 |

Source: Miami-Dade GIS, 2013.

**Objective: Enhance major tourist travel and access opportunities within the Urban Development Boundary:** Table 7-12 shows transit services that operate within close proximity to various tourist attractions in Miami-Dade County. As the table indicates, most of the attractions have transit service. However, a number of locations have relatively little service, including such diverse attractions as the Venetian Pool and the Miami Seaquarim.

In many cases, the locations of these attractions in outlying areas of the County or within residential neighborhoods do not lend themselves to extensive transit connections, and most are located along one or two routes that operate on an adjacent arterial street, rather than being in the center of a hub of transit service (such as in downtown Miami or Miami Beach). Analysis measuring the adequacy of transit services continues to be conducted to identify major trip generators and major attractors in Miami-Dade County.

Table 7-12 through Table 7-17 presents the transit services provided for each identified major trip generator in terms of number of routes and accessibility of these facilities. Furthermore, maps that illustrate the locations of these attractors are provided according to the type of major trip generator presented in each of the following tables.

**Table 7-12: MDT Major Trip Generators: Special Attractors, December 2013**

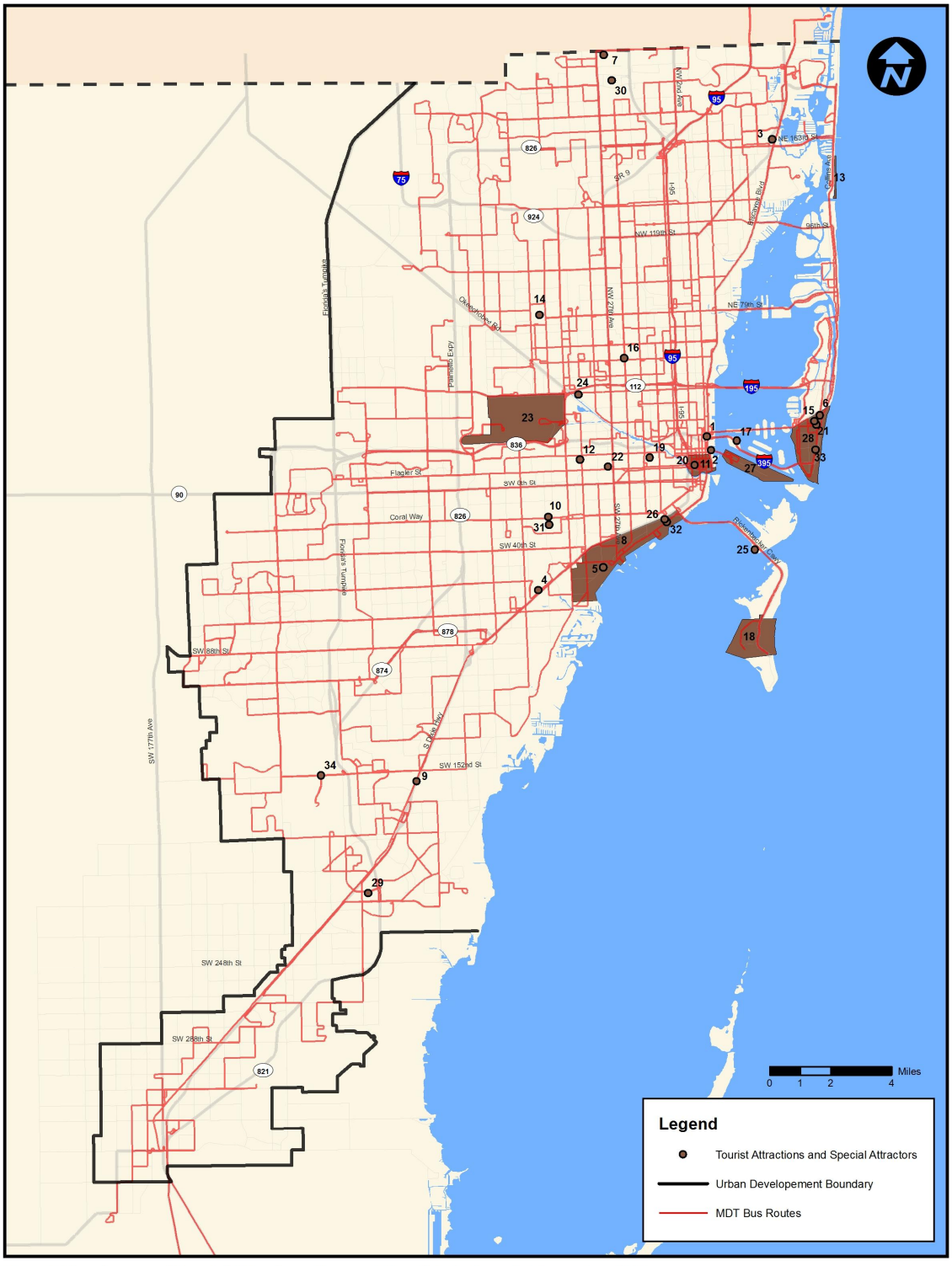
| ID | MAJOR GENERATORS | ROUTES | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | **Special Attractors** | | | | | | |
| 1 | Adrienne Arsht Center | A<br>6<br>93 | C<br>9<br>95 | M<br>10<br>120 | S<br>16<br>Mover | 3<br>32 | Service on local roadways |
| 2 | American Airlines Arena | C<br>95 | S<br>120 | 3 | 9 | 93 | Service on local roadways |
| | | 7 | 8 | 211 | 243 | | Service on adjacent roadways |
| 3 | The Cloisters of the Ancient Spanish Monastery | E | H | 3 | 75 | 93 | Service on local roadways |
| 4 | Bank United Center | 48 | 56 | 500 | Rail | | Service on adjacent roadways and within walking distance of University station |
| 5 | Barnacle Histroic State Park | 48 | 249 | | | | Service on local roadways |
| 6 | Bass Museum of Art | 103<br>150 | 112 | 113 | 119 | 123 | Service on adjacent roadways |
| | | 115 | 117 | | | | Service on local roadways |
| 7 | Calder Race Course/Casino | 99 | 27 | 297 | | | Service on adjacent roadways |
| 8 | Coconut Grove | 6 | 22 | 27 | 48 | 249 | Service on local roadways |

## Table 7-12: MDT Major Trip Generators: Special Attractors, December 2013 (continued)

| ID | MAJOR GENERATORS | ROUTES | COMMENTS |
|---|---|---|---|
| | **Special Attractors** | | |
| 9 | Coral Castle | 34 38 70 | Service on local roadway and the Busway |
| 10 | Coral Gables Merrick House | 24 | Service on adjacent roadway |
| 11 | Downtown Miami | C S 2 3 6<br>7 8 9 11 21<br>24 51 77 93 95<br>120 195 207 208 211<br>243 246 277 500<br>Mover Rail | Service on local roadways and within walking distance of Government Center and Historic Overtown/Lyric Theatre stations and various Metromover stations |
| 12 | Flagler Kennel Club-Magic City Casino | 6 7 37 238 | Service on adjacent roadways |
| 13 | Haulover Beach | H S 120 | Service on adjacent roadway |
| 14 | Hialeah Race Track | L 29 37 54 135<br>Rail | Service on local roadways |
| 15 | Fillmore Miami Beach at the Jackie Gleason Theater | A C L M S<br>115 117 120 123 150 | Service on local roadways |
| 16 | Joseph Caleb Community Center | 22 46 54 246 254 | Service on local roadways |
| 17 | Jungle Island/Miami Children's Museum | C M S 120 | Service on local roadways |
| 18 | Key Biscayne | B | Service on adjacent roadways |
| 19 | Marlins Park | 7 12 17 | Service on adjacent roadways |
| | | 6 7 11 51 208 | Service on local roadways |
| 20 | Perez Art Museum Miami | C S 2 3 6<br>7 8 9 11 21<br>24 51 77 93 95<br>120 195 207 208 211<br>246 277 500<br>Mover | Service on local roadways and within walking distance of routes C, S, 3, 93, 95, 103, 119 and various Metromover stations |
| 21 | Miami Beach Convention Center | C 120 150 | Service on local roadways |
| | | A L M S 115<br>117 123 | Serivce on adjacent roadways |
| 22 | Miami-Dade County Auditorium | 11 51 | Service on adjacent roadway |
| | | 27 | Service on local roadway |
| 23 | Miami International Airport | J 7 37 42 57<br>150 238 297 | Routes restructured to serve MIC; from MIC use MIA Mover to access Airport |
| | | 133 | Shuttle to Tri-Rail Sation serves Airport directly |
| 24 | Miami Jai-Alai | J 36 37 | Service on adjacent roadway |
| 25 | Miami Seaquarium | B | Service on adjacent roadway |
| 26 | Museum of Science | 12 48 | Service on adjacent roadway |
| | | 17 24 | Service on local roadway |
| | | Rail | Located within walking distance from Vizcaya station |
| 27 | Port of Miami | 243 | On-site service via local roadways |
| 28 | South Beach | A C L M S<br>120 123 150 | Service on local roadways |
| 29 | South Miami-Dade Cultural Arts Center | 1 31 35 38 52<br>70 137 200 | Service on adjacent roadways |
| 30 | Sunlife Stadium | 27 99 297 | Service on adjacent roadways |
| 31 | Venetian Pool | 24 | Service on local roadway |
| 32 | Vizcaya | 12 17 24 48 | Service on adjacent roadway |
| | | Rail | Located within walking distance from Vizcaya station |
| 33 | The Wolfsonian - FIU Museum | C M 120 | Service on adjacent roadway |
| 34 | Zoo Miami | 252 | On-site service to entrance |

Source: Miami-Dade Transit, 2013
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

**Figure 7-15: MDT Major Trip Generators: Special Attractors, December 2013**



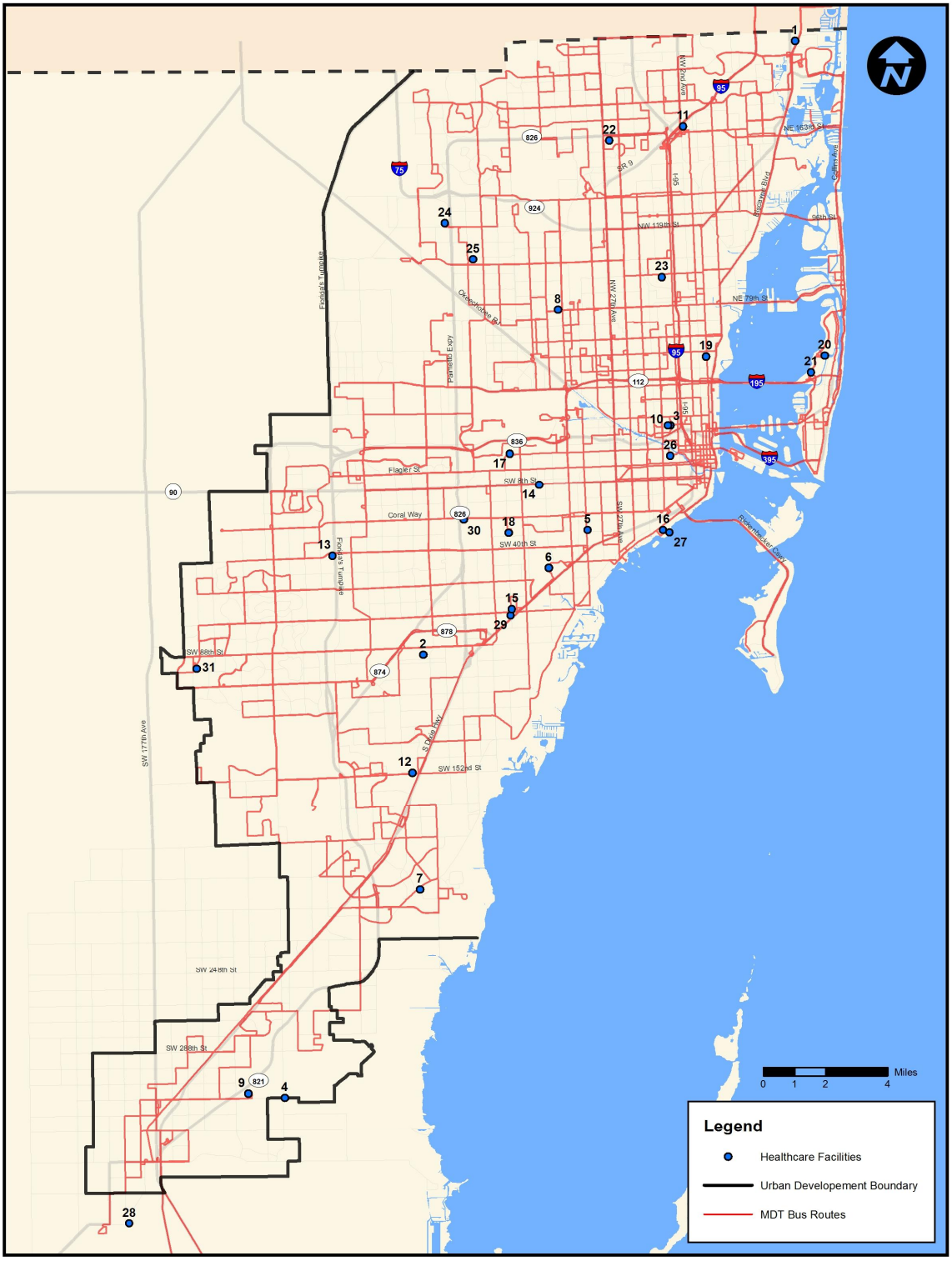

Tourist Attractions and Special Attractors. Source: Miami-Dade Transit, December 2013

## Table 7-13: MDT Major Trip Generators: Healthcare Facilities, December 2013

| ID | MAJOR GENERATORS | ROUTES | COMMENTS |
|---|---|---|---|
| | **Health Care Facilites** | | |
| 1 | Aventura Hospital | E | Service on adjacent roadway |
| 2 | Baptist Hospital | 88 104 | Service on adjacent roadways |
| 3 | Bascom Palmer Eye Institue/Ann Bates Leach Eye Hospital | M 21 Rail | Service on adjacent roadways and within walking distance from Civic Center station |
| | | 12 32 77 95 246 277 | Service on local roadways |
| 4 | Community Health Center of South Dade | 35 52 70 287 | On-site service and service on adjacent roadways |
| 5 | Coral Gables Hospital | 37 | Service on adjacent roadways |
| 6 | Doctors' Hospital | 56 | Service on adjacent roadway |
| 7 | HealthSouth Rehabilitation Hospital | 70 200 | Service on adjacent roadway |
| 8 | Hialeah Hospital | L 42 135 Rail | Service on adjacent roadways |
| 9 | Homestead Hospital (Baptist) | 35 | Service on adjacent roadway |
| 10 | Jackson Memorial / U.M. / V.A. Hospital | M 12 21 32 95 246 Rail | Service on adjacent roadways and within walking distance from Civic Center station |
| 11 | Jackson North Medical Center | E 2 22 77 246 | Service on adjacent roadways |
| 12 | Jackson South Community Hospital | 31 34 38 52 57 252 287 | Service on adjacent roadway |
| 13 | Kendall Regional Medical Center | 40 | Service on adjacent roadway |
| 14 | Kindred Hospital South Florida - Coral Gables | 8 | Service on adjacent roadway |
| 15 | Larkin Community Hospital | 37 72 | Service on adjacent roadway |
| | | 57 Rail | Service on local roadways |
| 16 | Mercy Hospital | 12 48 | On-site service with shelters |
| 17 | Metropolitan Hospital of Miami | 7 | Service on adjacent roadway |
| | | 238 | Service on local roadway |
| 18 | Miami Children's Hospital | 56 | On-site service with shelters |
| 19 | Miami Jewish Home & Hospital for the Aged | 2 9 10 202 | Service on adjacent roadway |
| | | 54 | Service on local roadway |
| 20 | Miami Heart Institute | 115 117 | Service on adjacent roadway |
| 21 | Mount Sinai Medical Center | C M 115 117 | On-site service |
| | | 62 J 150 | Service on adjacent roadway |
| 22 | North Dade Health Center | G | On-site service |
| | | 17 22 27 246 | Service on local roadways |
| 23 | North Shore Medical Center | 33 77 277 | Service on adjacent roadways |
| 24 | Palmetto General Hospital | 29 | On-site service with shelters |
| 25 | Palm Springs General Hospital | 33 54 | On-site service with shelters |
| | | 29 73 | Service on adjacent roadways |
| 26 | Selected Speciality Hospital | 7 | Service on adjacent roadway |
| | | 12 211 | Service on local roadway |
| 27 | Sister Emmanuel Hospital | 12 48 | On-site service with shelters |
| 28 | South Florida Evaluation & Treatment Center | 77 277 | Service on adjacent roadway |
| 29 | South Miami Hospital | 37 57 72 500 Rail | Service on adjacent roadways and within walking distance from South Miami station |
| 30 | Westchester General Hospital | 24 | Service on adjacent roadway |
| 31 | West Kendall Baptist Hospital | 72 88 104 204 272 288 | Service on adjacent roadway |

Source: Miami-Dade Transit, 2013.
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

**Figure 7-16: MDT Major Trip Generators: Healthcare Facilities, December 2013**




Healthcare Facilities. Source: Miami-Dade Transit, December 2013

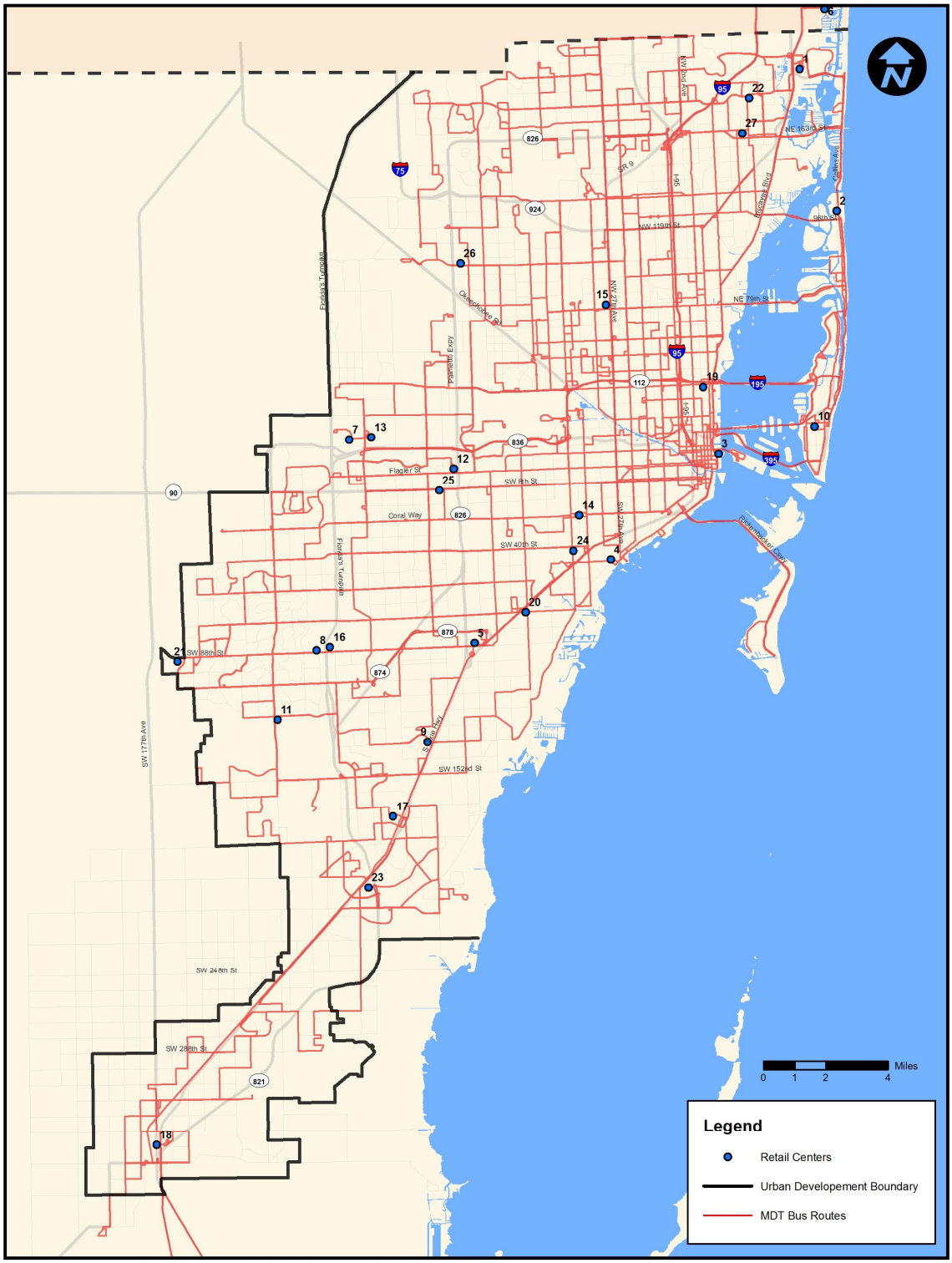
## Table 7-14: MDT Major Trip Generators: Retail Centers, December 2013

| ID | MAJOR GENERATORS | ROUTES | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | **Retail Centers** | | | | | | |
| 1 | Aventura Mall | E<br>99 | S<br>120 | 3<br>183 | 9 | 93 | On-site service |
| 2 | Bal Harbour Shops | G | H | S | 120 | | Service on adjacent roadways |
| 3 | Bayside Market Place | C<br>243 | S<br>Mover | 3 | 93 | 95 | Service on adjacent roadways and the Mover |
| 4 | Coco Walk/ Mayfair in the Grove | 37 | 48 | 249 | | | Service on adjacent roadways |
| 5 | Dadeland Mall | 52<br>204 | 73<br>272 | 87<br>288 | 88<br>500 | 104<br>Rail | Service on adjacent roadways. Pedestrian walkway to Dadeland North station |
| 6 | Diplomat Mall | E | | | | | Service on adjacent roadway |
| 7 | Dolphin Mall | 7 | 36 | 71 | 137 | 238 | On-site terminal with shelters |
| 8 | Kendall Village | 88 | 288 | | | | Service on adjacent roadway |
| 9 | (The) Falls | 31<br>252 | 34<br>287 | 38 | 52 | 136 | Service on adjacent roadway and at Busway Station at SW 136 Street |
| 10 | Lincoln Road Mall | A<br>115 | C<br>117 | L<br>120 | M<br>123 | S<br>150 | Service on adjacent roadways |
| 11 | London Square | 136 | 137 | | | | Service on adjacent roadways |
| 12 | Mall of the Americas | 7 | 11 | 51 | 87 | | On-site service with shelters |
| 13 | Miami International Mall | 7 | 36 | 71 | 137 | 238 | Service on adjacent roadways |
| 14 | Miracle Mile | 24 | 37 | 42 | 56 | | Service on adjacent roadways |
| 15 | Northside Shopping Plaza | L<br>79 | 12<br>97 | 21<br>Rail | 27 | 32 | On-site and adjacent roadway service |
| 16 | Palms at Town and Country | 88 | 288 | | | | Service on adjacent roadways |
| 17 | Perrine Plaza | 1 | 52 | | | | Service on adjacent roadways |
| | | 31 | 34 | 38 | Busway | | Located within walking distance of the Busway (park & ride lot at SW 168 St.) |
| 18 | Florida Keys Outlet Center | 70 | 344 | | | | Adjacent roadway service |
| 19 | Shops at Midtown Miami | 9 | 10 | | | | Service on local roadways |
| | | J | 36 | | | | Adjacent roadway service |
| 20 | Shops at Sunset Place | 37 | 57 | 72 | 500 | Rail | On-site and adjacent roadway service |
| 21 | Shops at Paradise Lake | 104 (Wknd) | 204 | | | | Service on adjacent roadways |
| 22 | Skylake Mall | H | 9 | 10 | 95 | 183 | Service on adjacent roadways |
| 23 | Southland Mall | 1<br>52 | 31<br>70 | 35<br>137 | 38<br>200 | | Service on adjacent roadways |
| 24 | Village at Merrick Park | 37<br>249 | 40<br>500 | 42<br>Rail | 48 | 136 | Service on adjacent roadways and within walking distance of Douglas Road station |
| 25 | Westchester Shopping Center | 8 | 24 | 87 | | | Service on adjacent roadways |
| 26 | Westland Mall | 29 | 33 | 54 | | | Service on adjacent roadways |
| 27 | 163rd Street Mall | E<br>10<br>246 | H<br>16 | 2<br>19 | 3<br>22 | 9<br>75 | Service on adjacent roadways and off-site terminal |

Source: Miami-Dade Transit, 2013.

Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

**Figure 7-17: MDT Major Trip Generators: Retail Centers, December 2013**



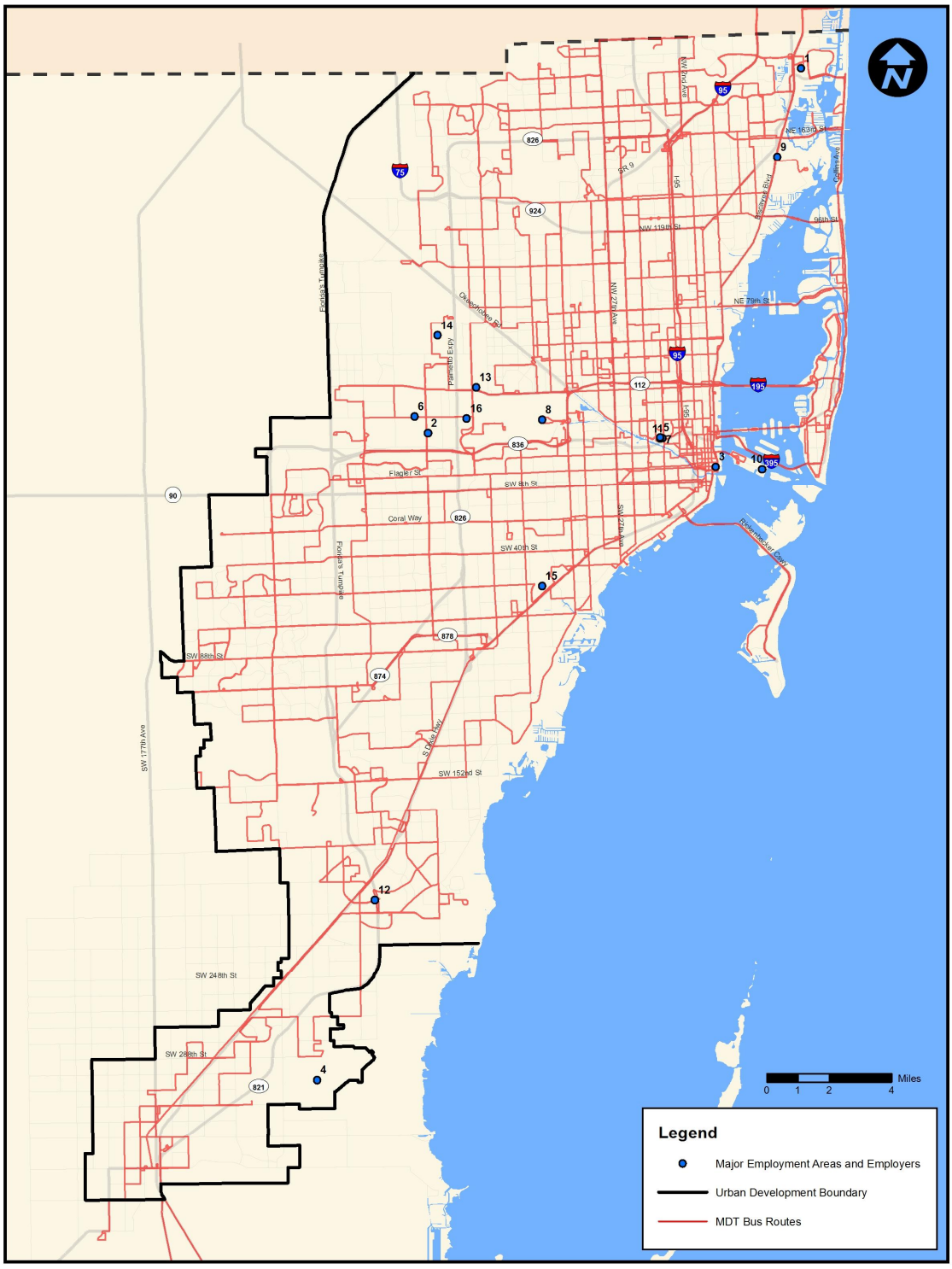

Retail Centers. Source: Miami-Dade Transit, December 2013

## Table 7-15: MDT Major Trip Generators: Major Employment Areas and Employers, December 2013

| ID | MAJOR GENERATORS | ROUTES | COMMENTS |
|---|---|---|---|
| | **Major Employment Areas and Employers** | | |
| 1 | Aventura Mall | E 99, S 120, 3 183, 9, 93 | On-site service |
| 2 | Doral - Warehouse Area | 36, 87, 95, 132 | Service on adjacent roadways |
| 3 | Downtown Miami | C 7, S 8, 2 9, 3 11, 6 21, 24, 51, 77, 93, 95, 120, 207, 208, 211, 243, 246, 277, 500, Mover, Rail | Service on local roadways and within walking distance of Government Center and Historic Overtown/Lyric Theatre stations and various Metromover stations |
| 4 | Homestead Air Reserve Base | 70 | Service on adjacent roadway |
| 5 | Miami-Dade Pre-Trial Detention Center | M 246, 12 Rail, 21, 32, 95 | Service on local roadways and located within walking distance of Civic Center station |
| 6 | Miami-Dade Police Department | 87, 95, 238 | Service on adjacent roadway |
| 7 | Miami Dade State Attorney's Office | M 246, 12 Rail, 21, 32, 95 | Service on local roadways and located within walking distance of Civic Center station |
| 8 | Miami International Airport | J 150, 7, 238, 37, 297, 42, 57 | Routes restructured to serve MIC; from MIC use MIA Mover to access Airport |
| | | 133 | Shuttle to Tri-Rail Sation serves Airport directly |
| 9 | North Dade Justice Center | 3, 75, 93, 135 | Service on adjacent roadways |
| 10 | Port of Miami | 243 | On-site service via local roadways |
| 11 | Richard E. Gerstein Justice Building | M 246, 12 Rail, 21, 32, 95 | Service on local roadways and located within walking distance of Civic Center station |
| 12 | South Miami-Dade Government Center | 1 70, 31, 137, 35, 200, 52 | Service on adjacent roadway |
| | | 38 | Service on local roadway |
| 13 | Turner-Guilford Knight Correctional Center | 36, 73, 95, 132 | Service on adjacent roadways |
| 14 | Unicorporated Miami-Dade County Area bounded by NW 74 St. to the North, NW 58 St. to the South between SR-826 and NW 87 Ave. | 87 | Service on adjacent roadway |
| 15 | University of Miami | 48, 56, 500, Rail | Service on adjacent roadways and within walking distance of University station |
| 16 | U.S. Post Office- General Mail Facility | 73, 238 | Service on adjacent roadways |

Source: Miami-Dade Transit, 2013.
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

**Figure 7-18: MDT Major Generators: Major Employment Areas and Employers, December 2013**




Major Employment Areas and Employers. Source: Miami-Dade Transit, December 2013

## Table 7-16: MDT Major Trip Generators: Educational Centers, December 2013

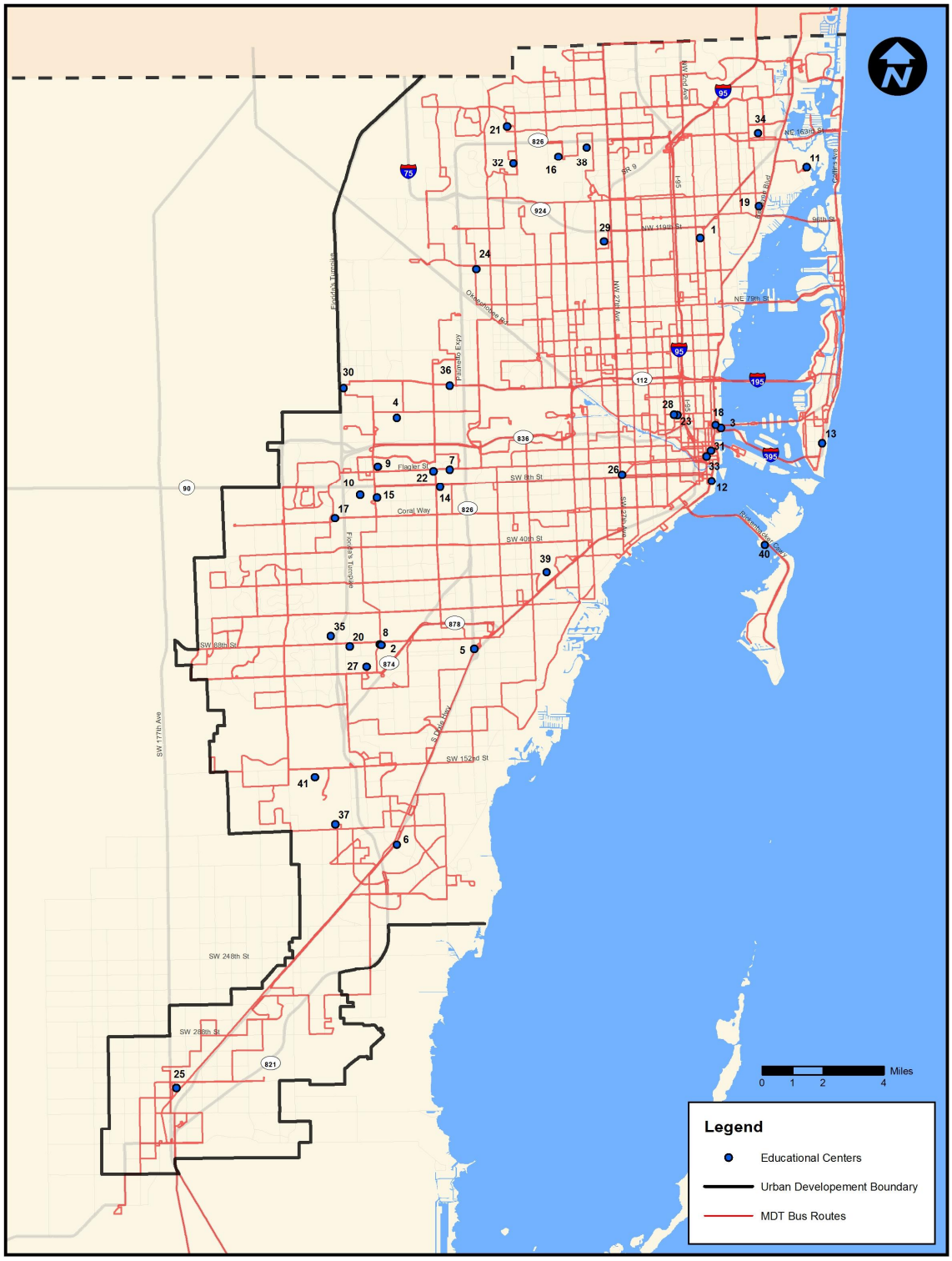
| MAJOR GENERATORS | | ROUTES | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|
| ID | **Educational Centers** | | | | | | |
| 1 | Barry University - Main Campus | 2 | 9 | 10 | 19 | | Service on adjacent roadways |
| 2 | Barry University - Kendall Campus | 104 | | | | | Service on adjacent roadway |
| | | 88 | 288 | | | | Service on local roadway |
| 3 | Brown Mackie College | S | 3 | 9 | 10 | 16 | Service on adjacent roadways |
| | | 32 | 93 | 95 | | | |
| | | A | C | M | 6 | 120 | Service on local roadways |
| | | Mover | | | | | Within walking distance of Adrienne Arsht Center Station |
| 4 | Carlos Albizu University | 95 | 238 | | | | Service on local roadway |
| 5 | City College | 38 | 52 | 73 | 88 | 104 | Within walking distance of Dadeland South Station and route 252. |
| | | 31 | 34 | 87 | 136 | 287 | |
| | | Rail | | | | | |
| 6 | College of Business and Technology - Cutler Bay | 31 | 34 | 35 | 38 | | Service on adjacent roadway |
| 7 | College of Business and Technology - Flagler | 11 | 51 | 87 | | | Service on adjacent roadway |
| | | 7 | | | | | Servcie on local roadway |
| 8 | College of Business and Technology - Kendall | 71 | 88 | 288 | | | Service on adjacent roadways |
| 9 | FIU - Center for Engineering & Applied Sciences | 11 | 51 | 137 | 212 | | Service on adjacent roadways |
| 10 | FIU - Modesto A. Maidique Campus | 8 | 11 | 24 | 71 | | On-site terminal with shelters |
| 11 | FIU - Biscayne Bay | 75 | 135 | | | | On-site service |
| 12 | FIU - The Metropolitan Center | 3 | 11 | 24 | 77 | | Service on adjacent roadways |
| | | 93 | 95 | | | | |
| | | C | L | 2 | 6 | 8 | Service on local roadways |
| | | 9 | 21 | 51 | 120 | 207 | |
| | | 208 | 277 | | | | |
| | | Mover | | | | | Within walking distance of Knight Center Station |
| 13 | FIU - The Wolfsonian | C | M | 120 | | | Service on adjacent roadway |
| 14 | Florida Atlantic University | 8 | | | | | Service on adjacent roadway |
| | | 87 | | | | | Service on local roadway |
| 15 | Florida Career College | 8 | 11 | 71 | | | Service on adjacent roadway |
| 16 | Florida Memorial College | 32 | | | | | Service on adjacent roadway |
| 17 | Florida National College | 24 | 40 | 51 | | | Service on adjacent roadways |
| 18 | International Fine Arts College | S | 3 | 9 | 10 | 16 | Service on adjacent roadways |
| | | 32 | 93 | 95 | | | |
| | | A | C | M | 6 | 120 | Service on local roadways |
| | | Mover | | | | | Within walking distance of Adrienne Arsht Center Station |
| 19 | Johnson & Wales University | 16 | | | | | Service on adjacent roadway |
| | | 3 | 93 | | | | Servcie on local roadway |
| 20 | Jones College | 88 | 288 | | | | Service on adjacent roadway |
| 21 | Keiser Career College | 75 | 286 | | | | Service on local roadways |
| 22 | Keller Graduate School of Management | 11 | 51 | 87 | | | Service on adjacent roadways |
| 23 | Lindsey Hopkins Technical Education Center | M | 21 | 77 | 277 | | Service on adjacent roadways |
| 24 | MDC - Hialeah | 33 | 54 | | | | Service on adjacent roadway |
| 25 | MDC - Homestead | 34 | 35 | 344 | | | Service on adjacent roadways |
| | | 38 | 70 | | | | Service on local roadways |
| 26 | MDC - Interamerican | 8 | 27 | 207 | 208 | | Service on adjacent roadways |
| 27 | MDC - Kendall | 35 | 71 | 104 | 204 | | On-site service with shelters |
| 28 | MDC - Medical Center | M | 12 | 21 | 32 | Rail | Service on adjacent roadways |

## Table 7-16: MDT Major Trip Generators: Educational Centers, December 2013 (continued)

| ID | MAJOR GENERATORS | ROUTES | COMMENTS |
|---|---|---|---|
| | **Educational Centers** | | |
| 29 | MDC - North | 19 27 32 297 | On-site terminal with shelters |
| 30 | MDC - West | 36 | Service on adjacent roadway |
| 31 | MDC - Wolfson Campus | 2 3 6 7 8 9 93 95 120 | Service on adjacent roadways |
| | | C S 11 21 77 207 208 211 243 246 277 | Service on local roadways |
| | | Mover | Within walking distance of College/Bayside and College North Stations |
| 32 | Miami Lakes Education Center | 29 75 | Service on adjacent roadway |
| 33 | New World School of the Arts | 2 6 7 8 9 120 | Service on adjacent roadways |
| | | C S 3 11 51 77 93 95 207 208 211 246 277 | Service on local roadways |
| | | Mover | Within walking distance of College/Bayside Station |
| 34 | Nova Southeastern University - Dental | H | Service on local roadway |
| 35 | Nova Southeastern University - Kendall Campus | 88 288 | Service on local roadway |
| 36 | Polytechnic University of Puerto Rico | 36 95 132 | Service on adjacent roadway |
| 37 | Robert Morgan Educational Center | 52 | Service on adjacent roadways |
| | | 137 | Service on local roadway |
| 38 | St. Thomas University | 32 | Service on adjacent roadway |
| 39 | University of Miami | 48 56 500 Rail | Service on adjacent roadways and within walking distance of University station |
| 40 | University of Miami - Marine Campus | B | Service on adjacent roadway |
| 41 | University of Miami - South Campus | 252 | Service on adjacent roadway |

Source: Miami-Dade Transit, 2013.
Note: Rail stands for Metrorail. Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

**Figure 7-19: MDT Major Trip Generators, Educational Centers, December 2013**



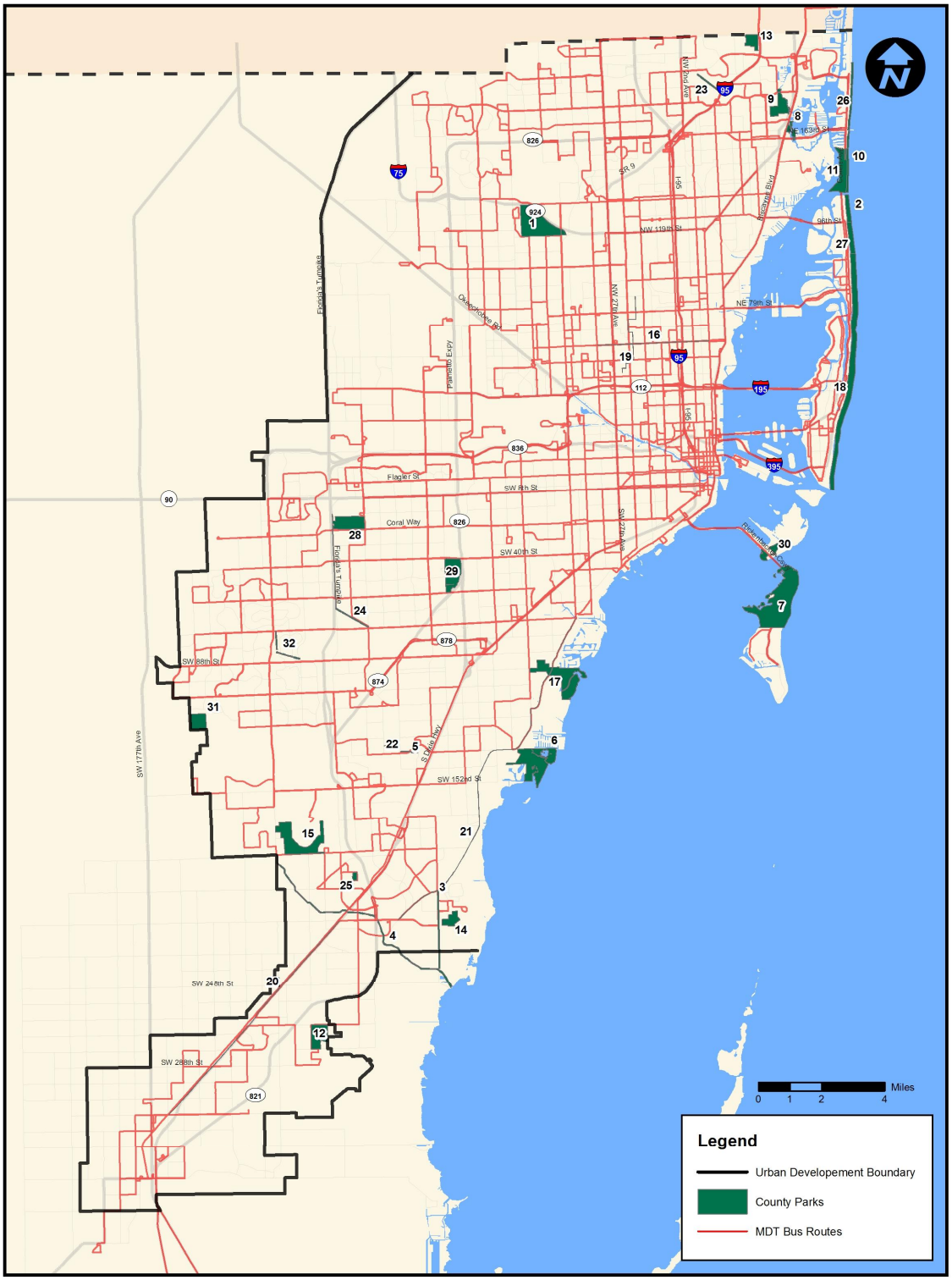

Educational Centers. Source: Miami-Dade Transit, December 2013

## Table 7-17: MDT Major Trip Generators, County Parks, December 2013

| ID | MAJOR GENERATORS | ROUTES | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|
| | **County Parks** | | | | | | |
| 1 | Amelia Earhart Park | 37 | 135 | | | | Service on adjacent roadway |
| | | 42 | | | | | Service on local roadway |
| 2 | Bal Harbour Beach | H | S | 120 | | | Service on adjacent roadway |
| | | G | | | | | Service on local roadway |
| 3 | Biscayne Trail (East Side of Canal) | 200 | 287 | | | | Service on adjacent roadway |
| 4 | Black Creek Trail (Along C1 Canal) | 137 | | | | | Service on local roadway |
| 5 | Briar Bay Linear Park | 136 | | | | | Service on adjacent roadway |
| 6 | Chapman Field Park | 136 | | | | | Service on local roadway |
| 7 | Crandon Park | B | | | | | Service on local roadway |
| 8 | East Greynolds Park | 3 | 93 | 183 | | | Service on adjacent roadway |
| 9 | Greynolds Park | 3 | 93 | 183 | | | Service on adjacent roadway |
| 10 | Haulover Beach | H | S | 120 | | | Service on adjacent roadway |
| 11 | Haulover Park | H | S | 120 | | | Service on adjacent roadway |
| 12 | Homestead Air Reserve Park | 70 | | | | | Service on adjacent roadway |
| 13 | Ives Estates Park | 99 | | | | | Service on local roadway |
| 14 | Lakes by the Bay Park | 200 | 287 | | | | Service on local roadway |
| 15 | Larry & Penny Thompson Park | 137 | | | | | Service on adjacent roadway |
| | | 52 | | | | | Service on local roadway |
| 16 | Martin Luther King Blvd (NW 62 ST) | 32 | 62 | | | | Service on adjacnet roadway |
| 17 | Matheson Hammock Park | 136 | | | | | Service on local roadway |
| 18 | Miami Beach (from South Beach to NW 86 ST) | A | C | H | J | L | Service on adjacent roadway |
| | | M | S | SB Local | 62 | 79 | |
| | | 115 | 117 | 120 | 150 | | |
| 19 | Model Cities Trail | L | 12 | 21 | 22 | 46 | Servcie on adjacent roadway |
| | | 54 | 62 | 79 | 246 | | |
| | | 17 | | | | | Service on local roadway |
| 20 | North South Trail | 34 | 35 | 38 | 70 | | Service on adjacent roadway |
| | | 70 | 344 | | | | Service on local roadways |
| 21 | Old Cutler Bike Path | 136 | | | | | Service on adjacent roadway |
| 22 | Pinewoods Park | 136 | | | | | Service on local roadway |
| 23 | Snake Creek Trail | 75 | 77 | | | | Service on local roadways |
| 24 | Snapper Creek Trail | 17 | 75 | 77 | 99 | | Service on local roadways |
| 25 | Southridge Park | 1 | | | | | Service on adjacent roadway |
| | | 52 | | | | | Service on local roadway |
| 26 | Sunny Isles Beach | E | H | S | 120 | | Service on adjacent roadway |
| 27 | Surfside Beach | H | S | 115 | 117 | 120 | Service on adjacent roadway |
| 28 | Tamiami Park | 8 | 24 | 71 | | | Service on adjacent roadway |
| 29 | Tropical Park | 40 | 56 | | | | Service on adjacent roadway |
| 30 | Virginia Key | B | | | | | Service on local roadway |
| 31 | West Kendall District Park | | | | | | None |
| 32 | Winston Linear Park | 88 | | | | | Service on adjacent roadway |
| | | 288 | | | | | Service on local roadway |

Source: Miami-Dade Transit, 2013.
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within walking distance (1/4 mile) of the trip generator.

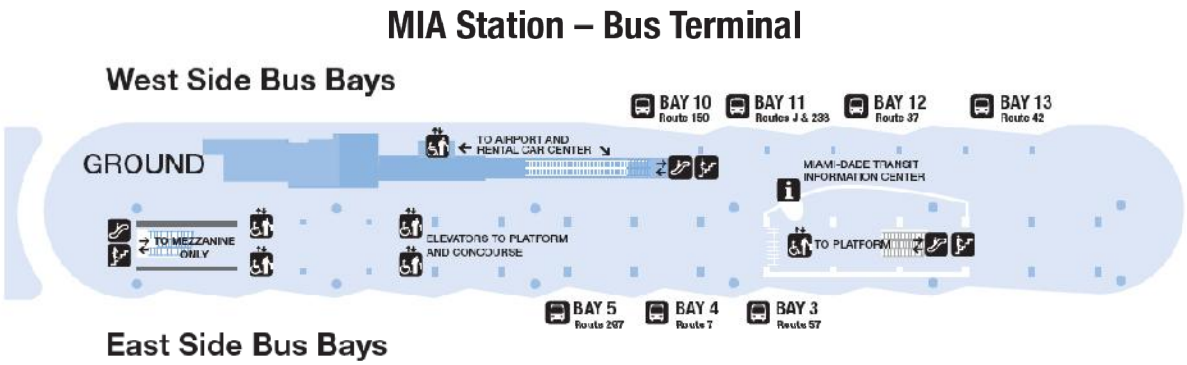
**Figure 7-20: MDT Major Trip Generators, County Parks, December 2013**




County Parks. Source: Miami-Dade Transit, December 2013

**Objective: Increase and improve transit access to Miami International Airport (MIA) and the PortMiami:** The transit service route miles within a ¼ mile of MIA and the PortMiami are presented in Table 7-18 Metrobus Routes J, 7, 37, 42, 57, 150 (Airport Flyer) and 238 serve the new MIA Metrorail Station. Route 297 (27th Avenue Orange MAX) provides a direct connection to the new MIA Metrorail Station from the Broward County Line along NW 27th Avenue. Riders can use the free MIA Mover, located on the Connector Level (4th floor) of the new MIA Metrorail Station to travel to the Airport Terminal.

The MIA Metrorail Station and MDT bus terminal are components of the Miami Intermodal Center which consolidates various modes of transportation in one location and allows for seamless transfers between modes as well as access to the Airport Terminal. The Route 133 schedule complements Tri-Rail's schedule and runs between the Hialeah Market Tri-Rail station and the Airport Terminal, with selected trips also serving the Tri-Rail Metrorail station. This route will be in effect until the new airport Tri-Rail station opens in late 2014, adjacent to the MIA Metrorail station.




Metrobus Route 243, the Seaport Connection, connects PortMiami to Downtown Miami and to MDTR"s Metrobus and Metrorail systems

**Table 7-18: Transit Service Route Miles within ¼ mile of MIA and PortMiami**

| Facility | Transit Service Route Miles within 1/4 mile |
|---|---|
| Miami International Airport | 61 |
| Port of Miami | 2 |

Source: Miami-Dade GIS, 2013.

**Objective: Implement projects that support economic development and redevelopment areas:** A number of corridors were identified by Miami-Dade County as potential redevelopment areas based on their older development and infrastructure. As Table 7-19 shows, MDT provides service on multiple routes to most of these areas.

**Table 7-19: Transit Route Miles within ¼ mile of Redevelopment Areas**

| Redevelopment Areas* | Transit Service Route Miles within 1/4 mile |
|---|---|
| East Overtown | 79 |
| North Miami | 64.5 |
| City of Miami - OMNI | 50.5 |
| North Miami Beach | 44.7 |
| Florida City | 30.5 |
| Miami Beach | 27.6 |
| 7th Avenue Corridor | 24.1 |
| West Perrine | 23.8 |
| Naranja Lakes | 15.8 |
| Homestead | 15.1 |
| Midtown Miami | 12.4 |
| South Miami | 10.3 |
| NW 79th Street | 54.6 |

Source: *Information taken from the Miami-Dade County's GIS webpage, 2013.

**Objective: Apply transportation and land use planning techniques, such as transit oriented development (TOD), that support intermodal connections and coordination:** Policy initiatives do exist within the CDMP Land Use element and Transportation Element related to development and population density around or near transit stations.

### 7.9.5 Goal 5: Preserve the Environment and Promote Energy Conservation

**Objective: Reduce fossil fuels consumption through the consideration of alternative fuel vehicle technology:** In an innovative move to improve energy efficiency and reduce operational costs, MDT has electrified key accessories on eighteen (18) 40-foot diesel/electric hybrid buses - becoming one of the first transit agencies in the nation to electrify bus accessories. This modification is expected to make the buses 25 percent (25%) more fuel efficient or 2,471 gallons and estimated carbon reduction of 24.3 metric tons (53,612 pounds) of $CO_2$ per year are projected per hybrid bus. The estimated carbon reduction per bus for the proposed project during the 15 years expected life of the bus is 407.7 metric tons of $CO_2$. This calculation was based on $CO_2$ emissions from a gallon of diesel equal to 22.2 pounds/gallon (Source: U.S. Environmental Protection Agency Web site).

As a Chicago Climate Exchange member, Miami-Dade County voluntarily agreed to annual emissions reductions. Miami-Dade Transit currently operates 43 diesel/electric hybrid buses of which 25 are 60-foot articulated buses that use a B5 blend (5 percent) of Biodiesel with Ultra Low Sulfur Diesel Fuel in its bus fleet. Biodiesel is non-toxic, biodegradable, and suitable for sensitive environments.

The hybrid buses are equipped with emissions gas recirculation (EGR) components, proven to reduce the NOx and carbon emissions up to 80 percent (80%). The urea (DEF) exhaust after treatment technology will achieve additional NOx reductions.

After examining various alternative fuels, Miami Dade Transit decided to migrate its bus fleet to clean-burning, compressed natural gas (CNG). A Request for Proposal for a Public Private Partnership (P3) was released. MDT expects to select an experienced CNG developer to enter into a Master Developer Agreement which will be dedicated to the conversion of Miami-Dade Transit heavy fleet vehicles to CNG. Specifically, through the Master Developer Agreements, MDT intends to form a public partnership with the selected Proposer(s) that allows the MDT to take advantage of the savings associated with the use of CNG for its fleet.

The Program objectives to be achieved by the selected Proposer(s) include the following:

1. Design, build, finance, operate and maintain CNG fuel service stations;

2. Upgrade existing County infrastructure including upgrading and/or converting MDT maintenance facilities and existing fuel stations to provide CNG;

3. Purchase and/or lease CNG powered buses;

4. Supply CNG; and

5. Generate revenues for the County through the sale of CNG to third parties.

MDT is also adding LED lighting at park-and-ride lot locations.

**Objective: Promote transit service projects that support urban infill and densification:** MDT operates transit service primarily within the urban infill area with the exception of various areas throughout the county that are not fully developed (Table 7-20).

**Table 7-20: Transit Route Miles Within ¼ mile of the Route Alignment**

| Other | Transit Route Miles within 1/4 mile | |
|---|---|---|
| | 2012 | 2013 |
| Urban Infill Area (UIA) Boundary | 1417 | 1414 |

Source: Miami-Dade GIS, 2013.

### 7.9.6 Goal 6: Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes and Transit Providers, for People and Freight

The number of transit service route miles within a ¼ mile of Traffic Analysis Zones (TAZ's) with a high proportion (20% or higher) of elderly (Age 65+) is about 880 miles which is a 27% increase since last year's MDT Annual Update. This indicates that areas with a high concentration of elderly are well served by transit service and have full access to the Metrobus system, with some areas also well served by Metrorail.

### 7.9.7 Goal 7: Optimize Sound Investment Strategies for System Improvement and Management/Operation

**Objective: Optimize operations and maintenance expenses:** Cost per revenue mile and hour are measures of efficiency. Improving operating speeds on congested corridors are among the ways to improve cost efficiency.

**Table 7-21: Cost per Revenue Mile**

| | Metrobus | Metrorail | Metromover | STS |
|---|---|---|---|---|
| FY 2012/2013 | $10.66 | $9.85 | $18.40 | $3.12 |
| FY 2011/2012 | $10.59 | $11.40 | $21.96 | $3.82 |

Source: Miami-Dade Transit, 2013.

**Table 7-22: Cost per Revenue Hour**

| | Metrobus | Metrorail | Metromover | STS |
|---|---|---|---|---|
| FY 2012/2013 | $114.70 | $198.95 | $185.48 | $39.51 |
| FY 2011/2012 | $114.96 | $250.76 | $223.43 | $48.85 |

Source: Miami-Dade Transit, 2013.

**Objective: Identify Public, Private Partnership opportunities:** A 14-acre vacant parcel adjacent to the intersection of the Homestead Extension of the Florida Turnpike (HEFT) on NW 215th Street and NW 27th Avenue has been identified as a park-and-ride/transit terminal location for the NW 27th Avenue Enhanced Bus Service project. This facility will provide strategic TOD opportunities. Section 2.2.14 provides additional detail on MDT's existing and future transit joint development and TOD projects.

**Objective: Align MDT priorities and deliverables with available funding and resources:** Miami-Dade Transit continually evaluates operational and capital priorities and assesses the viability of securing various funding sources.

### 7.9.8 Goal 8: Maximize and Preserve the Existing Transportation System

**Objective: Continue to examine the provision and utilization of special-use lanes on the existing system for transit use:** The existing special use lanes used by MDT

consists of the South Miami-Dade Busway which is approximately 20 miles in length. In 2010, the managed lanes were implemented on I-95 and increased transit's usage of Toll Express Lanes from the operation of 95 express service between locations in Broward County and downtown Miami. In addition, FDOT is studying a system of managed lanes for southeast Florida on which express transit routes could be implemented on SR 836, SR 826, and I-75.

**Objective: Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system:** Miami-Dade Transit continuously works to assess Intelligent Transportation System (ITS) needs through an organization of prioritized ITS projects for deployment that conform to regional ITS architecture while reflecting the local needs and preferences for transit operations. Newly implemented ITS projects include transit signal priority, wireless services, and personal digital assistants (PDAs) with real time next bus arrival information.

**Objective: Upgrade and maintain existing transit infrastructure and facilities in a state of good repair:** Miami-Dade Transit has developed a procedure for identifying, evaluating, prioritizing, and programming capital improvement projects that will upgrade and maintain the existing transit infrastructure and facilities. This Infrastructure and Renewal Program (IRP) is updated annually to assure the existing transit system and facilities remain in a state of good repair.

**Objective: Maintain the operational functionality of transit vehicles to maximize reliability:** MDT experienced 0.20 percent (0.20%) missed pullouts in FY 2013. The current goal set forth at the agency is zero percent. While even a single missed pullout can mean inconvenience and discomfort for hundreds of passengers, an average of less than one missed pullout per day is very good performance for a transit system of MDT's size.

Metromover plans to improve the adherence to its preventive maintenance program by implementing a mileage based maintenance program. A time based program is currently in place requiring vehicle inspections to be performed regardless of the vehicle mileage. Implementation of a time based program will more effectively utilize the agency's man power by ensuring that all preventive maintenance inspections are completed within the allotted time frames.

The current goal is set at a 90 percent (90%) adherence. According to the last fiscal year, Metrobus and Metrorail exceeded the 90 percent (90%) adherence goal while Metromover achieved a compliance rate of 86 percent (86%) (Table 7-23). The preventive maintenance program identifies mechanical issues before failures result and greatly contributes to MDT meeting its performance goal for this measure.

**Table 7-23: Percent of Adherence to Preventative Maintenance Program by Mode**

| | Metrobus | Metrorail | Metromover |
|---|---|---|---|
| FY 2012/2013 | 98.4% | 99.7% | 85.5% |
| FY 2011/2012 | 98% | 97.1% | 78.8% |
| Goal | 90% | 90% | 90% |

Source: Miami-Dade Transit, as of March 2014.

Another measure of service reliability is the measure of the mean distance between service disruptions (Metrorail) or breakdowns (buses). Disruptions are described as five (5) minutes or more impact to the customer. Table 7-24 presents the mean number of miles for a breakdown according to MDT transit mode.

**Table 7-24: Mean Distance between Failures by Mode**

| | Metrobus | Metrorail | Metromover |
|---|---|---|---|
| FY 2012/2013 | 4,391 | 40,505 | 7,571 |
| FY 2011/2012 | 4,459 | 42,410 | 5,157 |
| Goal | 4,000 | 39,000 | 6,000 |

Source: Miami-Dade Transit, as of March 2014.