Kimley-Horn and Associates, Inc.

Local Municipal Transit Circulator Policy Study

EXECUTIVE SUMMARY

Local Municipal Transit Circulator Policy Study

Project Overview

Recently, a number of communities in Miami-Dade County have expressed interest in establishing local transit circulator services to improve mobility and provide connections to the regional transit system. These types of services can serve local trips within a community and typically serve neighborhoods and areas not served by the County's transit system. Transit circulators offer significant potential toward improving the mobility of local communities' residents, employees, and visitors. Other benefits associated with transit circulators may include (1) easing traffic congestion by providing an alternative to the personal automobile for travel and (2) providing a transportation opportunity for a number of mobility-deprived citizens.

Several communities in Miami-Dade County already provide transit circulators including Miami Beach, North Miami Beach, and Aventura. Studies have been performed in several other communities and the implementation of circulator services is under serious consideration; however, no general policies or procedures exist to assess the feasibility of establishing these services.

Miami Beach Electrowave

In response to Miami-Dade County communities' interest in establishing or helping to fund local transit circulators and the lack of procedures for assessing the feasibility and planning for these services, the Miami-Dade Metropolitan Planning Organization (MPO) initiated the *Local Municipal Transit Circulator Policy Study*. The two main objectives of this study were (1) to develop a set of guidelines and standards for establishing local transit circulator services and (2) to develop measures of effectiveness (MOEs) for evaluating these services.

Research and Data Collection

Recent planning studies for local transit circulators in Miami-Dade County were reviewed and a database was compiled for existing local transit circulator systems.

A number of common themes and consistent elements were identified in these planning studies. The typical recommended services were neighborhood circulators operating on local streets with links to the County's transit system. High-density areas with mixed land uses were regarded as the most ideal environment for instituting local transit circulator service. Target populations of potential riders included senior citizens, students, and low-income workers.

Data were collected from existing transit circulator systems and a transit circulator database was developed. In addition to obtaining data from Miami-Dade communities that provide circulator

services, data were compiled from a number of communities in Broward County, Florida, and from three communities outside of South Florida to provide a wider perspective on these types of services.

Transit Circulator Survey

County and municipal staffs were surveyed to determine interest in establishing local transit circulators and to identify issues that may affect the establishment of these services.

A transit circulator survey was developed to identify communities in Miami-Dade County interested in establishing or expanding transit circulator services. The survey also obtained data on existing transit circulators in the communities that offer these services. Surveys were sent to 35 communities, including 30 Miami-Dade County municipalities and 5 municipalities from outside the County. The survey was returned by 22 (63 percent) of these communities, including ten communities with existing transit circulators. According to municipal staff, reaction to transit circulators has been extremely positive in the communities that provide these services. In addition, the survey found that several communities were in the process of establishing circulators or were at least considering establishing circulators.

Data Analysis

The database of existing local transit circulators and results of the survey were analyzed to identify conditions and service characteristics that may be required for establishing these services.

Miramar Community Shuttle Bus

Results of the data analysis indicate that an elderly population may provide a significant ridership base for community circulators, especially in communities with smaller overall populations. Surprisingly, circulator service is more widespread in municipalities with higher per capita incomes; these communities tend to have more funds available to subsidize the circulator service.

Four different types of circulator routes were identified:

- Downtown circulators
- Neighborhood circulators
- Park-ride and feeder circulators
- Shopping-based/"lifeline" circulators

The type of transit circulator route is dictated by a community's transit needs, which are driven by the community's socioeconomic and geographic characteristics. Downtown circulator routes are often offered in downtowns, outlying business districts and high employment areas; neighborhood circulators are often located in suburban municipalities with lower population densities; park-ride and feeder circulator routes serve peak period commuter needs; shopping-based or "lifeline" circulators typically operate in municipalities that have high proportions of elderly citizens.

Development Guidelines and Standards for Local Circulator Services

A generalized approach for developing and monitoring the performance of local transit circulators was established.

General policy and legal issues associated with the implementation of municipal transit circulator services were examined and broad guidelines were developed for application to all potential municipal circulator services, regardless of the type of service being considered or location. Factors considered included:

- Role of municipal circulator services
- Interlocal agreement
- Risk management
- Federal/state regulations
- Section 13(c) labor protection
- Americans with Disabilities Act

A list of general policy and legal issues municipalities should follow when planning transit circulator service was developed and is shown below.

General Policy and Legal Issues Guide

1. Municipalities should provide localized services and MDT will provide broader county-wide service.
2. Municipalities that establish circulator service must enter into an interlocal agreement with Miami-Dade County.
3. Municipalities must be aware of the liability associated with operating a municipal circulator service and hold harmless the County from liabilities and claims. If the circulator service is contracted to a private transportation provider, the County must be named as an additional insured on the policy.
4. Municipalities must comply with all federal, state, and local regulations regarding the provision of transit services.
5. Municipal circulator service should complement - not compete with - MDT service, so as not to endanger Section 13(c) protected employees.
6. All transit circulator vehicles must be ADA compliant.

Two-Step Planning Process

In addition, a **two-step planning process** was developed as a model for municipalities to follow when considering and planning local transit circulator services. **"Step One"** is the initial planning effort during the development of local transit circulator services. A scorecard of weighted attributes was developed for **"Step One"** to assist municipalities in evaluating the feasibility of establishing circulator services.

Step-One Initial Service Proposal Evaluation Elements

1. Indicators of transit dependency or propensity to use circulators including assessment of ranges of population density, percentage of elderly residents, household income level, and personal automobile unavailability.
2. Indicators of recognizable gaps in transit service in the community.
3. Indicators of activity centers in the community that are not served or are underserved by transit.
4. Indicators of relatively frequent requests or calls for community transit circulator services.
5. Indicators of municipal support for contributing funds for the initial feasibility study.
6. Indicators of municipal support for contributing funding the actual circulator services.

Step-Two Detailed Feasibility Assessment Framework

"Step Two" of the planning process provides a more detailed feasibility assessment framework that should only be undertaken if **"Step One"** indicates that transit circulator service is feasible. The purpose of **"Step Two"** is to assist in developing operations, management, and financial plans for the circulator service. Although each community has specific mobility needs and unique socioeconomic and geographic characteristics, a number of general recommendations for developing circulator services were provided as guidance in this step. Some of these recommendations are shown below.

- Circulator routes should be fairly direct and not try to serve all community mobility needs; shorter circulators tend to attract more passengers per revenue hour.
- Headways of 30 minutes or shorter are strongly recommended for municipalities that are serious about providing a viable transportation alternative for their residents.
- Circulator schedules and routes should be coordinated with the schedules and routes of other transit providers to provide "timed-transfer networks," whenever feasible. "Timed-transfer points" are especially important when headways are infrequent.
- Public input should be obtained during the planning stage to determine operating parameters desirable from the standpoint of the potential riders.
- Circulator vehicles should be easily distinguishable from Miami-Dade Transit buses and be identifiable as a separate municipal transit service.
- Major capital investment may be avoided and implementation may be hastened by contracting the municipal transit service to a private transportation provider; however, a municipality that operates the transit circulator service internally may take a more active role and may become more intrinsically involved with ensuring the system's success.
- Marketing strategy is vital for building community awareness of and support for a circulator system and attracting ridership.
- Funding for municipal circulator service may be obtained from a number of local, state, federal, and private sources; however, these funding sources are highly competitive and most are not indefinitely available. Municipalities typically fund the majority of costs associated with ongoing, successful transit circulator services internally.

Post-Implementation Monitoring

After a municipal transit circulator is implemented, evaluation of the system's performance is needed to ensure the public's mobility needs are served. Continuing performance monitoring also assists in adjusting services for efficiency and effectiveness.

A critical component of the post-implementation monitoring program is maintaining a public outreach program, as public involvement is important to help define the role of the circulator system in the community.

The municipality should also perform an evaluation of the municipal transit circulator service at least on an annual basis; often a monitoring process and annual evaluation is a requirement of funding agencies. Performance and service goals should be established for review during the annual evaluation process and measurable objectives should be developed for assessment. Typical performance measures include annual passengers per route, passengers per revenue hour, costs per passenger, and on-time performance. Examples of useful applications of the monitoring process include revising or adding new routes, adjusting headways, and modifying hours of operation.

Conclusion

Currently, Miami-Dade County sometimes assists with the planning for local transit circulators and municipalities receive grants from the Florida Department of Transportation (FDOT) or other agencies to initiate the circulator service. However, grant support often expires after a period of two to three years and municipalities then must obtain funding from other sources or discontinue the circulator service if new funding sources cannot be secured.

Aventura Advantage Shuttle Bus

The objective of the *Local Municipal Transit Circulator Policy Study* was to provide guidelines for municipalities to follow when planning local transit circulators. This study provides a framework that will (1) provide Miami-Dade municipalities with a good screening and assessment tool for considering local transit circulators and (2) allow Miami-Dade County to better evaluate requests for assistance in planning and establishing municipal transit circulators. Municipalities can benefit from this study by following the recommended planning process to first determine if transit circulator service is feasible and, if the service is assessed as feasible, to develop a circulator system that serves the community's mobility needs with an improved chance of continued success.

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LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY

TECHNICAL MEMORANDUM # 1: DATA COLLECTION AND RESEARCH

Prepared For:

Prepared By:

Kimley-Horn and Associates, Inc.

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I. INTRODUCTION

Miami-Dade Transit (MDT) offers a wide range of transit services in Miami-Dade County including Metrobus, Metrorail, and Metromover. MDT is the largest transit provider in Florida and the sixteenth largest public transit operator in the United States. Metrobus alone operates over 600 buses on 82 routes. Most of the County's population has reasonable access to the Metrobus routes; however, Metrobus routes primarily travel along major thoroughfares and its service focuses primarily on grid system transportation needs. Although the County's transit system provides a transportation alternative for many residents, some areas cannot easily access the regional system and local trips within a community are not always well served.

One option to accommodate trips not served by the County's transit system is to provide community transit circulators or shuttles. These types of services can serve local trips within a community and typically serve neighborhoods and areas not served by the County's transit system. Transit circulators offer significant potential toward improving the mobility of local communities' residents, employees, and visitors. Other benefits associated with the transit circulators may include (1) easing traffic congestion by providing an alternative to the personal automobile for travel and (2) providing a transportation opportunity for a number of mobility-deprived citizens.

Recently, a number of communities in Miami-Dade County have expressed interest in establishing local transit circulator services to improve mobility and provide a connection to the regional transit system. Several communities in Miami-Dade County already provide transit circulators including Miami Beach, North Miami Beach, and Aventura. Studies have been performed in other communities and the implementation of circulator services is under serious consideration; however, no general policies or procedures exist to assess the feasibility of establishing these services.

In response to Miami-Dade County communities' interest in establishing or helping to fund local transit circulators and the lack of procedures for assessing the feasibility and planning for these services, the Miami-Dade Metropolitan Planning Organization (MPO) has initiated the *Local Municipal Transit Circulator Policy Study*. The two main objectives of this study were (1) to develop a set of guidelines and standards for establishing local transit circulator services and (2)

to develop measures of effectiveness (MOEs) for evaluating these services. The following tasks were addressed in the development of this project:

- Data Collection and Research – recent feasibility studies for establishing local transit circulators in Miami-Dade County were reviewed and a database was compiled for existing local transit circulators
- Survey – County and municipal staffs were surveyed to determine interest in establishing local transit circulators and to identify issues that may affect the establishment of these services
- Data Analysis – the database of existing local transit circulators was analyzed to identify conditions and service characteristics that may be required for establishing these services
- Development of Guidelines and Performance Standards for Local Transit Circulator Services – procedures for developing and monitoring the performance of local transit circulators were established.

This technical memorandum summarizes the data collection and research task. Additional technical memoranda were prepared for the other tasks as they were completed throughout the study process. These technical memoranda appear as subsequent chapters of this report.

II. REVIEW OF RECENT MPO TRANSIT CIRCULATOR STUDIES

Six transit circulator studies were prepared for the Miami-Dade MPO between 1996 and 2000. These studies were reviewed to develop a better understanding of local experience in implementing transit circulator services. These studies include the following:

- Miami Surface Shuttle Services: Feasibility Study for Transit Circulator Services in Downtown Miami, Brickell, Overtown, and Airport West
- North Miami Community Transit Circulator Study
- North Miami Beach Circulator Services
- City of Hialeah Circulator Study
- Aventura Municipal Transit Study
- Electric Transit Circulator Feasibility Study

Summaries of these individual studies are presented next, followed by a summary of common elements in the studies.

A. Miami Surface Shuttle Services: Feasibility Study for Transit Circulator Services in Downtown Miami, Brickell, Overtown, and Airport West

The *Miami Surface Shuttle Services: Feasibility Study for Transit Circulator Services in Downtown Miami, Brickell, Overtown, and Airport West* was completed in June 2000. This study was prepared for the Miami-Dade MPO by the Center for Urban Transportation Research (CUTR) and it evaluated the feasibility of designing and funding local transit circulator services. In particular, this study examined the feasibility of establishing surface shuttle services in the following areas:

- Flagler Street corridor in Downtown Miami from the Miami River to Biscayne Boulevard
- Brickell community on the south side of the Miami River
- Overtown community to the north of the Flagler Street corridor
- "Airport West," which is bound by NW 74th Street/Okeechobee Road to the north, SW 7th Street to the south, the Florida Turnpike to the west, and LeJeune Road to the east.

This study provided a number of viable options for circulator routes in the study areas and concluded that this type of service is "truly exciting and could help the development of the downtown area significantly, and give public transit a new and positive image in the area." The study indicated the key to establishing this type of service will be securing funding sources. The combined operating costs – not including capital expenses – for circulator services in all four study areas range from $1,044,000 to $2,819,000 per year.

Circulator service was recommended to be implemented in phases beginning immediately with the Brickell area. Shuttle services along Flagler Street should be delayed until the improvements associated with the "Flagler Marketplace" plan are completed. These improvements include changing Flagler Street from one-way to two-way operations, streetscape, and rerouting large buses to other streets in the downtown. Shuttle service in the Overtown area was recommended to start with the implementation of redevelopment activities along NW 3rd Avenue. In the "Airport West" additional shuttle routes are recommended to increase service during the midday. Future routes could be added to the "Airport West" in the morning and afternoon peak periods.

This study also examines options for operating the shuttle services, vehicle technology options, and potential funding sources. There are several options for potential service providers including MDT, the City of Miami, the Transportation Management Association (TMA) of the Downtown Development Authority (DDA), and the Transportation Management Initiative for the "Airport West." Vehicle technology options include minibuses, low floor buses, traditional fixed route buses, and alternative fuel vehicles. Minibuses are the preferred vehicle type because of their neighborhood-friendly size and ability to maneuver through residential neighborhoods. Low floor buses are preferable because boarding and alighting are easier, particularly for the elderly and disabled. A comprehensive list of potential funding sources is provided including Florida Department of Transportation (FDOT) funding programs, federal funding programs, and local funding sources.

B. North Miami Community Circulator Study

The *North Miami Community Transit Circulator Study, "Pre-Community Input Interim Report"* was completed in February 1999. This report was prepared for the City of North Miami by PRL & Associates. Funding for this study was provided by the Miami Dade MPO through the Unified

Planning Work Program (UPWP) Municipal Grant Program. This study presents a preliminary analysis of the need and feasibility of implementing transit circulator services in the City to integrate with and enhance existing transit services.

The transit circulator would target the three segments of the population with the greatest mobility need: senior citizens, students, and commuters. In the "Existing Conditions" chapter, the report summarizes the current state of conditions that leads to the need for transit services. This chapter includes the following sections:

- Land Use Analysis
- Identification of Major Generators and Attractions
- Demographics
- Existing Transit Services
- Roadway Conditions

Based on the existing conditions data, the needs of the target populations were identified. Transit demand characteristics were examined from surveys conducted by MDT in 1993 and 1994. Surveys included both an on-board survey and a random telephone survey. Attitudinal information obtained from the transit surveys was used to identify service characteristics that will best meet the needs of the target riders and overall community.

C. North Miami Beach Circulator Services

The *North Miami Beach Circulator Services "End of Year Report"* was completed in September 1998. This report presents monitoring and evaluation of the City's circulator service.

In 1996 the Northeast Dade Transit Improvement Study (NEDTIS) recommended developing circulator services for North Miami Beach and the phasing out of service from regional routes through neighborhoods as circulators were established. The City received funding through the MPO Municipal Grant in fiscal year (FY) 1996 to analyze the economic, environmental, and traffic impacts of circulator services; and to identify potential circulator routes. In May 1997 the City selected Handivan to operate its circulator services. These circulator services began operating on May 27, 1997.

North Miami Beach initially implemented two separate routes using minibuses with a seating capacity of 20 passengers. A third route was added in February 1998. The City began charging fares consistent with the MDT fare structure in August 1997. Although the City expected a decrease in ridership with the initiation of fares, there was no significant impact. This may be related to the fact that many elderly riders have ADA cards and ride for free.

The FDOT established a minimum daily ridership level for this project of 85 daily boardings for each route within three years. In September 1998 the three routes were operating below this established ridership level with 42.0, 3.0, and 17.8 daily boardings. The City developed the following strategies to improve ridership:

- Development of a marketing plan - marketing in the first year was limited to public meetings at neighborhood centers and condominiums
- Coordination with MDT to initiate implementation of NEDTIS recommendations such as bus stop enhancements (benches and shelters)
- Investigation of the feasibility of creating a TMA to manage and coordinate the transit services provided in Northeast Miami-Dade County

D. City of Hialeah Circulator Study

The *City of Hialeah Circulator Study* was completed in October 1998. This study was prepared for the City of Hialeah by Carr Smith Corradino and was funded through the MPO Municipal Grant Program. This study recommended implementing a circulator service in the City of Hialeah. The "Hialeah Circulator" would provide local community transit service that complements the regional service provided by MDT. As part of the study, the City applied to FDOT for the Public Transit Service Development Program Funds.

Transit generators in Hialeah are identified including shopping centers, industrial parks, high-density housing, elderly housing, government centers, hospitals, and recreation facilities. Senior citizens, income-disadvantaged, and youths were targeted as the primary users. A system of two circulator routes with a central transfer point is recommended. Service should be provided at 30-minute headways and the service span should be 12 hours on weekdays and 8 hours on weekends. Three options are presented for operating the circulator service: (1) the City could provide all service, which would require hiring and training drivers and support personnel, acquiring

vehicles, and providing maintenance, (2) acquiring the vehicles and contracting all or a portion of administration, operations, and maintenance, or (3) contracting out the service – including vehicles.

This report estimates that over 1,000,000 annual passenger trips would be provided by the service if the recommended operating span, headways, and fares ($0.75) were adopted. First-year costs including buses and operating costs are estimated at $2,240,800. Fares are expected to provide $803,760 in revenue.

E. Aventura Municipal Transit Study

The Aventura Municipal Transit Study was completed in July 1998. This study was prepared for the City of Aventura by Bermello, Ajamil & Partners, Inc. and it recommends fixed route circulator service with three different routes: a northern route, a central route, and a southern route. "Skip-stop service" was recommended, which would serve condominiums on alternate routes. Some advantages of the "skip-stop service" recommended in this study include the following:

- Shorter travel times – travel time is considerably shorter for each passenger to reach major destinations
- Minimal communications – there are fixed routes and standard schedules
- Easy to understand schedules – there will be clockface (every location is served at the same time every hour of the day) headways in the north and central service areas
- Reduced layovers – a short layover at the Aventura Mall may potentially minimize congestion

Service was recommended from 9:00 AM to 5:00 PM on Monday through Friday. Saturday service from 9:00 AM to 1:00 PM was identified as an option the City may want to consider. This report recommends contracting the operation of the entire service to a public or private transit service provider to avoid a major capital investment. Low floor minibuses with between 14 to 20 passenger seating capacity were recommended. Annual costs for operating this system were estimated at $211,000.

F. Electric Transit Circulator Feasibility Study

Increased interest in local circulators and growing interest in electric vehicle technology prompted this study of the feasibility of using electric or hybrid-electric vehicles as the technology of choice for municipal, neighborhood, and other transit circulator services in Miami-Dade County. The electric vehicles are an attractive option to serve areas characterized by outdoor shopping, dining, and other pedestrian activities due to their quietness, lack of exhaust smoke and fumes, and overall non-intrusive nature. This report consists of five chapters as follows:

Chapter 1: Electric Vehicles – Technology and Infrastructure – provides basic information regarding electric vehicle technology and infrastructure requirements for operation and maintenance.

Chapter 2: Study Areas – provides a brief description of the eighteen study areas including either existing or potential circulator service characteristics, potential vehicle requirements, and opportunities for the general provision of electric transit circulator service.

Chapter 3: Funding Sources – contains a comprehensive listing and discussion of funding sources that can potentially be used for the electric vehicle circulators.

Chapter 4: Electric Vehicle Experiences – provides insight on implementing, operating, and maintaining an electric vehicle circulator system based on experiences in Santa Barbara, California; Chattanooga, Tennessee; and Miami Beach.

Chapter 5: Findings and Recommendations – provides concluding thoughts and recommendations regarding the feasibility of using electrically powered vehicles for transit circulator services in various areas of Miami-Dade County.

G. Common Elements in Studies

Our review identified a number of common themes and consistent elements in the six transit circulator studies completed for the Miami-Dade MPO.

The typical recommended services were neighborhood circulators operating on local streets. The circulators were complementary to and established a link with the existing transit service provided by MDT. Several reports recommended providing stops at regional transit system hubs. The recommended routes had fixed stops, which allows residents to become familiar with the

circulator system. Headways should be "clockface" – every location is served at the same time every hour of the day – so schedules are easy to understand.

In terms of vehicle type, smaller buses are recommended for transit circulators. The term "minibus" or "shuttle" was often used in the studies to describe the ideal vehicle for local transit circulators, which seats 20-25 passengers. The smaller buses are capable of more easily navigating through different neighborhood environments and are not perceived as a nuisance. In addition, the buses should be low floored or "lift-equipped" to accommodate physically challenged and elderly passengers. Electric vehicles provide an attractive option because of their overall non-intrusive nature.

To assess the feasibility of providing circulator services the studies examined land use characteristics and density of the localities to be served. A high-density area with mixed uses is generally regarded as a relatively ideal environment for instituting transit service. A target population of potential riders should be identified. Typical target populations include seniors, students, and low-income workers.

A funding mechanism should also be identified during the planning stage. Typical funding sources include city, county, and state governments; transit agencies; and community level funding sources. Charging a fare may help pay for some of the operating costs; however, an excessive fare may deter people from using the service.

III. DATA COLLECTION METHODOLOGY

Transit data were collected from various communities and transit operators with existing transit circulator systems. Additional information was obtained from transit maps and Internet sites. The purpose of the data collection effort was to develop a transit circulator database including socioeconomic characteristics, geographic characteristics, operational characteristics, system characteristics, funding, and results. After compiling the transit circulator database, typical conditions for successful transit circulators were identified in subsequent stages of the study.

A. Socioeconomic Characteristics

Socioeconomic characteristics compiled for communities served by transit circulators include total population, age cohorts, household ownership, and household income. Total population provides an indicator of the potential market for transit circulator services. The remaining socioeconomic characteristics may be used to identify the transit dependent portion of the population. In terms of age cohorts, the percentages of the population over 65 years and under 18 years were identified. These age groups include many people that are too old or young to drive. Household ownership – measured by the percentage of rental housing within the community – and median household income are economic indicators of households for which automobile ownership may be a burden.

B. Geographic Characteristics

Geographic characteristics compiled for the transit circulator communities include the area-types and specific activity centers served by the transit circulators. A key factor in assessing the need for transit service is land use patterns. A mixture of residential and nonresidential land uses fosters transit usage by providing trip origins and destinations in the same area. Transit ridership typically increases with residential density. Major trip attractors that are supportive of transit service were also identified.

C. Operational Characteristics

Operational characteristics compiled for the communities include the number of circulator routes, service span, headways, fares, and vehicle types. Service span includes the days of the week and

hours of operation. Headway, which is a measure of service frequency, is the time between transit stops. Data was compiled on fares and fare collection methods. Vehicle types were noted including the number of seats.

D. System Characteristics

System characteristics describe "how the circulator operates in the community it serves." Some system characteristics compiled for the communities include links and the ability to transfer to the regional transit system. Other system characteristics may include delivering passengers from remote parking facilities to final destinations.

E. Funding

Since operating revenues usually cannot cover funding for transit circulators, funding sources were identified. Funding sources include general municipal; local sources; and county, state, and federal programs.

F. Results

Results compiled for the transit circulators include ridership and costs associated with providing the service. The availability of ridership data differed among the communities. For some communities there were no ridership data; daily and/or yearly ridership data were available for other communities. There were varying levels of costs data available for the communities. The costs data ranged from hourly costs for operating the service to yearly operating budgets.

IV. DATA FOR EXISTING TRANSIT CIRCULATORS

A number of communities in Miami-Dade County already provide transit circulator services. Besides obtaining data from these communities, data were compiled from a number of communities in Broward County, Florida. Data were also complied for three circulator systems outside South Florida to provide a perspective on types of services provided in other regions. These services include Lymmo in Orlando, Florida, and two circulator systems in suburban Chicago, Illinois.

Some transit circulator data were more readily available. For example, almost every community provided the hours of operations for their transit circulator services. On the other hand, ridership data were often difficult to obtain for some smaller transit circulator services. Since many of these smaller transit circulator systems are fully subsidized and do not collect fares, these systems do not record boardings.

The data are summarized in two separate tables provided in the Appendix: Table A-1 summarizes data for transit circulators in Miami-Dade County and Table A-2 summarizes the data for transit circulators outside of Miami-Dade County. A brief discussion of the services provided in each community is presented next.

A. Miami-Dade County Local Transit Circulators

1. Aventura

Aventura provides a circulator service that is subsidized from its general fund. The service is contracted out to Coach USA at a cost of $36 per hour. A large portion (35.2%) of Aventura's population is over 65 years old, and the transit circulator focuses on serving the needs of this population group. The circulator serves condominiums in Aventura and provides access to shopping destinations and the local hospital. A "skip-stop service" (each condominium complex is served on every other trip) operates on the circulator's three routes to shorten the travel time for passengers. The circulator provides a connection to regional transit – MDT and Broward County Transit (BCT) – at the Aventura Mall. No fare is charged to ride the 20-seat minibuses and approximately 250 passengers per day ride the circulator.

2. Bal Harbour

Bal Harbour provides a free circulator service that operates between 9:00 AM and 1:00 PM on Mondays, Wednesdays, and Fridays. Although the community has a relatively small population, a high percentage (37.5%) of its population is over 65 years old. The circulator serves residential areas and shopping areas with one route that operates on 60-minute headways. The route also provides a connection to Miami-Dade Transit (MDT) routes. The service is contracted to Handi-Van, which provides a 15-seat minibus for $44.50 per hour.

3. Brickell

MDT operates the Brickell shuttle, which was recommended in the *Miami Surface Shuttle Services: Feasibility Study for Transit Circulator Services in Downtown Miami, Brickell, Overtown, and Airport West*. The shuttle was implemented on April 1, 2001, and it is financed by Job Access and Reverse Commuting funds. The shuttle serves employment centers and multi-family residences in the Brickell neighborhood south of downtown Miami. The shuttle operates on 15-minute headways from 6:30 AM to 6:30 PM, Monday through Saturday. MDT uses 26-seat minibuses for this service and charges its $0.25 shuttle fare. Ridership is approximately 100 passengers per day.

4. Hialeah

Hialeah - one of the largest communities in Miami-Dade County with a population of 226,419 – is on the verge of implementing a circulator service. The circulator will serve parks, shopping centers, government centers, and industrial parks. Two routes will operate on thirty-minute headways from 6:00 AM to 9:00 PM on weekdays and from 9:00 AM to 5:00 PM on weekends. The service will provide links to the regional transit system including Metrobus, Metrorail, and Tri-Rail. The City has adopted the MDT fare structure and is in negotiations with Coach USA to operate the service utilizing 24-seat Bluebird buses.

5. Miami Beach

The Electrowave, a circulator service that uses electric buses, serves Miami Beach. The Electrowave provides transportation in the South Beach area and operates from 8:00 AM to 2:00 AM on Mondays through Wednesdays, 8:00 AM to 4:00 AM on Thursdays through Saturdays, and from 10:00 AM until 2:00 AM on Sundays and holidays. Headways are approximately 10 minutes and a fare of $0.25 is charged. The late-night service provides transit options for the

many people attracted to the "night-life" of South Beach and links to remote parking. Several Electrowave shuttle stops are shared with MDT bus stops. The service is operated by the Miami Beach Transportation Management Association (TMA) and is funded by a host of agencies including the City, Florida Department of Transportation (FDOT), Miami-Dade MPO, and the Federal Transit Administration (FTA). In the three years of operation, total ridership exceeds 3.5 million passengers. The feasibility of expanding the service to other parts of the City is presently under consideration.

6. North Bay Village

North Bay Village operates a circulator service to serve shopping needs of its residents. Although only 12.1 percent of North Bay Village's population is over 65 years old, the transit service is specifically targeted for senior citizens of the community and it attracts only four to six riders daily. The service provides one route at 9:00 AM on Mondays, Wednesdays, and Thursdays to a grocery store. One route to the Aventura Mall is provided on Fridays at 9:00 AM. There is no charge for the grocery store route and $1.00 is charged for the Aventura Mall route.

7. North Miami Beach

The North Miami Beach (NMB)-Line is a free transit circulator that serves condominiums, shopping centers, groceries, department stores, government centers, restaurants, and a library. Although the City has a relatively small percentage (11.3%) of residents over 65 years old, the majority of NMB-Line passengers are elderly. There are two routes that operate on one fixed route, one travels clockwise and one travels counterclockwise. This pattern shortens travel times to many destinations. Five clockwise buses run daily between 8:30 AM and 4:30 PM on 90-minute headways and four counterclockwise fixed-routes run daily between 9:15 AM and 3:45 PM on 90-minute headways. Service is contracted out to Handi-Van, which provides 15-seat handicap-accessible E350 Vans. The NMB-Line is currently financed through the City's general fund; however, the City has previously received funding from county, state, and federal grants.

8. Sunny Isles Beach

Sunny Isles Beach operates a free transit service that provides its residents access to shopping and also provides links to Metrobus. There is one fixed-stop route with two minibuses, which seat between 15 and 25 passengers. The service operates everyday except Sunday between the hours of 8:00 AM and 4:00 PM on 30-minute headways.

9. Surfside

Surfside operates a free circulator service with 30-minute headways on weekdays from 8:00 AM to 3:30 PM. Surfside is a small community of 4,909 residents, with approximately 25 percent over 65 years old. The service provides residents access to shopping centers, serves area beaches, and provides links to Metrobus. The circulator operates on 30-minute headways with two 30-seat buses traveling over one route. The service is completely funded by the City.

B. Local Transit Circulators in Broward County

The Broward County Transit (BCT) Community Bus Program provides cities in Broward County $20,000 yearly per vehicle to operate local transit circulator services. The County provides vehicles or a capital allowance, administrative support, operator training, route and scheduling assistance, and bus stop signs. The cities must operate each vehicle a minimum of 40 hours per week. Currently there are no minimum ridership standards, but there is a proposal to adopt a minimum standard of five passengers per revenue hour after a service has been in operation for six months.

1. Coconut Creek

Coconut Creek operates a free circulator service that is part of the Broward County Transit Community Bus Program. The Coconut Creek circulator service consists of one route with 90-minute headways between the hours of 8:15 AM and 4:00 PM on weekdays. The circulator provides links to BCT routes and also connects with the Margate transit circulator at the Margate Terminal. Coconut Creek uses two minibuses and the cost to operate each minibus is between $50,000 to $70,000 yearly. Funding is obtained from the City, BCT, and Congestion Mitigation and Air Quality (CMAQ) funds. In FY 2000, ridership totals were 19,700 passengers for 1,902 revenue-hours of service or approximately 10 passengers per revenue hour.

2. Cooper City

Cooper City operates a transit circulator that is part of the BCT Community Bus Program. A small portion (6.7%) of Cooper City's population is over 65 years old. The circulator provides residents with access to shopping. The circulator operates on 45-minute headways and is in operation on Mondays through Saturdays between the hours of 8:30 AM and 4:45 PM. No fare is

charged. The circulator provides links to BCT and the Town of Davie circulator. The service costs $47,000 yearly including maintenance, operating, and labor. The county provides $20,000 per year and the remaining funding is from the City's Health and Social Services Funds. In FY 2000, 10,886 passengers utilized the circulator during 2,426 revenue-hours of service or approximately 4.5 passengers per revenue hour.

3. Davie

The Town of Davie has a free transit circulator service operated by A+ Transportation that is a part of the BCT Community Bus Program. The Town has a relatively small portion (9.4%) of residents that are over 65 years old. The service consists of two circulator routes that operate on 45-minute headways from 7:00 AM to 7:00 PM on weekdays. This circulator provides a connection to BCT routes and the Cooper City circulator. A+ Transportation charges $28 per hour per route to operate the service. BCT provides $20 per hour per route, and the County gas tax and the City's general funds provide the remainder of the funding. Ridership in FY 2000 was 22,526 during 6071 revenue-hours or approximately 4 passengers per revenue hour.

4. Fort Lauderdale

Fort Lauderdale has six circulator (TMAX) routes and one additional demonstration route. The routes provide access to many attractions around downtown Fort Lauderdale including offices, beaches, the BCT Terminal, Tri-Rail, and park-ride lots. Various schedules are provided depending on the characteristics of the route. The TMAX Park-N-Ride Route operates twice during both the AM and PM peaks. The TMAX Downtown Business Route operates on 15-minute headways from 7:30 AM to 6:00 PM on weekdays. The TMAX weekend route operates on 30-minute headways between 6:00 PM and 1:00 AM on Friday and Saturday nights. The service is contracted to Laidlaw and hourly operating costs range from $35.50 to $37.00.

5. Lauderdale Lakes

Lauderdale Lakes provides circulator service that is operated by A+ Transportation. The circulator provides access to shopping centers, medical facilities, and recreational facilities. One route is operated on 45-minute headways on weekdays between 6:30 AM and 6:30 PM using an 18-seat minibus. The cost for the transit services is $28 per hour, and the BCT Community Bus Program provides $20 of this cost. This service was just recently established; therefore, no ridership data is available.

6. Margate

Margate utilizes City personnel and maintenance facilities to operate circulator services that are part of the BCT Community Bus Program. The Margate Inner-City Transit provides four routes that serve shopping, employment, and residential areas for $0.25 per trip. The circulator serves the needs of commuters by operating from 7:15 AM to 7:00 PM, Monday through Saturday. Numerous stops of the Margate Inner-City Transit are shared with BCT and the Margate circulator also connects with the Coconut Creek circulator at the Margate Terminal. Service is provided on 25-seat Bluebirds. Ridership was 179,012 in FY 2000 over 13,110 revenue-hours or approximately 14 passengers per revenue hour.

7. Miramar

Miramar operates a community transit service with two routes as part of the BCT Community Bus Program. A small portion (6.3%) of Miramar's population is more than 65 years old. The service provides residents with access to shopping centers, the civic center, a hospital, and the senior center between the hours of 7:00 AM and 7:00 PM on weekdays. A fare of $0.25 is charged. Ridership in FY 2000 was 30,017 passengers over 5,480 revenue hours: or approximately 5.5 passengers per revenue hour.

8. Pembroke Pines

Pembroke Pines operates a circulator that provides residents with access to shopping centers and medical facilities as part of the BCT Community Bus Program. Only Fort Lauderdale has a larger population than Pembroke Pines (137,427) of the cities that participate in the BCT Community Bus Program. Two routes operate on 45-minute headways between 7:00 AM and 8:00 PM on Monday through Saturday. Three minibuses are used to operate the two routes and a $0.50 fare is charged. The Pembroke Pines circulator provides links to BCT and the Miramar circulator. The total cost of the system in 2000 was $195,360. BCT contributed $60,000 and the remainder was funded by the city and through the collection of fares. A total of 29,294 passengers rode the circulator during 7,005 revenue-hours in FY 2000 or approximately 4 passengers per revenue hour.

9. Plantation

Plantation is on the verge of implementing a circulator service that will be a part of the BCT Community Bus program. The service will be subsidized by the County and City through funds obtained from the County's transit tax. The service will be free of charge and is expected to operate between 8:00 AM and 8:00 PM on weekdays, and between 8:00 AM and 6:00 PM on Saturdays.

10. Sunrise

The community circulator service in Sunrise is not part of the BCT Community Bus Program. The service operates six routes on headways ranging from 45 to 60 minutes between 8:15 AM and 2:40 PM on weekdays. Routes are designed to transport residents to shopping and medical facilities. The vehicles have a capacity of 24 passengers. The circulator service had over 75,000 passengers in 2000 or approximately 8 passengers per revenue hour.

11. Tamarac

Tamarac operates a community circulator that is part of the BCT Community Bus program. Tamarac has a high portion (37.8%) of the population older than 65 years old. The system provides three circulator routes that operate on 45-minute headways from 9:00 AM to 5:00 PM on weekdays. A $0.25 fare is charged. In addition to funds provided by BCT, the City contributes $125,000 yearly for this service. Ridership in FY 2000 was 3,788 passengers during 3,353 revenue-hours of service or approximately 1 passenger per revenue hour. City staff believes that ridership has recently been increasing since routes were shortened and travel times decreased.

C. Transit Circulators Outside South Florida

1. Orlando, Florida

The Central Florida Regional Transportation Authority, commonly known as Lynx, operates a circulator in downtown Orlando called Lymmo. Lymmo serves employment centers, government centers, shopping, restaurants, and parking garages. The target population is people who drive to downtown Orlando, then use Lymmo to get around downtown. The service operates in exclusive lanes and is employed with traffic signal preemption capability. Additional amenities for Lymmo

users include information kiosks and stations, with route information and large shelters. No fare is charged for this service, and headways are generally 5 minutes during peak periods. Ten buses are required to operate over the 2.3 mile Lymmo route. Lymmo does not stop at the downtown transit station, which is the terminus of most Lynx routes. The total capital costs for Lymmo were $21 million and annual operating costs are approximately $1.2 million. Approximately 91,485 passengers per month ride Lymmo or approximately 50 passengers per revenue hour.

2. Downers Grove, Illinois

The Village of Downers Grove, which is a Chicago suburb, provides a shuttle service to transport commuters to and from residential areas to the Main Street Burlington Northern Train Station. The passengers access Chicago via a commuter train from this station. The service operates three routes with 40-minute headways during the AM and PM peak periods. There is a $1.25 fare, but a sheet of 12 tickets can be purchased for $12 and a monthly pass can be purchased for $30. Intergovernmental revenues, fares, interest, and Village funds provide funding. The annual cost to provide the service is approximately $600,000. Approximately 200 daily riders per route use this service.

3. Niles, Illinois

The Village of Niles, which is a Chicago suburb, operates the Niles Free Bus. The buses are provided by Pace, the suburban bus operator. This service is designed to provide residents with access to shopping malls, libraries, schools, community centers, and a YMCA. This service provides three routes that operate seven days per week between 8:30 AM and 6:30 PM on weekdays, and 11:30 AM and 6:30 PM on weekends. Headways are approximately 45 minutes. The most heavily utilized route, the Niles Shopper's Special, averages 228 passengers per weekday or approximately 33 passengers per revenue hour. The least utilized route, the Niles South End Special, averages 67 passengers per weekday or approximately 6 passengers per revenue hour; however, this route does average 10 passengers per revenue hour on weekends.

V. SUMMARY

Recent feasibility studies for establishing local transit circulators in Miami-Dade County were reviewed and a database was compiled for local transit circulators. The database includes socioeconomic characteristics, geographic characteristics, operational characteristics, system characteristics, funding, and performance results. Data were obtained for existing Miami-Dade County circulators and for a number of circulators in Broward County, Florida. Data were also obtained for several circulators outside South Florida to provide insight on services provided in other regions.

As the data was assembled, consistent elements were apparent among transit circulator systems. Many circulators cater to the needs of elderly or transit dependent populations, and primarily provide transportation for shopping trips. Other circulators serve commuters, move people around a downtown, or provide shuttle services from park-ride lots.

Next, a survey was developed to obtain additional information that proved difficult to obtain such as costs and ridership for circulator systems in Miami-Dade County. The survey also gauged community interest in establishing local transit circulators and attempted to identify issues key to the implementation of these services. This transit circulator survey is presented in the following technical memorandum.

The data obtained in the survey and in this collection and research effort were subsequently analyzed to identify characteristics key to the successful implementation of circulator type services. Circulator service guidelines were then established for developing and monitoring transit circulators in Miami-Dade County. This process is presented in subsequent technical memoranda.

APPENDIX

TABLE A-1
LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY
Transit Circulator Data for Miami-Dade County Communities

	Socioeconomic Characteristics					Geographic Characteristics		Operational Characteristics					System Characteristics	Funding	Results	
Community/ Municipality	Population	% Population > 65 Years	% of Rental Housing	Population Density	Median Household Income	Area Types Served	Activity Centers Served	Number of Routes	Hours of Operation	Headways	Fares	Types of Vehicles	Links to Regional Transportation System	Funding Sources	Ridership	Costs
Aventura	25,267	35.2%	28.3%	7,896	$32,316	Retail, Residential	Aventura Mall, Promenade Shoppes, A. Hospital and Medical Center, Publi	3	Mon - Sat 8:30 - 5:30	60'	Free	20-seat Mini-bus	MDTA, BCT, City of North Miami Beach, private service	City of Aventura general fund	250 /day	$36/hr
Bal Harbour	3,305	37.5%	49.9%	11,017	$39,773	Grocery, Residential	Grocery store in Bal Harbour, Shops	1	MWF 9:00 AM-1:00 PM	60'	Free	15-seat	MDTA	Village of Bal Harbour	Unknown	$44.50/hr
Brickell (part of Miami)	part of Miami	part of Miami	part of Miami	part of Miami	part of Miami	Employment, Residential	Office buildings	1	M-Sat 6:30 AM-6:30 PM	15'	$0.25	26-seat Mini-bus	MDTA: Metrorail, Metrobus, and Metromover	Job Access & Reverse Commuting Funds	100 to 200/day	
Hialeah	226,419	16.6%	49.3%	11,321	$23,443	Retail, Residential, Employment	Parks, Shopping Centers, Government Centers, Industrial Parks	2	M-F 6:00 AM-9:00 PM, Sat Sun 9:00 AM-5:00 PM	30'	MDTA fare structure	24-seat Bluebirds	MDTA: Metrorail and Metrobus; Tri-Rai	City		under negotiations
Miami Beach	87,933	19.2%	63.4%	11,724	$15,312	Tourist, Retail, Residential	South Beach, Art Deco Historical Area, Lincoln Road Mal	2	M-W 8:00 AM-2:00 AM, Th Sat 8:00 AM-4:00 AM, Sun 10:00 AM-2:00 AM	10' to 15'	$0.25	Alternative Fue	MDTA	City of Miami Bch., FDOT, MPO FTA	3.5 million in 3 years	
North Bay Village	6,733	12.1%	70.9%	22,443	$25,165	Retail, Residential	Publix and Aventura Mal	2	MWTh 9:00 Friday to Aventura Mal	once daily	free to Publix, $1 to mall		MDTA passes through	City	4 to 6/day	
North Miami Beach	40,786	11.3%	38.2%	12,746	$24,963	Retail, Residential	163 St Shopping Center, Publix, Library, K-Mart, Condos	2	Mon - Fri 8:30 AM - 4:30 PM	90'	Free	15-seat E350 Van	MDTA and BCT	Federal, State, County grants, and City funds	"low"	
Sunny Isles Beach	15,315	32.2%	41.8%	5,672	$22,116	Retail, Residential	Shopping Center, Beaches	1	8AM - 4PM 6 days/week	30'	Free	15 and 25-seat	MDTA	City	Unknown	
Surfside	4,909	25.9%	30.0%	5,454	$32,349	Retail, Residential	Shopping Center, Beaches	1	8AM - 3:30PM weekdays only	30'	Free	30-seat	MDTA	City of Surfside	Unknown	

TABLE A-2
LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY
Transit Circulator Data for Communities Outside Miami-Dade County

	Socioeconomic Characterisitics					Geographic Characteristics		Operational Characteristics					System Characteristics	Funding	Results	
Community/ Municipality	Population	% Population > 65 Years	% of Rental Housing	Population Density	Median Household Income	Area Types Served	Activity Centers Served	Number of Routes	Hours of Operation	Headways	Fares	Types of Vehicles	Links to Regional Transportation System	Funding Sources	Ridership	Costs
Coconut Creek	43,566	26.5%	24.5%	3755.7	$33,191	Retail, Residential	Shopping Centers, Library, Schools, Margate Terminal	1	M-F 8:15 AM-4:00 PM	90'	Free	Mini-bus	BCT, Margate system	County provides buses, CMAQ, FDOT matching funds, City	19,700 in FY 2000	$100,000 annual. budget, $50,000-$70,000 per year to operate one bus; $20,000 from BCT
Cooper City	27,939	6.7%	7.8%	3991.3	$49,750	Retail, Residential	Shopping Centers	1	M-Sat 8:30 AM-4:45 PM	45'	Free	Mini-bus	BCT, Davie	County = $20,000/yr; City Health and Social Service funds	10,886 in FY 2000	$47,000 per year including maintenance, operating, and labor; $20,000 from BCT
Davie	75,720	9.4%	23.5%	2194.8	$36,843	Retail, Residential, Employment	Shopping Center, Govt. Centers, Library, College, Recreation	2	M-F 7:00 AM-7:00 PM	45'	Free	16-passenger Mini-bus	BCT, Cooper City	County gives $20/hr; remainder from Town's general funds	22,526 in FY 2000	$28/hour per bus, bus given by BCT and operated by A+ Transportation
Fort Lauderdale	152,397	15.3%	44.6%	4807.5	$27,239	Retail, Employment	Central Transit Terminal, Office Buildings, Tri-Rail, Park-Ride, Beaches	7	various	10', 30', 40', 45', 60'	Free	Mini-bus	BCT, Tri-Rail	County, City, Tri-Rail	250,069 in 2000 for all	2 routes @ $37/hr and 4 routes @ $35.50/hr (operated by Laidlaw)
Lauderdale Lakes	31,705	17.9%	37.8%	9907.8	$20,731	Retail, Residential, Employment	Shopping Center, Med. Ctr., Nursing Home, Recreation	1	M-F 6:30 AM-6:30 PM	45'	Free	18-seat	BCT	County gives $20/hr, City		$28/hour for one route, BCT bus operated by A+ Transportation
Margate	53,909	21.7%	19.9%	5859.7	$28,465	Retail, Residential, Employment	Shopping, Recreation, Med. Buildings, Casino, Margate Terminal	4	M-Sat 7:15 AM-7:00 PM	60'	$0.25	25-seat Bluebird	BCT, Coconut Creek system	County gives $20,000/yr/bus; City general fund	179,012 in FY 2000	$400,000: $230,000 = personnel; $45,000 = maint.; $45,000 = fuel; also overhead, uniforms,
Miramar	72,739	6.3%	19.9%	2346.4	$35,794	Retail, Residential, Employment	Shopping Center, Civic Center, Hospital, Senior Center	2	M-F 7:00 AM-7:00 PM	60'	$0.25	E350 and E450 16 seats + 2 wc	BCT, Pembroke Pines system	County gives $20,000/yr/bus; Fares, Gas Tax allocation, City	30,017 in FY 2000	approximately $80,000 per route per year including personnel, maintenance, fuel
Pembroke Pines	137,427	15.2%	19.8%	3926.5	$36,431	Retail, Residential, Employment	Shopping Center, Medical Building	2	M-Sat 7:00 AM-7:55 PM	45'	$0.50	Mini-bus	BCT, Miramar system	County = $20,000 per bus, City, fares = $1600	29,294 in FY 2000	costs = $195,360 in 2000; new bus = $55,000
Plantation	82,934	13.1%	28.3%	3804.3	$41,832		This service is on the verge of implementation	1	M-F 8:00 AM-8:00 PM Sat 8:00 AM-6:00 PM	20' to 40'	Free	20 to 25-seat	BCT	County = $350,000; City funds from County Transit Tax		
Sunrise	85,779	17.7%	26.2%	3899	$31,540	Retail, Residential	Shopping Center, Medical Building	6	M-F 8:15 AM-2:40 PM	45' to 60'	$0.25	24-seat Bluebird Transhuttles	BCT (NOT part of the BCT community shuttle)	City	75,000 Oct '99-Sep '00	personnel + operating + maintenance about $200,000/yr; capital = $110,000 per bus
Tamarac	55,588	37.8%	20.1%	4632.3	$26,703	Retail, Residential	Shopping Center, Movie Theater, Hospital, Community Center, Library	3	M-F 9:00 AM-5:00 PM	45'	$0.25	Mini-bus	BCT (also offers door-to-door service)	County = $20,000/year/bus; remainder from City = $125,000	3,788 in FY 2000	$180,000/year for 3 routes; non-BCT shuttle that goes outside the City = $70,000
Orlando Orange County	185,951 896,344	11.3% 10.0%	59.2% 39.3%		$26,119 $30,252	Employment	Employment Centers, Parking Garage (Terminus of Lymmo)	1	M-Th 6:00 AM-10:00 PM; F 6:00 AM-12:00 AM; Sat 10:00 AM-12:00 AM; Sun 10:00 AM-10:00 PM	5' (peak)	Free	Large	no connections with other Lynx routes	Central Florida Regional Transit Authority	91,485/ month	$21,000,000 = capital costs $1,200,000 = operating costs
Downers Grove, Illinois	148,110	12.3%	21.7%			Residential, Train Station	Residential Areas and Main Street Burlington Northern Train Station	3	Mon - Fri 6AM - 8AM 4:30PM - 7PM	40'	$1.25; 12 rides = $12; or monthly pass = $30	47-seat bus	commuter train to Chicago	Intergovernmental Revenues, Fares, Interest, Other Financial Sources	218/day; 208/day; 52/day	operating expenses = $267,083; capital expenses = $123,425; other financecosts = $208,883; TOTAL = $599,391
Niles, Illinois	102,638	21.7%	19.0%			Residential, Retail	Malls, Shopping Centers, Library, Schools, YMCA	3	M-F 8:30AM - 6:30PM SaSu 11:30AM - 6:30PM	45'	Free	Mini-bus			200/day; 60/day	

LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY

TECHNICAL MEMORANDUM # 2: TRANSIT CIRCULATOR SURVEY

Prepared For:

Prepared By:

Kimley-Horn and Associates, Inc.

June 2002

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I. INTRODUCTION

In response to Miami-Dade County communities' interest in establishing or helping to fund local transit circulators and the lack of procedures for assessing the feasibility and planning for these services, the Miami-Dade Metropolitan Planning Organization (MPO) initiated the *Local Municipal Transit Circulator Policy Study*. The two main objectives of this study were (1) to develop a set of guidelines and standards for establishing local transit circulator services and (2) to develop measures of effectiveness (MOEs) for evaluating these services.

This technical memorandum represents the second in a series of reports documenting the work and findings of this study. The previous technical memorandum summarized "Data Collection and Research." This technical memorandum summarizes the design, execution, and results of a survey of municipal staff that was conducted for this study. The data obtained in the "Transit Circulator Survey" helped identify communities that are interested in establishing transit circulators and was also used to develop procedures for establishing circulator service.

Two subsequent technical memoranda were prepared for additional tasks as they were completed throughout the study. These technical memoranda appear as subsequent chapters of this report.

II. SURVEY DESIGN

Several aspects of survey design were considered during the development of the survey for the *Local Municipal Transit Circulator Policy Study*. The survey's goals and objectives; target audience; the format of the survey questionnaire; and how to administer the survey were important factors of consideration. The goal of the survey design was to provide communities with an opportunity to provide input and at the same time present a survey design that minimized efforts required to respond to the "Transit Circulator Survey." An overview of the survey design process is presented below.

A. Objectives

The objectives of the "Transit Circulator Survey" were twofold. The first objective was to identify communities that are interested in either establishing or expanding transit circulator services. The second objective was to obtain data on existing transit circulators that may be used to develop procedures for establishing circulator services. In particular, survey provided a means for obtaining additional information that was difficult to obtain during the "Data Collection and Research" effort, such as ridership and costs for existing circulator systems in Miami-Dade County.

B. Target Audience

An initial step in the development of the "Transit Circulator Survey" was the identification of the target audience. In order to provide Miami-Dade communities an opportunity to participate in this study and provide input, all incorporated areas in the County were targeted for the survey with the exception of Indian Creek Village and Islandia. These two communities were not targeted for the survey because their small population bases (less than 100 persons) and geography (island communities) preclude the feasible provision of fixed-route circulator services by the municipality. All other municipalities in Miami-Dade County were surveyed.

In addition, the survey was distributed to five communities in Broward County and one suburb of Chicago, Illinois (Downer's Grove). These communities were targeted for the survey to obtain perspectives outside Miami-Dade County and to obtain additional information on their existing

transit circulators beyond the data that was acquired during the "Data Collection and Research" effort.

A list of the targeted communities is provided in Table 2-1. A total of 35 communities were requested to participate.

Table 2 - 1: List of Communities Targeted for "Transit Circulator Survey"

Miami-Dade County Communities:

City of Aventura
Village of Bal Harbour
Town of Bay Harbor Islands
Village of Biscayne Park
City of Coral Gables
Village of El Portal
City of Florida City
Town of Golden Beach
City of Hialeah
City of Hialeah Gardens
City of Homestead
Village of Key Biscayne
Town of Medley
City of Miami
City of Miami Beach
Town of Miami Lakes
Village of Miami Shores
City of Miami Springs
City of North Bay Village
City of North Miami
City of North Miami Beach
City of Opa-Locka
Village of Pinecrest
City of South Miami
City of Sunny Isles Beach
Town of Surfside
City of Sweetwater
Village of Virginia Gardens
City of West Miami

Broward County Communities:

City of Fort Lauderdale
City of Margate
City of Miramar
City of Plantation
City of Sunrise

Communities Outside South Florida:

Village of Downer's Grove, Illinois

Based upon input from the Study Advisory Committee, a decision was made to target municipal staff in lieu of political representatives. The basis for this decision was that municipal staff would be more knowledgeable of the administration and operation of transit circulators.

City managers were targeted for the survey in communities without existing circulator services. In communities with existing circulator services, staff had previously been contacted during the study's "Data Collection and Research." These contacts were maintained as the appropriate targets for the survey.

C. Format

A draft survey instrument was initially prepared and submitted to the Study Advisory Committee for review and comment. The draft survey instrument contained many open-ended questions that the Study Advisory Committee believed would be difficult to answer. Therefore, the Study Advisory Committee recommended modifying – wherever possible – open-ended questions to multiple choice or true/false questions.

The Study Advisory Committee also recommended grouping the questions into two sections. Questions in the first section sought to identify the need for circulator services, while questions in the second section aimed to collect data on existing circulator services. All communities were asked to complete the first section of the survey, "Identification of Need for Service," while only communities that already have transit circulators were directed to answer the "Existing Circulator Service" section.

The survey was originally envisioned to be administered via e-mail, but it was determined that several contacts in the various communities do not have access to e-mail. However, fax numbers were identified for all the communities during the preparation of a contact list. Administering the survey via fax offered two key advantages over sending the survey through the regular postal service: (1) the surveys could be received rapidly (same-day); and (2) the ease of survey return via fax without the need of addressing an envelope and supplying postage.

An introduction to the study was included at the beginning of the survey instrument. The introduction included a definition of transit circulators, the objectives of the study, and the purpose of the survey. Also included in the introduction was an invitation to attend the October 10, 2001, Study Advisory Committee meeting to learn about the findings of the survey and provide further input. A copy of the survey instrument is provided in the Appendix.

III. SURVEY EXECUTION

The "Transit Circulator Survey" was faxed to the 35 communities listed in Table 2-1 on August 31, 2001. In the survey's introduction a deadline of September 14, 2001, was stipulated for the communities to respond; the deadline allowed the communities two full weeks to complete and return the survey. This timeframe was necessary to allow the study to proceed to its next task, "Data Analysis," on schedule.

Ten surveys were returned by the end of the first week after its distribution. Reminder phone calls were made to the communities that had not returned the surveys early in the second week after its distribution. These communities were encouraged to participate in the study by responding to the survey. Eight additional surveys were returned in advance of the deadline and four additional surveys were received after the deadline after further solicitation. Altogether 22 communities responded to the survey, which represents a 63 percent response rate.

Although more than half the communities responded to the survey, two events occurred during the second week after the survey's distribution that may have impacted the return from being even higher. These events included (1) the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, which resulted in the closing of many public buildings, and (2) heavy rain in South Florida along with the threat of Tropical Storm Gabrielle from September 12 through September 14, 2001.

A list of the communities that responded to the survey is provided in Table 2-2.

Table 2 - 2: List of Communities that Responded to "Transit Circulator Survey"

Miami-Dade County Communities:	Responded
City of Aventura	Yes
Village of Bal Harbour	Yes
Town of Bay Harbor Islands	Yes
Village of Biscayne Park	No
City of Coral Gables	Yes
Village of El Portal	Yes
City of Florida City	No
Town of Golden Beach	Yes
City of Hialeah	Yes
City of Hialeah Gardens	No
City of Homestead	Yes
Village of Key Biscayne	No
Town of Medley	Yes
City of Miami	Yes
City of Miami Beach	Yes
Town of Miami Lakes	Yes
Village of Miami Shores	No
City of Miami Springs	No
City of North Bay Village	Yes
City of North Miami	Yes
City of North Miami Beach	No
City of Opa-Locka	Yes
Village of Pinecrest	No
City of South Miami	Yes
City of Sunny Isles Beach	No
Town of Surfside	No
City of Sweetwater	Yes
Village of Virginia Gardens	No
City of West Miami	No

Broward County Communities:	Responded
City of Fort Lauderdale	Yes
City of Margate	Yes
City of Miramar	No
City of Plantation	Yes
City of Sunrise	Yes
Communities Outside South Florida:	
Village of Downer's Grove, Illinois	Yes

IV. SURVEY RESULTS

This section presents the data collected in the "Transit Circulator Survey." Of the 22 communities that responded to the survey, seventeen were located in Miami-Dade County, four were located in Broward County, and one was located in suburban Chicago, Illinois. Ten of these communities have existing circulator services, including six of the Miami-Dade communities.

The majority of the respondents answered most of the questions that were applicable for their communities. Questions A1 through B1 were applicable for communities without existing circulator services and Questions A1 through B11 were applicable for communities with existing circulator services. However, several questions received a low response rate. In particular, many respondents did not answer Question A6 (automobile ownership per household), which suggests that this data was not readily available.

A. Database

The data received in the surveys were entered into a *Microsoft Access* database. An input form was created that provided separate fields for the possible responses to the survey questions; the input form is included in the Appendix. The database was an effective tool for summarizing the responses to the survey questions, and the database provides capability to create tables and graphs for further data analysis.

B. Responses

The intent of questions A1 through A10 was to identify the need for circulator services, while the intent of questions B1 through B11 was to obtain data on existing circulator services, especially data that was difficult to obtain during this study's "Data Collection and Research" task. The data on existing circulator services will be used to develop standards and procedures for establishing circulator services in Miami-Dade County.

As mentioned previously, the survey was administered to municipal staff. Some of the responses to the survey questions represent the opinions and/or perceptions of the staff member that responded. The responses to the survey questions are summarized in the following sections.

1. Identification of Need for Service

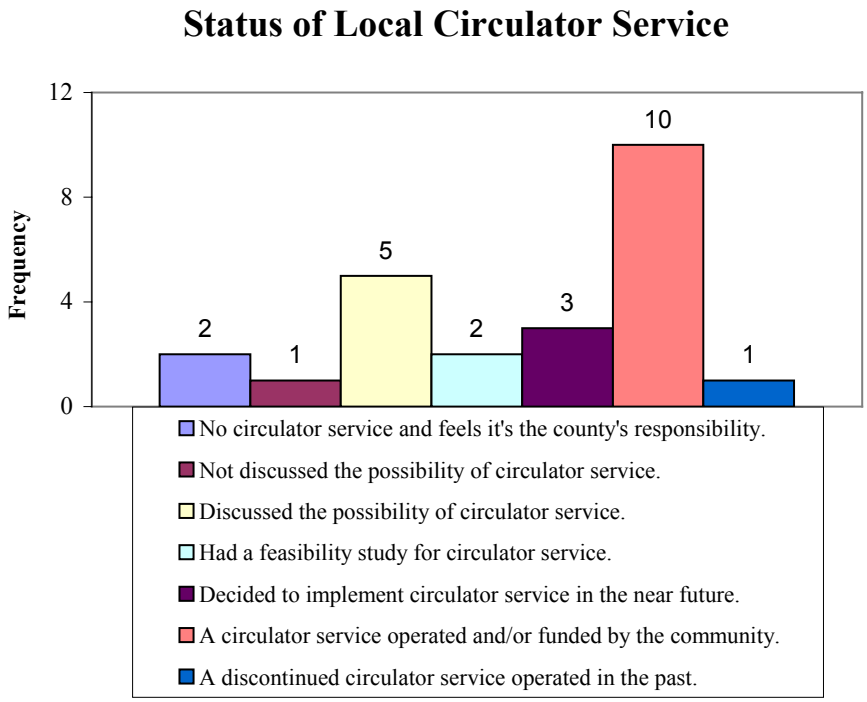
Eleven of the surveyed communities indicated that requests have been made for new circulator service or the expansion of existing service, which represents 64 percent of the communities that responded to the survey.

Request for New or Expansion of Existing Circulator Service

	# of Responses	% of Responses
Yes	14	64%
No	7	32%
Not Answered	1	4%

Residents made about 85 percent of the circulator service requests, while employees made 15 percent of the circulator service requests.

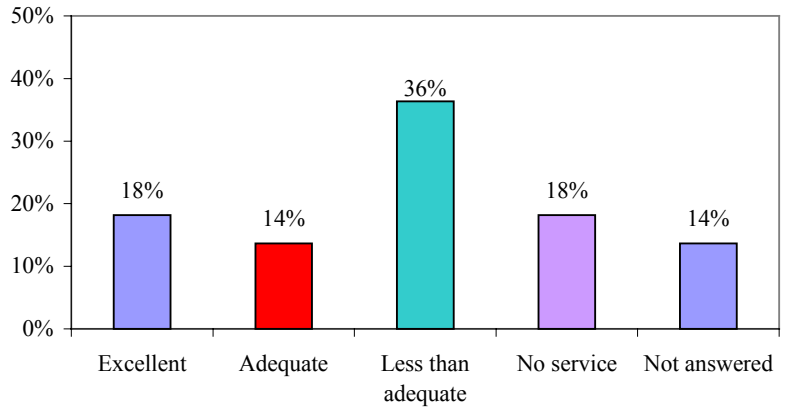
Nine of the communities that responded to the survey already have circulator service. Two more communities are on the verge of establishing circulator service, one community has had a feasibility study for circulator service, and four additional communities have discussed the possibility of implementing circulator service. Only three of the communities either have not discussed the possibility of circulator service or believe providing circulator service is the County's responsibility.



Potential budget constraints were cited most frequently by municipal staff as a concern of the municipality operating its own circulator service. The next most frequently cited concerns were municipal staff's lack of familiarity with operating transit service and the belief that circulator service should be contracted out to a private service provider.

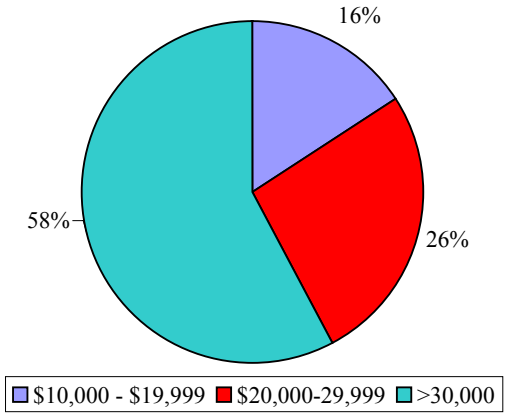
Only 32 percent of the municipal staff that responded to the survey believe their community is served at least adequately by existing transit routes, while 54 percent of the respondents believe their community is served less than adequate or not at all by existing transit routes.

Service by Existing Transit Routes



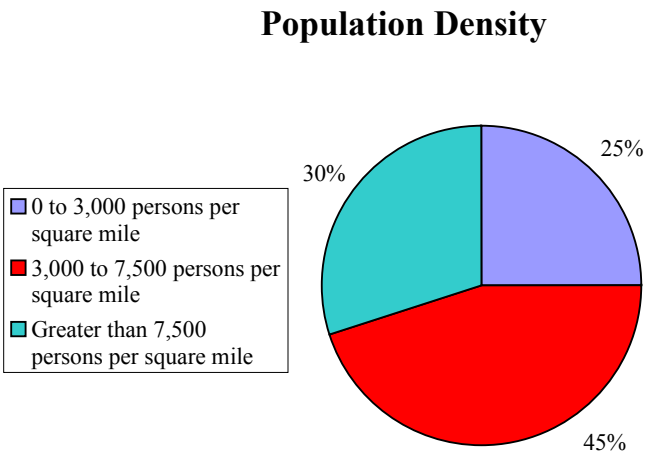
Median household income was greater than $30,000 in the majority of the communities that responded to the survey; median household income was below $20,000, which represents the poverty level for a typical household, in only 16 percent of these communities.

Median Household Income

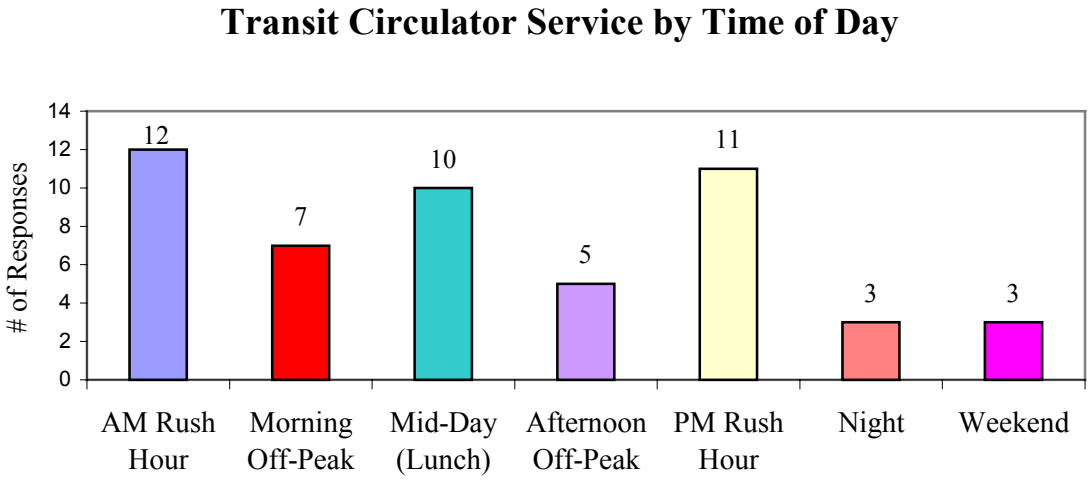


As mentioned previously, only a few survey respondents provided information on automobile ownership per household within their community. Additionally, the data received from some respondents does not appear accurate. For instance, one respondent indicated that 100 percent of the households in their community own two or more automobiles.

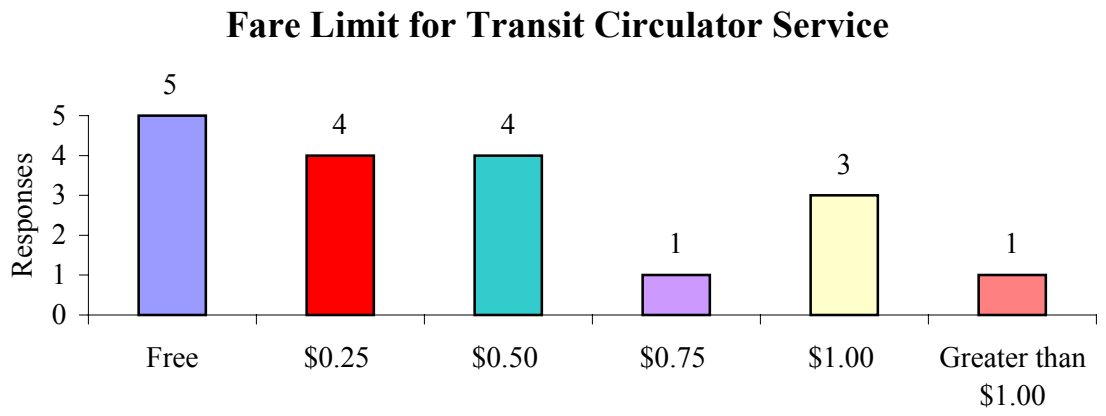
Population density was between 3,000 and 7,500 persons per square mile in 45 percent of the communities that provided this data. In 30 percent of the communities, the population density was less than 3,000 persons per square mile; in 25 percent of the communities; the population density was greater than 7,500 persons per square mile.



According to the staff of the communities that responded to the survey, transit circulator service would be most heavily used during the AM rush hour, mid-day (lunch-hour), and the PM rush hour. There would be less demand during the morning and afternoon off-peaks, and the least demand would be during nights and on weekends.



The majority of the municipal staff that responded to the survey believes that fares for transit circulator services should be $0.50 or less, and only one respondent felt fares should be more than $1.00.



However, 41 percent of the municipal staff that responded to the survey believe that users are willing to pay a higher fare for better circulator service.

Believe Users Are Willing To Pay Higher Fare for Better Service

	# of Responses	% of Responses
Yes	9	41%
No	9	41%
Not Answered	4	18%

2. Existing Circulator Service Data

Responses to Question B1 identified communities that already have community transit circulators or shuttle services. As mentioned previously, 10 of the 22 communities that responded to the survey presently provide circulator services for their residents. The communities that do not have existing circulator services were instructed not to proceed with the survey beyond Question B1. Questions B2 through B11 sought to obtain data on the existing circulator services; responses to these questions are summarized below.

Studies or surveys to assess rider satisfaction have been performed in four of the communities with existing circulator services. However, only one of these communities is located within Miami-Dade County.

According to the staff of the communities that responded to the survey, reactions to transit circulator services have been overwhelmingly positive within the communities.

Community Reaction to Existing Circulator Services

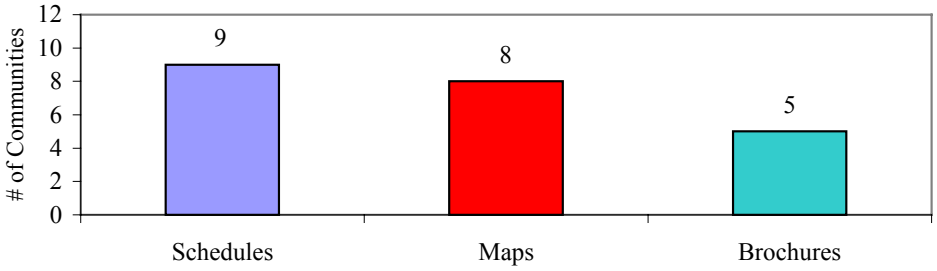
	# of Responses	% of Responses
Positive	8	89%
Negative	0	0%
Indifferent	1	11%

Total costs associated with providing circulator services varied widely across the communities. Primary factors that influence these costs include the number of routes, service span, and headway(s). Administrative costs are generally higher for communities with larger systems that provide coordination internally and are generally lower for communities that contract their service to a private transportation provider. Few communities allocate funds for marketing their circulator service, and communities that do allocate funds for marketing assign only a small budget in comparison to other costs.

Private transportation providers are contracted to operate the circulator service in four of communities that responded to the survey. The hourly rates are $36 per route in the two communities that provided cost information.

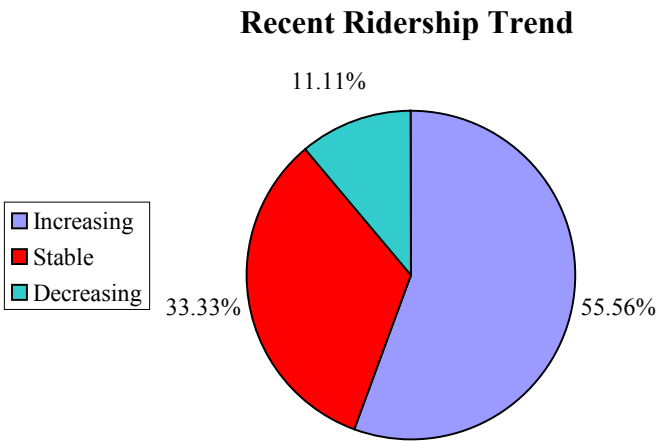
Schedules are available for riders in eight of the communities, maps are available in seven of the communities, and four of the communities have brochures for their circulators. The circulator route information is most often (70 percent of the time) available at city hall. Four of the ten communities provide circulator route information on their websites.

Information Available for Riders



Five of the communities use mailings to market their circulator services and two communities use the newspaper. None of the communities market their circulator services on television or the radio, which most likely is related to the costs associated with this more expensive form of media.

According to the perceptions of municipal staff that responded to the survey, ridership is increasing in five of the nine communities that provided a description of recent trends, while ridership is stable in three communities and is only decreasing in one community.



Five of the ten communities with existing circulators that responded to the survey fund their circulator services entirely locally from a combination of fare box revenue and internal funding sources. A variety of sources assist the other five communities in funding their circulator services including county funds, state funds, federal funds, on-board advertising revenues, bus bench and shelter advertising revenues, parking revenues, and concurrency mitigation funds.

Communities with existing circulator services were requested to provide route information including headway, span of service, route length, fares, ridership, and route description. The purpose of obtaining this information was to identify characteristics of existing transit circulator systems. These data were then analyzed to determine common traits of successful transit circulator systems in the next study task, "Data Analysis."

V. SUMMARY

This technical memorandum described the development and execution of the "Transit Circulator Survey." This survey was developed to identify communities in Miami-Dade County that are interested in establishing or expanding transit circulator services. Additionally, the survey was developed and administered to obtain data on existing transit circulators that was difficult to obtain during this study's "Data Collection and Research" task.

The survey was returned by 22 (63 percent) of the 35 communities that it was distributed to, including ten communities with existing transit circulators. The survey also found that several more communities either are in the process of establishing circulators or are at least interested in establishing circulators.

Various information was gathered on the transit circulator systems of the ten communities with existing circulators that responded to the survey. The reaction to the circulators has been overwhelmingly positive in these communities.

The information obtained in the survey was reviewed and analyzed in subsequent stages of the study, along with information that was acquired during the "Data Collection and Research" task. In particular, this information gathered in these two efforts was evaluated to identify common conditions and service attributes that characterize successful transit circulator systems. A list of development guidelines and standards for local transit circulator services were eventually result from these analyses.

APPENDIX

Miami-Dade Metropolitan Planning Organization

Local Municipal Transit Circulator Policy Study

Background

Recently, a number of communities in Miami-Dade County have expressed interest in establishing local transit circulator services to improve community mobility and provide connections to the regional transit system. These types of circulators serve local trips within a community and neighborhoods not typically served by the regional transit system.

In response to the interest in establishing these local transit circulators, the Miami-Dade MPO contracted Kimley-Horn and Associates, Inc. to conduct the "Local Municipal Transit Circulator Policy Study." The two primary objectives of this study are (1) to develop a set of guidelines and standards for establishing local transit circulator services; and (2) to develop measures of effectiveness (MOEs) for evaluating these services. This survey is a key part of this study. The survey will help identify communities that are interested in either establishing or expanding transit circulator services. A second purpose of the survey is to obtain data on existing transit circulators that will be used to develop procedures for establishing circulator serv*ices.*

Please contribute to this study's success by answering the survey questions and **faxing your completed survey to Kimley-Horn and Associates at 954-739-2247 by September 14, 2001.**

You may contact Greg Kyle, the project manager for Kimley-Horn and Associates, if you have any questions or concerns. Mr. Kyle can be reached at 954-739-2233 or at greg.kyle@kimley-horn.com

Survey results will be presented at a study advisory committee meeting on Wednesday, October 10, 2001, at the Stephen P. Clark Center, 111 NW 1st Street, 12th Floor Conference Room .You are welcome to attend this meeting to learn the findings of the survey and to provide further input.

Thank you for your contribution to this important project.

A. Identification of Need for Service

A1. Have requests for new circulator service or expansion of existing service been received by your municipality?

☐ Yes ☐ No

If yes, who has made these requests?

☐ Residents
☐ Employees
☐ Hospitals
☐ Shopping Centers
Other_____

A2. Has your municipality explored the possibility of providing a circulator service?

My municipality has...

☐ *No circulator service and feels it's the County's responsibility.*
☐ *Not discussed the possibility of circulator service.*
☐ *Discussed the possibility of circulator service.*
☐ *Had a feasibility study for circulator service.*
☐ *Decided to implement circulator service in the near future.*
☐ *A circulator service operated and/or funded by the community.*
☐ *A discontinued circulator service operated in the past.*

A3. What are your concerns with your municipality operating and/or funding its own circulator service?

☐ Potential municipal budget constraints.
☐ Staff not familiar with operating transit service.
☐ Believe service should be contracted out to a private service provider.
☐ Other_____

_____

_____

_____

A4. How well are the major activity and employment centers in your community served by existing transit routes?

- ☐ Excellent
- ☐ Adequate
- ☐ Less than adequate
- ☐ No service

A5. What is the annual median household income in your community ?

- ☐ < $10,000
- ☐ $10,000-19,9000
- ☐ $20,000-29,000
- ☐ > $30,000

A6. Automobile ownership per household:

_____% of the households in my community own 0 automobiles.
_____% of the households in my community own 1 automobile.
_____% of the households in my community own 2 or more automobiles.

A7. Check the box that describes the population density in your community.

- ☐ 0 to 3,000 persons per square mile
- ☐ 3,000 to 7,500 persons per square mile
- ☐ Greater than 7,500 persons per square mile

A8. Are there specific times of the day that transit circulator service would be most utilized in your community?

- ☐ AM rush hour
- ☐ Morning off-peak
- ☐ Mid-day (lunch)
- ☐ Afternoon off-peak
- ☐ PM rush hour
- ☐ Night
- ☐ Weekend

A9. Is there a general limit to how high fares should be for transit circulator service?

- ☐ Free
- ☐ $0.25
- ☐ $0.50
- ☐ $0.75
- ☐ $1.00
- ☐ Greater than $1.00

A10. Do you think people are willing to pay a higher fare for better service?

☐ Yes ☐ No

B. Existing Circulator Service

B1. Does your municipality already have community transit circulators or shuttle services?

☐ Yes ☐ No

If NO-do not complete the remainder of this survey. Thank you for your participation. Please fax your responses to: Kimley-Horn and Associates

Fax: (954) 739-2247

If yes, please continue answering the remaining survey questions.

B2. Have any studies or surveys been conducted to assess rider satisfaction?

☐ Yes ☐ No

If yes, please provide us with any results or summary statistics, or refer us to the appropriate sources to obtain the information.

_____
_____
_____
_____
_____

B3. What has been the reaction of residents to the transit circulator service provided in the community?

☐ Positive ☐ Negative

Other_____
_____

B4. Please provide an approximate breakdown of the costs associated with providing circulator services in your community.

Capital_____
Operating _____
Administrative_____
Marketing_____
Other_____
_____

B5. If your circulator service is contracted out to a private transportation provider, please provide the hourly rates that your municipality pays for each circulator route.

_____

_____

_____

B6. What types of information is currently available for riders and potential riders?

- ☐ Schedules
- ☐ Maps
- ☐ Brochures

Other_____

_____

B7. Where can riders obtain this passenger information?

- ☐ Website
- ☐ Library
- ☐ City Hall
- ☐ County

Other_____

_____

_____

B8. What types of resources are used in the community to market the circulator service?

- ☐ Newspaper
- ☐ T.V.
- ☐ Radio
- ☐ Mailings

Other_____

_____

B9. Which of the following best describes the recent trend in ridership?

- ☐ Increasing
- ☐ Stable
- ☐ Decreasing

Other_____

_____

B10. Please provide a breakdown of funding sources for the circulator services of your community.

_____

_____

_____

_____

B11. Please complete the following table for each of your municipality's transit circulator routes.

	Ist Route Route_____	2nd Route Route_____	3rd Route Route_____	4th Route Route_____	5th Route Route_____	6th Route Route_____
Headway (in minutes)						
Span of service (days and times)						
Route length (in miles)						
Fare						
Ridership (average daily ridership)						
Route description*						

* Examples: one-way loop, two-way loop, linear (out-and-back)

Thank you for your participation. Please fax your responses to: Kimley-Horn and Associates

Fax: (954) 739-2247

LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY

TECHNICAL MEMORANDUM # 3: DATA ANALYSIS

Prepared For:

Prepared By:

Kimley-Horn and Associates, Inc.

June 2002

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I. INTRODUCTION

In response to Miami-Dade County communities' interest in establishing or helping to fund local transit circulators and the lack of procedures for assessing the feasibility and planning for these services, the Miami-Dade Metropolitan Planning Organization (MPO) initiated the *Local Municipal Transit Circulator Policy Study*. This technical memorandum is the third in a series of reports documenting the work and findings of this study. The first technical memorandum summarized "Data Collection and Research" and the second technical memorandum presented the "Transit Circulator Survey." This technical memorandum discusses the findings of the "Data Analysis" portion of this study.

Data collected during both the "Data Collection and Research" and the "Transit Circulator Survey" was analyzed to identify common practices and operating environments, which may indicate conditions and service characteristics that may be required for establishing successful circulator services.

One additional technical memorandum was prepared for the final study task, "Development Guidelines and Standards for Local Transit Circulator Services." This technical memorandum appears as subsequent chapter of this report.

II. DATA ANALYSIS

A wealth of information was compiled in a transit circulator database during the "Data Collection and Research" portion of this study. This database includes socioeconomic characteristics, geographic characteristics, operational characteristics, system characteristics, funding sources, costs, and ridership information. Additional data obtained in the "Transit Circulator Survey" includes the identification of need for community circulator service and system information on existing community circulator systems.

A. Data Collection and Research Database

This subsection highlights important descriptive statistics and observations from the database compiled during the "Data Collection and Research" portion of this study, which was completed prior to the administering of the "Transit Circulator Survey." The transit circulator database includes information on nine Miami-Dade municipalities, eleven Broward County, Florida, municipalities, and three municipalities outside of South Florida. All these municipalities have existing circulator services.

The database is presented in two separate tables provided in the Appendix: Table A-1 summarizes data for transit circulators in Miami-Dade County and Table A-2 summarizes the data for transit circulators outside of Miami-Dade County. Note, the Miami circulator service, the "Brickell Circulator," is actually operated by Miami-Dade Transit - not the City of Miami. Also, Hialeah was included in the transit circulator database, although its circulator service is still just on the verge of implementation.

The population of the nine Miami-Dade County municipalities in the database ranges from 3,305 persons (Bal Harbour) to 362,470 persons (Miami). Populations are based on the 2000 U.S. Census. The mean population of these municipalities is 85,904 persons; however, the median population is only 25,267 persons. The large populations of Miami and Hialeah skew the mean, so the median population may be considered more typical of municipalities providing circulator service.

The population of Miami-Dade municipalities that have existing circulator service is generally smaller than the population of municipalities outside of Miami-Dade County that are in the study

database. The median population of these municipalities in Broward County is 72,739 persons, which is nearly three times the median population of the Miami-Dade municipalities. The median population of the municipalities outside of South Florida is 148,110 persons.

Based on a review of the database, a minimum service area population base of approximately 30,000 persons may be necessary to support full-scale community circulator services. Although circulator service may be provided for service areas with a smaller population base, the type of service provided in these communities is generally limited service geared toward a specific segment of the population, such as shuttle services serving shopping trips of the elderly.

The elderly population can provide a significant ridership base for community circulators. In particular, a large elderly population may indicate a high level of transit dependency, since a significant portion of the elderly population does not own vehicles. For this study, the elderly were defined as persons aged 65 or older. Of Miami-Dade County municipalities in the study database, the portion of the elderly citizens is 23.8 percent. In Broward County, this age cohort represents only 17.1 percent of the population for municipalities in the study database. Although a specific threshold is difficult to define for the percentage of the population that is elderly, a larger elderly population may be a general indicator of the need for circulator service.

Higher population densities provide more favorable conditions for transit. Population densities in the study database are higher for the Miami-Dade County municipalities than the Broward County municipalities and the municipalities outside of South Florida. However, the total population base must also be taken into consideration and the population of many of the Miami-Dade municipalities in the study database is smaller. Additionally, many Broward County municipalities operate successful circulators despite lower population densities. Based upon a review of the database, a minimum population density of approximately 3,000 persons per square mile may be necessary to support full-scale community circulator services. Fixed route circulator service in less densely populated communities may have difficulty attracting significant ridership.

The percentage of rental housing in a community may be another indicator of transit dependency. Typically, high levels of rental housing are associated with lower incomes and transit dependency. Although the percentage of rental housing is high for a number of the Miami-Dade municipalities in the database, the median household income is relatively high in these communities. The percentage of rental housing is not related to low incomes in these

communities, but is more closely related to the large number of retirees and seasonal residents. Additionally, a number of these retirees have migrated from urban environments with extensive transit systems and desire the level of mobility to which they are accustomed. However, a specific threshold for the percentage of rental housing is difficult to extract from the study database.

B. Transit Circulator Survey

This subsection highlights important descriptive statistics and observations from the information collected in the "Transit Circulator Survey." The survey was divided into two sections: "Identification of Need for Service" and "Existing Circulator Services." Municipalities that currently do not have circulator service only responded to the first part of the survey, "Identification of Need for Service." Municipalities with existing circulator service responded to both parts of the survey. A total of 22 surveys were returned, twelve by municipalities without existing circulator services and ten by municipalities that presently operate transit circulators.

1. Identification of Need for Service

In the "Identification of Need for Service" section of the survey, five of the eight communities with existing circulator service that responded to the survey indicated that their median household income is greater than $30,000, which was the highest median income value provided as a survey response. The provision of circulator services in these communities is counterintuitive, because typically low-income segments of the population are associated with transit dependency and the need for transit service. These findings may indicate that the provision of circulator service is more closely related to a municipality's wealth. Circulator service is more widespread in higher-income municipalities, because these municipalities have sufficient funds to subsidize the service.

The survey also sought information on automobile ownership per household. Low levels of automobile ownership are often an indicator of transit dependency. However, only a few of the returned surveys provided accurate data on automobile ownership and no specific thresholds could be drawn from the data.

All eight municipalities with existing circulator service that responded to the survey question regarding population density have population densities greater than 3,000 persons per square

mile. These results support the earlier findings from the "Data Collection and Research" portion of this study that a population density of 3,000 persons per square mile may be necessary to support full-scale community circulator services. The survey also provided information that five of the twelve municipalities without circulator services have population densities less than 3,000 persons per square mile. These results may indicate that these municipalities may have difficulty attracting significant ridership if they establish circulator services.

2. Existing Circulator Services

Ten surveys were returned by municipalities with existing circulator services; however, one of these surveys contained responses to only three of the survey questions. Therefore, extensive information was obtained on the existing circulator service in nine municipalities.

Information was obtained on the costs associated with operating circulator service to provide insight on the scale of investment for municipalities considering establishing these services. This represents particularly useful information, because several municipalities indicated municipal budget constraints are a concern for their municipality potentially operating and/or funding its own circulator.

According to the survey responses, annual operating costs for municipal circulators range from $16,000 (North Bay Village) to over $2,000,000 (Miami Beach). Excluding the operating costs of these two municipalities, whose level of service and costs are outliers in comparison to the other municipalities, the average annual operating costs for circulator service are approximately $354,000. Three of the municipalities (Aventura, Bay Harbor Islands, and Fort Lauderdale) contract their circulator service to a private transportation provider. Average hourly costs in these municipalities are approximately $36 per route.

Additionally, the survey found average annual administrative costs for circulator service are approximately $85,000 per year. Also, three of the municipalities (Downer's Grove, Fort Lauderdale, and Miami Beach) allocate funds for marketing. Average marketing costs in these communities are approximately $20,000.

The level of transit service may have a major impact on the transit circulators' success in attracting ridership. In terms of service characteristics, the average headway for the circulator

routes in the communities that responded to the survey was approximately one hour. Another important service characteristic is the hours of operation, which influences the type of trips the circulator service can accommodate. Most of the circulators have limited hours of operation that do not extend into the evening. Therefore, these circulators may not be capable of serving many commute trips.

3. Comparison of Results for Communities with/without Circulator Service

Survey results were compared for communities with and without existing circulator service to determine if any meaningful similarities and/or differences exist between these communities. The findings are presented below in Table 3-1.

Table 3 - 1: Analysis of Municipalities with/without Circulator Service

	Percentage with Annual Median Household Income > $30,000	Percentage of Households with less than 2 Automobiles*	Percentage with Population Density > 3,000 (persons per square mile)
Existing Municipal Circulator Service	62.5%	77.5%	100.0%
No Existing Municipal Circulator Service	54.5%	48.3%	58.3%

* This data should be interpreted with caution due to small sample size.

The analysis found that annual median household income is generally higher in the municipalities with circulator services. As previously mentioned, this finding may demonstrate that wealthier municipalities more often have funds available to subsidize the service. Although only a limited amount of data was complied on automobile ownership, this data indicates that circulator service is more widespread in municipalities with lower levels of automobile ownership. This data indicates that transit service may be more vital for communities with lower levels of automobile ownership, which may indicate greater levels of transit dependency. Population density is generally higher in municipalities with existing circulator service. This finding supports earlier findings that population density is positively correlated to the demand for transit services.

III. TYPES OF TRANSIT CIRCULATOR SERVICES

As the data on existing transit circulators was compiled and reviewed, four unique types of circulator routes were identified that exhibit unique service and operational characteristics. These four types of transit circulator routes are downtown circulators, neighborhood circulators, park-ride and feeder circulators, and shopping-based/"life-line" circulators.

The type of transit circulator route is dictated by a community's transit needs, which are specified by the community's socioeconomic and geographical characteristics. Downtown circulator routes are often offered in high employment areas. Neighborhood circulators are often located in suburban municipalities with lower population densities. Park-ride and feeder circulator routes serve peak period commuter needs. Shopping-based/"life-line" circulators typically operate in municipalities that have high proportions of elderly citizens.

A. Downtown Circulator Routes

Downtown circulators serve trips within a community's central business district (CBD). These trips are not usually home-based trips, but are more typically trips from remote parking lots, trips within the CBD during the business day, or trips serving nighttime recreational activities. Downtown circulators serve high-density areas that are often large employment centers. Examples of downtown circulators examined in this study include the "Electrowave" in Miami Beach, the "TMAX Downtown-Courthouse Loop" in Fort Lauderdale, and the "Lymmo" in Orlando.

B. Neighborhood Circulator Routes

Neighborhood circulators typically operate in suburban communities of at least 30,000 persons. These services often utilize local streets instead of major arterials and serve neighborhoods not served by the regional transit system. Neighborhood circulators sometimes share stops with the regional transit system, thus providing a connection to the regional transit system. Neighborhood circulators may serve diverse trip purposes including commuting, shopping, and recreation. Examples of neighborhood circulator routes examined in this study include Miami's Brickell Shuttle, the "TMAX Northwest Circulator" in Fort Lauderdale, and the Margate "Inner-City Transit" routes.

C. Park-Ride and Feeder Circulator Routes

Park-ride and feeder circulator routes typically provide a connection to a final destination or a link between different modes of travel. These routes may operate between a park-ride lot and a downtown employment center or may function as a feeder service for other transportation modes, such as commuter rail. Although not always the case, these services often operate only during the peak hours. Fares for park-ride and feeder routes are sometimes higher than fares charged for downtown or neighborhood circulators. This may result from the focus of this service, which is to serve one specific function. Examples of the park-ride and feeder circulator routes examined in this study include the "TMAX Park-Ride Bus" in Fort Lauderdale, "Tri-Rail Feeder" bus routes, and the service in Downers Grove, Illinois, which operates between residential neighborhoods and a commuter rail station.

D. Shopping-Based/"Lifeline" Circulators

Shopping-based/"lifeline" circulators tend to operate in areas with elderly populations that depend on transit for basic transportation services for purposes like shopping and medical trips. These circulators often stop at condominium complexes inhabited by senior citizens and at senior community centers. The routes often connect to popular shopping destinations such as malls and also to essential shopping destinations such as grocery stores or post offices. These circulator routes are common in small densely populated municipalities with large proportions of senior citizens. Examples of shopping-based/lifeline circulator routes examined in this study include the North Bay Village and Bay Harbor Islands circulator routes.

E. Comparison of Circulator Route Types

Downtown circulator routes and park-ride and feeder circulator routes are identifiable by operational characteristics, such as headways and route structure. Distinguishing between neighborhood circulators and shopping-based/"lifeline" circulators is not always as clear. However, neighborhood circulator routes typically operate in larger suburban communities with populations greater than 30,000 persons. On the other hand, shopping-based/"lifeline" circulator routes typically operate in smaller communities with larger proportions of elderly citizens.

Table 3-2 presents information collected in the "Data Collection and Research" and "Transit Circulator Survey" for the different types of circulator routes. Several municipalities contribute to more than one route category, because these municipalities have multiple circulator routes that exhibit different characteristics.

Table 3 - 2: Average Service Characteristics by Circulator Route Types

	Daily Span of Service (hours)	Headway (minutes)	Route Length (miles)	Daily Ridership	Ridership per Revenue Hour
Downtown Circulators	14	16	4	1,005	25
Neighborhood Circulators	9	53	10	112	15
Park-Ride and Feeder Circulators	7	50	10	156	29
Shopping-Based/ "Lifeline" Circulators	7	68	Not Available	44	6

As shown in Table 3-2, downtown circulator routes tend to operate for longer hours than the other types of circulator routes. Downtown circulator routes also offer more frequent service (shorter headways) than the other types of circulator routes, and their route lengths are usually much shorter. Daily ridership is highest for the downtown circulator routes, although ridership per revenue hour is similar for park-ride and feeder circulator routes.

The hours of operation are typically shorter for neighborhood circulator routes than for downtown circulator routes. However, the hours of operation for many neighborhood circulator routes are long enough to serve commuters in both the AM and PM peak periods. Neighborhood circulator routes typically have longer route lengths than downtown circulator routes. Headways tend to be longer for neighborhood circulator routes than for downtown circulator routes, but neighborhood circulator routes often provide shorter headways than shopping-based/"lifeline" circulator routes. Ridership is much lower for neighborhood circulator routes than for downtown circulator routes, but ridership on neighborhood circulator routes typically exceeds ridership on shopping-based/"lifeline" circulator routes.

The hours of operation are typically more limited for park-ride and feeder circulator routes than for downtown and neighborhood circulator routes. Headways are typically less frequent for park-

ride and feeder circulator routes than for downtown circulator routes; however, park-ride and feeder circulator routes usually offer shorter headways than neighborhood and shopping-based/"lifeline" circulator routes. Park-ride and feeder circulator routes are typically the most efficient of the circulator routes measured in terms of passengers per revenue hour. Ridership per revenue hour is typically even higher on park-ride and feeder circulator routes than on downtown circulator routes.

Shopping-based/"lifeline" circulator routes typically offer the shortest hours of operation and least frequent service (longest headways) of the circulator route types. In fact, shopping-based/"lifeline" circulator routes sometimes operate just once per day. Shopping-based/"lifeline" circulator routes tend to have lower ridership than the other types of circulator routes. However, these circulator routes often perform a vital function in many communities by serving transit dependent segments of the population.

IV. CHARACTERISTICS OF SUCCESSFUL TRANSIT CIRCULATORS

As mentioned previously, some municipalities may view circulator services as serving an essential transportation function by providing mobility for the transit dependent. Statistics such as ridership and cost recovery are not vital to the goals these communities set for their circulator service. Nevertheless, some circulator systems achieve very successful results in terms of ridership. This section identifies common traits for communities that have attracted significant ridership on their circulator systems.

Based on the findings of the "Data Collection and Research" and the responses to the "Transit Circulator Survey," Miami Beach; Fort Lauderdale; Margate; Sunrise; and Downers Grove, Illinois; were identified as relatively successful in attracting ridership for their circulator services. These municipalities represent a diverse cross-section of communities in terms of both population size and population density.

Diversity also exists in the types of circulator services offered by these municipalities. Fort Lauderdale has a dense central business district that is surrounded by residential neighborhoods. In order to serve the diverse transportation needs of its community, the Downtown Fort Lauderdale Transportation Management Association (DFLTMA) operates several types of circulator routes including a downtown circulator, neighborhood circulators, and a park-ride circulator route.

Margate is a relatively large suburban Broward County municipality in terms of land area and population. The City provides four neighborhood circulator routes for its citizens. These routes provide access to numerous destinations within the community and also provide connections to regional transit services.

A. Service Attributes and Population

Table 3-3 summarizes service attributes and socioeconomic characteristics for the circulator systems in the study database that are the most successful in attracting ridership. In particular, Table 3-3 identifies the type of circulator service, ridership data, population, and population density.

Table 3 - 3: Service Attributes and Population for Successful Transit Circulator Systems

	Route Type	Average Passengers/ Revenue Hour	Population	Population Density (per square mile)
Miami Beach	Downtown Circulator	25	87,933	> 7,500
Fort Lauderdale	Various Route Types	23	152,397	> 7,500
Margate	Neighborhood Circulator	12	53,909	3,000 - 7,500
Sunrise	Neighborhood Circulator	8	85,779	3,000 - 7,500
Downers Grove	Park-Ride/Feeder Route	32	148,110	3,000 - 7,500

All the route types identified in this study are represented in Table 3-3 with the exception of the shopping-based/lifeline circulators. Both Miami Beach and Fort Lauderdale operate downtown circulator routes. Fort Lauderdale, Margate, and Sunrise offer neighborhood circulator routes, and Fort Lauderdale and Downer's Grove operate park-ride and feeder circulator routes.

In terms of ridership, the Downer's Grove feeder routes attract the most passengers per revenue hour. Downer's Grove success is attributable to the focus of its service, as its routes operate for a shorter span (AM and PM peak commute periods) and serve a specific function (feeder service to commuter rail line). The downtown circulators operated in Miami Beach and Fort Lauderdale attract similar ridership. The neighborhood circulator routes achieve lower ridership results per revenue hour when compared to the other route types, because these routes serve less densely populated communities.

All of the municipalities included in Table 3-3 have populations greater than 50,000 persons and population densities greater than 3,000 persons per square mile. This supports earlier findings that a minimum population base for the service area and population density are necessary to attract significant ridership.

B. Costs and Funding Sources

Key factors to consider before establishing municipal circulator service are the associated costs and potential funding sources. The successful transit circulator systems were examined to obtain information on the scale of investment required to provide the type of circulator service that is likely to attract significant ridership. Several of the successful circulator systems have been successful in obtaining funding from several sources. Table 3-4 presents total annual costs associated with the successful transit circulator systems and also lists the funding sources for these systems.

Table 3 - 4: Costs and Funding Sources for Successful Transit Circulator Systems

	Number of Routes	Total Annual Costs	Funding Sources
Miami Beach	2	$2,160,000	City, FDOT, CMAQ, Advertising, Fares
Fort Lauderdale	7	$650,000	City, County, FDOT, DDA, Tri-Rail
Margate	4	$406,700	City, County, Advertising, Fares
Sunrise	6	$310,000	City, Fares
Downers Grove	3	$500,000	Village, Charter Revenues, Grant, Fares

As shown in Table 3-4, Miami Beach's "Electrowave" circulator service is the most costly circulator service. However, the "Electrowave" provides the highest level of service with short headways (10 minutes) and broad hours of operation extending from 8:00 AM to 2:00 AM on weekdays and from 8:00 AM to 4:00 AM on weekends. The "Electrowave" is funded through several sources including City of Miami Beach parking earnings, the Florida Department of Transportation (FDOT), Congestion Mitigation Air Quality (CMAQ) funds, fare box revenue, and on-board advertising revenue.

The Fort Lauderdale circulator routes are partially funded by the Broward County Transit (BCT) Community Bus Program. This program provides $20,000 annually per route with a requirement that the route operates a minimum of 40 hours per week. The DFLTMA also secures funds from

FDOT, the Fort Lauderdale Downtown Development Authority (DDA), and the Tri-County Commuter Rail Authority (Tri-Rail). The Fort Lauderdale routes are the only routes included in Table 3-4 for which no fare is charged, although staff is considering implementing a fare in the future.

The City of Margate also receives funding through its participation in the BCT Community Bus Program. Other sources of funding include City general funds, advertising, and fare box revenue. Margate recovers approximately 10 percent of the cost for the "Margate Inner-City Transit" service through the collection of fares.

The City of Sunrise does not participate in the BCT Community Bus Program. The City's circulator routes generally operate from 8:00 AM to 3:00 PM on weekdays, which does not satisfy the program's weekly minimum service requirement of 40 hours per route. Sunrise funds its circulator system entirely from its general fund and fare box revenue. Sunrise recovers approximately 9 percent of its operating costs through the collection of fares.

All the successful circulator systems with the exception of Sunrise receive funding from external sources. This finding is significant because it demonstrates that municipalities usually must secure outside sources of funds in order to offset the costs associated with providing the type of circulator service that will attract significant ridership.

V. SUMMARY

This technical memorandum described the results of the "Data Analysis" portion of this study. Data that was collected during the "Data Collection and Research" and the "Transit Circulator Survey" were analyzed to identify common traits of successful transit circulator systems. The purpose of the analysis was to determine conditions and service characteristics that may be necessary for establishing circulator service.

Analysis of the database compiled during the "Data Collection and Research" portion of this study resulted in several significant findings. In particular, a population base for the service area of approximately 30,000 persons, along with a minimum population density of approximately 3,000 persons per square mile, may be necessary to support full-scale community circulator services. Although circulator service may be provided in communities that do not satisfy these criteria, the service may have difficulty attracting ridership. However, the circulator service in the communities that do not satisfy these criteria may be viewed as an essential transportation function that provides mobility to the transit dependent.

A review of the information obtained in the "Transit Circulator Survey" supported the findings of the analysis of the "Data Collection and Research" database in terms of population base and density requirements. Also noteworthy, was the finding that circulator service is most often provided in wealthier communities. Circulator service may be more widespread in these communities, because these communities can afford to subsidize the service.

Four unique types of circulator routes were identified that exhibit unique service and operational characteristics. These four types of transit circulator routes are downtown circulators, neighborhood circulators, park-ride and feeder circulators, and shopping-based/"lifeline" circulators.

Based upon the findings of the "Data Collection and Research" and the responses to the "Transit Circulator Survey," Miami Beach; Fort Lauderdale; Margate; Sunrise; and Downers Grove, Illinois; were identified as relatively successful in attracting ridership for their circulator services. All of these municipalities have populations greater than 50,000 persons and population densities greater than 3,000 persons per square mile, which supports the minimum service area population base and density findings. With the exception of Sunrise all of these municipalities receive

funding from external sources. This finding is significant because it demonstrates that municipalities usually must secure outside sources of funds in order to offset the costs associated with providing the type of circulator service that will attract significant ridership.

The next step in this study was to build upon the findings of the "Data Analysis" to develop a set of general guidelines and procedures for establishing local transit circulator services. The guidelines included recommendations in terms of the physical environment and service characteristics. The guidelines also addressed such issues as costs and funding sources. Finally, a process and schedule was developed to evaluate the effectiveness of transit circulator routes. This information is presented in the subsequent technical memorandum.

APPENDIX

TABLE A-1
LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY
Transit Circulator Data for Miami-Dade County Communities

	Socioeconomic Characteristics					Geographic Characteristics		Operational Characteristics					System Characteristics	Funding	Results	
Community/ Municipality	Population	% Population > 65 Years	% of Rental Housing	Population Density	Median Household Income	Area Types Served	Activity Centers Served	Number of Routes	Hours of Operation	Headways	Fares	Types of Vehicles	Links to Regional Transportation System	Funding Sources	Ridership	Costs
Aventura	25,267	35.2%	28.3%	7,896	$32,316	Retail, Residential	Aventura Mall, Promenade Shoppes, A. Hospital and Medical Center, Publi	3	Mon - Sat 8:30 - 5:30	60'	Free	20-seat Mini-bus	MDTA, BCT, City of North Miami Beach, private service	City of Aventura general fund	250 /day	$36/hr
Bal Harbour	3,305	37.5%	49.9%	11,017	$39,773	Grocery, Residential	Grocery store in Bal Harbour, Shops	1	MWF 9:00 AM-1:00 PM	60'	Free	15-seat	MDTA	Village of Bal Harbour	Unknown	$44.50/hr
Brickell (part of Miami)	part of Miami	part of Miami	part of Miami	part of Miami	part of Miami	Employment, Residential	Office buildings	1	M-Sat 6:30 AM-6:30 PM	15'	$0.25	26-seat Mini-bus	MDTA: Metrorail, Metrobus, and Metromover	Job Access & Reverse Commuting Funds	100 to 200/day	
Hialeah	226,419	16.6%	49.3%	11,321	$23,443	Retail, Residential, Employment	Parks, Shopping Centers, Government Centers, Industrial Parks	2	M-F 6:00 AM-9:00 PM, Sat Sun 9:00 AM-5:00 PM	30'	MDTA fare structure	24-seat Bluebirds	MDTA: Metrorail and Metrobus; Tri-Rai	City		under negotiations
Miami Beach	87,933	19.2%	63.4%	11,724	$15,312	Tourist, Retail, Residential	South Beach, Art Deco Historical Area, Lincoln Road Mal	2	M-W 8:00 AM-2:00 AM, Th Sat 8:00 AM-4:00 AM, Sun 10:00 AM-2:00 AM	10' to 15'	$0.25	Alternative Fue	MDTA	City of Miami Bch., FDOT, MPO FTA	3.5 million in 3 years	
North Bay Village	6,733	12.1%	70.9%	22,443	$25,165	Retail, Residential	Publix and Aventura Mal	2	MWTh 9:00 Friday to Aventura Mal	once daily	free to Publix, $1 to mall		MDTA passes through	City	4 to 6/day	
North Miami Beach	40,786	11.3%	38.2%	12,746	$24,963	Retail, Residential	163 St Shopping Center, Publix, Library, K-Mart, Condos	2	Mon - Fri 8:30 AM - 4:30 PM	90'	Free	15-seat E350 Van	MDTA and BCT	Federal, State, County grants, and City funds	"low"	
Sunny Isles Beach	15,315	32.2%	41.8%	5,672	$22,116	Retail, Residential	Shopping Center, Beaches	1	8AM - 4PM 6 days/week	30'	Free	15 and 25-seat	MDTA	City	Unknown	
Surfside	4,909	25.9%	30.0%	5,454	$32,349	Retail, Residential	Shopping Center, Beaches	1	8AM - 3:30PM weekdays only	30'	Free	30-seat	MDTA	City of Surfside	Unknown	

TABLE A-2
LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY
Transit Circulator Data for Communities Outside Miami-Dade County

	Socioeconomic Characterisitics					Geographic Characteristics		Operational Characteristics					System Characteristics	Funding	Results	
Community/ Municipality	Population	% Population > 65 Years	% of Rental Housing	Population Density	Median Household Income	Area Types Served	Activity Centers Served	Number of Routes	Hours of Operation	Headways	Fares	Types of Vehicles	Links to Regional Transportation System	Funding Sources	Ridership	Costs
Coconut Creek	43,566	26.5%	24.5%	3755.7	$33,191	Retail, Residential	Shopping Centers, Library, Schools, Margate Terminal	1	M-F 8:15 AM-4:00 PM	90'	Free	Mini-bus	BCT, Margate system	County provides buses, CMAQ, FDOT matching funds, City	19,700 in FY 2000	$100,000 annual. budget, $50,000-$70,000 per year to operate one bus; $20,000 from BCT
Cooper City	27,939	6.7%	7.8%	3991.3	$49,750	Retail, Residential	Shopping Centers	1	M-Sat 8:30 AM-4:45 PM	45'	Free	Mini-bus	BCT, Davie	County = $20,000/yr; City Health and Social Service funds	10,886 in FY 2000	$47,000 per year including maintenance, operating, and labor; $20,000 from BCT
Davie	75,720	9.4%	23.5%	2194.8	$36,843	Retail, Residential, Employment	Shopping Center, Govt. Centers, Library, College, Recreation	2	M-F 7:00 AM-7:00 PM	45'	Free	16-passenger Mini-bus	BCT, Cooper City	County gives $20/hr; remainder from Town's general funds	22,526 in FY 2000	$28/hour per bus, bus given by BCT and operated by A+ Transportation
Fort Lauderdale	152,397	15.3%	44.6%	4807.5	$27,239	Retail, Employment	Central Transit Terminal, Office Buildings, Tri-Rail, Park-Ride, Beaches	7	various	10', 30', 40', 45', 60'	Free	Mini-bus	BCT, Tri-Rail	County, City, Tri-Rail	250,069 in 2000 for all	2 routes @ $37/hr and 4 routes @ $35.50/hr (operated by Laidlaw)
Lauderdale Lakes	31,705	17.9%	37.8%	9907.8	$20,731	Retail, Residential, Employment	Shopping Center, Med. Ctr., Nursing Home, Recreation	1	M-F 6:30 AM-6:30 PM	45'	Free	18-seat	BCT	County gives $20/hr, City		$28/hour for one route, BCT bus operated by A+ Transportation
Margate	53,909	21.7%	19.9%	5859.7	$28,465	Retail, Residential, Employment	Shopping, Recreation, Med. Buildings, Casino, Margate Terminal	4	M-Sat 7:15 AM-7:00 PM	60'	$0.25	25-seat Bluebird	BCT, Coconut Creek system	County gives $20,000/yr/bus; City general fund	179,012 in FY 2000	$400,000: $230,000 = personnel; $45,000 = maint.; $45,000 = fuel; also overhead, uniforms,
Miramar	72,739	6.3%	19.9%	2346.4	$35,794	Retail, Residential, Employment	Shopping Center, Civic Center, Hospital, Senior Center	2	M-F 7:00 AM-7:00 PM	60'	$0.25	E350 and E450 16 seats + 2 wc	BCT, Pembroke Pines system	County gives $20,000/yr/bus; Fares, Gas Tax allocation, City	30,017 in FY 2000	approximately $80,000 per route per year including personnel, maintenance, fuel
Pembroke Pines	137,427	15.2%	19.8%	3926.5	$36,431	Retail, Residential, Employment	Shopping Center, Medical Building	2	M-Sat 7:00 AM-7:55 PM	45'	$0.50	Mini-bus	BCT, Miramar system	County = $20,000 per bus, City, fares = $1600	29,294 in FY 2000	costs = $195,360 in 2000; new bus = $55,000
Plantation	82,934	13.1%	28.3%	3804.3	$41,832		This service is on the verge of implementation	1	M-F 8:00 AM-8:00 PM Sat 8:00 AM-6:00 PM	20' to 40'	Free	20 to 25-seat	BCT	County = $350,000; City funds from County Transit Tax		
Sunrise	85,779	17.7%	26.2%	3899	$31,540	Retail, Residential	Shopping Center, Medical Building	6	M-F 8:15 AM-2:40 PM	45' to 60'	$0.25	24-seat Bluebird Transhuttles	BCT (NOT part of the BCT community shuttle)	City	75,000 Oct '99-Sep '00	personnel + operating + maintenance about $200,000/yr; capital = $110,000 per bus
Tamarac	55,588	37.8%	20.1%	4632.3	$26,703	Retail, Residential	Shopping Center, Movie Theater, Hospital, Community Center, Library	3	M-F 9:00 AM-5:00 PM	45'	$0.25	Mini-bus	BCT (also offers door-to-door service)	County = $20,000/year/bus; remainder from City = $125,000	3,788 in FY 2000	$180,000/year for 3 routes; non-BCT shuttle that goes outside the City = $70,000
Orlando Orange County	185,951 896,344	11.3% 10.0%	59.2% 39.3%		$26,119 $30,252	Employment	Employment Centers, Parking Garage (Terminus of Lymmo)	1	M-Th 6:00 AM-10:00 PM; F 6:00 AM-12:00 AM; Sat 10:00 AM-12:00 AM; Sun 10:00 AM-10:00 PM	5' (peak)	Free	Large	no connections with other Lynx routes	Central Florida Regional Transit Authority	91,485/ month	$21,000,000 = capital costs $1,200,000 = operating costs
Downers Grove, Illinois	148,110	12.3%	21.7%			Residential, Train Station	Residential Areas and Main Street Burlington Northern Train Station	3	Mon - Fri 6AM - 8AM 4:30PM - 7PM	40'	$1.25; 12 rides = $12; or monthly pass = $30	47-seat bus	commuter train to Chicago	Intergovernmental Revenues, Fares, Interest, Other Financial Sources	218/day; 208/day; 52/day	operating expenses = $267,083; capital expenses = $123,425; other financecosts = $208,883; TOTAL = $599,391
Niles, Illinois	102,638	21.7%	19.0%			Residential, Retail	Malls, Shopping Centers, Library, Schools, YMCA	3	M-F 8:30AM - 6:30PM SaSu 11:30AM - 6:30PM	45'	Free	Mini-bus			200/day; 60/day	

LOCAL MUNICIPAL TRANSIT CIRCULATOR POLICY STUDY

TECHNICAL MEMORANDUM # 4: DEVELOPMENT GUIDELINES AND STANDARDS FOR LOCAL TRANSIT CIRCULATOR SERVICES

Prepared For:

MIAMI-DADE MPO

Prepared By:

Kimley-Horn and Associates, Inc.

June 2002

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I. INTRODUCTION

In response to a recent surge of interest by Miami-Dade County communities in establishing and funding local transit circulators, the Miami-Dade Metropolitan Planning Organization (MPO) initiated the *Local Municipal Transit Circulator Policy Study*. This technical memorandum is the fourth in a series of reports documenting the work and findings of the study. The technical memoranda are summarized below.

(1) The first technical memorandum summarized a review of past studies and the development of a transit circulator information database.

(2) The second technical memorandum presented the design, execution, and results of a transit circulator survey.

(3) The third technical memorandum summarized an analysis of the transit circulator database and survey results.

(4) This final technical memorandum discusses the approaches to standardizing initiation of state- and county-facilitated municipal transit circulator services and recommends a process for monitoring the circulator services after implementation.

Data collected during the study were analyzed to identify conditions and service characteristics that are common traits of successful transit circulator systems. The data were further evaluated to determine what conditions and service characteristics may be necessary for implementing a transit circulator service. Additional policy and legal issues were considered including municipal and county policy, legal issues, and potential impacts of circulator service.

II. POLICY CONSIDERATIONS AND LEGAL ISSUES

General policy and legal issues associated with the implementation of municipal transit circulator services are presented in this section. The objective of this section is to provide guidelines on a number of factors that must be addressed when establishing circulator services. These guidelines are broad in nature and apply to all potential municipal circulator services, regardless of the type of service being considered or location. Factors considered include:

- Role of municipal circulator services
- Interlocal agreement
- Risk management
- Federal/state regulations
- Section 13(c) labor protection
- Americans with Disabilities Act

Countywide policies should be established addressing these factors as they apply to transit circulator services.

A. Role of Municipal Circulator Services

The Miami-Dade County Code of Ordinances grants the County jurisdiction over virtually all transportation services within its boundaries. The County operates Miami-Dade Transit (MDT), which is the sixteenth largest public transit agency in the United States. MDT provides mobility and accessibility on a countywide basis. Because of limitations, providing transit service for shorter trips within individual municipalities is not always possible.

The roles of MDT and municipalities relating to transit service must be established to improve operational efficiency and the ability to move people in Miami-Dade County. Municipal transit routes should ideally serve mainly local trips by providing access to popular destinations either within the borders or within a short distance of the municipality. Municipal circulator routes would most efficiently serve local neighborhoods that have no or only partial access to MDT routes. MDT routes should continue to travel primarily along major thoroughfares and focus on urban corridor, urban area-wide, and regional transportation needs.

B. Interlocal Agreement

Because the County has jurisdiction for virtually all transportation services, an interlocal agreement must be established between the County and any municipality intending to either establish or contract to an alternative service provider operations for local circulator services. The interlocal agreement should address the following issues:

- Reasons for implementing the municipal circulator service
- Description of the transit services the municipality will provide
- General requirements that the municipality must adhere to
- Description of any financial assistance provided by the County
- Insurance/indemnification for liabilities associated with circulator services
- Any other relevant issues between the County and the municipality

Broward County Model

In Broward County, Florida, a partnership has been developed between the County and municipalities to provide local circulator services that complement the services provided by the County transit agency, BCT. The Broward County "Community Bus Program" supplies municipalities vehicles or a capital allowance, administrative support, operator training, route and scheduling assistance, bus-stop signs, and operating funds of $20 per revenue hour. The municipality must satisfy minimum operating thresholds including (1) maintaining at least 40 service hours weekly per vehicle, (2) obtaining a ridership requirement of five passengers per revenue hour, and (3) not charging a fare above $0.25.

The "Community Bus Program" has been very successful in Broward County since its implementation in the early 1990s and the program continues to expand. Currently, fifteen municipalities have entered into the partnership and three other municipalities are in the process of implementing services. Miami-Dade County should consider establishing a similar partnership with municipalities who demonstrate significant local support for circulator services.

C. Risk Management

Municipalities are self-insured governmental entities as required by Florida State Statute 768.28. However, municipalities should realize there are specific liabilities associated with providing transit circulator services and institute appropriate risk management programs. Municipalities should also agree to be responsible for the acts or omissions of its agents and employees, and to the extent permitted by law indemnify and hold harmless the County from liabilities and claims.

If municipal circulator service is contracted to a private transportation provider, the municipality should require coverage that includes worker's compensation insurance for employees of the contractor, public liability insurance, and automobile liability insurance. The insurance policy should name the municipality and the County as additional insured with respect to the coverage and should indemnify and hold harmless the County from liabilities and claims. The municipality should maintain a certificate of the insurance policy on file and a copy of the insurance policy should be also provided to the County.

D. Federal/State Regulations

Compliance with *all* federal and state regulations is mandatory for municipalities initiating transit circulator services. These regulations include but are not limited to drug/alcohol policies, safety training, bus equipment standards, driver licensing, operator hours and shifts.

Procedures for Transportation Workplace Drug and Alcohol Testing Programs - 49 Code of Federal Regulations (CFR) Part 40 of the United States Department of Transportation (USDOT) - must be followed. On August 1, 2001, the Federal Transit Administration's (FTA) final rule on the Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations (49 CFR Part 655) became effective. This new rule replaces FTA's previous drug and alcohol testing rules (49 CFR Parts 653 and 654, respectively.) The basic components of the new rule include (1) testing safety-sensitive employees for the use of controlled substances and the misuse of alcohol and (2) providing educational training on the effects and consequences of drug use.

Safety requirements shall be met by complying with Section 341.061(2), Florida Statutes, and Rule 14-90, Florida Administrative Code, concerning system safety. Section 341.061(2) provides that the State of Florida enforce minimum equipment and operational safety standards for all

governmentally owned bus transit systems and privately owned or operated bus transit systems operating in Florida, which are financed wholly or partly by state funds. Rule 14-90 provides the minimum equipment and operational safety standards for all governmentally owned bus transit systems covered by Section 341.061(2). Rule 14-90 also provides rules for driving requirements, operator hours, and physical examinations for drivers.

E. Section 13(c) Labor Protection

As a prerequisite to receiving a federal assistance grant from the FTA, Section 13(c) of the Federal Transit Act requires that "fair and equitable" protective arrangements must be made by the grantee to protect transit employees. Section 13(c) is known as the labor protection provision of the Federal Transit Act. This statute requires provisions in labor protective arrangements addressing five specific matters:

(1) Preservation of rights, privileges, and benefits under existing collective bargaining agreements
(2) Continuation of collective bargaining rights
(3) Protection of employees against a worsening of their positions with respect to their employment
(4) Employment assurance for staff of acquired mass transportation systems and priority of reemployment for staff terminated or laid off
(5) Paid training or retraining programs

The United States Department of Labor (DOL) is charged with ensuring that Section 13(c) protective conditions are followed. The DOL typically carries out this responsibility by certifying that fair and equitable arrangements are in place for FTA projects. This certification is the last step in a process under which a potential grantee and the union(s), which represent transit employees that may be affected by the federally funded project, develop Section 13(c) protections.

If municipalities intend to obtain federal funding to cover a portion of the costs associated with circulator service, awareness of Section 13(c) is important. However, feedback received from MDT staff indicates that implementing municipal transit circulator service does not endanger the jobs of Section 13(c) protected employees as long as the circulator service *complement*s - and

does not compete with - County transit service. Indeed, municipal circulators may even increase ridership on MDT routes by functioning as a feeder service, which potentially may stimulate the need for more union transit jobs at MDT.

F. Americans with Disabilities Act

Compliance with the Americans with Disabilities Act (ADA) is mandated for all public or private transportation providers. The implementing regulation of the 1990 Americans with Disabilities Act is 49 CFR Part 37. The accessibility specifications for ADA-compliant transportation vehicles are specified in 49 CFR Part 38, which provides minimum guidelines and requirements for vehicles to meet accessibility standards of the ADA. All buses and vans must provide a level-change mechanism or boarding device, such as a lift or ramp. At least two securement locations must be provided on buses and vans in excess of 22 feet in length, and at least one securement location must be provided on buses and vans 22 feet in length or less. Also required are sufficient clearances to permit a wheelchair or other mobility aid user to reach a securement location.

G. Summary of Policy and Legal Issues

Table 4-1 on the following page presents a list of general policy and legal issues that municipalities may use as a guide when planning transit circulator service.

Table 4 - 1: General Policy and Legal Issues Guide

1. Municipalities should provide localized services and MDT will provide broader countywide service.
2. Municipalities that establish circulator service must enter into an interlocal agreement with Miami-Dade County.
3. Municipalities must be aware of the liability associated with operating a municipal circulator service and hold harmless the County from liabilities and claims. If the circulator service is contracted to a private transportation provider, the County must be named as an additional insured on the policy.
4. Municipalities must follow all federal, state, and local regulations regarding the provision of transit services.
5. Municipal circulator service should *complement* - not compete with - MDT service, so as not to endanger Section 13(c) protected employees.
6. All transit circulator vehicles must be ADA compliant.

III. TWO-STEP PLANNING PROCESS

Guidelines were developed for municipalities in Miami-Dade County to follow when planning local transit circulator services. These guidelines may be broadly classified into two steps, which should logically follow each other in sequence. "Step One" provides general indicators that identify the need for transit circulator service in a municipality or area and gauge the level of community support. "Step Two" consists of a specific study that should be conducted only if "Step One" determines that transit circulator services may be feasible. This two-step process is recommended as the procedure for developing circulator services.

A. Step-One – General Feasibility Study

"Step One" is envisioned as the initial planning interface between a municipality and Miami-Dade County during the development of local transit circulator services. The potential need for circulator service - or lack thereof - and the level of local support will be measured. "Step One" may also function as a tool for the County to evaluate several simultaneous requests for circulator services. Communities shown to have the greatest need for circulator service and the highest level of local support should receive priority for County assistance.

1. Indicators of the Need for Transit Service

Several socioeconomic characteristics are indicators of areas where local transit circulators might achieve operating success. These socioeconomic indicators include population density, the percentage of elderly citizens, household income, and automobile ownership.

Results of our research demonstrate that circulator service is most often successful in areas with population densities greater than 3,000 persons per square mile. Therefore, a population density of 3,000 persons per square mile in the circulator's service area should be established as the minimum population density for community's seeking County assistance. Population densities above 3,000 persons per square mile are common in Miami-Dade County. In fact, many areas in the county have population densities greater than 10,000 persons per square mile. Preference should be given to municipalities with higher population densities when comparing the need for circulator service in different communities.

Population age distribution is useful for determining the demand for circulator services. Elderly persons are more likely to be dependent on the transit system for their mobility. Results of our research indicate that many elderly depend on circulators to access essential locations such as medical facilities, groceries, and governmental services. Preference should be given to communities or areas where greater than 20 percent of residents are over 65 years in age.

Low-income households often do not have mobility choices other than public transportation. Areas with low-median household incomes generally have high potential for transit use. Preference should be given to areas with median household incomes below $30,000 (results of the 2000 Census indicate that the median household income in Miami-Dade County is approximately $39,300). Communities with median household incomes below $20,000 should receive the highest preference (results of the 2000 Census indicate that the poverty level for a family of four is $17,600).

Areas with a low level of automobile ownership also have a greater propensity to use transit. Preference should be given to communities or areas with higher percentages of households with zero automobiles.

Municipalities also must realize that duplication of transit services between proposed circulators and MDT's existing transit system is not desirable. Municipal transit circulators should provide a complementary service to MDT operating on local roadways within the community and serving shorter trips. The municipal circulators may also function as feeders to the MDT system providing residents a means of accessing MDT routes.

2. Indicators of Community Support

The level of community support is an important factor in assessing the likely success of local municipal transit service. Local support should be demonstrated before proceeding with planning for a local circulator service. Depending upon its success in securing funding from outside sources, a municipality may also need to fund at least a portion of the costs associated with establishing and operating a circulator service.

Our research discovered several communities with socioeconomic characteristics indicative of a propensity for transit use with circulator systems that are achieving poor ridership results. An

underlying theme in these communities is a lack of marketing for the circulator services. If residents are unaware of the availability or the specifics of the circulator service, achieving significant ridership on the system is difficult. This finding stresses the importance of marketing the circulator service to maximize its benefit to the community.

3. Criteria for Determining Need and Gauging Support

Criteria should be established to assist in determining the need and gauging the support for establishing municipal circulator service. These criteria should address the following questions:

- Is the population density of the area high enough to support fixed-route transit service?
- Is there a high percentage of transit dependent persons, such as elderly or low-income?
- Do recognized gaps exist in the transit service provided by MDT? Do neighborhoods or areas not receive any transit service? Recognized gaps in transit service are defined as areas that are not located within a ¼-mile walking distance of a transit stop.
- Is there an identifiable demand for trips that could be served by transit circulators, such as trips from medium-density or high-density residential neighborhoods to popular shopping destinations or medical facilities? Are these trips not adequately accommodated by MDT service?
- Are there potential links or transfer points to MDT service?
- Are local roadways overcrowded and could circulator service help relieve congestion?
- Have requests for circulator service been received from citizens, employers, employees, visitors, etc.? If yes, are these groups willing to actively participate in the planning for developing the circulator service?
- Is the municipality willing to partially or completely fund a feasibility study for transit circulator service?
- If a municipal circulator is established, does the municipality have a specific budget earmarked for operating and marketing the circulator service?

Table 4-2 presents a scorecard that was prepared to assist municipalities in evaluating the feasibility for establishing circulator services. This scorecard provides specific criteria that indicate the need and the level of community support for circulator service. The criteria have been weighted so that the evaluation will produce a score.

Table 4 - 2: Step-One Evaluation Scorecard

1. Indicators of transit dependency or the propensity to use circulator services. (50 points maximum for A through D)

(a) Population density less than 3,000 persons per square mile. (0 points)
Population density between 3,000 and 7,500 persons per square mile. (5 points)
Population density between 7,500 and 10,000 persons per square mile. (10 points)
Population density greater than 10,000 persons per square mile. (15 points)

(b) Less than 20 percent of residents aged 65 and older. (0 points)
Greater than 20 percent of residents aged 65 and older. (5 points)
Greater than 25 percent of residents aged 65 and older. (10 points)
Greater than 30 percent of residents aged 65 and older. (15 points)
Greater than 35 percent of residents aged 65 and older. (20 points)

(c) Median household income greater than $30,000. (0 points)
Median household income between $20,000 and $30,000. (5 points)
Median household income less than $20,000. (10 points)

(d) Greater than 10 percent of households with zero automobiles. (5 points)

2. Recognizable gaps (defined as outside a ¼-mile walking distance from a transit stop) in the community where MDT does not provide transit service.
(Yes = 15 points, No = 0 points)

3. Presence of specific activity centers in the community that are not serviced by MDT.
(Yes = 10 points, No = 0 points)

4. Often obtain requests for circulator service from citizens, employers, employees, etc.
(Yes = 10 points, No = 0 points)

5. Commitment of the municipality to partially or completely fund a feasibility study.
(Yes = 10 points, No = 0 points)

6. Identification of a detailed local funding source for the transit circulator service.
(Yes = 5 points, No = 0 points)

In general, a score above 60 points demonstrates that a community is a good candidate for circulator service, a score between 40 and 60 indicates that a circulator service may or may not be feasible, and a score below 40 points demonstrates that a community is a poor candidate for circulator service. The County may also utilize the scoring to prioritize its resources to communities seeking assistance for local circulator services.

B. Step-Two – Detailed Feasibility Assessment Framework

"Step Two" consists of a detailed feasibility study that should only be undertaken if "Step One" determines transit circulator service is potentially feasible in the municipality or area. The purpose of "Step Two" is to assist in developing operations, management, and financial plans for the circulator service. The operations plan should address route alignments, headways, hours of operation, and vehicle types; the management plan should develop an organizational structure and define roles and responsibilities; the financial plan should provide cost estimates and identify sources of funding.

Although each community has specific mobility needs and unique socioeconomic and geographic characteristics, some general recommendations for designing proposed circulator services are provided. These recommendations are based on common elements of the more successful municipal circulator systems identified during our research.

1. Operations Plan

The operations plan should identify the circulator system's service characteristics including the locations of the circulator routes, the frequency of service, the days and hours of operation, and the type(s) of vehicle being considered. Based on research and analysis for this study, several trends in terms of operational characteristics were revealed for the more successful transit circulators. These trends are the basis of the general operational recommendations presented below.

a. Route Alignment

Our review of existing transit circulator systems demonstrated that systems with shorter route lengths tend to have better results in terms of passengers per revenue hour. Routes that meander

haphazardly through a community typically do not attract as many riders as shorter more direct routes, which do not try to serve every possible mobility need in the community.

Chapter 31, Article III, Section 31-113 of the Code of Metropolitan Dade County states that at least 70% of a transit "circulator service" route must be within one municipality in order for it to be referred to as a circulator service. Adhering to this rule will generally assist in designing routes that are short enough to maximize the circulator services. Additionally, some smaller land area municipalities might want to explore the possibility of establishing a circulator system in conjunction with a neighboring municipality.

b. Headways

Headways are an important indicator of transit level of service. Long headways (low frequency service) generally are a detriment to potential users of the circulator system. People may choose not to use the circulator if they fear that "missing the bus" will force them to wait a long time before the arrival of the next bus. The costs associated with operating frequent service often force operators to run with 60-minute or longer headways; however, municipalities should strive to achieve lower headways for their circulator systems. Headways of 30 minutes or shorter are strongly recommended for municipalities that are serious about providing a viable transportation alternative for their residents.

If possible, "clockface" schedules should be developed; these allow the circulator vehicles to pass locations at the same time of the hour. This type of schedule is easier for users to remember and become accustomed to more quickly. "Clockface" schedules may be developed with headways of 5, 10, 15, 20, 30, or 60 minutes.

Municipal circulator schedules and routes should be coordinated with the schedules and routes of other transit providers to provide "timed-transfer networks," whenever feasible. Coordinated schedules allow passengers to make more seamless transfers and will increase the level of transit service provided by the municipal transit circulator system. Enabling efficient interchange of transit passengers through "timed-transfer networks" is even more important when headways are not frequent. Municipal circulator schedules should be designed on the basis of timed transfers.

c. Hours of Operation

Careful planning must be undertaken to determine appropriate hours of operations for proposed circulator services. Public input should be obtained during the planning stage to determine the hours of operation that are desirable from the standpoint of the potential riders. Longer hours are desirable from a service standpoint but cost more in terms of labor, fuel, and vehicle maintenance costs. The hours of operation must be longer for municipalities wishing to provide transit circulator service for commuters than for municipalities desiring to provide "lifeline" circulator services. Another important issue of consideration is whether or not to provide circulator service on weekends.

d. Vehicle Type

In terms of vehicle type, a smaller bus with a seating capacity for up to 25 passengers is recommended for transit circulators. Smaller buses are better capable of navigating through different neighborhood environments than standard-sized buses and are not perceived as a nuisance. The circulator vehicles should be easily distinguishable from full-size MDT buses and painted in a color scheme that identifies them as a municipal transit service. All vehicles must be ADA-compliant.

For downtown circulator routes, buses with more standing room may be utilized since trips are normally shorter. For suburban neighborhood and "lifeline" circulator routes, which are often used for shopping and medical trips, buses should provide plenty of seating and more room for packages and shopping bags.

2. Management Plan

The management plan provides an organizational structure and defines roles and responsibilities for operating the circulator system. A key component of the management plan is the recognition of the importance of a marketing strategy.

The basic administrative options available to municipalities for circulator services include:

- Operating and maintaining all service with municipal staff
- Acquiring the circulator vehicles and contracting all or portions of administration, operations, and maintenance activities
- Contracting out the entire service to a public or private transit service provider

All three options offer advantages. A municipality that operates the transit circulator service internally is forced to take a more active role and may become more intrinsically involved with ensuring the system's success. However, municipal staff typically has no experience operating a transit system and the municipality may benefit from having an experienced operator that specializes in the provision of transit services. By contracting the service the municipality may also avoid a major capital investment and may speed up the implementation of circulator service.

A marketing strategy is vital for building community support for a circulator system. Marketing for the system may consist of a coordinated blend of research, community outreach, public relations, promotions, and advertising. The marketing strategy should seek to attract riders by:

- Increasing visibility and awareness of the system
- Increasing support of the circulator's role in the community
- Increasing use of the system by providing potential riders with pertinent information

3. Financial Plan

The financial plan should provide realistic and reasonably developed estimates for capital and operating costs and identify sources of funding. A host of characteristics impact costs including whether a municipality elects to operate or contract the service to a transit service provider and service characteristics such as the number of routes, length of routes, headways, hours of operation, and fleet size. Funding for circulator service may be obtained from a number of different local, state, federal, and private sources.

a. Cost Estimates

Operating costs for municipal circulator systems must be determined on a case specific basis, as the costs may vary widely depending on the service characteristics of the system. However, information collected for this study may provide a rough estimate of the costs associated with a

circulator system. For instance, we estimate the operating costs for a circulator system consisting of two weekday routes operating twelve hours per day with 30-minute headways will approximate $450,000 annually. Additionally, our research demonstrates municipalities that contract the circulator service to a transit service provider typically pay $30 to $45 hourly per vehicle.

Municipalities that elect to operate a circulator system may also incur capital costs for the purchase of vehicles. Mini-buses with seating capacity for 14 to 25 passengers typically cost between $55,000 and $110,000. Other types of vehicles including alternative fuel vehicles, electric vehicles, and electric-hybrid vehicles often cost more than standard mini-buses. For example, electric mini-buses range in cost from approximately $210,000 to $250,000; however, the electric mini-buses may introduce significant savings in operating costs through better fuel efficiency.

b. Funding

Funding for municipal circulator service may be obtained from a number of local, state, federal, and private sources. However, municipal funds are always needed to pay for some portion of the costs. For example, even with the funding assistance provided by the "Community Bus Program," on average Broward County municipalities cover 60 percent of the costs from their general funds. The State of Florida can only fund transit projects at a 100% level in very limited cases such as major corridor projects.

Farebox revenue generally accounts for only a small portion of the costs associated with operating circulator services. The majority of municipalities currently operating circulators in Miami-Dade and Broward Counties charge no fare. Municipalities that do charge fares generally recoup less than 10 percent of the operating costs from fare revenues.

Other potential local funding sources include "Special Taxing Districts." The Code of Miami-Dade County supplies the County the authority to establish "Special Taxing Districts" to help finance a wide range of public improvements and services, which may include public transit improvements. For example, Miami-Dade County's Metromover (people-mover system) obtains operating assistance from a "Special Taxing District" assessment within the City of Miami's Downtown Development Authority area.

Securing funding from private sources may be possible if the municipal circulators will serve employers or major attractors such as shopping centers. Acquiring funding from private sources also leads to more parties having a stake in the system's success and may foster a sense of community pride.

State programs that may be used to help finance municipal transit circulator systems include the State of Florida Transit Block Grant and Service Development programs. In addition, FDOT's Transportation Outreach Program (TOP) provides funds for programs that increase mobility on the state's transportation system and help the region's economy. FDOT's Urban Transit Capital Program offers a source of funding for capital costs associated with acquiring transit vehicles, purchasing land for project facilities, constructing mass transportation facilities, and acquiring computers for operations planning.

Several sources of federal funds are available for municipal circulator systems, but the process of securing these funds is *highly competitive*. The Surface Transportation Program (STP) provides funds for capital projects. The Federal Transit Administration (FTA) Urbanized Area Formula Transit Grants offer assistance to transit agencies in urbanized areas with populations greater than 200,000 to support capital expenses, and these funds may be shared with municipal transit providers assuming the presence of an interlocal agreement. The Transportation and Community and System Preservation Pilot (TCSP) program provides grants for community preservation and private sector based initiatives; this program might be applicable for communities looking to provide transportation to employment or shopping. The Access to Jobs and Reverse Commute (JARC) Grant Program is available for services that help welfare recipients access employment areas.

IV. POST-IMPLEMENTATION MONITORING

After a municipal transit circulator service is implemented, evaluation of the system's performance is needed to ensure the public's mobility needs are served. The circulator system may fail to be responsive to changing needs in the community if the service is not evaluated on a regular basis. Continuing performance monitoring also assists in adjusting services for efficiency and effectiveness.

A. Public Involvement

A critical component of the post-implementation monitoring program is the maintenance of the public outreach effort that began during the initial planning stages for the municipal circulator system. Public input is important to help define the role of the circulator system in the community. Several methods are available for acquiring public input including:

- Holding periodic community meetings
- Conducting rider satisfaction surveys
- Providing onboard suggestion boxes
- Participating in community events such as festivals

B. Annual Evaluation of Services

The municipality should perform an evaluation of the municipal transit circulator service at least on an annual basis. An annual evaluation is usually required by agencies funding all or portions of the circulator service. Section 341.071, Florida Statutes, states that each public transit provider shall establish productivity and performance measures and each provider shall report annually regarding these measures. An annual evaluation provides an opportunity to examine the circulator system to determine if the service is meeting its goals and objectives. If the service is not meeting its goals and objectives, an annual evaluation provides a good forum to analyze and address the underlying reasons why the service may be lacking. In addition to evaluating the circulator system's performance during the annual evaluation, the goals and objectives should be refined based on changing needs in the community.

Measurable goals and objectives should be established during the planning stage for a circulator system for assessment during the annual evaluation process. During the annual evaluation of services, municipalities should also address non-quantitative goals associated with the service such as good public perception and coordination with MDT. The goals and objectives may weigh a number of indicators of system success including ridership, costs, efficiency, and reliability. Measures available to gauge these indicators include:

- Total passengers
- Passengers per revenue hour
- Passengers per revenue mile
- Cost per passenger
- On-time performance

Based on our research of circulator systems, some sample measurable goals and objectives were developed for guidance purposes for communities that are establishing a circulator system. Table 4-3 presents several sample performance goals.

Table 4 - 3: Sample Performance Goals

Performance Measure	Sample Goal
Passengers Per Route (Annual)	15,000
Passengers Per Revenue Hour	5.0
Passengers Per Revenue Mile	0.3
Cost Per Passenger	$6.00

Typical ridership goals for a municipality establishing a circulator system may be 15,000 annual passengers per route, 5.0 passengers per revenue hour, and/or 0.3 passengers per revenue mile (one passenger each three revenue miles). A typical goal for costs may be below $6.00 per passenger. Constant performance improvement is desirable for municipal circulator systems after service is implemented. In order to achieve advancement, performance goals may be periodically adjusted based on percentage improvements such as a ten percent overall increase in annual ridership.

Service goals and objectives should also be established for review during the annual evaluation process. The service goals and objectives should include improvements to be achieved in a clearly specified timeframe. Service goals should be designed to increase the transit level of service leading to increased utilization of the municipal circulator system. Service goals may address a number of items including improving bus-stop facilities and providing better information on circulator services to the public such as timetables and maps.

Useful applications of the post-implementation monitoring process include the refinement of existing transit circulator service to better meet the needs of the community. Examples of useful applications of the monitoring process include the following.

- Realigning existing routes
- Adding new routes
- Reducing headways
- Modifying the hours of operation
- Modifying schedules to optimize timed-transfers with other transit routes

V. CONCLUSION

The purpose of this study was to provide guidelines for municipalities in planning and implementing municipal transit circulators. Currently, Miami-Dade County sometimes assists with the planning for local transit circulators and municipalities receive grants from the Florida Department of Transportation (FDOT) or other agencies to initiate the circulator service. However, grant support often expires after a period of two to three years and municipalities then must obtain funding from other sources or discontinue the circulator service if new funding sources cannot be secured.

This study provides a framework that will (1) provide Miami-Dade municipalities with a good screening and assessment tool for considering local transit circulators and (2) allow Miami-Dade County to better evaluate requests for assistance in planning and establishing municipal circulators. Municipalities can benefit from this study by following the recommended planning process to first determine if transit circulator service is feasible and, if the service is assessed as feasible, to develop a circulator system that serves the community's mobility needs with an improved chance of continued success.

This technical memorandum outlined the development of guidelines and standards for establishing municipal transit circulator services and recommended a process for monitoring the circulator services after implementation. General policy and legal issues associated with the implementation of municipal transit circulator services were examined. Broad guidelines were provided for application to all potential municipal circulator services, regardless of the type of service being considered or location, and a list of general policy and legal issues that municipalities may use as a guide when planning transit circulator service was developed.

Guidelines were developed for municipalities in Miami-Dade County to follow when planning local transit circulator services. These guidelines were separated into two steps, which should logically follow each other in sequence. "Step One" is envisioned as the initial planning effort during the development of local transit circulator services. The potential need for circulator service and the level of local support are measured. A scorecard was developed for this step to assist municipalities in evaluating the feasibility for establishing circulator services.

"Step Two" of the planning process consists of a detailed study that should only be undertaken if "Step One" determines transit circulator service is feasible. The purpose of "Step Two" is to assist in developing operations, management, and financial plans for the circulator service. The operations plan should address service characteristics; the management plan should develop an organizational structure and define roles; the financial plan should provide cost estimates and identify funding sources. Although each community has specific mobility needs and unique socioeconomic and geographic characteristics, general recommendations for circulator services were provided as guidance in this step.

Evaluation of the circulator system's performance after implementation is vital to ensure the public's mobility needs are served. Continuing performance monitoring also assists in adjusting services for efficiency and effectiveness. A critical component of the post-implementation monitoring program is maintaining a public outreach program, as public involvement is important to help define the role of the circulator system in the community.

The municipality should also perform an evaluation of the municipal transit circulator service at least on an annual basis; often a monitoring process and annual evaluation is a requirement of funding agencies. Performance and service goals should be established for review during the annual evaluation process and measurable objectives should be developed for assessment. Typical performance measures include annual passengers per route, passengers per revenue hour, costs per passenger, and on-time performance. Examples of useful applications of the monitoring process include revising or adding new routes, adjusting headways, and modifying hours of operation.